

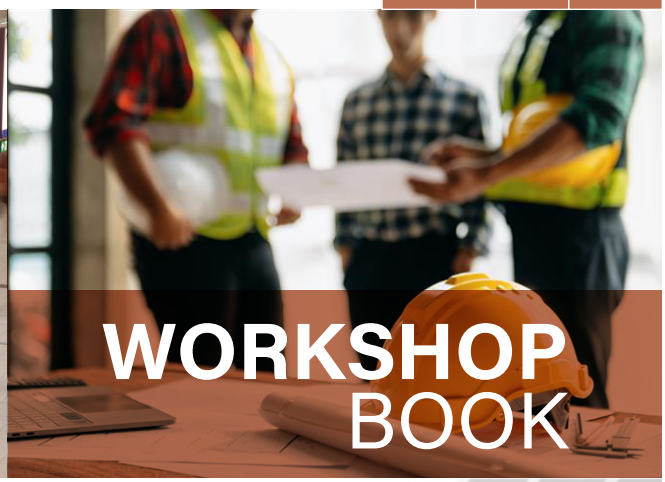

WORKSHOP BOOK



MOULDED CASES

DPX³ 125 HP/160 HP/250 HP
DPX³ 630/1600

#LegrandImprovingLives

legrand®

LEGRAND SUPPORTS YOU ON ALL YOUR PROJECTS

As well as providing reliable, accurate protection, the entire DPX³ range offers numerous advantages for your low-voltage boards. The wide choice of features and versions covers the needs of all demanding commercial, tertiary and industrial electrical installations.
Integrated measure means you can monitor installation parameters and consumption without the need for additional equipment or accessories.
The various selectivity techniques available guarantee optimum continuity of service.
The full range of electrical and mechanical auxiliaries makes operation and maintenance easy.
Perfect synergy with Legrand XL³ and XL³ S enclosures simplifies design with XLPRO³ and installation by panel builders.
A wide range of accessories is available to adapt to all panel configurations.
Find out more about the DPX³ 125 HP, DPX3 160 HP, DPX³ 250 HP, DPX³ 630, DPX³ 1600 range and all its advantages in this document.

LEGAL INFORMATION

Presentation pictures do not always include Personal Protective Equipment (PPE), but this is a legal and regulatory obligation that must be scrupulously respected.

In accordance with its continuous improvement policy, Legrand reserves the right to change the specifications and illustrations without notice. All illustrations, descriptions and technical information included in this document are provided as indications and cannot be held against Legrand.



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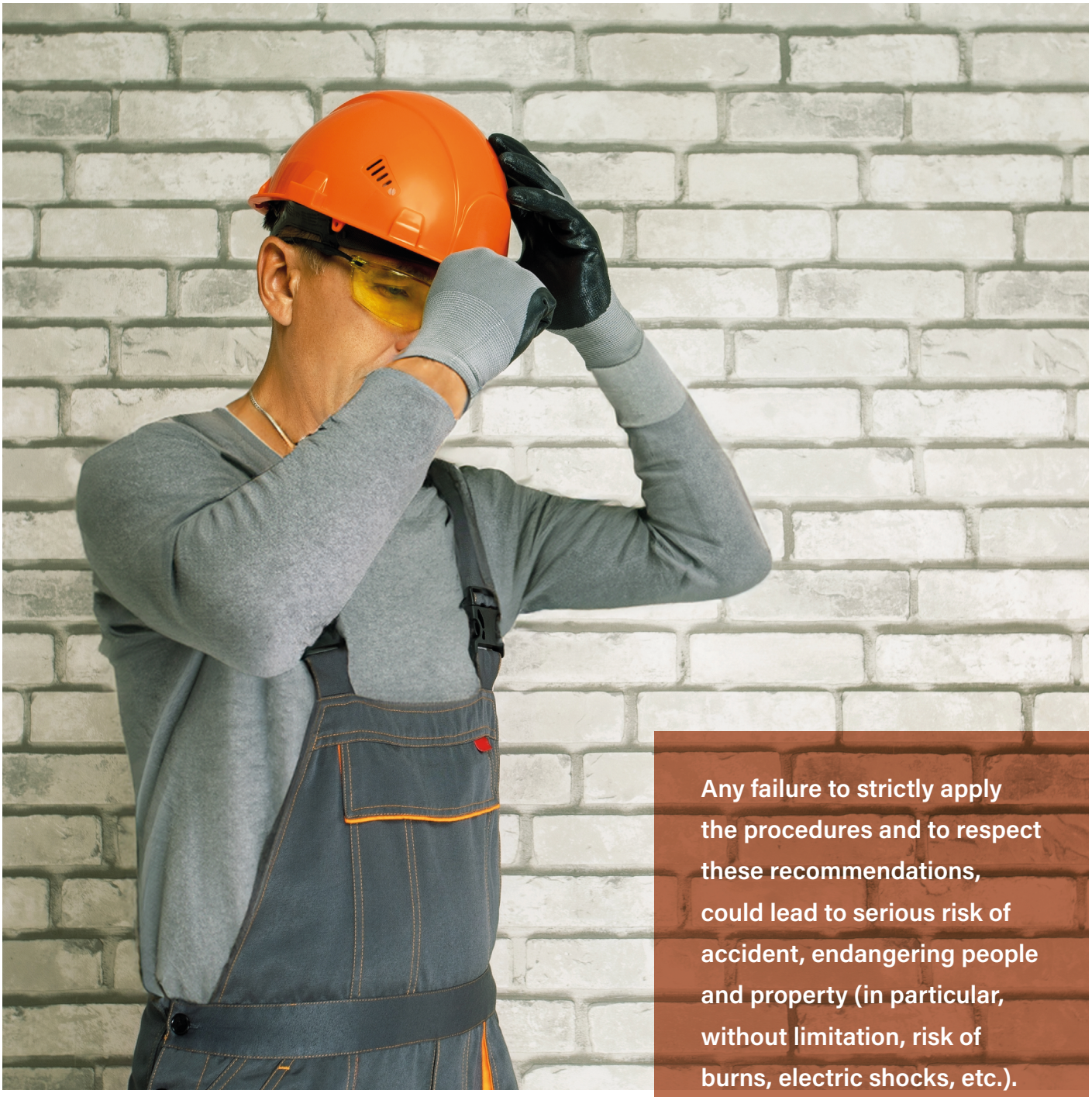
MOULDED CASES DPX^3 125 HP/160 HP/250 HP AND DPX^3 630/1600

SAFETY INSTRUCTIONS



Any failure to strictly apply the procedures and to respect these recommendations, could lead to serious risk of accident, endangering people and property (in particular, without limitation, risk of burns, electric shocks, etc.).

General information

- Use only the products and accessories recommended by the Legrand Group in the catalogue, instructions, technical data sheets and all other documents provided by Legrand (hereinafter referred to as “the Documentation”) in compliance with the installation rules.



Improper installation or use may result in the risk of arcing in the enclosure, overheating or fire. The enclosures must be used under normal conditions, they must not be subjected to Voltage / Current / Temperature values other than those specified in the Documentation.

- Legrand declines all responsibility for any modification or repair of the equipment making up the enclosure that is not authorized by the Legrand Group, as well as any failure to comply with the rules and recommendations specified by Legrand in the Documentation. In addition, in the cases mentioned above, the warranty granted by Legrand will not be applicable.
- It is necessary to check that the characteristics of the products are appropriate for their environment and use during maintenance operations, and to refer to the Documentation.
- If you have any questions or require clarification, please contact Legrand Group.

Protection/security



- The installation, use and maintenance of the enclosures and their components must be carried out by qualified, trained and authorized personnel, in accordance with the regulations in force in each country.
- People working on the installation must have the appropriate electrical authorizations for the work to be carried out.
- Wear the PPE (Personal Protective Equipment) necessary to work on live products.



- Respect the safety rules related to electrical work.
- Improper electrical and mechanical use of equipment can be dangerous and may result in personal injury or damage to property.

Maintenance

- Depending on the maintenance operations to be carried out, partial or total power cuts of the enclosure concerned should be planned before any work.
- When performing operations that involve access to the inside of the enclosure, be aware of the risk of burns before touching any.
- Before turning the power back on, make sure that there are no foreign bodies and that all physical protections have been put back in place (e.g.: screens, covers, faceplates).



Risk of electric shock, burns and explosion.

The rules and recommendations in this document are based on our knowledge of the typical conditions of use of our products in the fields of application usually encountered. However, it is always the customer’s responsibility to verify and validate that Legrand products are suitable for its installation and use.

The customer must ensure proper installation, maintenance and operation of the equipment to avoid any risk of injury to personnel or damage to property in the event of product failure, especially for applications that require a very high level of safety (e.g., those in which the failure of a component may endanger human life or health).

The rules for storage, handling, installation and maintenance and the appropriate precautions and warnings must be strictly observed and applied.

MOULDED CASES

DPX³ 125 HP/160 HP/250 HP & DPX³ 630/1600



PRESENTATION OF THE OFFER

The strengths of the circuit-breakers and switches in the DPX³ range are :

- optimized dimensions;
- ease of installation, use and accessorization;
- reliability.

The circuit-breakers are available in thermal magnetic, electronic, electronic with measure or magnetic-only versions, with rated currents from 16 to 125 amperes for DPX³ 125 HP, 160 amperes for DPX³ 160 HP, 16 to 250 amperes for DPX³ 250 HP, 250 to 630 amperes for DPX³ 630 and 500 to 1600 amperes for DPX³ 1600. Switching capacities range from 36 kA to 100 kA.

Switches are available in 3P and 4P with rated currents of 125 A for DPX³-I 125 HP, 160 A for DPX³-I 160 HP, 250 A for DPX³-I 250 HP, 400 A and 630 A for DPX³-I 630 and 630 A, 800 A, 1250 A, 1600 A for DPX³-I 1600.

All those products can be installed in XL³ and XL³ S on mounting plate, combined with dedicated faceplates.



DPX³ 125 HP-3P



DPX³-I 125 HP-4P



DPX³ 160 HP-4P



DPX³ 250 HP-3P



DPX³ 250 HP-4P + diff.



DPX³ 630-3P



DPX³-I 1600-3P



DPX³ 1600-4P

Breaking capacities identification

In	16	25	40	63	80	100	125	160	200	250	320	400	500	630	800	1000	1250	1600
36 kA	DPX³ 125 HP																	
								DPX³ 160 HP										
	DPX³ 250 HP																	
												DPX³ 630						
																DPX³ 1600		
50 kA	DPX³ 125 HP																	
								DPX³ 160 HP										
	DPX³ 250 HP																	
												DPX³ 630						
																DPX³ 1600		
70 kA	DPX³ 125 HP																	
								DPX³ 160 HP										
	DPX³ 250 HP																	
												DPX³ 630						
																DPX³ 1600		
100 kA	DPX³ 125 HP																	
								DPX³ 160 HP										
	DPX³ 250 HP																	
												DPX³ 630						
															DPX³ 1600			

Easy breaking capacity identification per color dots

36 kA 50 kA 70 kA 100 kA

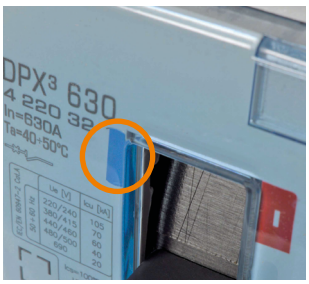
Examples of breaking capacities illustrated per color on the circuit-breakers



DPX³ 125 HP - 36 kA



DPX³ 250 HP - 36 kA



DPX³ 630 - 70 kA



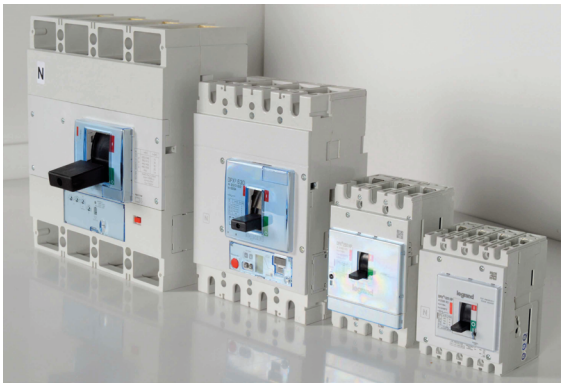
DPX³ 1600 - 100 kA

PRESENTATION

DPX³ 125/160/250 HP & DPX³ 630/1600

DPX³ circuit-breaker range offers offers a wide choice of versions to meet every need :

- Thermal magnetic, eletronic, eletronic with measures or thermal magnetic only releases according to the level of protection required.
- Fixed, plug-in or draw-out versions, according to the maintenance, maintainability and security level wanted.
- With or without integrated earth leakage protection for DPX³ 125 HP DPX³ 160 HP and DPX³ 250 HP, with or without earth leakage protection with upstream adaptable unit for DPX³ 630 and with or without earth leakage protection with external associable residual current relay and coils for DPX³ 1600.



CIRCUIT-BREAKERS		DPX³ 125 HP	DPX³ 160 HP	DPX³ 250 HP	DPX³ 630	DPX³ 1600
Number of poles	3P	●	●	●	●	●
	4P	●	●	●	●	●
Version	Fixed	●	●	●	●	●
	Plug-in			●	●	
	Draw-out			●	●	●
Release	Thermal magnetic	●	●	●	●	●
	Electronic S1			●	●	●
	Electronic S10			●	●	●
	Thermal magnetic only			●	●	●
Options	Protection earth leakage integrated	●	●	●		
	Protection earth leakage associable				●	●(1)
	With measure			●(2)	●(2)	●(2)

(1) : with external residual current relay associated with shunt trip (ST) or undervoltage release (UVR).
(2) : electronic S10 only.

SWITCHED		DPX³ 125 HP	DPX³ 160 HP	DPX³ 250 HP	DPX³ 630	DPX³ 1600
Number of poles	3P	●	●	●	●	●
	4P	●	●	●	●	●
	4P residual current with external module					●
	4P residual current	●	●	●		
Version	Fixed	●	●	●	●	●
	Plug-in			●	●	●
	Draw-out			●	●	●

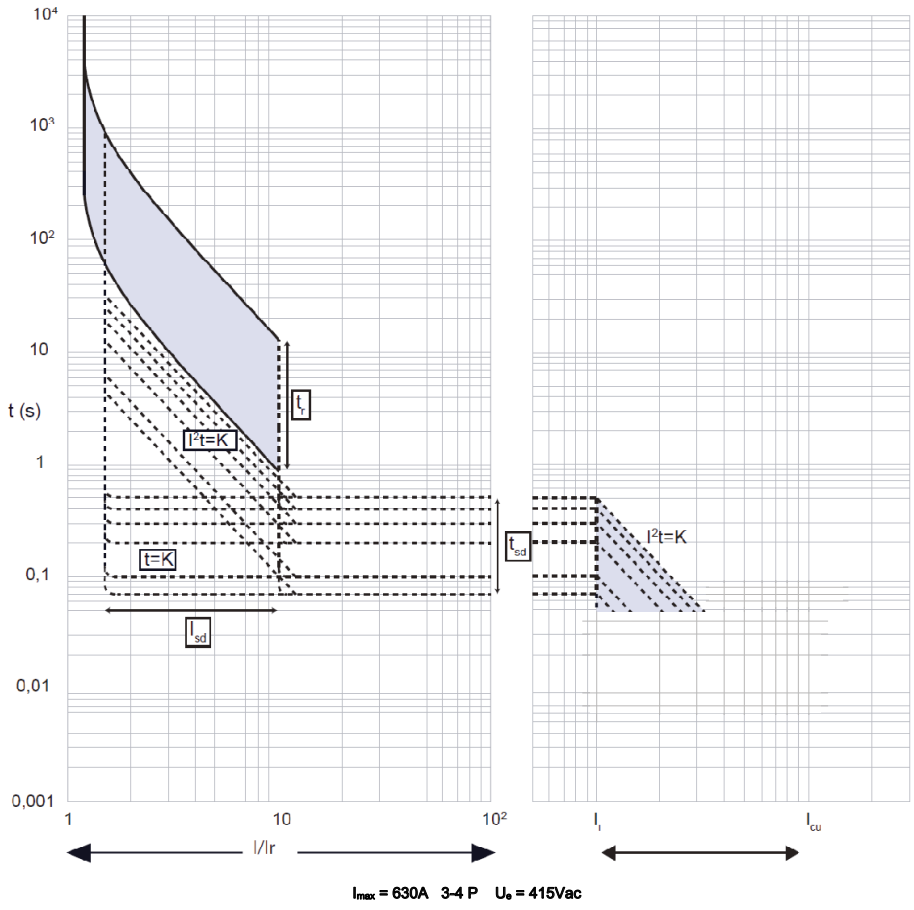
	Thermal protection against overloads		Magnetic protection against short-circuits			Neutral	Short-delay trip current	Short time delay	Ground fault protection Protection contre défaut de terre		Measure
			Short delay		Instantaneous						
	Ir	tr[2]	Isd	tsd (t = k, I2t = k)[3]	Ii	N	Id	td	Ig	tg (t= k, I2t = k)[4]	
DPX³ 125 HP											
Thermal magnetic	0,8 to 1 x In	-	10 x In[1]	-	-	100 %	-	-	-	-	-
DPX³ 160 HP											
Thermal magnetic	0,8 to 1 x In	-	10 x In[1]	-	-	100 %	-	-	-	-	-
DPX³ 250 HP											
Thermal magnetic	0,8 to 1 x In	-	5 to 10 x In[1]	-	-	100 %	-	-	-	-	-
Eletronic S1	0,4 to 1 x In	5 s	1,5 – 10 x Ir[A] [B]	100 ms	Fixed	(OFF - 0,5 - 1 - 1,5 - 2) x Ir	-	-	-	-	-
Eletronic S10 : local on the product	0,2 to 1 x In, per 1 A steps	3 - 5 - 10 - 15 s	1,5 to 3 x Ir, per 0,5 x Ir steps 3 to 10 x Ir, per 1 x Ir steps	40 ms, 80 ms, 160 ms, 240 ms, 320 ms 400 ms, 480 ms	-	50 %, 100 %, 150 %, 200 %, OFF	30 mA, 300 mA, 1 A, 3 A	0 ms, 300 ms, 1 s, 3 s	0,2 to 1 x In, per 0,1 x In steps	80 to 480 ms and 1 s (6 steps)	Yes
Eletronic S10 : via Software or Application	0,2 to 1 x In - OFF, per 1 A steps	3 to 15 s, per 40 ms steps	1,5 to 10 x Ir, per 1 A steps	40 to 480 ms par pas de 40 ms	2 to 15 x In, per 1 A steps					80 ms to 1 s, per 40 ms steps	Yes
Thermal magnetic only	-	-	6 to 14 x In	-	-	100 %	-	-	-	-	-
DPX³ 630											
Thermal magnetic	0,8 to 1 x In	-	5 to 10 x In	-	-	100 %	-	-	-	-	-
Eletronic S1	0,4 to 1 x In	5 s	1,5 – 10 x Ir[A] [B]	100 ms	[A] [B] F[1]	(OFF - 50 % - 1) x Ir	-	-	-	-	-
Eletronic S10 : local on the product	0,2 to 1 x In, per 1 A steps	3 - 5 - 10 - 15 - 20 - 25 - 30 s	1,5 to 3 x Ir, per 0,5 x Ir steps 3 to 10 x Ir, per 1 x Ir steps	40 ms, 80 ms, 160 ms, 240 ms, 320 ms 400 ms, 480 ms	-	50 %, 100 %, 150 %, 200 %, OFF	30 mA, 300 mA, 1 A, 3 A	0 ms, 300 ms, 1 s, 3 s	0,2 to 1 x In, per 0,1 x In steps	80 to 480 ms and 1 s (6 steps)	Yes
Eletronic S10 : via Software or Application	0,2 to 1 x In - OFF, per 1 A steps	3 to 30 s, per 40 ms steps	1,5 to 10 x Ir, per 1 A steps	40 to 480 ms per 40 ms steps	2 to 15 x In, per 1 A steps					80 ms to 1 s, per 40 ms steps	Yes
Thermal magnetic only	-	-	5 to 10 x In	-	[A] [B] F[1] F[2]	100 %	-	-	-	-	-
Thermal magnetic electronic only	-	-	5 to 10 x In	0 ÷ 500 ms	[A] [B] F[1] F[2]	(OFF - 0,5 - 1) x Ir	-	-	-	-	-
DPX³ 1600											
Thermal magnetic	0,8 to 1 x In	-	5 to 10 x In	-	-	100 %	-	-	-	-	-
Eletronic S1	0,4 to 1 x In	5 s	1,5 – 10 x Ir [A] [B]	100 ms	[A] [B] F[1]	(OFF - 50 % - 1) x Ir	-	-	-	-	-
Eletronic S10 : local on the product	0,2 to 1 x In, per 1 A steps	3 - 5 - 10 - 15 - 20 - 25 - 30 s	1,5 to 3 x Ir, per 0,5 x Ir steps 3 to 10 x Ir, per 1 x Ir steps	40 ms, 80 ms, 160 ms, 240 ms, 320 ms 400 ms, 480 ms	-	50 %, 100 %, 150 %, 200 %, OFF	30 mA, 300 mA, 1 A, 3 A	0 ms, 300 ms, 1 s, 3 s	0,2 to 1 x In, per 0,1 x In steps	80 to 480 ms and 1 s (6 steps)	Yes
Eletronic S10 : via Software or Application	0,2 to 1 x In - OFF, per 1 A steps	3 to 30 s, per 40 ms steps	1,5 to 10 x Ir, per 1 A steps	40 to 480 ms per 40 ms steps	2 to 15 x In, per 1 A steps					80 ms to 1 s, per 40 ms steps	Yes
Thermal magnetic only	-	-	5 to 10 x In	-	[A] [B] F[1] F[2]	100 %	-	-	-	-	-
Thermal magnetic electronic only	-	-	5 to 10 x In	0 ÷ 500 ms	[A] [B] F[1] F[2]	(OFF - 0,5 - 1) x Ir	-	-	-	-	-

[A] : For 630 A size TRAD : for rating Isd ≤ Ii, only for DPX³ 630 - In 630 A - If < Isd max.
[B] : Except DPX³ 630 calibre 630 A : Isd max. = 5000 A.
F[1] : DPX³ 1600 - Icw = 15000 A (1250 A) or 20000 (calibre 1600 A).
F[2] : SEL : H/L.
[1] Isd fixed up to 400 A (In ≤ 40 A) ; (6,5 - 10 - 13) x In for In = 50 A.
[2] It is possible to select the thermal memory « On » or « Off » and stop the Modbus.
[3] It is possible to stop the Modbus.
[4] It is possible to stop the Modbus and product navigation.

PRESENTATION

A S10 circuit-breaker is customizable in order to obtain each type of protection.

Example of an electronic trigger curve:



Value	Description
t	Time
I	Current
In	Rated current
Ir	Current setting for long delay
tr	Short delay tripping time
Isd	Current setting for short delay
tsd	Short delay tripping time
$I^2t = K$	Energy
t = K	Constant time of triggering
Ig	Electronic + earth protection
tg	Earth current measurement delay

DPX³ 125 HP/DPX³-I 125 HP/DPX³ 160 HP/DPX³-I 160 HP

DPX³ 125 HP/DPX³-I 125 HP/DPX³ 160 HP and DPX³-I 160 HP moulded cases can be integrated in our XL³ and XL³ S enclosures on mounting plate only in vertical and horizontal position.
DPX³ 125 HP/160 HP thermal magnetic circuit-breakers ensure the break, the control, the disconnection and the protection of the power lines. They are available with:

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA.
- 10 rated currents: 16 A, 20 A, 25 A, 32 A, 40 A, 50 A, 63 A, 80 A, 100 A, 125 A, except for the DPX³ 160 HP (160 A).
- In 3P, 4P and 4P residual current protection version
- Integrated residual current module (type A, available for Icu = 36 kA, 50 kA and 4P version).
- Compliant to IEC 60947-2 standard.



	DPX³ 125 HP THERMAL MAGNETIC								DPX³ 125 HP THERMAL MAGNETIC + RESIDUAL CURRENT	
	36 kA		50 kA		70 kA		100 kA		36 kA	50 kA
Rating	3P	4P	3P	4P	3P	4P	3P	4P	4P	
16 A	4 236 00	4 236 10	4 236 40	4 236 50	4 236 80	4 236 90	4 237 00	4 237 10	4 236 30	4 236 70
20 A	4 236 01	4 236 11	4 236 41	4 236 51	4 236 81	4 236 91	4 237 01	4 237 11	4 236 31	4 236 71
25 A	4 236 02	4 236 12	4 236 42	4 236 52	4 236 82	4 236 92	4 237 02	4 237 12	4 236 32	4 236 72
32 A	4 236 03	4 236 13	4 236 43	4 236 53	4 236 83	4 236 93	4 237 03	4 237 13	4 236 33	4 236 73
40 A	4 236 04	4 236 14	4 236 44	4 236 54	4 236 84	4 236 94	4 237 04	4 237 14	4 236 34	4 236 74
50 A	4 236 05	4 236 15	4 236 45	4 236 55	4 236 85	4 236 95	4 237 05	4 237 15	4 236 35	4 236 75
63 A	4 236 06	4 236 16	4 236 46	4 236 56	4 236 86	4 236 96	4 237 06	4 237 16	4 236 36	4 236 76
80 A	4 236 07	4 236 17	4 236 47	4 236 57	4 236 87	4 236 97	4 237 07	4 237 17	4 236 37	4 236 77
100 A	4 236 08	4 236 18	4 236 48	4 236 58	4 236 88	4 236 98	4 237 08	4 237 18	4 236 38	4 236 78
125 A	4 236 09	4 236 19	4 236 49	4 236 59	4 236 89	4 236 99	4 237 09	4 237 19	4 236 39	4 236 79

	DPX³ 160 HP THERMAL MAGNETIC								DPX³ 160 HP THERMAL MAGNETIC + RESIDUAL CURRENT	
	36 kA		50 kA		70 kA		100 kA		36 kA	50 kA
Rating	3P	4P	3P	4P	3P	4P	3P	4P	4P	
160 A	4 237 20	4 237 21	4 237 25	4 237 26	4 237 30	4 237 31	4 237 35	4 237 36	4 237 23	4 237 28

DPX³-I 125 HP and DPX³-I 160 HP switches ensure the load breaking and the disconnection of the electric lines. They are available in:

- 125 A for DPX³-I 125 HP, and 160 A for DPX³-I 160 HP.
- 3P, 4P and 4P residual current protection version.
- Integrated residual current module (type A, available in 4P version).
- Compliant to IEC 60947-3 standard.

	DPX³-I 125 HP		DPX³-I 125 HP + RESIDUAL-CURRENT.
Rating	3P	4P	4P
125 A	4 231 84	4 231 85	4 231 87

	DPX³-I 160 HP		DPX³-I 160 HP + RESIDUAL-CURRENT.
Rating	3P	4P	4P
160 A	4 231 88	4 231 89	4 231 91

DPX³-I 125 HP and DPX³-I 160 HP switches are easily recongnizable with their grey handle.

PRESENTATION

DPX³ 250 HP/DPX³-I 250 HP

DPX³ 250 HP and DPX³-I 250 HP moulded cases can be integrated in our XL³ and XL³ S enclosures on mounting plate only in vertical and horizontal position. DPX³ 250 HP thermal magnetic circuit-breakers ensure the break, the control, the disconnection and the protection of the power lines. They are available with:

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA.
- 10 rated currents: 16 A, 20 A, 25 A, 32 A, 40 A, 50 A, 63 A, 80 A, 100 A, 125 A, 160 A, 200 A, 250 A.
- In 3P, 4P and 4P residual current protection version.
- residual current protection module integrated (type A, available for Icu = 36 kA, 50 kA and 4P version).
- Compliant to IEC 60947-2 standard.



	DPX³ 250 HP THERMAL MAGNETIC								DPX³ 250 HP THERMAL MAGNETIC + RESIDUAL-CURRENT	
	36 kA		50 kA		70 kA		100 kA		36 kA	50 kA
Rating	3P	4P	3P	4P	3P	4P	3P	4P	4P	
16 A	4 230 00	4 230 15	4 230 60	4 230 75	4 231 20	4 231 35	4 231 50	4 231 65	4 230 45	4 231 05
20 A	4 230 01	4 230 16	4 230 61	4 230 76	4 231 21	4 231 36	4 231 51	4 231 66	4 230 46	4 231 06
25 A	4 230 02	4 230 17	4 230 62	4 230 77	4 231 22	4 231 37	4 231 52	4 231 67	4 230 47	4 231 07
32 A	4 230 03	4 230 18	4 230 63	4 230 78	4 231 23	4 231 38	4 231 53	4 231 68	4 230 48	4 231 08
40 A	4 230 04	4 230 19	4 230 64	4 230 79	4 231 24	4 231 39	4 231 54	4 231 69	4 230 49	4 231 09
50 A	4 230 05	4 230 20	4 230 65	4 230 80	4 231 25	4 231 40	4 231 55	4 231 70	4 230 50	4 231 10
63 A	4 230 06	4 230 21	4 230 66	4 230 81	4 231 26	4 231 41	4 231 56	4 231 71	4 230 51	4 231 11
80 A	4 230 07	4 230 22	4 230 67	4 230 82	4 231 27	4 231 42	4 231 57	4 231 72	4 230 52	4 231 12
100 A	4 230 08	4 230 23	4 230 68	4 230 83	4 231 28	4 231 43	4 231 58	4 231 73	4 230 53	4 231 13
125 A	4 230 09	4 230 24	4 230 69	4 230 84	4 231 29	4 231 44	4 231 59	4 231 74	4 230 54	4 231 14
160 A	4 230 10	4 230 25	4 230 70	4 230 85	4 231 30	4 231 45	4 231 60	4 231 75	4 230 55	4 231 15
200 A	4 230 11	4 230 26	4 230 71	4 230 86	4 231 31	4 231 46	4 231 61	4 231 76	4 230 56	4 231 16
250 A	4 230 12	4 230 27	4 230 72	4 230 87	4 231 32	4 231 47	4 231 62	4 231 77	4 230 57	4 231 17

DPX³ 250 HP electronic S1 circuit-breakers ensure the load breaking and the disconnection of the electric lines. They are available in:

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA.
- 4 rated currents: 40 A, 100 A, 160 A, 250 A.
- 3P, 4P (with Neutral settings) and 4P residual current protection version.
- residual current protection module integrated (type A, available for Icu = 36 kA, 50 kA in 4P version).
- Compliant to IEC 60947-2 standard.

	DPX³ 250 HP ELECTRONIC S1								DPX³ 250 HP ELECTRONIC S1 + RESIDUAL-CURRENT	
	36 kA		50 kA		70 kA		100 kA		36 kA	50 kA
Rating	3P	4P	3P	4P	3P	4P	3P	4P	4P	
40 A	4 232 00	4 232 05	4 232 20	4 232 25	4 232 40	4 232 45	4 232 50	4 232 55	4 232 15	4 232 35
100 A	4 232 01	4 232 06	4 232 21	4 232 26	4 232 41	4 232 46	4 232 51	4 232 56	4 232 16	4 232 36
160 A	4 232 02	4 232 07	4 232 22	4 232 27	4 232 42	4 232 47	4 232 52	4 232 57	4 232 17	4 232 37
250 A	4 232 03	4 232 08	4 232 23	4 232 28	4 232 43	4 232 48	4 232 53	4 232 58	4 232 18	4 232 38

DPX³ 250 HP electronic S10 circuit-breakers ensure the load breaking and the disconnection of the electric lines.
They are available in:

- 4 breaking capacities : 36 kA, 50 kA, 70 kA, 100 kA (36 kA and 50 kA for the versions with residual current protection).
- 4 rated currents : 40 A, 100 A, 160 A, 250 A.
- In 3P, 4P (with Neutral setting) and 4P residual current protection version.
- residual current protection module integrated (type A, available Icu = 36 kA, 50 kA in 4P version).
- Compliant to IEC 60947-2 standard.

	DPX³ 250 HP ELECTRONIC S10								DPX³ 250 HP ELECTRONIC S10 + RESIDUAL-CURRENT	
	36 kA		50 kA		70 kA		100 kA		36 kA	50 kA
Rating	3P	4P	3P	4P	3P	4P	3P	4P	4P	
40 A	4 234 00	4 234 05	4 234 20	4 234 25	4 234 40	4 234 45	4 234 50	4 234 55	4 234 15	4 234 35
100 A	4 234 01	4 234 06	4 234 21	4 234 26	4 234 41	4 234 46	4 234 51	4 234 56	4 234 16	4 234 36
160 A	4 234 02	4 234 07	4 234 22	4 234 27	4 234 42	4 234 47	4 234 52	4 234 57	4 234 17	4 234 37
250 A	4 234 03	4 234 08	4 234 23	4 234 28	4 234 43	4 234 48	4 234 53	4 234 58	4 234 18	4 234 38

DPX³ 250 HP electronic S10 circuit-breakers, with measure, ensure the load breaking and the disconnection of the electric lines.
They are available in:

- 4 breaking capacities : 36 kA, 50 kA, 70 kA, 100 kA (36 kA and 50 kA for versions with residual current protection).
- 4 rated currents : 40 A, 100 A, 160 A, 250 A.
- In 3P, 4P (with Neutral settings) and 4P residual current protection version.
- residual current protection module integrated (type A, available for Icu = 36 kA, 50 kA in 4P version).
- Compliant to IEC 60947-2 standard.

	DPX³ 250 HP ELECTRONIC S10 WITH MEASURE								DPX³ 250 HP ELECTRONIC S10 + RESIDUAL-CURRENT PROTECTION WITH MEASURE	
	36 kA		50 kA		70 kA		100 kA		36 kA	50 kA
Rating	3P	4P	3P	4P	3P	4P	3P	4P	4P	
40 A	4 234 60	4 234 65	4 234 80	4 234 85	4 235 00	4 235 05	4 235 10	4 235 15	4 234 75	4 234 95
100 A	4 234 61	4 234 66	4 234 81	4 234 86	4 235 01	4 235 06	4 235 11	4 235 16	4 234 76	4 234 96
160 A	4 234 62	4 234 67	4 234 82	4 234 87	4 235 02	4 235 07	4 235 12	4 235 17	4 234 77	4 234 97
250 A	4 234 63	4 234 68	4 234 83	4 234 88	4 235 03	4 235 08	4 235 13	4 235 18	4 234 78	4 234 98

PRESENTATION

DPX³ 250 HP Magnetic only circuit-breakers ensure the breaking, the control, the disconnection and the protection (on short-circuit) of three-phase motors.
They are available in:

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA.
- 9 rated currents : 6,3 A, 12,5 A, 25 A, 32 A, 50 A, 80 A, 100 A, 160 A, 220 A.
- 3P and 4P version.
- Compliant to IEC 60947-2 standard.

	DPX³ 250 HP MAGNETIC ONLY (NON ELECTRONIC)							
	36 kA		50 kA		70 kA		100 kA	
Rating	3P	4P	3P	4P	3P	4P	3P	4P
6,3 A	4 239 01	4 239 13	4 239 25	4 239 37	4 239 49	4 239 61	4 239 73	4 239 85
12,5 A	4 239 02	4 239 14	4 239 26	4 239 38	4 239 50	4 239 62	4 239 74	4 239 86
25 A	4 239 03	4 239 15	4 239 27	4 239 39	4 239 51	4 239 63	4 239 75	4 239 87
32 A	4 239 04	4 239 16	4 239 28	4 239 40	4 239 52	4 239 64	4 239 76	4 239 88
50 A	4 239 05	4 239 17	4 239 29	4 239 41	4 239 53	4 239 65	4 239 77	4 239 89
80 A	4 239 06	4 239 18	4 239 30	4 239 42	4 239 54	4 239 66	4 239 78	4 239 90
100 A	4 239 07	4 239 19	4 239 31	4 239 43	4 239 55	4 239 67	4 239 79	4 239 91
160 A	4 239 08	4 239 20	4 239 32	4 239 44	4 239 56	4 239 68	4 239 80	4 239 92
220 A	4 239 09	4 239 20	4 239 33	4 239 45	4 239 57	4 239 69	4 239 81	4 239 93

DPX³-I 250 HP switches ensure the load breaking and the disconnection of the electric lines. They are available in

- 1 size only : 250 A.
- 3P, 4P and 4P residual current protection version.
- residual current protection module integrated (type A, available in 4P version).
- Compliant to IEC 60947-3 standard.



	DPX³-I 250 HP		DPX³-I 250 HP + RESIDUAL-CURRENT.
Rating	3P	4P	4P
250 A	4 231 80	4 231 81	4 231 83

DPX³-I 250 HP circuit-breakers are easily recognizable with their grey handles.

DPX³ 630/DPX³-I 630/DPX³ 630 AB/DPX³ 630 Magnetic only

DPX³ 630 molded cases can be integrated in our XL³ 800/4000 and XL³ S 630/4000 enclosures on mounting plates only in vertical and horizontal positions.
DPX³ 630 thermal magnetic circuit-breakers ensure the breaking, the control, the disconnection and the protection of the electric lines. They are available in:

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA.
- 5 sizes: 250 A, 320 A, 400 A, 500 A, 630 A.
- 3P, 3P+N and 4P version.
- with a downstream earthleakage module.
- Compliant to IEC 60947-2 standard.



	DPX³ 630 THERMAL MAGNETIC											
	36 kA			50 kA			70 kA			100 kA		
Rating	3P	3P + N	4P	3P	3P + N	4P	3P	3P + N	4P	3P	3P + N	4P
250 A	4 220 00	-	4 220 05	4 220 14	-	4 220 19	4 220 28	-	4 220 33	4 220 42	-	4 220 47
320 A	4 220 01	4 220 10	4 220 06	4 220 15	4 220 24	4 220 20	4 220 29	4 220 38	4 220 34	4 220 43	4 220 52	4 220 48
400 A	4 220 02	4 220 11	4 220 07	4 220 16	4 220 25	4 220 21	4 220 30	4 220 39	4 220 35	4 220 44	4 220 53	4 220 49
500 A	4 220 03	4 220 12	4 220 08	4 220 17	4 220 26	4 220 22	4 220 31	4 220 40	4 220 36	4 220 45	4 220 54	4 220 50
630 A	4 220 04	4 220 13	4 220 09	4 220 18	4 220 27	4 220 23	4 220 32	4 220 41	4 220 37	4 220 46	4 220 55	4 220 51

DPX³ 630 electronic S1 and S10 circuit-breakers (with and without measure/earth protection) ensure the breaking, the control, the disconnection and the protection of the electric lines. They are available in:

- 4 breaking capacities: 36 kA, 50 kA, 70 kA, 100 kA.
- 5 sizes: 250 A, 320 A, 400 A, 500 A, 630 A.
- 3P, 4P with Neutral settings version.
- with a downstream earthleakage module.
- Compliant to IEC 60947-2 standard.

	DPX³ 630 ELECTRONIC S1							
	36 kA		50 kA		70 kA		100 kA	
Rating	3P	4P	3P	4P	3P	4P	3P	4P
250 A	4 224 98	4 225 03	4 225 08	4 225 13	4 225 18	4 225 23	4 225 28	4 225 33
320 A	4 224 99	4 225 04	4 225 09	4 225 14	4 225 19	4 225 24	4 225 29	4 225 34
400 A	4 225 00	4 225 05	4 225 10	4 225 15	4 225 20	4 225 25	4 225 30	4 225 35
500 A	4 225 01	4 225 06	4 225 11	4 225 16	4 225 21	4 225 26	4 225 31	4 225 36
630 A	4 225 02	4 225 07	4 225 12	4 225 17	4 225 22	4 225 27	4 225 32	4 225 37



PRESENTATION

	DPX³ 630 ELECTRONIC S10							
	36 kA		50 kA		70 kA		100 kA	
Rating	3P	4P	3P	4P	3P	4P	3P	4P
250 A	4 228 20	4 228 25	4 228 30	4 228 35	4 228 40	4 228 45	4 228 50	4 228 55
320 A	4 228 21	4 228 26	4 228 31	4 228 36	4 228 41	4 228 46	4 228 51	4 228 56
400 A	4 228 22	4 228 27	4 228 32	4 228 37	4 228 42	4 228 47	4 228 52	4 228 57
500 A	4 228 23	4 228 28	4 228 33	4 228 38	4 228 43	4 228 48	4 228 53	4 228 58
630 A	4 228 24	4 228 29	4 228 34	4 228 39	4 228 44	4 228 49	4 228 54	4 228 59

	DPX³ 630 ELECTRONIC S10 WITH MEASURE							
	36 kA		50 kA		70 kA		100 kA	
Rating	3P	4P	3P	4P	3P	4P	3P	4P
250 A	4 228 60	4 228 65	4 228 70	4 228 75	4 228 80	4 228 85	4 228 90	4 228 95
320 A	4 228 61	4 228 66	4 228 71	4 228 76	4 228 81	4 228 86	4 228 91	4 228 96
400 A	4 228 62	4 228 67	4 228 72	4 228 77	4 228 82	4 228 87	4 228 92	4 228 97
500 A	4 228 63	4 228 68	4 228 73	4 228 78	4 228 83	4 228 88	4 228 93	4 228 98
630 A	4 228 64	4 228 69	4 228 74	4 228 79	4 228 84	4 228 89	4 228 94	4 228 99

DPX³ 630 magnetic only circuit-breakers ensure the breaking, the control, the disconnection and the protection of the three-phase motos. They are available in:

- 2 breaking capacities: 36 kA, 70 kA.
- 3 sizes: 400 A, 500 A and 630 A.
- 3P, 4P version.
- with a downstream earthleakage module.
- Compliant to IEC 60947-2 standard.

	DPX³ 630 MAGNETIC ONLY			
	36 kA		70 kA	
Rating	3P	4P	3P	4P
400 A	4 225 98	4 226 16	4 226 01	4 226 18
500 A	4 225 99	-	4 226 02	-
630 A	4 226 00	4 226 17	4 226 03	4 226 19

DPX³-I 630 switches ensure the load breaking and electrical circuit isolation. They are available with:

- 2 ratings: 400 A, 630 A.
- 3P, 4P version.
- A downstream residual current block.
- Conforming to the IEC 60947-3 standard.

	DPX³-I 630	
Rating	3P	4P
400 A	4 222 16	4 222 18
630 A	4 222 17	4 222 19

DPX³ 630 AB circuit-breakers are used for breaking, controlling, isolating and protecting EDF installations (monitored power). They are available in:

- 1 rating only: 400 A.
- 4P version only.
- A downstream residual current device
- Conforming to the IEC 60947-2 standard.

	DPX³-I 630 AB - ELECTRONIC	
	Without measure	With measure
Rating	4P	
400 A	4 225 96	4 225 97

DPX³ 1600/DPX³-I 1600/DPX³ 1600 MAGNETIC ONLY

DPX³ 1600 MCCBs fit into our XL³ 4000 and XL³ S 4000 enclosures on mounting only, in vertical and horizontal position.
DPX³ 1600 thermal magnetic circuit-breakers are used for breaking, controlling, isolating and protecting power lines, and are available with :

- 4 breaking capacities : 36 kA, 50 kA, 70 kA, 100 kA.
- 4 ratings : 630 A, 800 A, 1000 A, 1250 A.
- 3P or 3P+N (external neutral) or 4P.
- Conforming to IEC 60947-2 standard.



	DPX³ 1600 THERMAL MAGNETIC											
	36 kA			50 kA			70 kA			100 kA		
Rating	3P	3P + N	4P	3P	3P + N	4P	3P	3P + N	4P	3P	3P + N	4P
630 A	4 222 51	-	4 222 56	4 222 63	-	4 222 68	4 222 75	-	4 222 80	4 222 87	-	4 222 92
800 A	4 222 52	-	4 222 57	4 222 64	-	4 222 69	4 222 76	-	4 222 81	4 222 88	-	4 222 93
1000 A	4 222 53	4 222 60	4 222 58	4 222 65	4 222 72	4 222 70	4 222 77	4 222 84	4 222 82	4 222 89	4 222 96	4 222 94
1250 A	4 222 54	4 222 61	4 222 59	4 222 66	4 222 73	4 222 71	4 222 78	4 222 85	4 222 83	4 222 90	4 222 97	4 222 95

DPX³ 1600 Electronics S1 and S10 circuit-breakers (with and without measurement/earth protection) ensure the breaking, control, disconnection and protection of power lines. They are available with :

- 4 breaking capacities : 36 kA, 50 kA, 70 kA, 100 kA.
- 6 ratings : 500 A (version S10 only), 630 A, 800 A, 1000 A, 1250 A, 1600 A.
- 3P, 4P or 3P+N (external neutral) versions.
- Conforming to IEC 60947-2 standard.

	DPX³ 1600 ELECTRONIC S1							
	36 kA		50 kA		70 kA		100 kA	
Rating	3P	4P	3P	4P	3P	4P	3P	4P
630 A	4 225 39	4 225 45	4 225 51	4 225 57	4 225 63	4 225 69	4 225 75	4 225 81
800 A	4 225 40	4 225 46	4 225 52	4 225 58	4 225 64	4 225 70	4 225 76	4 225 82
1000 A	4 225 41	4 225 47	4 225 53	4 225 59	4 225 65	4 225 71	4 225 77	4 225 83
1250 A	4 225 42	4 225 48	4 225 54	4 225 60	4 225 66	4 225 72	4 225 78	4 225 84
1600 A	4 225 43	4 225 49	4 225 55	4 225 61	4 225 67	4 225 73	-	-

PRESENTATION

	DPX³ 1600 ELECTRONIC S10							
	36 kA		50 kA		70 kA		100 kA	
Rating	3P	4P	3P	4P	3P	4P	3P	4P
500 A	4 229 00	4 229 01	4 229 02	4 229 03	4 229 04	4 229 05	4 229 06	4 229 07
630 A	4 229 20	4 229 25	4 229 30	4 229 35	4 229 40	4 229 45	4 229 50	4 229 55
800 A	4 229 21	4 229 26	4 229 31	4 229 36	4 229 41	4 229 46	4 229 51	4 229 56
1000 A	4 229 22	4 229 27	4 229 32	4 229 37	4 229 42	4 229 47	4 229 52	4 229 57
1250 A	4 229 23	4 229 28	4 229 33	4 229 38	4 229 43	4 229 48	4 229 53	4 229 58
1600 A	4 229 24	4 229 29	4 229 34	4 229 39	4 229 44	4 229 49	-	-

	DPX³ 1600 ELECTRONIC S10 WITH MEASURE							
	36 kA		50 kA		70 kA		100 kA	
Rating	3P	4P	3P	4P	3P	4P	3P	4P
500 A	4 229 08	4 229 09	4 229 10	4 229 11	4 229 12	4 229 13	4 229 14	4 229 15
630 A	4 229 60	4 229 65	4 229 70	4 229 75	4 229 80	4 229 85	4 229 90	4 229 95
800 A	4 229 61	4 229 66	4 229 71	4 229 76	4 229 81	4 229 86	4 229 91	4 229 96
1000 A	4 229 62	4 229 67	4 229 72	4 229 77	4 229 82	4 229 87	4 229 92	4 229 97
1250 A	4 229 63	4 229 68	4 229 73	4 229 78	4 229 83	4 229 88	4 229 93	4 229 98
1600 A	4 229 64	4 229 69	4 229 74	4 229 79	4 229 84	4 229 89	-	-

DPX³ 1600 Magnetic only circuit-breakers provide breaking, control, disconnection and magnetic protection. They are available with:

- 2 breaking capacities: 50 kA, 70 kA.
- 2 ratings: 800 A, 1000 A.
- 3P and 4P versions.
- Conforming to IEC 60947-2 standard.

	DPX³ 1600 MAGNETIC ONLY			
	50 kA		70 kA	
Rating	3P	4P	3P	4P
800 A	4 226 04	4 226 12	4 226 06	4 226 14
1000 A	4 226 05	4 226 13	4 226 07	4 226 15

DPX³-I 1600 switches provide on-load disconnection and isolation of electrical circuits. They are available with:

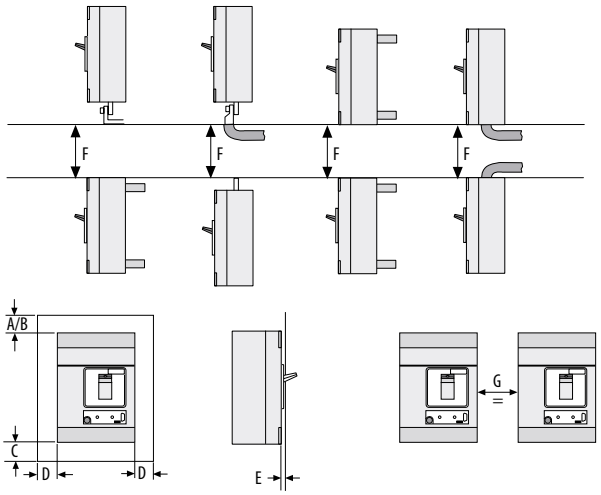
- 4 ratings: 630 A, 800 A, 1250 A, 1600 A.
- 3P and 4P versions.
- Conforming to IEC 60947-3.

	DPX³-I 1600	
Rating	3P	4P
630 A	4 224 90	4 224 94
800 A	4 224 91	4 224 95
1250 A	4 224 92	4 224 96
1600 A	4 224 93	4 224 97



IMPLEMENTATION

MINIMAL INSTALLATION DISTANCE



	Ground wall	Insulated wall	Ground wall	Metal wall	Faceplate	Distance between two circuit-breakers	
	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
DPX³ 125 HP/160 HP	60	30	20	20	0	100	0
DPX³ 250 HP	60	30	20	20	0	100	0
DPX³ 630	70	25	25	25	0	160	0
DPX³ 1600	90	40	40	40	0	160	0

DPX³ 125 HP/DPX³ 160 HP

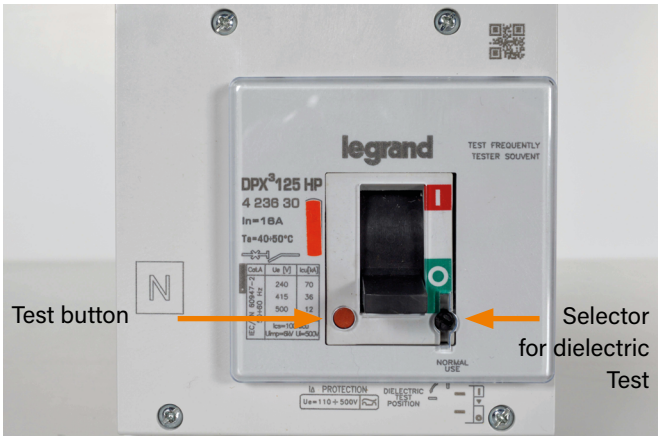


PRODUCT DESCRIPTION

1. Front panel of the circuit-breaker

Examples of circuit-breaker front panels:

Thermal-magnetic circuit-breaker with 4P residual current protection



3P thermal-magnetic circuit-breaker



2. Handle position (ON - Tripped - OFF)

Below are the 3 positions of the circuit-breaker handles according to their status:



- Open (OFF) (O).



- Tripped.



- Closed (ON) (I).

When the DPX³ 125 HP or 160 HP have tripped, before it can be closed again, it must be reset by turning the handle to the O position (OFF position).

3. Intensity settings (A) according to the size

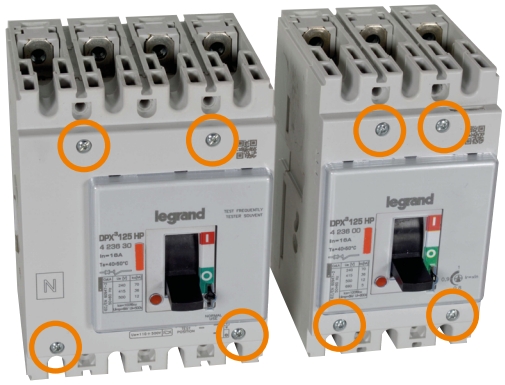
For DPX³ 125 HP/160 HP thermal-magnetic:

Thermal : Ir		Intensity (A)										
Multiplying factor of In	Marquing	16	20	25	32	40	50	63	80	100	125	160 (only DPX³ 160 HP)
0,8	0,8	12,8	16	20	25,6	32	40	50,4	64	80	100	128
0,9	0,9	14,4	18	22,5	28,8	36	45	56,7	72	90	112,5	144
1	1	16	20	25	32	40	50	63	80	100	125	160

Magnetic : Ii	16	20	25	32	40	50	63	80	100	125	160 (only DPX³ 160 HP)
Fixed	400	400	400	400	400	500	630	800	1000	1250	1600

4. Front opening

To open the front panel, simply put the circuit-breaker in the open or tripped position and loosen the 2 screws with a PZ1 screwdriver. The front panel is completely separated from the circuit-breaker. The screws are captive.



ELECTRICAL ACCESSORIES

AUXILIARY CONTACT (OC)/FAULT SIGNALLING CONTACT (CTR)

Cat.No	Voltage
4 210 11	24/48/110/230 V⎓ 110/230 V∿

SHUNT TRIP (ST)

Cat.Nos	Voltage
4 210 12	12 V∿/⎓
4 210 13	24 V∿/⎓
4 210 14	48 V∿/⎓
4 210 15	110 - 130 V∿
4 210 16	200 - 277 V∿
4 210 17	380 - 480 V∿

UNDERVOLTAGE RELEASE (UVR)

Cat.Nos	Voltage
4 210 18	12 V∿/⎓
4 210 19	24 V∿/⎓
4 210 20	48 V∿/⎓
4 210 21	110 - 130 V∿/⎓
4 210 22	200 - 240 V∿/⎓
4 210 23	277 V∿
4 210 24	380 - 415 V∿
4 210 25	440 - 480 V∿

TIME-LAG UNDERVOLTAGE RELEASE

Cat.Nos	Voltage
0 261 90	230 V∿
0 261 91	400 V∿
4 210 98	Release for time-lag modules

1. AUXILIARY CONTACT (OC) / FAULT SIGNALLING CONTACT (CTR)

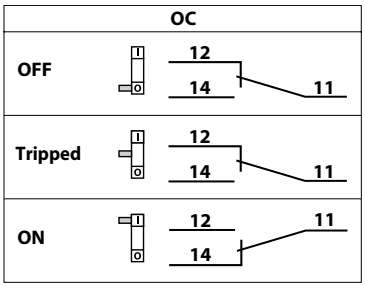


This contact Cat.No is common to all DPX³ circuit-breaker and switch ranges. Depending on its position in the product, it acts either as an auxiliary contact or as a fault signal contact.

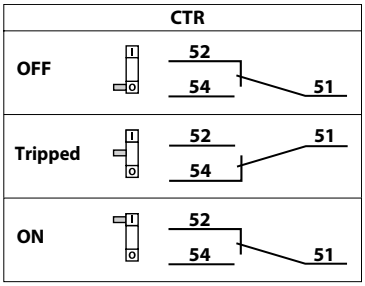
The auxiliary contact (OC) is used to signal the position of the power contacts of the circuit-breaker or switch (open or closed).

The fault signal contact (CTR) allows the signalling of a product disconnection either by an internal trigger or by mechanical action on the red "test" button.
These contacts are of the changeover type (NO/NC) with dry contact (potential free).

OC contact status



CTR contact status



Electrical characteristics (OC & CTR)

Voltage	Intensity (A)
24 V⎓	5
48 V⎓	1,7
110 V⎓	0,5
230 V⎓	0,25
110 V∿	4
230 V∿	3

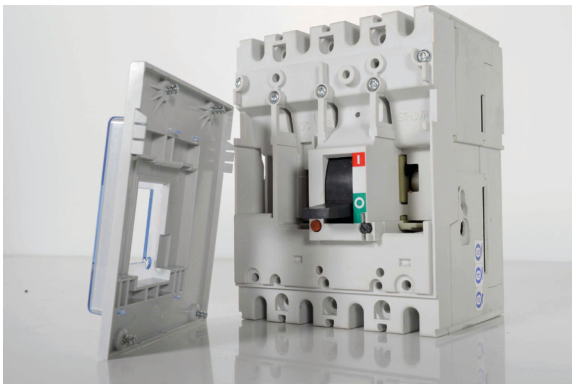
Implementation

The contact(s) are inserted after removing the front panel of the product. It is only possible to insert one OC and/or one CTR at the same time. They are placed on the left side of the handle. Markings are indicated on the product.

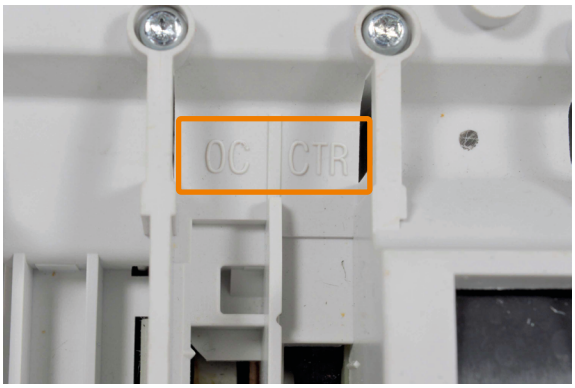
The locations are different for the OC and the CTR.

FRONT PANEL OPENING





2 marks are indicated on the product (OC/CTR)

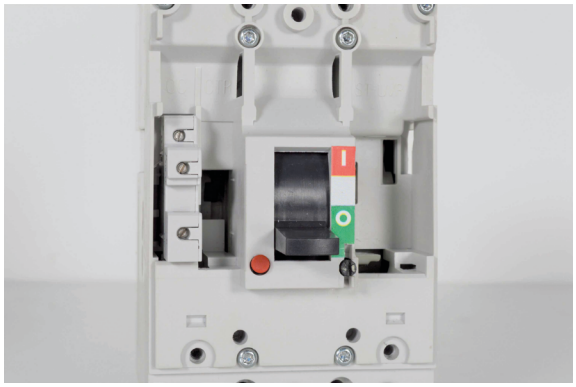


SETTING UP CONTACTS

One CTR contact.



One OC contact.



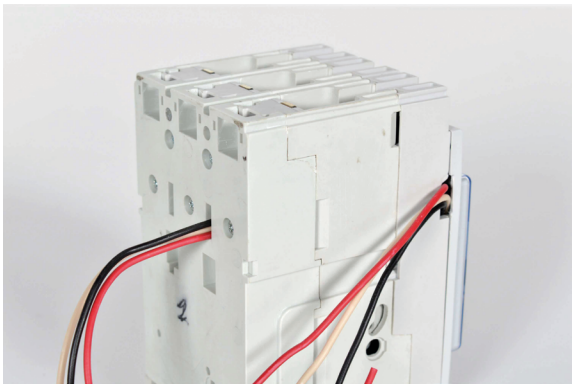
CONNECTION

The DPX³ offer several possibilities for the output of the connecting wires: towards the back of the product, laterally and upwards.
Below are some examples of wire outputs:

Upper and lateral output.



Rear and lateral output.



2. SHUNT TRIP (ST)



Both shunt trip and undervoltage releases are common to the DPX³ 125 HP/160 HP/250 HP range.
There is a wide voltage range from 12 volts (AC and DC) to 48 volts for DC and 480 volts for AC.
The shunt trips allow instantaneous opening of the protection device by powering the coil:

- Control by external NO contact

The contact incorporated in the shunt trip cuts off its power supply when an opening command is given (e.g.: emergency stop with hooking) thus avoiding the problem of overheating.
Permanent power supply to the shunt trip is possible, preventing the circuit-breaker from closing.

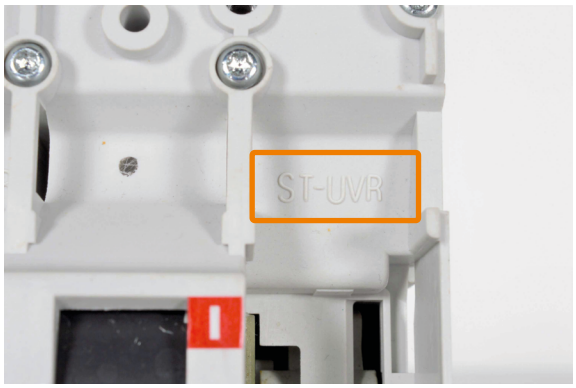
Electrical characteristics

DPX³ 125 HP/160 HP/250 HP	
Operating range	70 to 110 % Un
Operating time	≤ 50 ms
Inrush power	400 VA/W
Request time	> 50 ms
Insulation voltage	1,8 kV

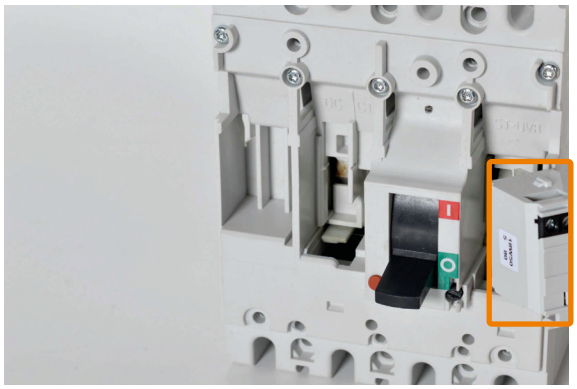
SETTING UP

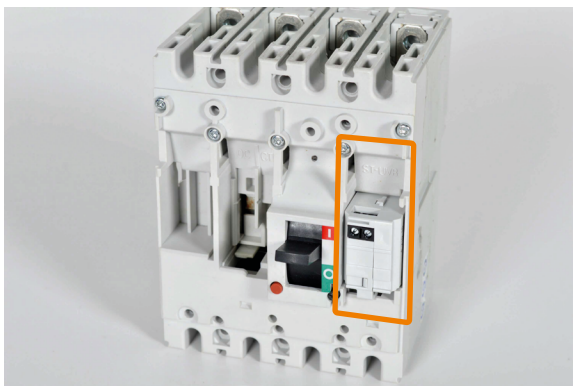
The circuit-breakers have a single location for the releases. This location is marked on the products. The installation is done simply by a clip located on the releases.

1. Set the circuit-breaker to the tripped position by pressing the red button on the front panel.



2. Open the front panel.
3. Insert the shunt trip.



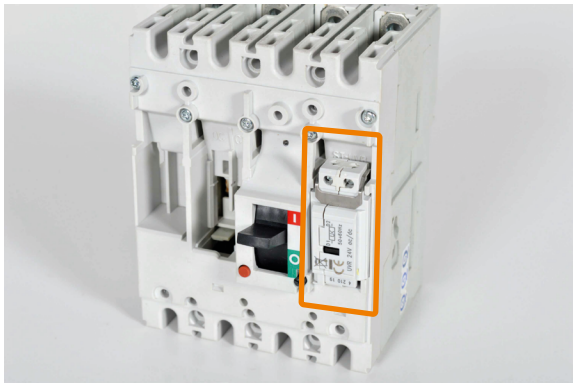


CONNECTION

It is made with wires of 1.5 mm² max. and the wire outputs are identical to the auxiliary contacts, depending on the wiring.

3. Undervoltage release (UVR)





There is a wide range of rated voltages from 12 volts (AC and DC) to 130 volts for DC and 480 volts for AC.
Undervoltage releases allow instant opening of the circuit-breaker by cutting off the power supply to their coil: positive safety (e.g.: emergency stop by external NC contact).

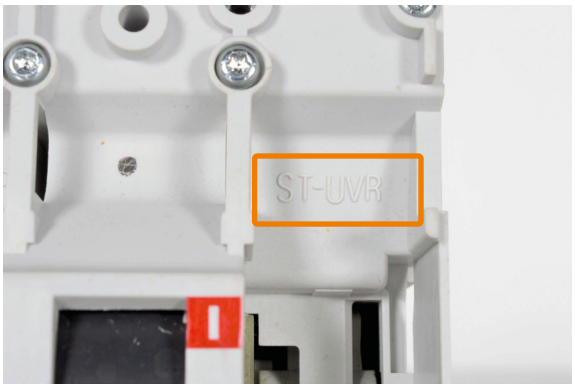
The undervoltage release must be supplied with power before it can operate the associated circuit-breaker. The circuit-breaker must first be reset to the OFF position.

Electrical characteristics

DPX³ 125 HP/ 160 HP/250 HP	
Operating range	85 to 110 %
Operating time	≤ 50 ms
Inrush power	1,6 W/5 VA
Request time	> 50 ms
Insulation voltage	1,8 kV

SETTING UP

It is identical to the shunt trip (see previous page).



CONNECTION

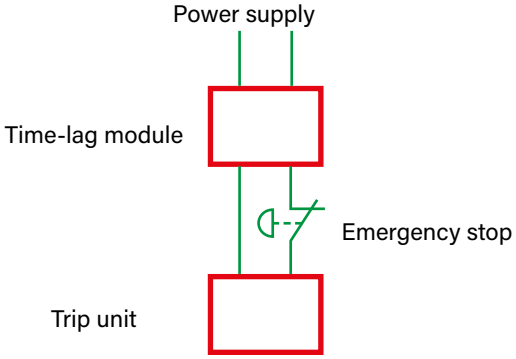
It is identical to the shunt trip (see previous page).

4. Time-lag modules

Combined with the release Cat.No 4 210 98 These modules are used to delay the opening of the circuit-breaker thus prevent unwanted tripping in the event of micro cuts in the network.



The wiring is done in parallel.
2 voltages are available: 230 volts and 400 volts.



MECHANICAL ACCESSORIES

INSULATED SHIELDS

Cat.Nos	Poles
4 238 34	3P
4 238 35	4P

PADLOCK FOR LOCKING

Cat.No
4 210 49

INTERLOCK

Cat.Nos	Accessories/Versions
4 238 25	Plate for lateral interlocking
4 238 27	Without electronic module for fixed circuit-breakers
4 238 28	With electronic module (contacts) for fixed circuit-breakers

ROTARY HANDLE

Cat.Nos	Accessories/Versions
4 238 70/10*	Direct standard
4 238 71/11*	Direct emergency
4 238 72/12*	Vari-depth, standard
4 238 73/13*	Vari-depth, standard for emergency use
4 238 05	Keylock support for vari-depth handle

* Only for India

UNIVERSAL KEY BARREL

Cat.Nos	Accessories/Versions
4 238 80	Universal key barrel and flat key with random mapping
4 238 81	Key barrel and flat key with fixed mapping EL43525
4 238 82	Key barrel and flat key with fixed mapping EL43363
4 238 83	Key barrel star key with random mapping

CAGE TERMINALS

Cat.Nos	Poles
4 238 84	3P standard
4 238 85	4P standard
4 238 76	3P high capacity
4 238 77	4P high capacity

SPREADERS

Cat.Nos	Poles
4 238 88	3P
4 238 89	4P

REAR TERMINALS

Cat.Nos	Poles
4 238 91	3P
4 238 92	4P

TERMINAL SHIELDS

Cat.Nos	Poles
4 238 93	3P
4 238 94	4P

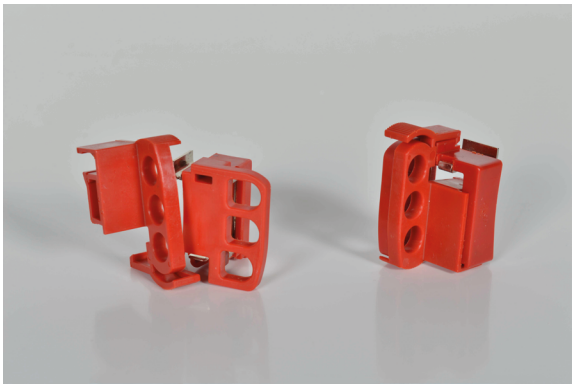
1. Insulated shields

The shields supplied with the circuit-breakers are mounted upstream of them simply by insertion between the poles (2 shields for 3P circuit-breakers and 3 shields for 4P circuit-breakers). They are used to prevent the propagation of an electric arc in the event of a shortcircuit.
Cat.Nos 4 238 34 and 4 238 35 are sets of shields for 1 circuit-breaker 3P or 4P (upstream or downstream).





2. Padlock for locking



This accessory allows to lock the whole range of DPX³ 125 HP/160 HP, by padlocking their handles. It is possible to install a maximum of 3 padlocks, with a minimum diameter of 3 mm and a maximum of 8 mm. It is composed of 2 different parts, one to be fixed on the DPX³ and the other to be clipped on the first part.
Setting up :

1. Put the DPX³ on 0 (OFF).
2. Insert the first part on the circuit-breaker.



3. Clip the second part on the first one.



4. The lockout is then possible with a padlock.



3. Interlock

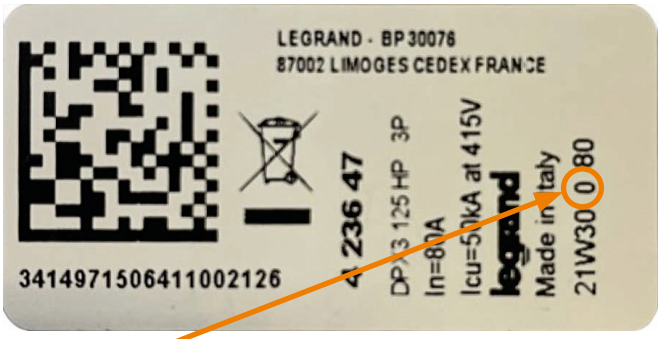
The purpose of this accessory is to associate two DPX³ 125 HP/160 HP 3P and/or 4P to prevent the closing of both products at the same time. It is mounted on a dedicated plate (Cat.No 4 238 25).
Below are the 2 interlock mechanisms Cat.Nos 4 238 27 and 4 238 28.





MECHANICAL ACCESSORIES

Please check the label on the circuit-breaker to see if the mechanism fits on it.



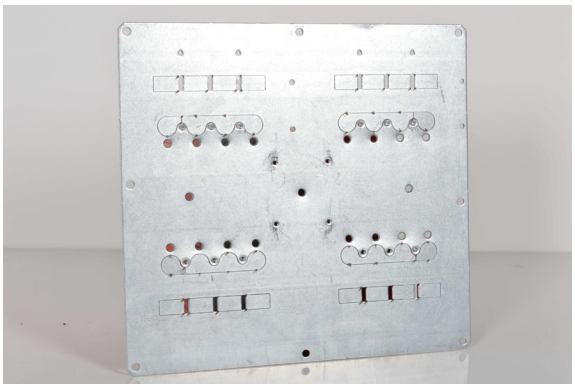
If this number is greater than or equal to 1, the circuit-breakers are OK. Here, the mechanism cannot be mounted.

The advantages of this system are simple implementation, small space requirement and no adjustment.

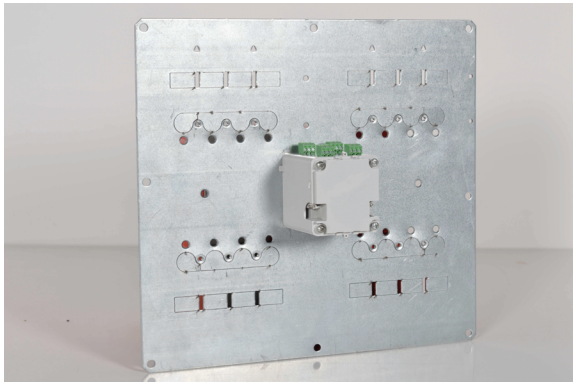
MISE EN PLACE

Il n'est pas possible de combiner un DPX³ 125 HP or un DPX³ 160 HP avec un DPX³ 250 HP.
Toutes les autres configurations sont possibles.

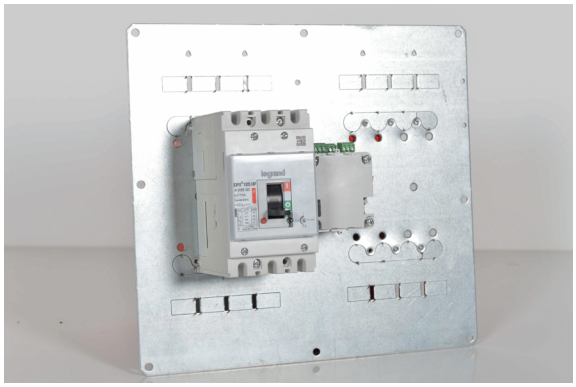
The 2 interlock versions are mounted identically.
The Cat.No 4 238 28 has 4 transfer switch contacts with connectors, which differs from the standard version.
Mounting is done on a dedicated plate (Cat.No 4 238 25).



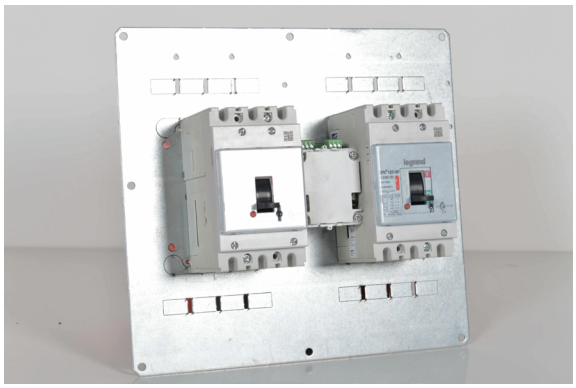
1. Fix the interlocking mechanism on the central part of the plate using the 4 screws supplied.



2. Put the circuit-breaker in the tripped position or in the 0 (OFF) position.
3. Insert the metal rod on the side of the circuit-breaker.
4. Fix the circuit-breaker on the plate.



5. Insert the metal rod on the side of the second circuit-breaker.
6. Fix the second circuit-breaker on plate and make sure that the 2 axis are in the right position.



It is possible to equip the system with one or two seal(s) supplied with the interlock.

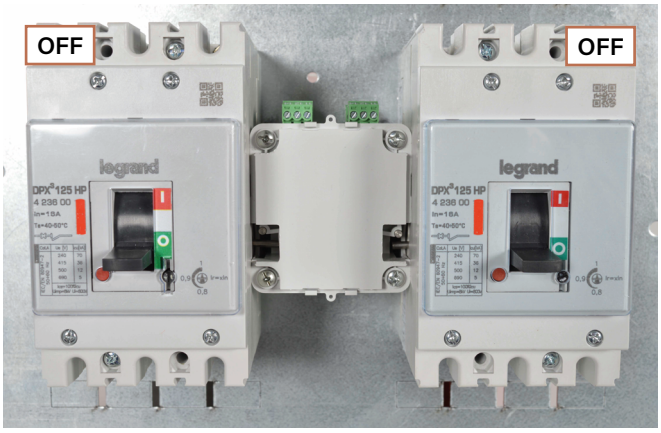




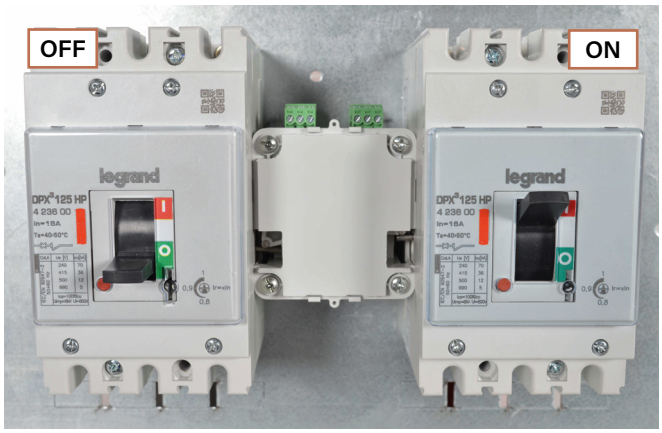
4 rods are supplied with the interlocking mechanisms. The small ones (17,8 mm) are for the DPX³ 125 HP/160 HP and the large ones (29,5 mm) are for theDPX³ 250 HP.

It is possible to connect the circuit-breaker from the front or the rear terminals.
Here are the 3 possible positions of the transfer switch system and the truth table :

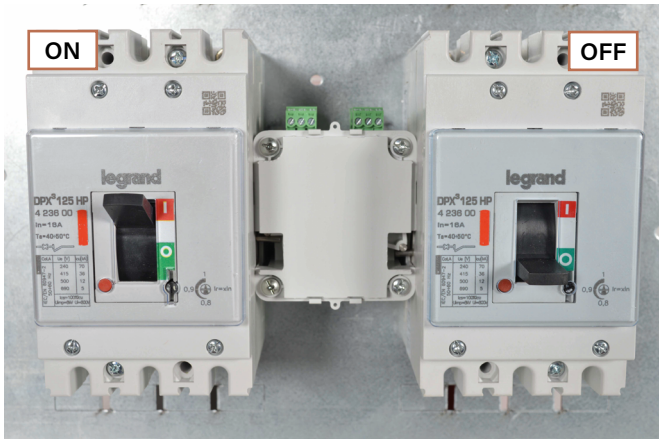
1. First position



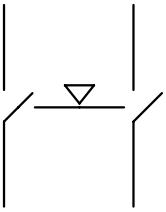
2. Second position.



3. Third position.



Q1	Q2	
0	0	✓
0	1	✓
1	0	✓
1	1	✗



4. Rotary handles

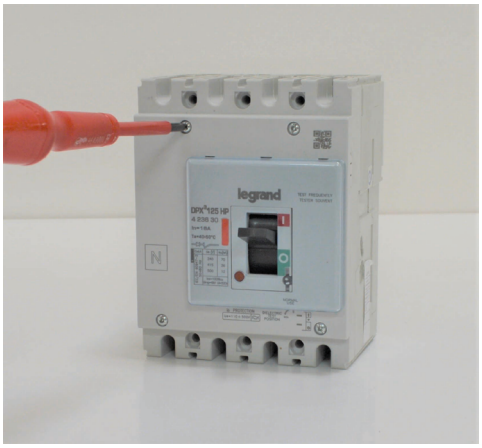
Direct handles

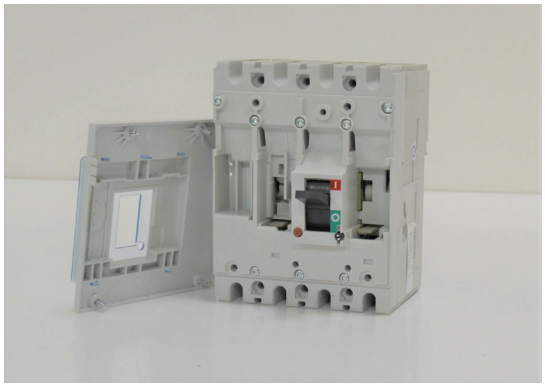


They exist in standard (dark grey color) and in "emergency" (red and yellow color). Their mounting is identical. These rotary handles cannot be installed on DPX³ 125 HP/160 HP with earth leakage module. They are sealable.

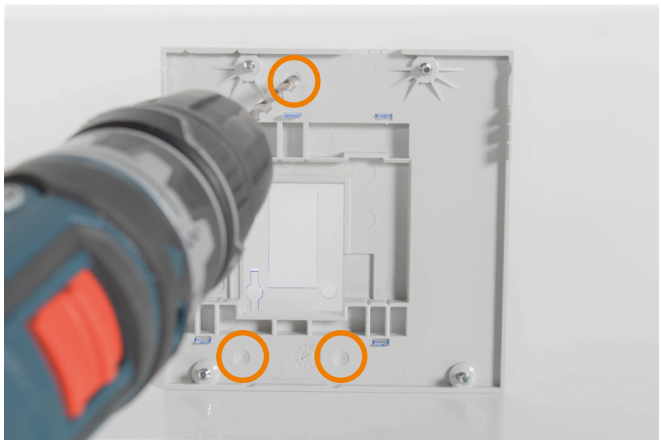
SETTING UP

1. Open the front panel after turning the circuit-breaker to the tripped position:





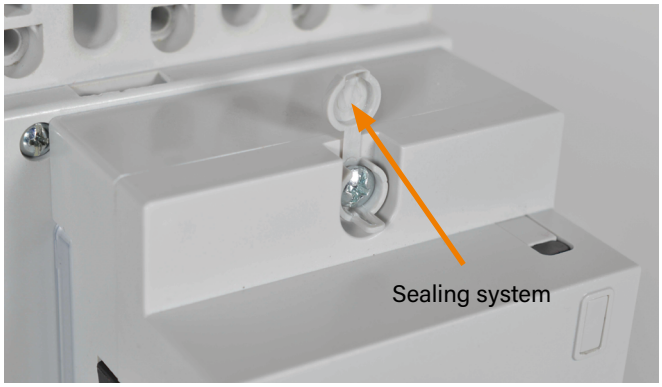
2. Drill three 4 mm diameter holes in the front panel.



3. Put back in place the front panel of the circuit-breaker.
4. Place the handle on the open position (O)
5. Fix the rotary handle system to the front panel of the DPX³ 125 HP/160 HP by orienting the handle to 0.



6. Before tightening the top screw, integrate the sealing system if needed.



7. Tighten the top screw.

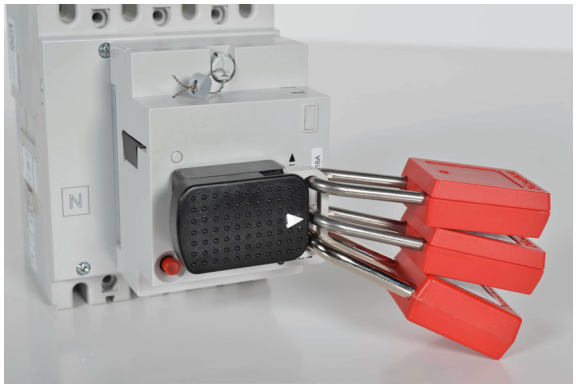


The rotary handle is ready to operate.

Think to paste the sticker with the correct rating of the breaker, as shown below, because the original marking of the circuit-breaker is hidden behind the control.



The rotary handles can be padlocked with a maximum of 3 padlocks, with a minimum diameter of 3 mm and a maximum of 8 mm.
Simply pull out the tab located in the handle and insert the padlocks.



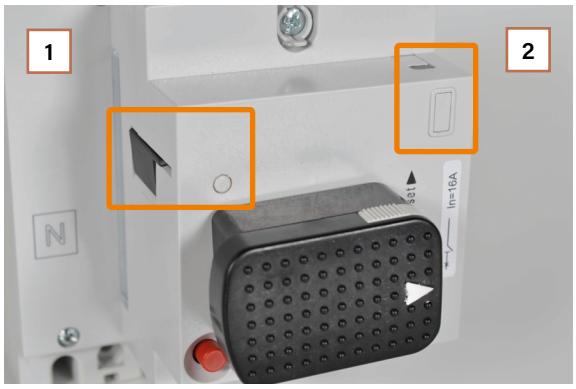
Two additional functions are available on the direct rotary handles. These functions are locking systems and can be functional or not depending on the installation:

- Locking in position O (OFF) with door open:

With this locking it is impossible to close the circuit-breaker with the door or a faceplate open without voluntary operation on the rotary control or closing the door or fitting the faceplate.

- Locking the door or faceplate in position I (ON):

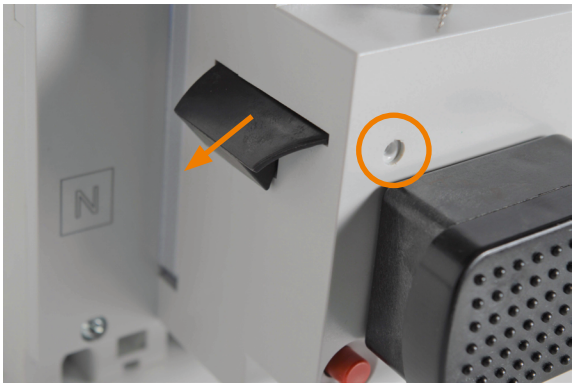
It is impossible to open the door or faceplate if the circuit-breaker is closed. For this system, a part must be fixed on the door or faceplate.



MECHANICAL ACCESSORIES

On the picture bellow, the two locks are not functional.
To make them functional, you have to remove two small plastic parts located on the front of the rotary control.

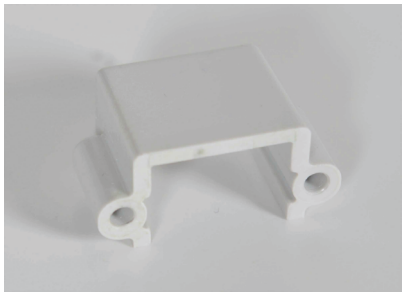
For the locking 1 :
Remove the pin on the top left of the handle, the locking piece will come out of its housing, preventing the circuit-breaker from closing without the door or a faceplate in place.



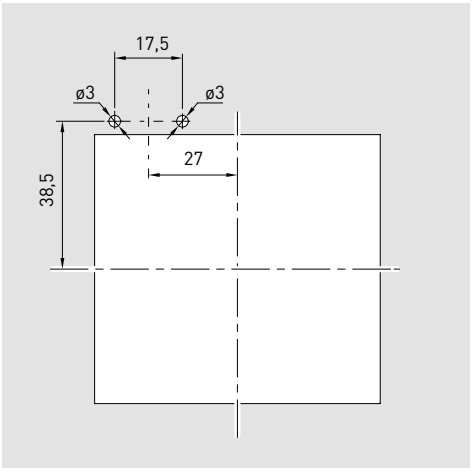
For the locking 2 :
Remove the plastic piece located on the upper right side of the handle. The locking mechanism will come out of its housing, putting the circuit-breaker in position I (ON).



To allow the good functioning of the system, it is also necessary to fix the supplied part on the door or on the faceplate.



The mounting dimensions are noted in the instruction sheet.



Vari-depth handle

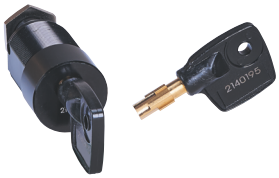


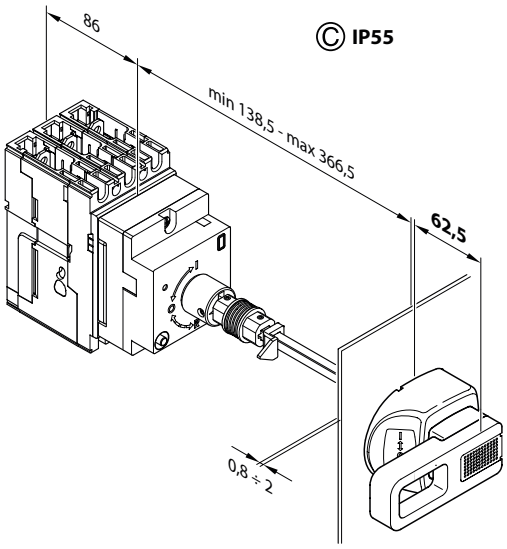


They are available in standard (dark grey color) and "emergency" (red and yellow color). Their mounting is identical. These rotary handles cannot be installed on DPX³ 125 HP/160 HP with earth leakage module.
They are sealable.

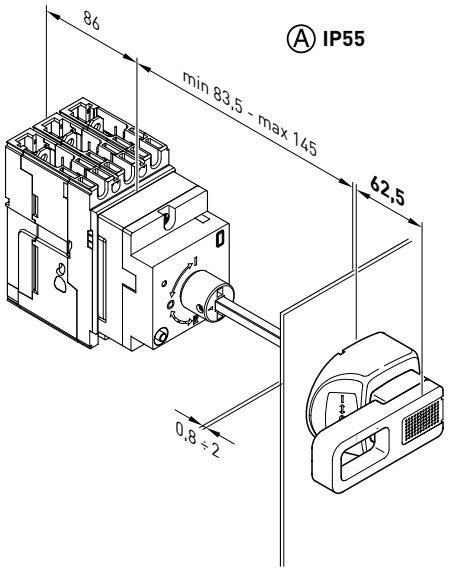
Several assemblies are possible depending on the desired protection index (IP), the length between the circuit-breaker and the door and/or faceplate and the presence or absence of a keylock equipped with a barrel. There are 4 barrels Cat.Nos 4 238 80/81/82/83, but only one can be installed on the locking accessory (Cat.No 4 238 05).



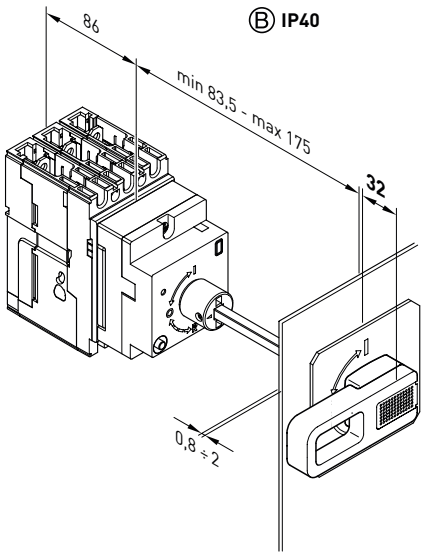




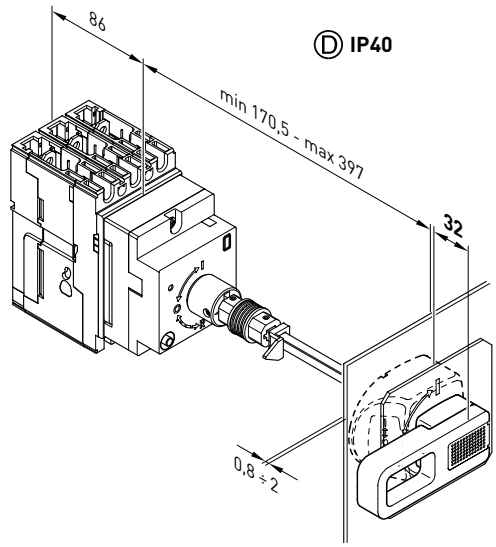
MOUNTING EXAMPLE ON IP 55 VARI-DEPTH HANDLE WITHOUT KEYLOCK DEPENDING ON THE DISTANCE BETWEEN THE MCCB AND THE DOOR AND/OR THE FACEPLATE.

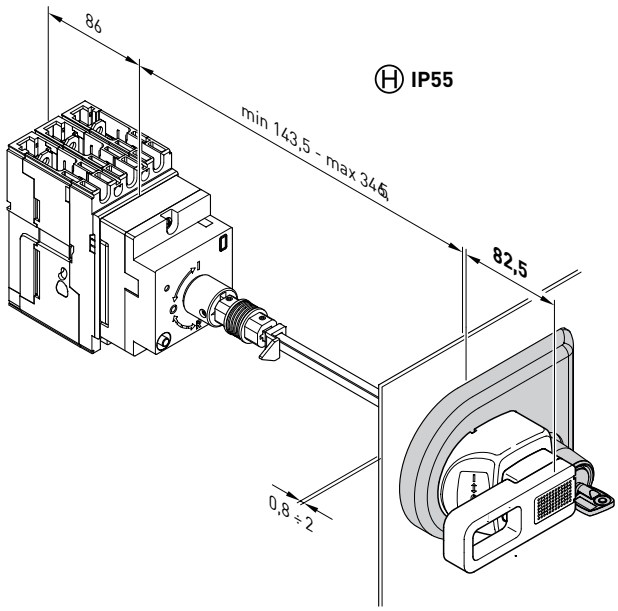


IP40 VARI-DEPTH HANDLE WITHOUT KEYLOCK. ACCESSORIES DEPEND ON THE DISTANCE BETWEEN THE MCCB AND THE DOOR AND/OR THE FACEPLATE.



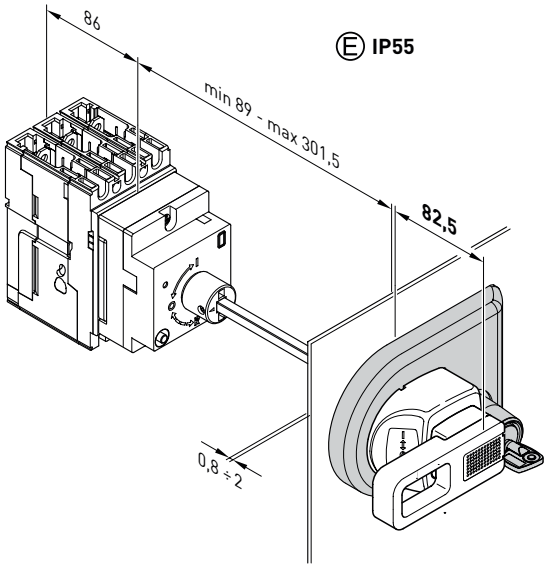
MECHANICAL ACCESSORIES

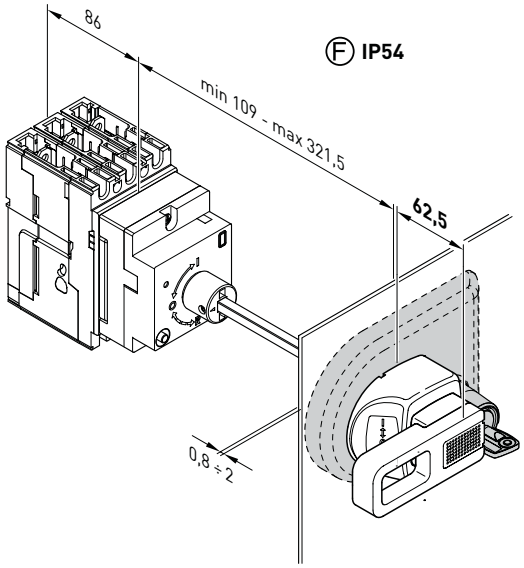


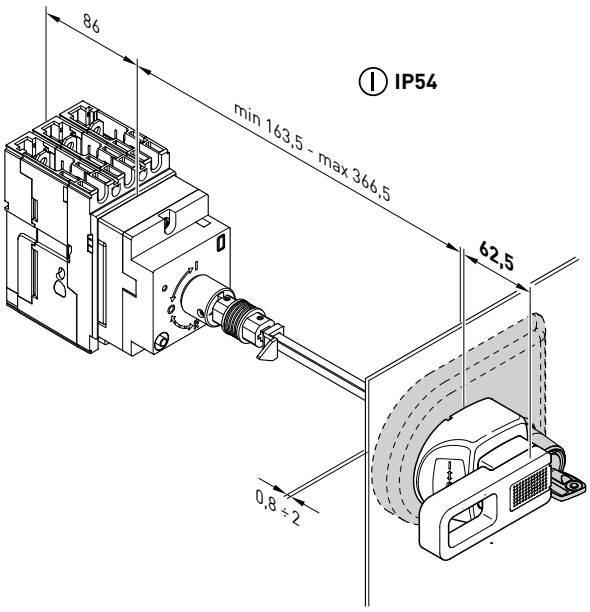


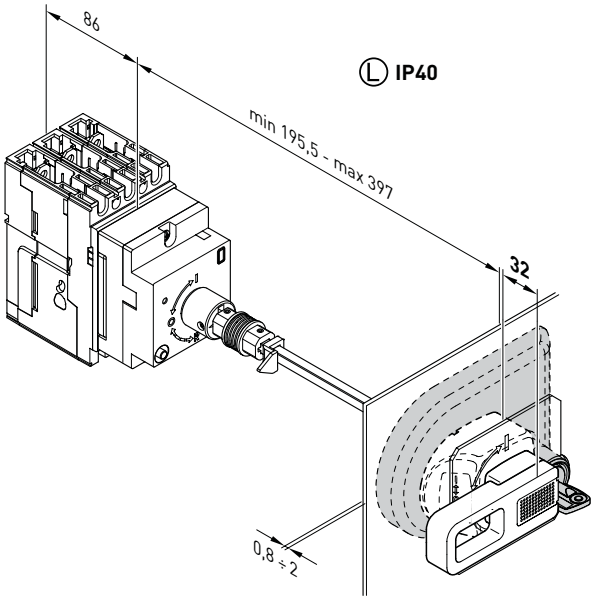
MOUNTING EXAMPLE IP55 VARI-DEPTH HANDLE WITH KEYLOCK.

MOUNTING EXAMPLE IP54 VARI-DEPTH HANDLE WITH KEYLOCK.

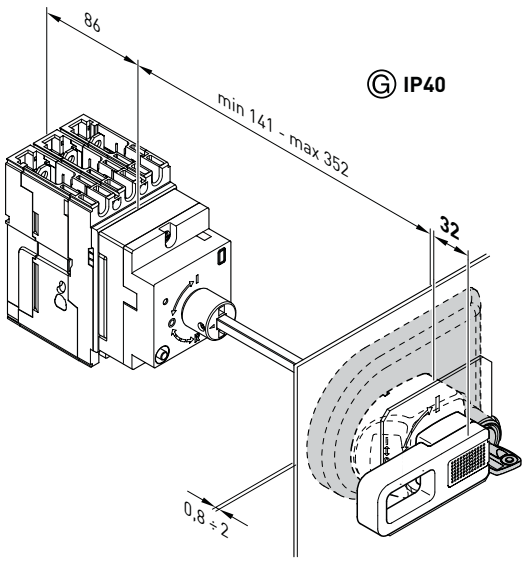








MOUNTING EXAMPLE IP40 VARI-DEPTH HANDLE WITH KEYLOCK



MOUNTING AND INSTALLATION



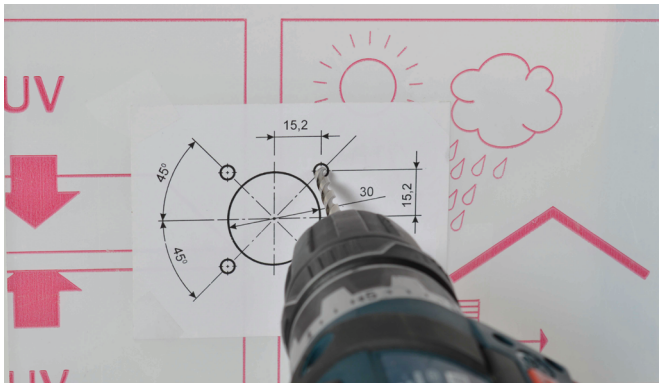
The mounting of the vari-depth handle on the circuit-breaker is identical to that of a direct handle (see pages 28/29/30), except for the handle that is fixed on a faceplate and/or a door.

However, the two locking functions available on the direct handles are not available on the vari-depth handles. The door is locked by the vari-depth handle itself and cannot be opened if the circuit-breaker is closed (I) (ON).

MECHANICAL ACCESSORIES

All the rotary handles can be padlocked with up to 3 padlocks, with a diameter between 5 mm and 8 mm. Simply pull out the tab located under the handle and insert the padlocks.





Below are the different steps for mounting the handle for an IP 55 version without keylock.



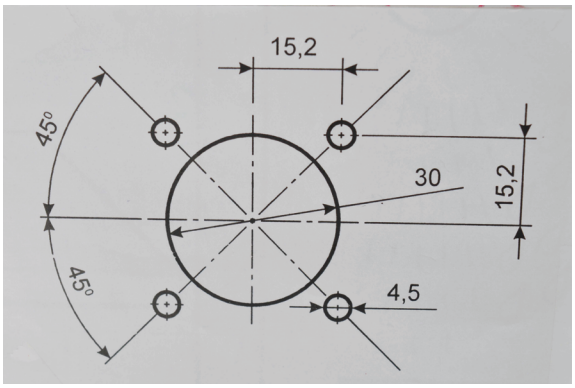


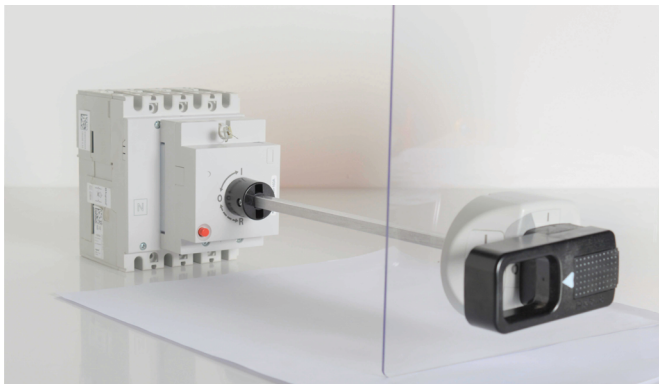


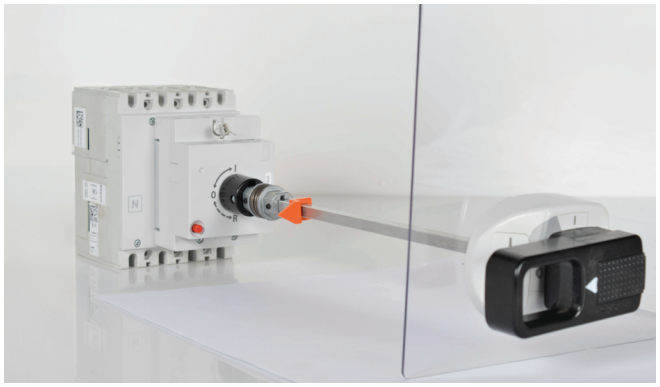


Think to paste the sticker with the correct rating of the circuit-breaker, because the original marking of the circuit-breaker is hidden behind the control. One sticker should be placed on the mechanical control and one on the top of the handle support.

The installation of the handle is done with the help of the drilling template, supplied with the product, to be sticked on the door and/or on the faceplate. Drill the 4 external holes at 4,5 mm diameter and the central hole at 30 mm diameter.





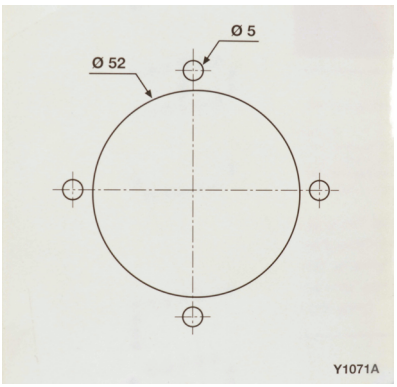


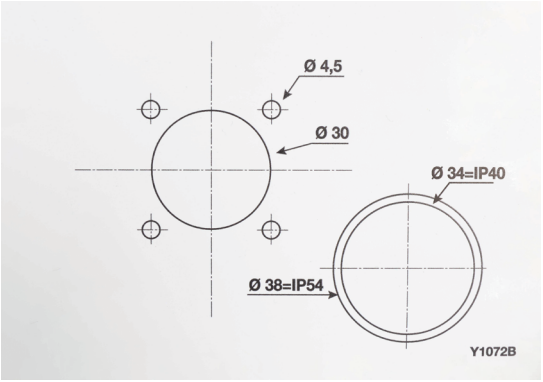
Below is an IP40 installation without keylock.





For the installation of a Keylock bracket, 2 drilling templates are supplied with the product, one of which must be used depending on the desired protection rating (IP55, IP54 or IP40).



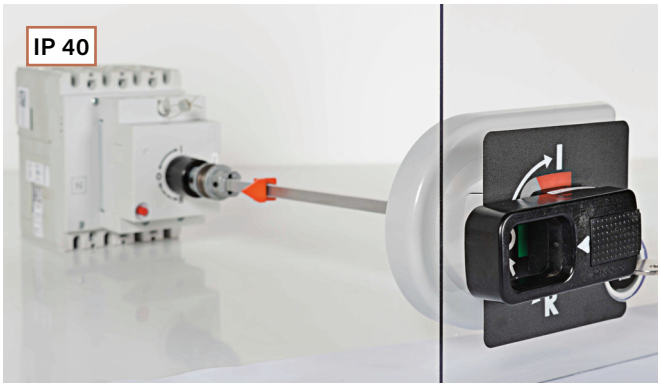


Before installing the bracket, the key barrel must be in place and the operating rod prepared.
The key can only be removed when the circuit-breaker is in the O (OFF) position.



MECHANICAL ACCESSORIES

Below are the IP40 and IP55 installation.





5. Cage terminal



The DPX³ 125 HP/160 HP circuit-breakers can be connected via 3 types of terminals:

SCREW TERMINALS (FOR LUGS OR BAGS) SUPPLIED WITH THE CIRCUIT-BREAKER

They can accept one lug or bar of 17 mm width maximum.





CAGE TERMINALS FOR CABLES (3P: CAT.NO 4 238 84 AND 4P: CAT.NO 4 238 85)



The maximum width for a cable is 14 mm. The section for flexible or rigid copper cables is at leat 2.5 mm² and at most 70 mm². For aluminium cables, it is at least 4 mm² and at most 70 mm².
For the tightening torque, refer to the DPX³ instruction sheet.
They can be mounted upstream or downstream of the circuit-breaker.



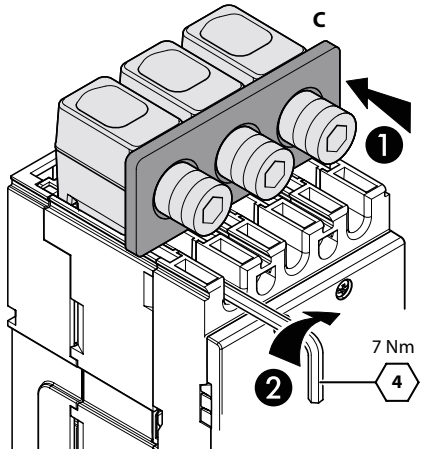


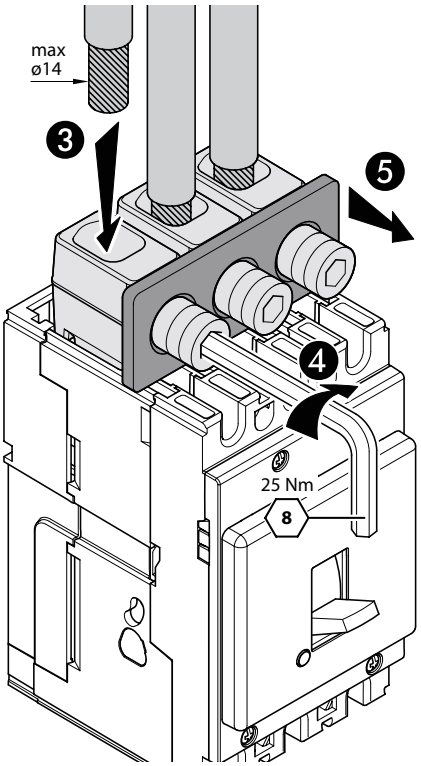
HIGH CAPACITY CAGE TERMINALS FOR CABLES (3P: RÉF. 4 238 76 AND 4P: RÉF. 4 238 77)

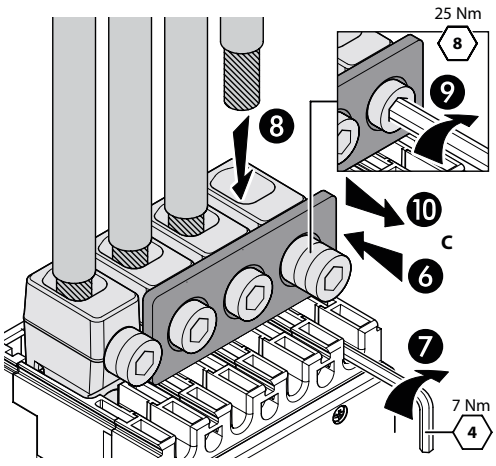
These terminals are recommended for rigid copper cables from 35 mm² to 95 mm², flexible copper from 35 mm² to 70 mm², rigid aluminum from 50 mm² to 95 mm² and flexible aluminum from 50 mm² to 70 mm².
Use the positioning template and tighten the terminals on the circuit-breaker to a torque of 7 Nm (4 mm hexagonal key).

1. Move this positioning jig to the 4th terminal (if a 4-pole circuit-breaker) then tighten it on the product.
2. Insert the cables and tighten them in the terminals to a torque of 25 Nm (8 mm hexagonal key).

The installation of the partition walls is not allowed when using the terminal shields.







6. Spreaders



This accessory is mounted on the circuit-breakers with the screw terminals for lugs supplied.

The tightening torque is 7 Nm. The connection capacity is 22 mm wide for a terminal or a bar with a 10.2 mm drilling diameter. It is mandatory to insert the insulated shields between the spreaders.

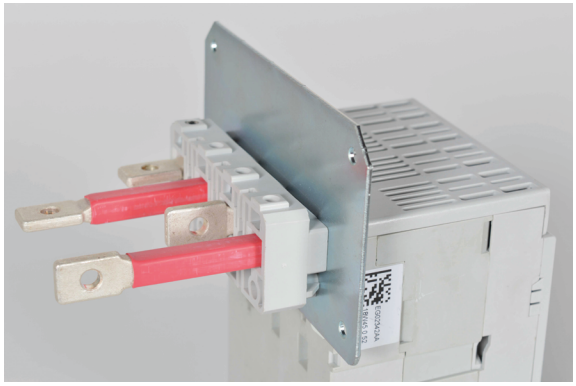


7. Rear terminal



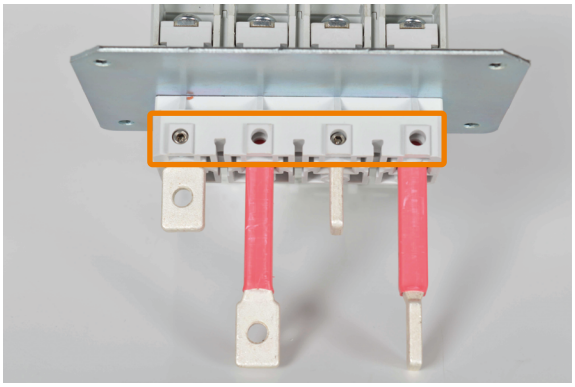
They are used to connect a fixed circuit-breaker at the rear. They are mounted directly on the circuit-breaker with the help of the small plate to strenghten the assembly. The dedicated terminal shield can be sealable.



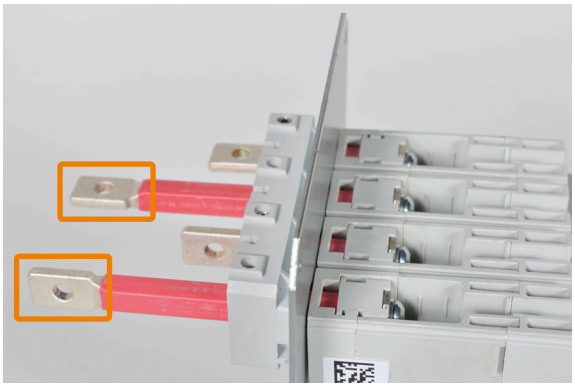




4 screws to maintain these rear terminals (one per pole), are provided to avoid excessive bending.



They can be installed horizontally or vertically.



8. Sealable terminal shields

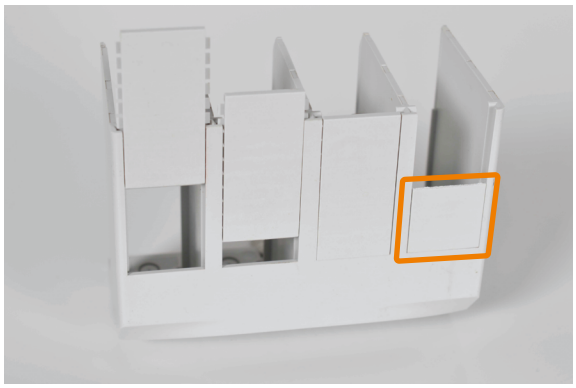
These terminal shields can be mounted with or without the high capacity terminals.



They are sealable and can be fixed with the supplied screws.



Small breakable plates are to be inserted or removed on the terminal shields according to the configurations.

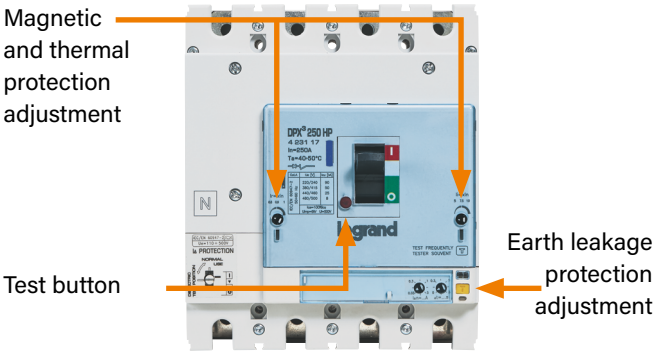




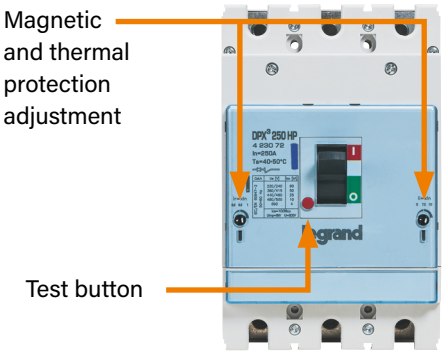
PRODUCT DESCRIPTION

1. Front panel of the circuit-breaker

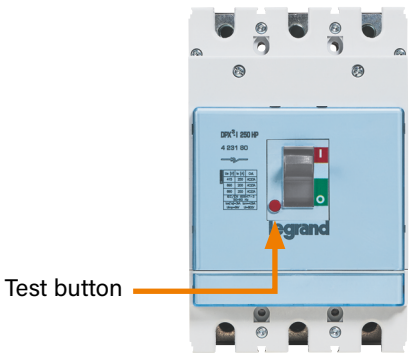
Examples of circuit-breaker front panels:
4P thermal-magnetic circuit-breaker



3P thermal-magnetic circuit-breaker



Switch



2. Handle position (ON - Tripped - OFF)

Below are the 3 positions of the circuit-breaker handles according to their status:

- Open (OFF) (O).



- Tripped.



- Closed (ON) (I).



After the DPX³ 250 HP has tripped, before it can be closed again, it must be reset by turning the lever to O (OFF position).

3. Settings

For DPX³ 250 HP thermal-magnetic:

Thermal : Ir		Intensity (A)												
Multiplying factor of In	Marking	16	20	25	32	40	50	63	80	100	125	160	200	250
0,8	0,8	13	16	20	26	32	40	51	64	80	100	128	160	200
0,9	0,9	14,4	18	22,5	28,8	36	45	56,7	72	90	115,2	115,2	180	225
1	1	16	20	25	32	40	50	63	80	100	125	160	200	250

Magnetic : Ii	16	20	25	32	40	50	63	80	100	125	160	200	250
Mini	400	400	400	400	400	325	315	400	500	625	800	1000	1250
Maxi	400	400	400	400	400	650	630	800	1000	1250	1600	2000	2500

Pour DPX³ 250 HP Electronic S1:

Thermal : Ir		Intensity (A)			
Multiplying factor of In	Marking	40	100	160	250
0.4	0.4	16	40	64	100
1	1	40	100	160	250

Magnetic : Isd	Intensity (A)			
Marking	40	100	160	250
Mini	60	150	240	375
Maxi	400	1000	1600	2500

Pour DPX³ 250 HP Electronic S10:

Thermal : Ir	Intensity (A)			
Settings	40 A	100 A	160 A	250 A
Local on the product	8 to 40	20 to 100	32 to 160	50 to 250
Via Software or Application	8 to 40	20 to 100	32 to 160	50 to 250

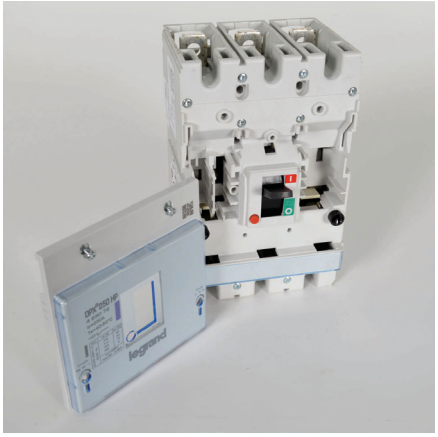
Magnetic : Isd	Intensity (A)			
Settings	40 A	100 A	160 A	250 A
Local on the product	1,5 to 10 x Ir	1,5 to 10 x Ir	1,5 to 10 x Ir	1,5 to 10 x Ir
Via Software or Application				

4. Front opening

To open the front panel, simply put the circuit-breaker in the open or tripped position and loosen the 4 screws with a PZ1 screwdriver. The front panel is completely separated from the circuit-breaker. The screws are captive.







ELECTRICAL ACCESSORIES

AUXILIARY CONTACT (OC)/FAULT SIGNALLING CONTACT (CTR)

Cat.No	Voltage
4 210 11	24/48/110/230 V⎓ 110/230 V~

SHUNT TRIP (ST)

Cat.Nos	Voltage
4 210 12	12 V~/⎓
4 210 13	24 V~/⎓
4 210 14	48 V~/⎓
4 210 15	110 - 130 V~
4 210 16	200 - 277 V~
4 210 17	380 - 480 V~

UNDERVOLTAGE RELEASE (UVR)

Cat.Nos	Voltage
4 210 18	12 V~/⎓
4 210 19	24 V~/⎓
4 210 20	48 V~/⎓
4 210 21	110 - 130 V~/⎓
4 210 22	200 - 240 V~/⎓
4 210 23	277 V~
4 210 24	380 - 415 V~
4 210 25	440 - 480 V~

TIME-LAG UNDER VOLTAGE RELEASE

Cat.Nos	Voltage
0 261 90	230 V~
0 261 91	400 V~
4 210 98	Release for time lag modules

MOTOR OPERATOR

Cat.Nos	Voltage
4 238 40	24 V~/⎓
4 238 41	48 V~/⎓
4 238 42	110 V~
4 238 43	230 V~

ACCESSORIES FOR MOTOR OPERATOR

Cat.Nos	Type of locking
4 238 46	Padlock
4 238 45	Locking support
4 238 80	Key barrel and flat key with random mapping
4 238 81	Key barrel and flat key EL43525
4 238 82	Key barrel and flat key EL43363
4 238 83	Key barrel star key with random mapping

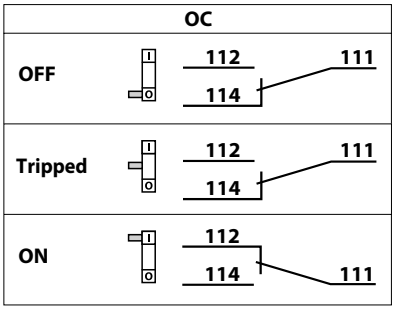
1. Auxiliary contact (OC)/fault signalling contact (CTR)

Same chapter as DPX³ 125 HP/160 HP (page 20): except for the DPX³ 250 HP **S10** which has these two integrated contacts.

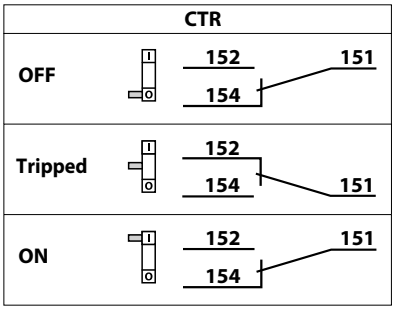
Electrical characteristics of the OC and CTR contacts integrated into the DPX³ 250 HP S10 module

Voltage	Intensity (A)
12 V⎓	5
24 V⎓	1
110 V~	5
230 V~	5

OC contact status integrated into the DPX³ 250 HP S10 module



CTR contact status integrated into the DPX³ 250 HP S10 module



2. Shunt trip (ST)

Same chapter as DPX³ 125 HP/160 HP (page 22).

3. Undervoltage release (UVR)

Same chapter as DPX³ 125 HP/160 HP (page 23).

4. Time-lag modules

Same chapter as DPX³ 125 HP/160 HP (page 23).

5. Motor operator and accessories





The motor operator allows to control a circuit-breaker or a trip-free switch remotely. If used as an automatic transfer switch, its management will be managed by an automation control unit.
The wiring is done through the terminal block located on the top of the motor. These motor operators are for front installation. 3 operating modes are present on the product:

- The automatic mode
- The manual mode,
- The mode locked in open position accessible by the selector placed on the front panel.

AUTOMATIC MODE (AUT)



The motor operator allows:

- To open the DPX³ by means of a pulse or maintained control (electric/remote control) or by the red push button (0) on the front panel
- To close the DPX³ using a pulse or hold control (electric/remote control) or the black push button (I) on the front panel (in manual mode). In this case, the DPX³ and the handle are locked.

MANUAL MODE (MAN)



Electric or remote controls are disabled. The front handle is used to load the spring manually. The black button (I) closes the DPX³ and the red button (O) opens it.

LOCKED MODE (LOCK)



The selector is placed in the « LOCK » position by pressing the red button (O) simultaneously. It is impossible to operate the motor operator electrically or manually. This position is only possible if the device is in the open position (OFF). In "LOCK" mode, it is possible to padlock the motor operator with a maximum of 3 padlocks with a maximum diameter of 6 mm.

Below, example with 2 padlocks.



ELECTRICAL ACCESSORIES

Motor operators can be equipped with a keylock support Cat.No 4 238 45, (barrels identical to the vari-depth rotary handles, Cat.Nos 4 238 80, 4 238 81, 4 238 82, 4 238 83) or a padlocking device Cat.No 4 238 46 accepting up to 3 padlocks with a maximum diameter of 8 mm.





These accessories are fixed instead of the front panel of the motor operator. They can be sealed to the front panel. Put the motor in manual position (MAN), unscrew the front panel and replace it with one of the accessories.
The desired barrel must first be inserted into the key lock.







The motor operators can be sealed at the mounting screw level and/or on the front panel.



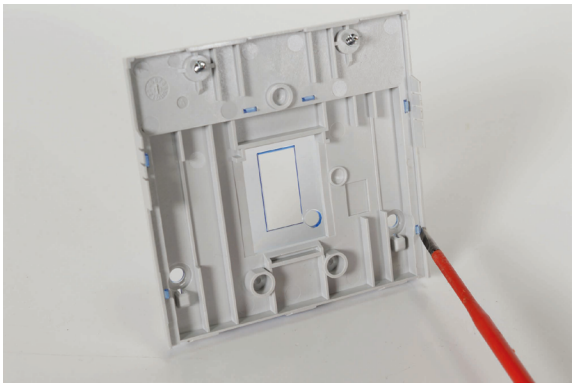
SETTTING UP

When unpacking the motordriven handle from its box, be careful not to break the rod at the rear of the drive.

1. Set the circuit-breaker to the tripped position by pressing the red button on the front panel,
2. Unscrew the front panel, remove and discard the blue plastic part of the front panel.







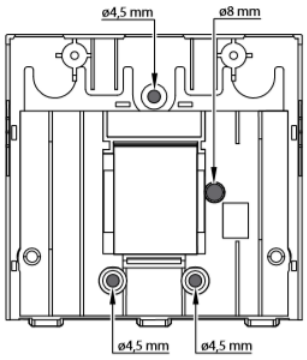


Depending on the type of circuit-breaker or trip-free switch, 3-pole or 4-pole, the installation will be different for the fixing screws and the drilling of the front panel.

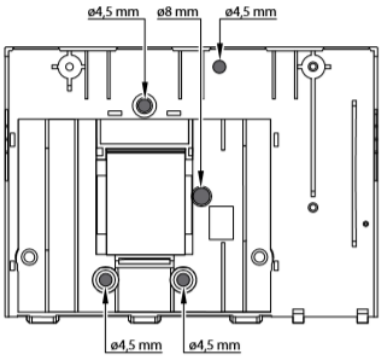
For a 3P, the 2 front panel fixing screws will have to be discarded, for a 4P only one (the right one) will have to be discarded.

For drilling, 4 holes will be necessary for a 3P and 5 holes for a 4P.

3 Poles

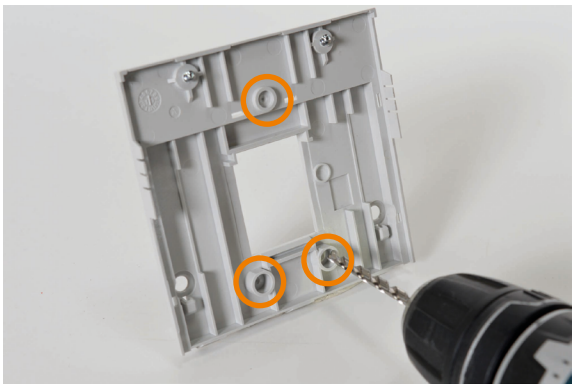


4 Poles

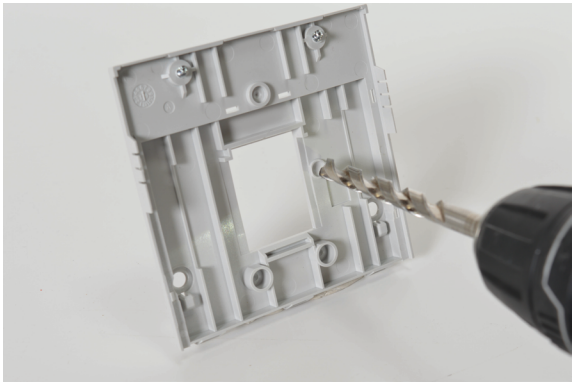


ELECTRICAL ACCESSORIES

Example of drilling 3 holes of 4.5 mm diameter for a 3-pole.

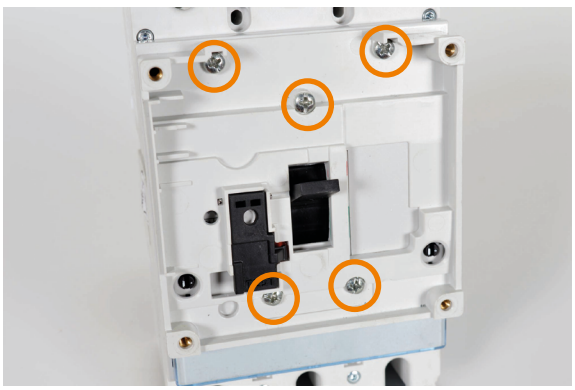


Drill the 8 mm diameter hole.

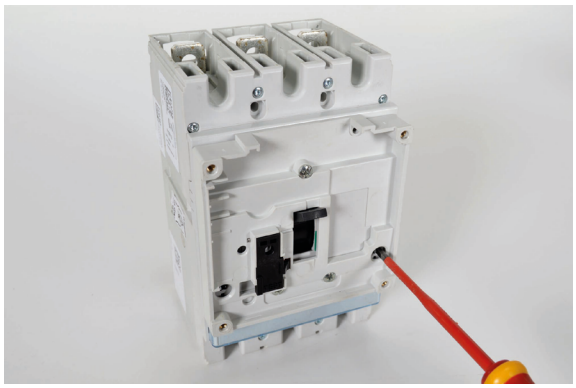


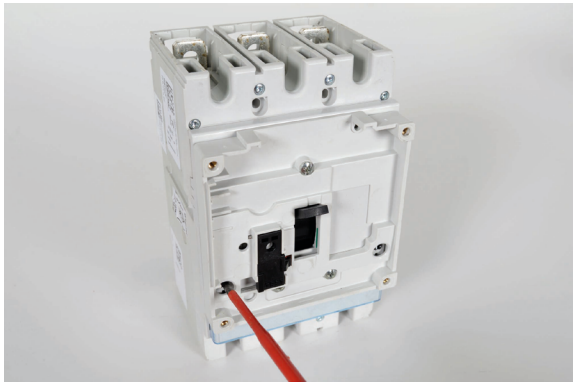
After drilling :

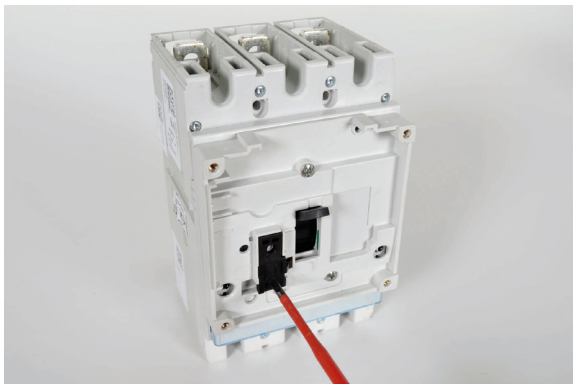
1. Fix the front panel with the motor support by using the 5 screws supplied with the motor.
2. Make a tripping test.



⚠ The magnetic and thermal adjustments must be made before installing the motor.

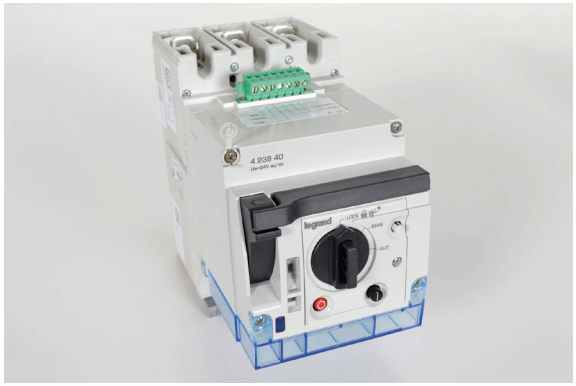






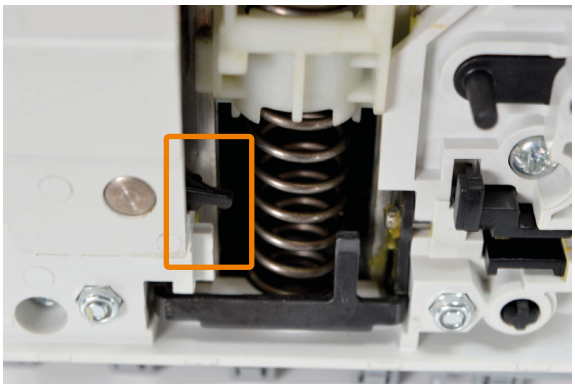


Motor operator mounted on a DPX³ 250 HP 3P thermal-magnetic.

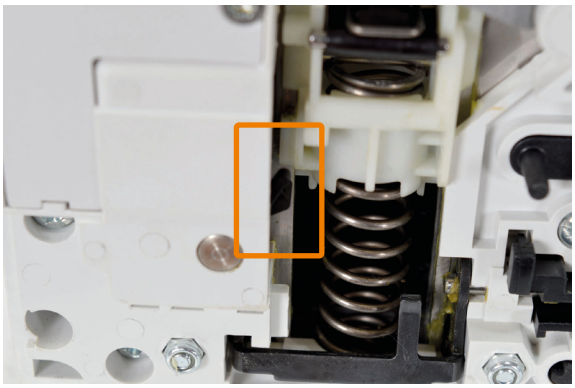


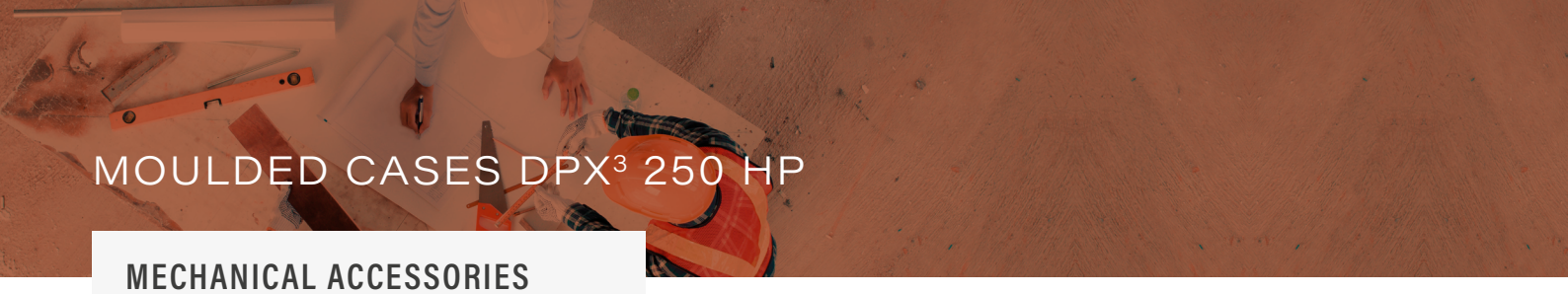
⚠ Installation of the motor operator on its support: check that the pin located at the back of the motor is in the upper position.

Low position



High position





MECHANICAL ACCESSORIES

INSULATED SHIELDS

Cat.Nos	Poles
4 238 34	3P
4 238 35	4P

PADLOCKING

Cat.No
4 210 49

INTERLOCK

Cat.Nos	Accessories/Versions
4 238 26	Mounting plate for interlocking
4 238 27	Without electronic module for fixed circuit-breakers
4 238 28	With electronic module (contacts) for fixed circuit-breakers

ROTARY HANDLES

Cat.Nos	Accessories/Versions
4 238 00/14*	Direct standard
4 238 01/15*	Direct for emergency use
4 238 02/16*	Vari-depth standard
4 238 03/17*	Vari-depth for emergency use
4 238 04	Keylock support for direct handle
4 238 05	Keylock support for vari-depth handle
4 238 06	Auxiliary contact for rotary handles

*Only for India

UNIVERSAL KEY BARRELS

Cat.Nos	Accessories/Versions
4 238 80	Key barrel and flat key with random mapping
4 238 81	Key barrel & flat key EL43525
4 238 82	Key barrel & flat key EL43363
4 238 83	Key barrel and star key with random mapping

CAGE TERMINALS

Cat.Nos	Poles
4 238 30	Standard 3P
4 238 31	Standard 4P

SPREADERS

Cat.Nos	Poles
6 250 14	3P
6 250 18	4P

REAR TERMINALS

Cat.Nos	Poles
4 238 21	3P
4 238 22	4P

TERMINAL SHIELDS

Cat.Nos	Poles
4 238 23	3P
4 238 24	4P

PLUG-IN VERSION

Cat.Nos	Description
4 238 50/4 238 51	Plug-in bases 3P / 4P (fixed)
4 238 52/4 238 53	Plug-in mobile part kit 3P / 4P
4 238 29	Mounting plate for interlocking plug-in or draw-out DPX³ 250 HP
4 210 48	Plug-in/draw-out contact for DPX³ 250 HP draw-out base
0 098 19	Set of connectors for auxiliary contacts for plug-in and draw-out versions
4 238 63	Locking accessories

DRAW-OUT VERSION

Cat.Nos	Description
4 238 60/4 238 61	Debro-lift mechanism 3P/4P
4 238 55	Draw-out front cover mask
4 238 56	Draw-out front cover mask with motor driven handle
4 238 62	Locking accessory with key barrel
4 238 64	Padlocking accessory
4 222 30	Auxiliary contact for draw-out DPX³ 250 HP

1. Insulated shields

Same chapter as DPX³ 125 HP/160 HP (page 24).

2. Padlocking

Same chapter as DPX³ 125 HP/160 HP (page 25).

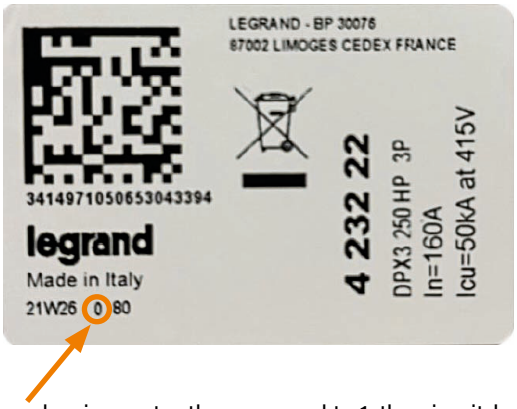
3. Interlocking

The purpose of this accessory is to be able to associate two DPX³ 250 HP 3P and/or 4P circuit-breakers and prevent the closing of the 2 products at the same time. It is mounted on a dedicated plate (Cat.No 4 238 26).
Below are the 2 interlocking Cat.Nos 4 238 27/28.





Please check the label on the circuit-breaker to see if the mechanism fits, on it.



If this number is greater than or equal to 1, the circuit-breakers are OK.
Here the mechanism cannot be mounted

The advantages of this system are simple implementation, small space requirement and no adjustment.

SETTING UP

The installation is the same as for 2 DPX³ 125 HP, only the mounting plate is different.

It is not possible to combine a DPX³ 125 HP or a DPX³ 160 HP with a DPX³ 250 HP.
Any other configurations are possible.

4 rods are supplied with the interlocking mechanisms. The small ones (17.8 mm) are for the DPX³ 125 HP/160 HP and the large ones (29.5 mm) are for the DPX³ 250 HP.

See chapter « Setting up » the interlock of the DPX³ 125 HP/160 HP ▶ page 25.

4. Rotary handles

Direct handles

They are available in standard (dark grey color) and "emergency" (red and yellow color). Their mounting is identical. They can be installed on the whole range of DPX³ 250 HP. They are sealable and can be key-locked with the same barrels as for the motor operator.

SETTING UP



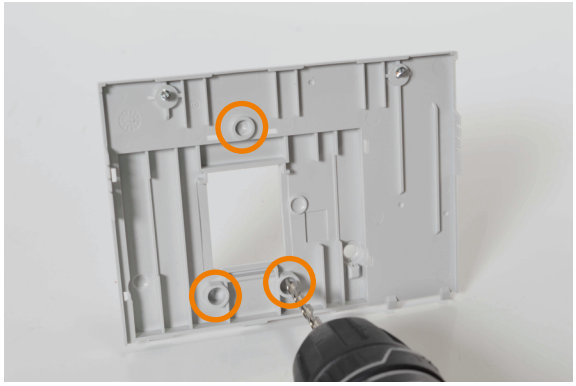
1. Open the front panel after setting the circuit-breaker to the tripped or open position.



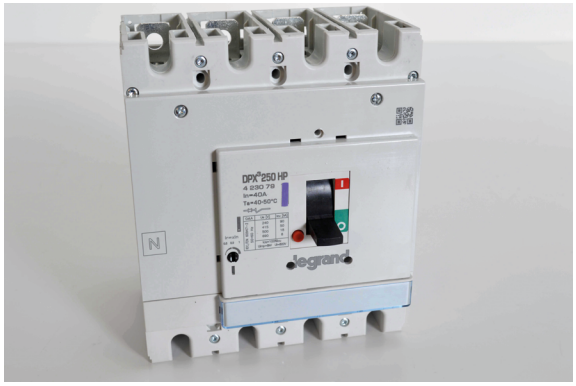
2. Remove and discard the blue plastic part of the front panel



3. Drill three 4.5 mm diameter holes in the front panel



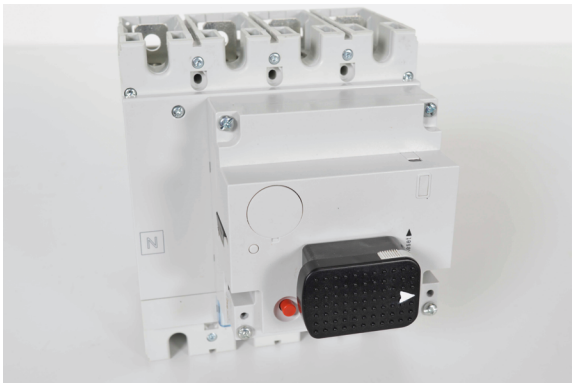
4. Put back in place the front panel on the circuit-breaker.
5. Place the handle in open position (0).



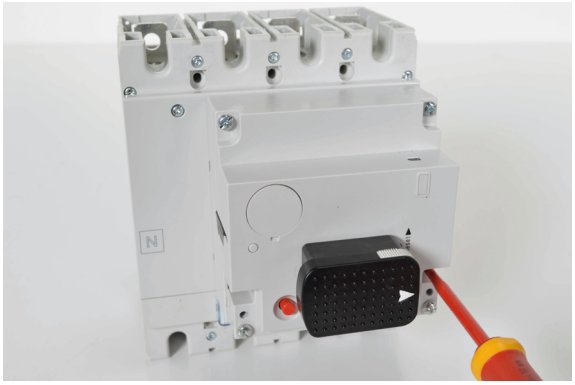
6. Fix the rotary handle system on the front panel of the DPX³ 250 HP.

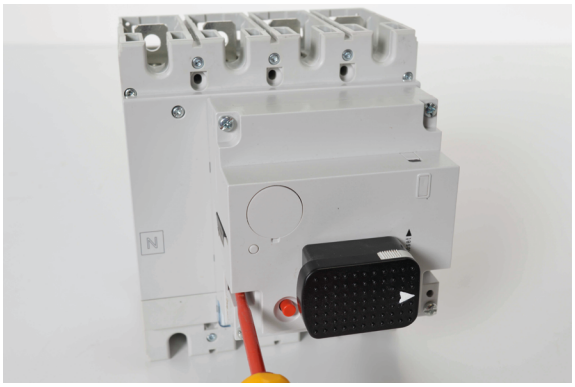


7. Place the handle on 0 then install the rotary handle. The sealing system is located under the handle.



Adjustments to the circuit-breaker must be made before attaching the lower blue plastic part. These adjustments are only possible in the "tripped" position.



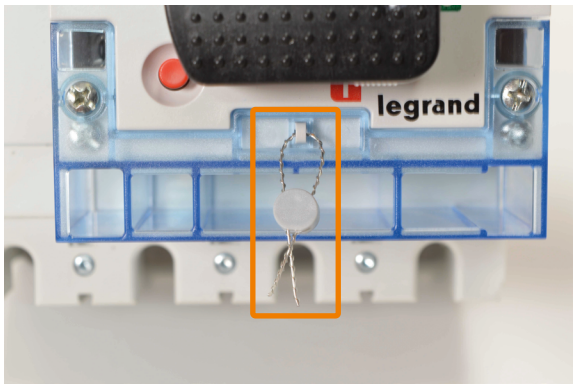


8. Screw on the lower part of the rotary handle
9. Install the seal if necessary.

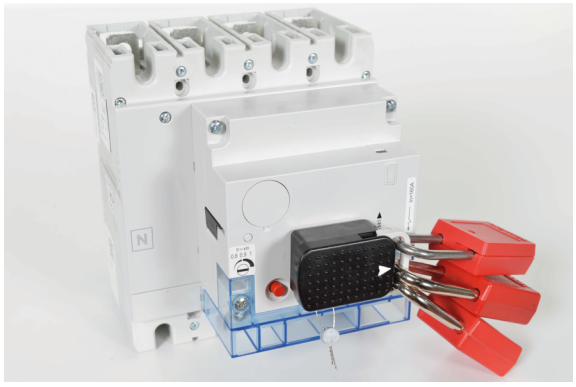
The handle is ready to operate.

Think to paste the 2 stickers, indicating the correct rating of the circuit-breaker and the settings made, because the original marking of the circuit-breaker is hidden behind the rotary handle.





The rotary handles can be padlocked with a maximum of 3 padlocks, with a minimum diameter of 5 mm and a maximum of 8 mm. Simply pull out the tab located in the handle and insert the padlocks.

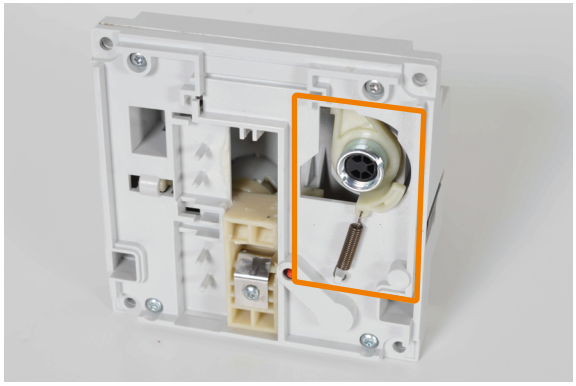


MECHANICAL ACCESSORIES

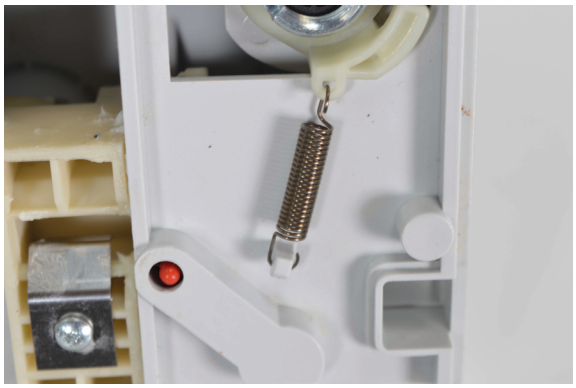
Two additional functions are available on these direct rotary handles as on the DPX³ 125 HP/160 HP (see page 29). These functions are locking systems and can be functional or not depending on the installation.

It is possible to lock the direct rotary handles with an accessory (Cat.No 4 823 04) and key locks, Cat.Nos are identical to the DPX³ 125 HP/160 HP. The mounting is done before the installation of the rotary handle on the DPX³ 250 HP by inserting the barrel on the front of the direct handle, and the mechanism inside it.

Cat.No 4 238 04.







The key can be removed only if the circuit-breaker is open (O).

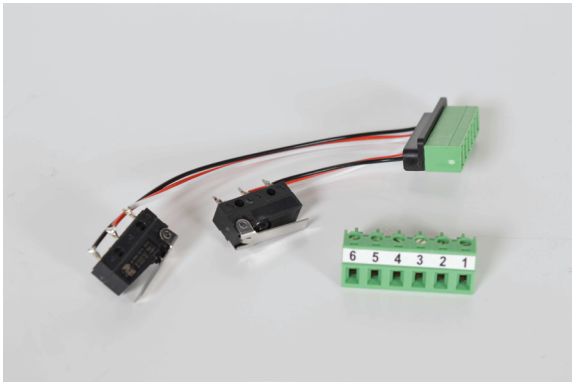




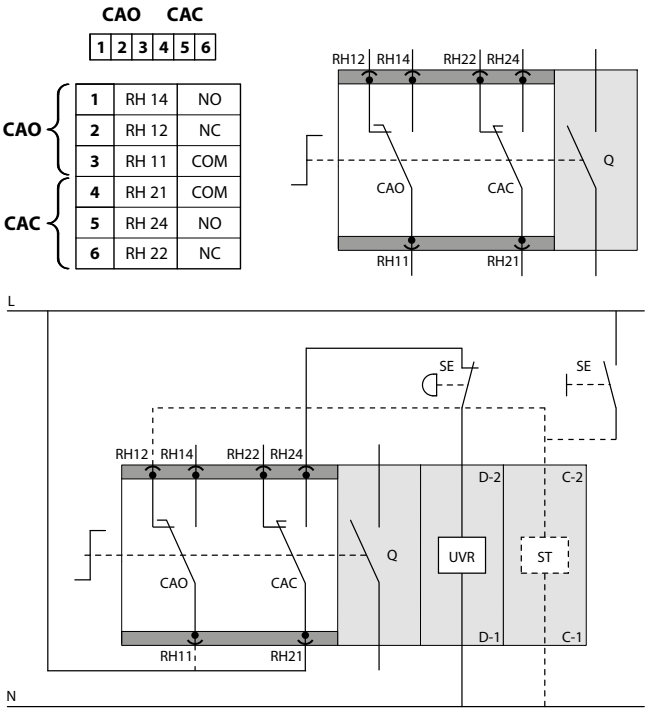




Another accessory available for these direct rotary handles is a set of 2 NO/NC switch contacts (Cat.No 4 238 06). It is mounted inside the case, before fixing it to the circuit-breaker.

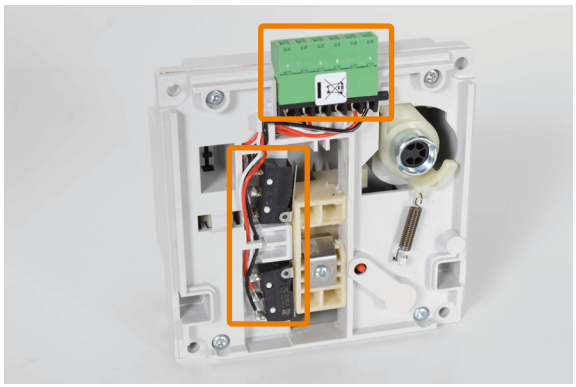


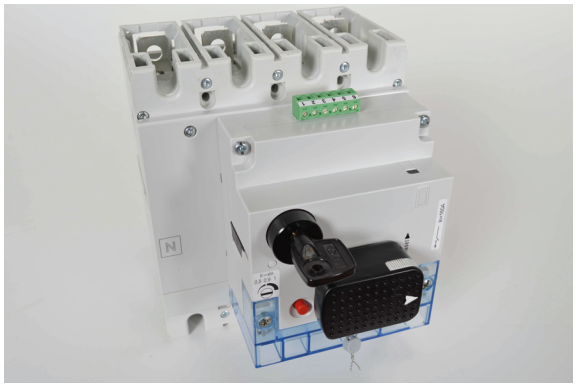
Cat.No 4 238 06



Remove the plastic part on the top of the direct rotary handle bracket and insert the 2 contacts and their connector on the handle.







Vari-depth handles

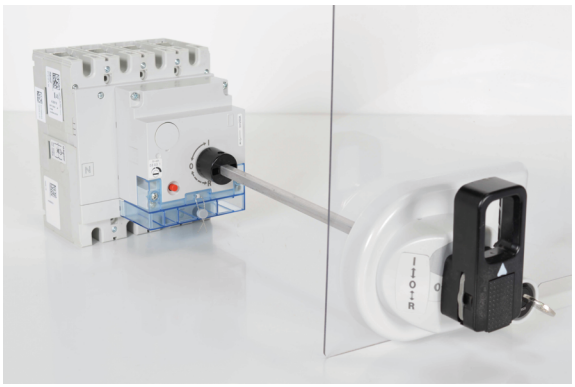


They are available in standard (dark grey color) and "emergency" (red and yellow color). Their mounting is identical. They can be installed on the whole range of DPX³ 250 HP. They are sealable and can be locked with a key with the same barrels as for the motor operator or the direct rotary handle. The mounting of the housing is identical to the direct handles (see page 50) and the mounting of the handles is identical to the one of the DPX³ 125 HP/160 HP (see page 31). It is possible to install the set of auxiliary contacts as for the direct handles (see previous page)

5. Cage terminals

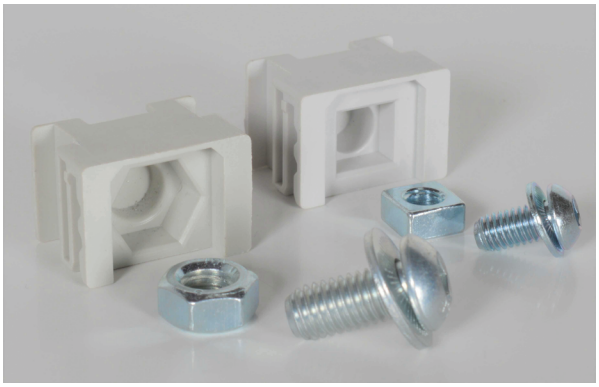






The DPX³ 250 HP circuit-breakers can be connected via 2 types of terminals, screw terminals and cage terminals:

SCREW TERMINALS FOR TERMINALS SUPPLIED WITH THE CIRCUIT-BREAKER



Depending on the size of the circuit-breakers, they are supplied with different screw terminals:

- either with 6 mm square nuts (≤ 125 A) for a tightening torque of 7 Nm ;
- or with 8 mm hexagonal nuts (> 125 A) for a tightening torque of 10 Nm..

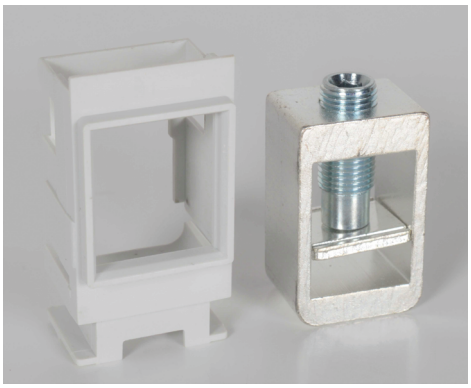
They have a capacity for a lug or bar up to 28.5 mm wide with a 8.5 mm diameter hole.

CARGE TERMINALS (FOR CABLES)



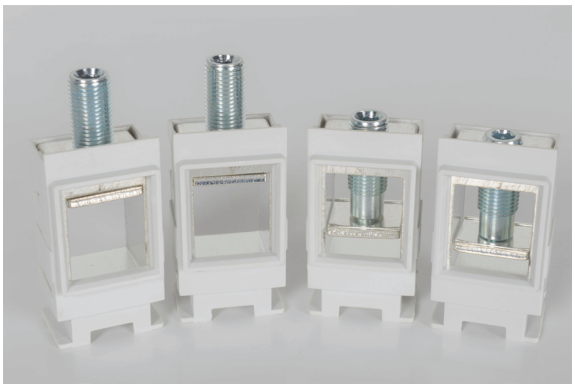
(3P : CAT.NO 4 238 30 AND 4P : CAT.NO 4 238 31)

The maximum capacity of these terminals is 18 mm wide.



The section of flexible cables is from 2.5 mm^2 minimum to 120 mm^2 maximum. The section of the rigid cables is from 2,5 mm^2 minimum to 150 mm^2 maximum. Tightening is done with a 5 mm hexagon wrench, the torque is recommended at 10 Nm. They are compatible with copper or aluminum cables and can be mounted upstream and/or downstream of the circuit-breaker.





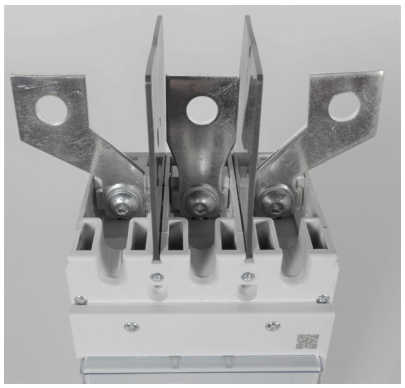


6. Spreaders

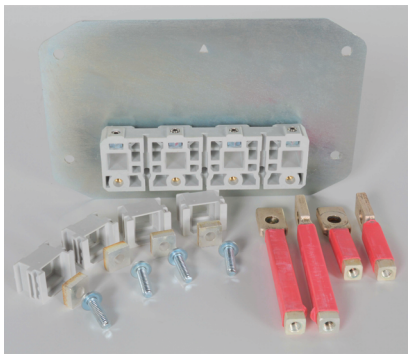


This accessory is mounted on the circuit-breakers with the screw terminals for lugs supplied.

The tightening torque is 7 Nm with 6 mm screws, and 10 Nm with 8 mm screws. The connection capacity is 30 mm wide for a terminal or a bar with a 13 mm drilling diameter. It is mandatory to insert the dividers between the spreaders.

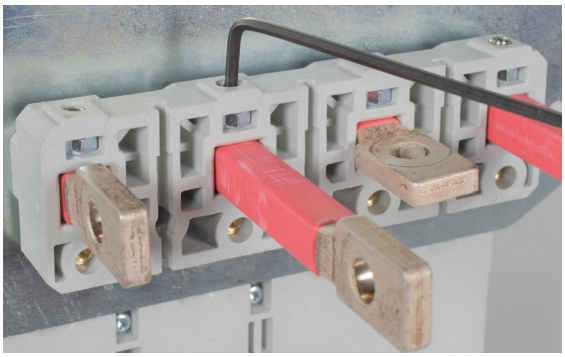


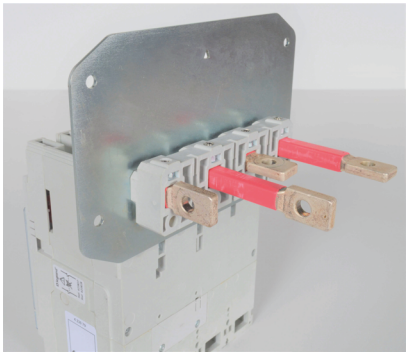
7. Rear terminals



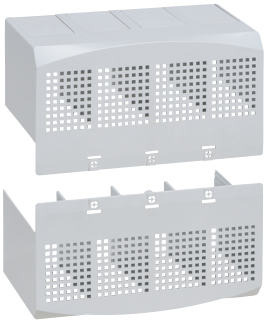
They allow the rear connection of a fixed circuit-breaker or an extractable base.
They are mounted directly on the circuit-breaker or on the base, using the small mounting plate to strenghten the assembly. The dedicated terminal cover can be sealable.
They can be installed upstream and/or downstream. 4 screws are provided to maintain these rear sockets (one per plate) to avoid excessive bending.
They can be installed horizontally or vertically.







8. Terminal shields



These terminal covers can be mounted on any type of terminal.
They are sealable and to be fixed with the screws supplied.





Small breakable plates are to be inserted or removed on the terminal shields according to the wiring configurations.

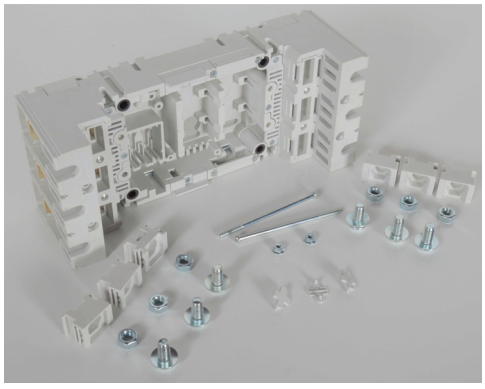




9. Plug-in version

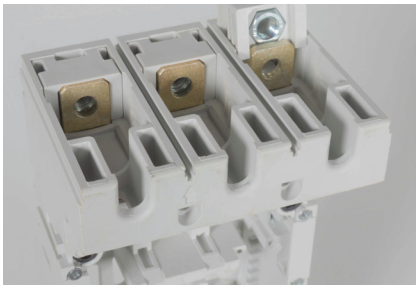
DPX³ 250 HP range can be mounted in a plug-in version thanks to a fixed base and a mobile base in 3P or 4P.

Fixed base

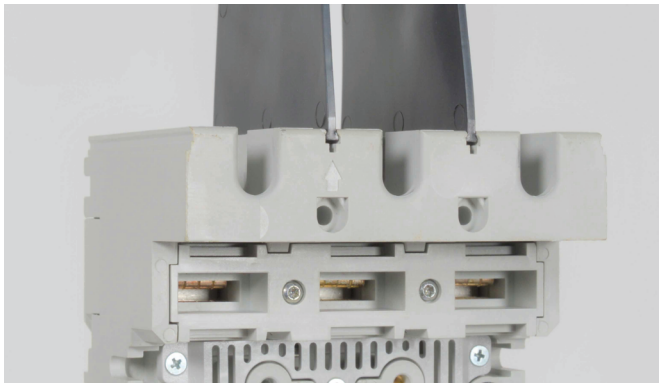


The connection types are identical to those of the circuit-breakers. Screw terminals, cage clamp terminals, rear terminals and spreaders can be fitted to the fixed bases. The characteristics are the same (see pages 54/55/56).

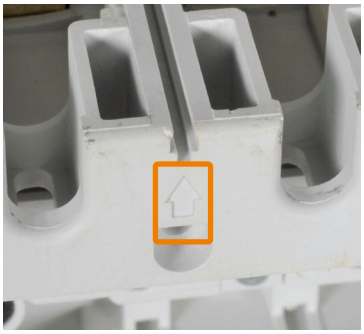




Terminal shields, pole dividers and rear terminals can also be installed on these fixed bases.



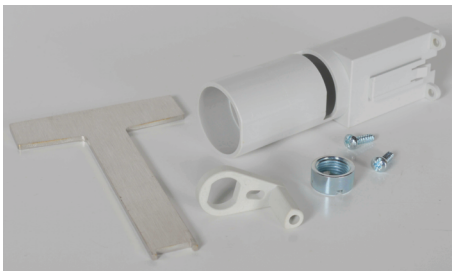
⚠ The fixed bases have a mounting direction: an arrow is inlaid on the top of the base as a marker.

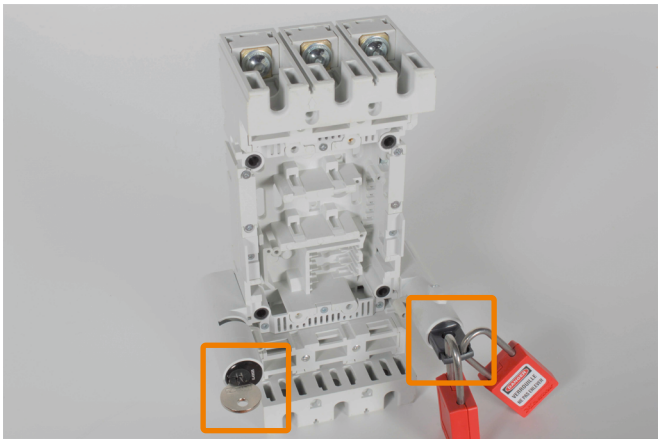


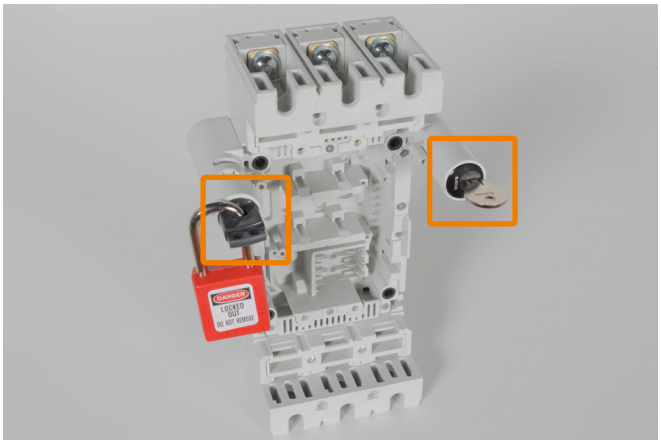
MECHANICAL ACCESSORIES

A keylock and/or padlock can be positioned in 4 locations on the fixed base. These locks prevent the circuit-breaker from being placed on the fixed base. The key locks (see Cat.Nos page 48) for locking are identical to those for mounting the rotary handles, motor driven handles, etc.
The picture below shows the accessory for the key locking.

The 4 locking locations:

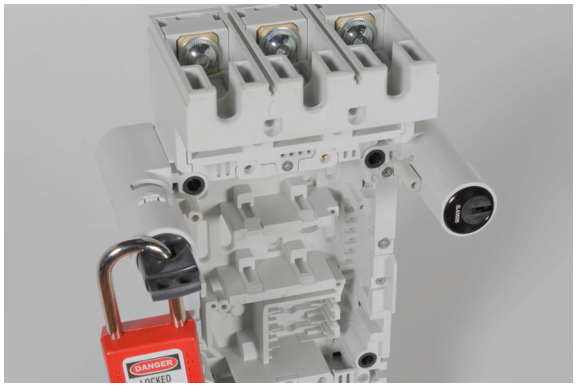






The padlock accessory accepts a maximum of 3 padlocks with a maximum diameter of 6 mm and they can be installed only in the locked position.

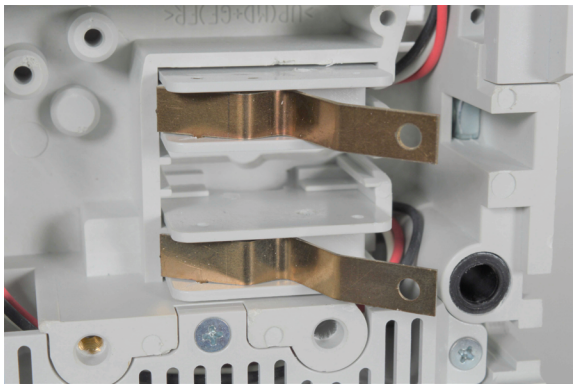
For the key accessory, the key can be removed only in the locked position.



In the locked position, the circuit-breaker cannot be inserted on the fixed base.

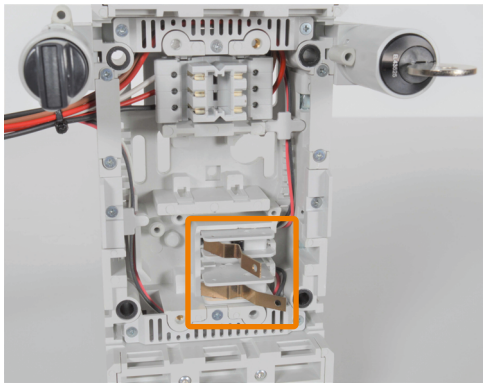
The fixed bases can receive 2 kinds of electrical contacts:

THE "CIRCUIT-BREAKER INSERTED" CONTACT (CAT.NO 4 210 48) USED TO REPORT THE STATE OF INSERTION OF THE CIRCUIT-BREAKER ON THE FIXED BASE

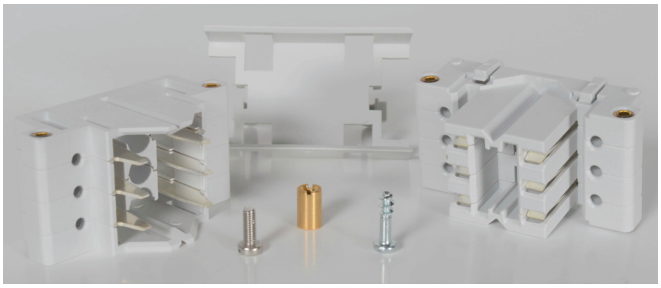


It is possible to equip the base with up to 3 contacts. These are switch contacts (NO/NC).

In the picture, 2 "circuit-breaker inserted" contacts are installed.



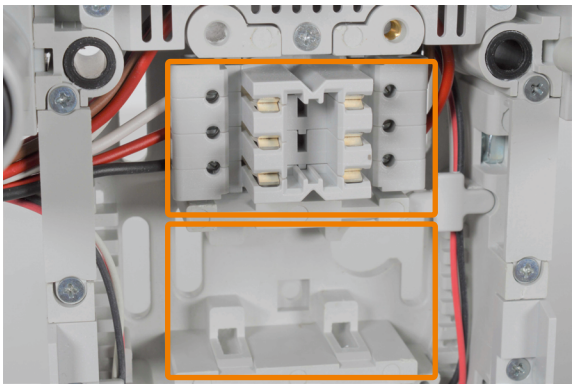
THE CONTACT BLOCK (CAT.NO 0 098 19) FOR WIRING THE ELECTRICAL ACCESSORIES OF THE CIRCUIT-BREAKER (COIL, AUXILIARY CONTACTS).



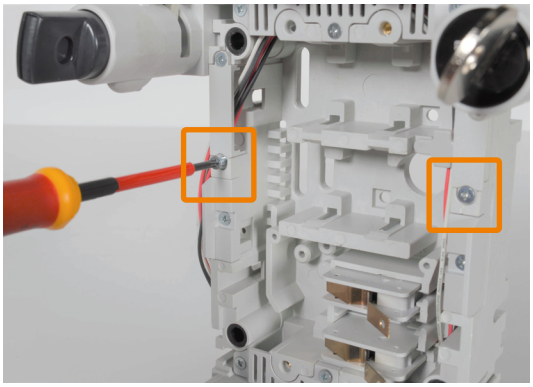
It is possible to equip the base with up to 2 contact blocks. They have 3 contacts each. One part of the block is clipped on the fixed base and the other on the mobile base.

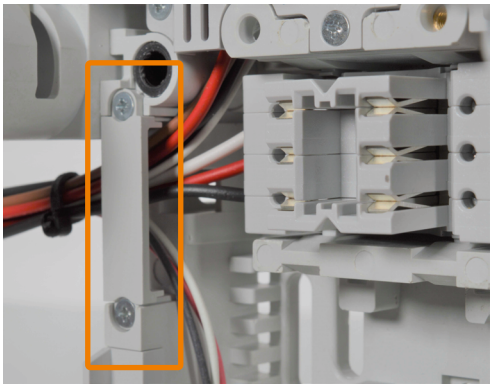
These contacts must be wired before being installed on the fixed base.

Below, the two locations of the contact blocks.

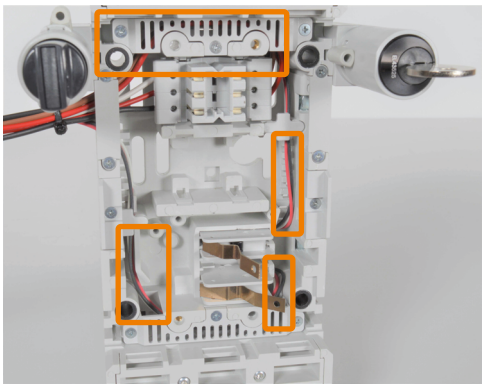


There are 2 wire outputs available on the fixed base. They are located on the right and left side of the base.



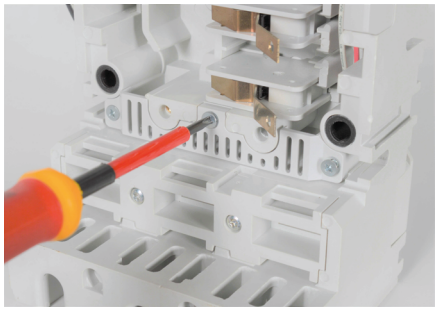


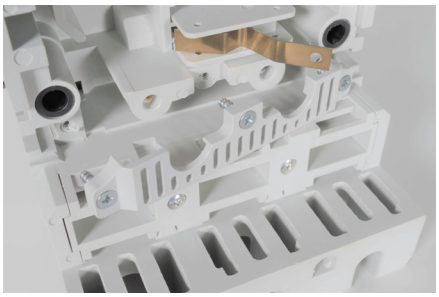
Wires can be guided, protected and supported up or down from the base.

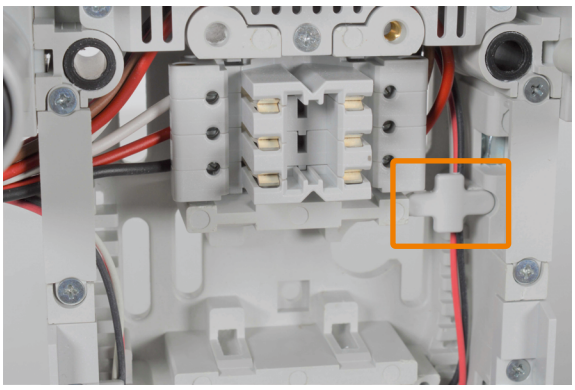


MECHANICAL ACCESSORIES

1. Unscrew one of the two wire guides (top or bottom)
2. Pass the wires under them.
3. Clip a wire support (delivered with the base) so that the wires remain at the bottom of the base







Mobile base



The mobile base allows the circuit-breaker to be pluged-in or removed from the fixed base. When the circuit-breaker is removed from the fixed base, it automatically moves to the "tripped" position if it is closed.

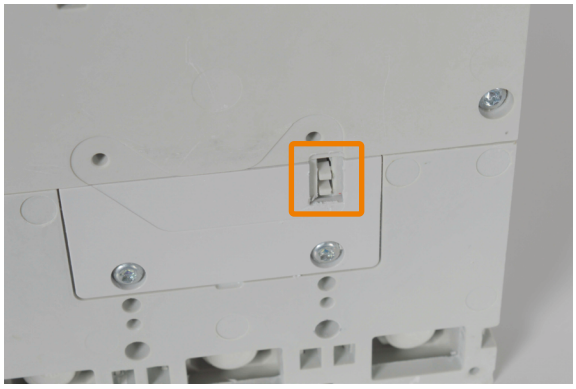
⚠ It is essential to place the terminal shields on the fixed base to prevent the operator from touching the cables when removing the circuit-breaker.

SETTING UP

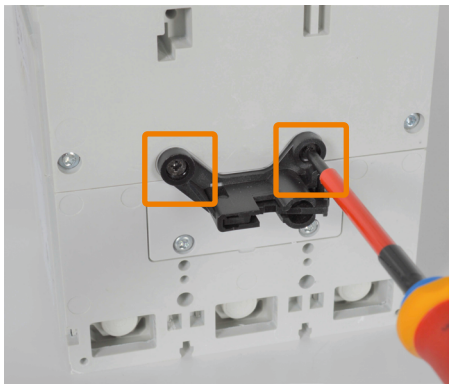
Installation of the tripping system:

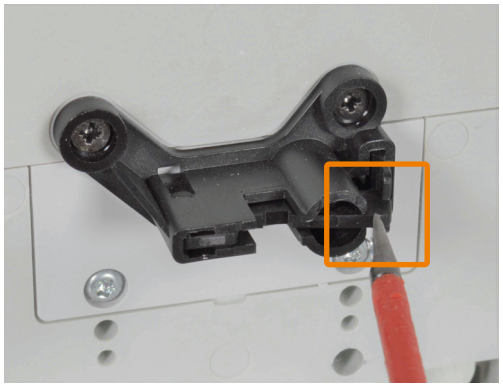
1. Remove the small tab located at the back of the circuit-breaker to reveal the tripping axis.





2. Fix the system with the 2 screws and clip it with the axis by pushing it with a screwdriver.

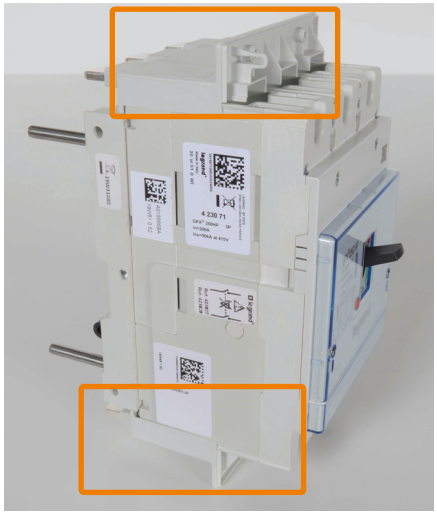




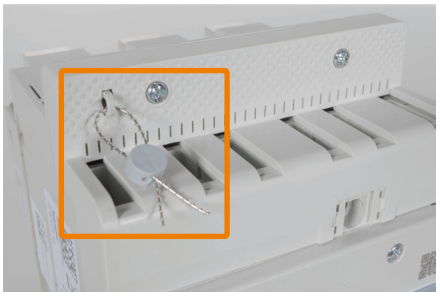
3. Fix the circuit-breaker on the mobile base with 2 screws for a 3-pole DPX^3 and 4 screws for a 4-pole DPX^3
4. Install the 2 terminal blocks, upstream and downstream, by approaching the 4 screws simultaneously
5. Tighten them to a torque of 10 Nm.
6. Put in place the screw covers which can be sealed.









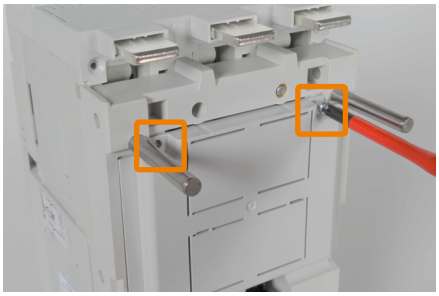


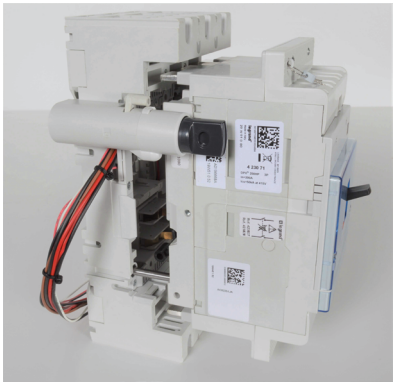
There are two ways of wiring the electrical accessories for alarm, status and/or command reporting:

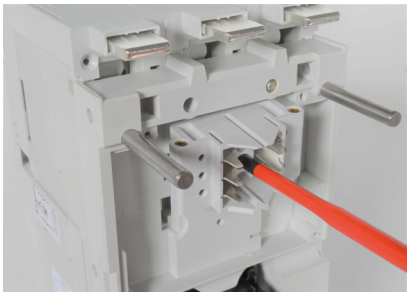
- With the contact blocks (Cat.No 0 098 19) installed on the fixed base (see page 59) by fixing the 2nd part ofthe block on the mobile base.

Unscrew the plate at the back of the base, remove the plastic part(s) (1 or 2 blocks installed) to reveal the screwed block.

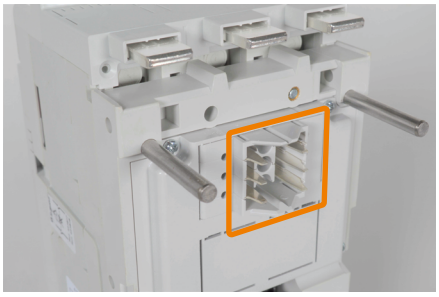
MECHANICAL ACCESSORIES

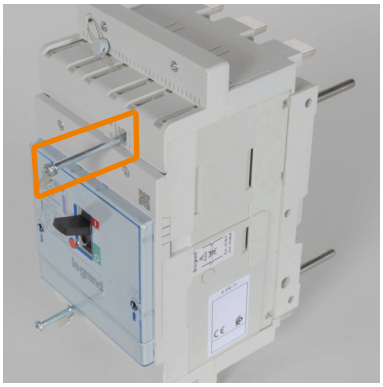






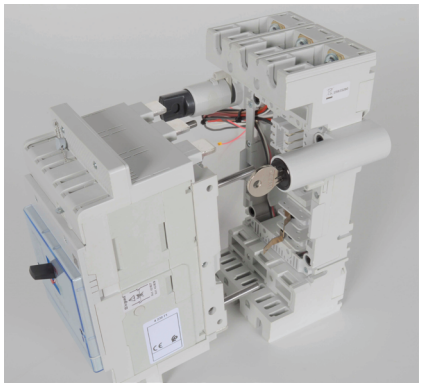


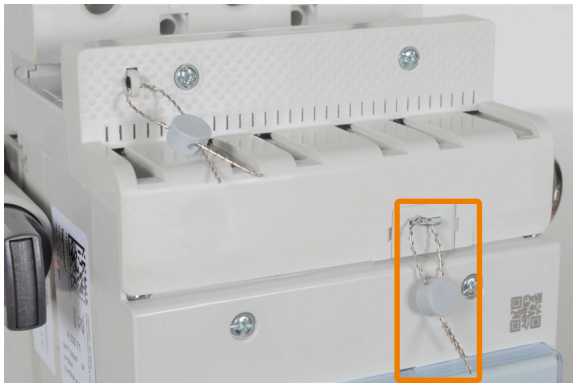




- With a plug-in contact block (Cat.No 4 222 29). This block is external to the plug-in system, the electrical accessories are wired directly from the circuit-breaker to the contact block.

The circuit-breaker can be inserted into the fixed base. This one must be fixed by 2 screws with the sealing system which allows an additional safety.





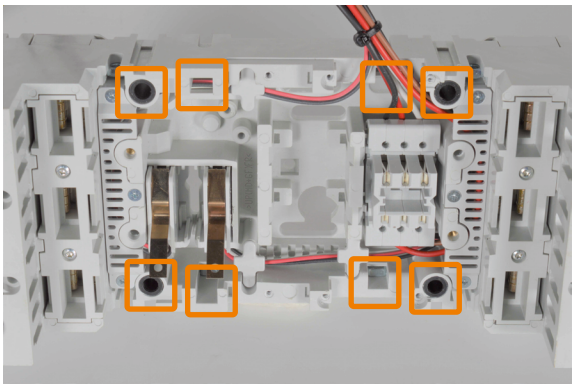
10. Draw-out version

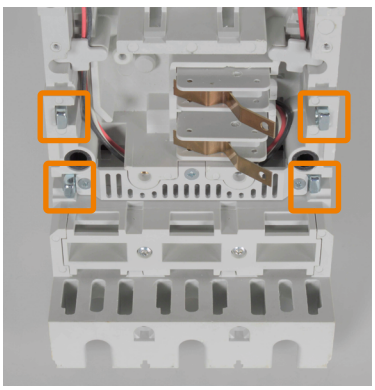
This version is a plug-in DPX³ 250 HP circuit-breaker equipped with a "Debro lift" kit to make it withdrawable with a crank handle.
The "debro-lift" kit is mounted on 3P and 4P bases. To complete the mounting, dedicated front panels are to be mounted on the circuit-breakers alone or motorized. They can be equipped with another version of the contact block and also with 2 types of locking, a padlock and a keylock with the 4 barrel catalogue numbers.

SETTING UP
Fixed base

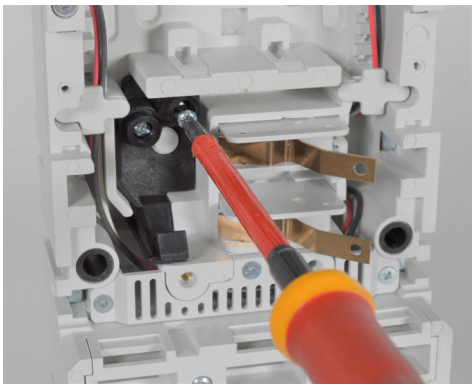
The contacts installed for a plug-in version circuit-breaker can be also used for a draw-out circuit-breaker, but the locks located on the sides of the fixed base cannot be kept.

1. Insert the 8 square nuts in the positions expected.

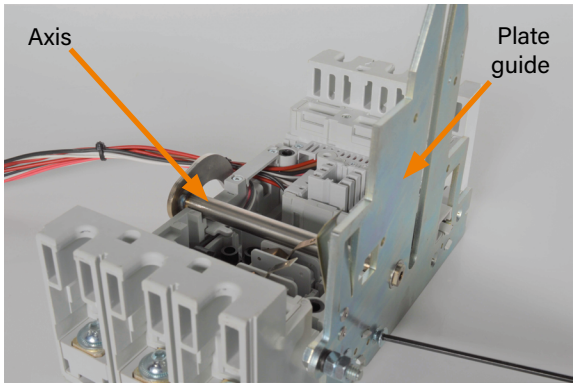


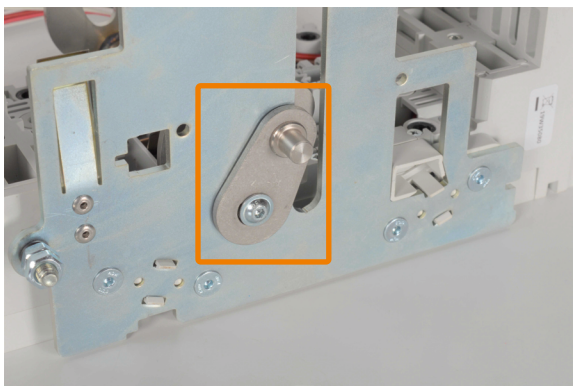


2. Install the release system part at the bottom of the fixed base using the 2 screws provided.



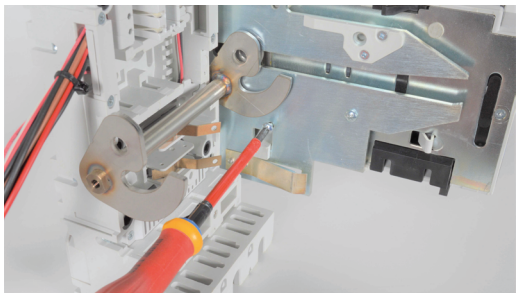
3. Mount the draw-out system starting with the right side of the base (do the mounting with the base laid flat).
4. Position the rotation shaft and the guiding plate of the circuit-breaker rack on the righth and side of the base, then fix the drive stud with its centring ring, and verify that the shaft rotates correctly in both directions.

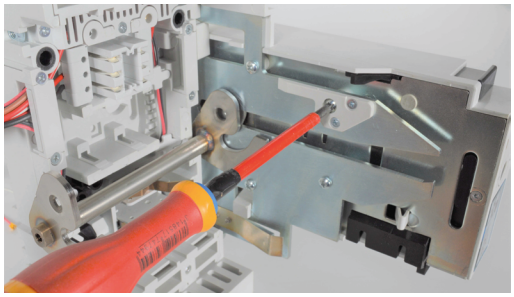


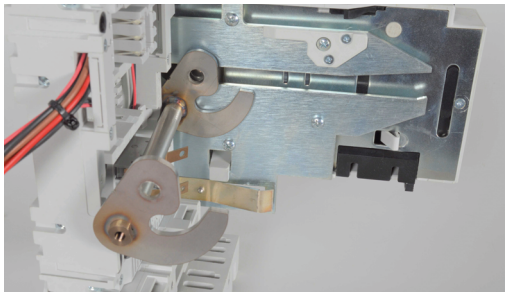


MECHANICAL ACCESSORIES

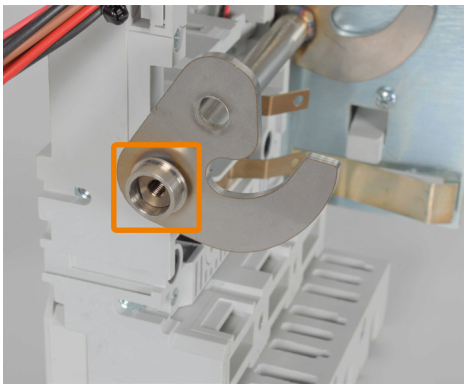
5. Fix the draw-out system to the guiding plate of the circuit-breaker rack already installed by screwing in 4 screws (tightening torque 2 Nm), and verify that the rotation axis is correctly positioned inside it.

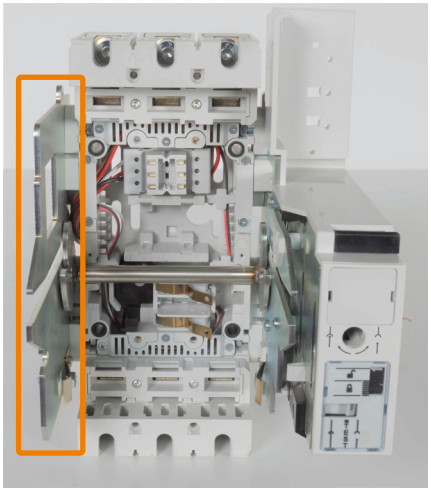




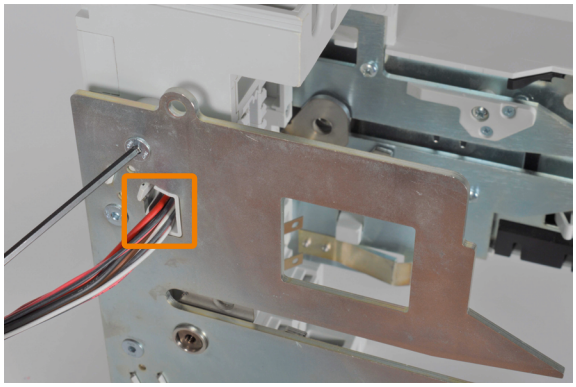


6. Place the centering ring on the left side of the rotation axis and screw the guiding plate of the circuit-breaker rack to the left of the base.



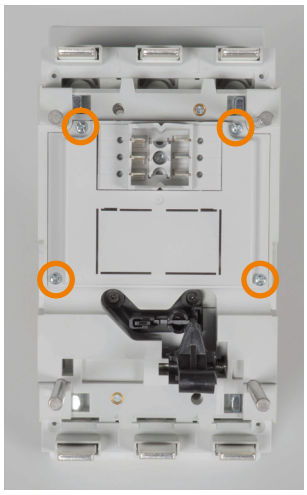


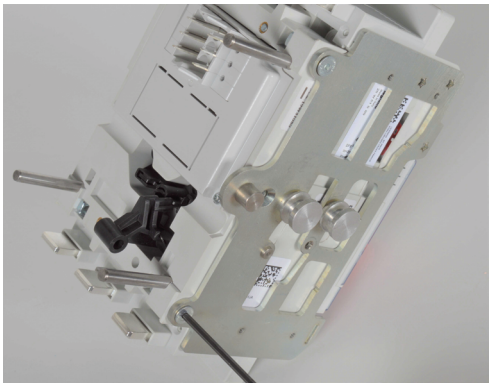
If contacts are installed on the fixed base, the wires must be brought out from the sides of the guiding plates.



Mobile base

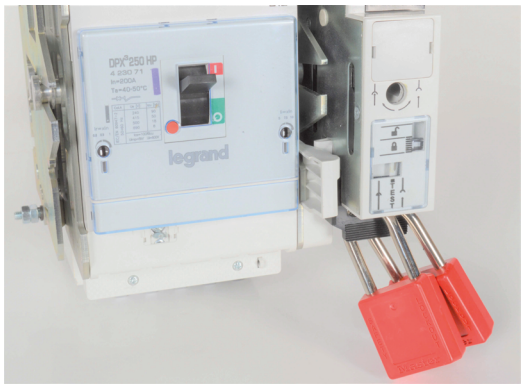
1. Install the 4 nuts at the back of the base and screw the two plates (torque 2 Nm) that will guide the circuit-breaker onto the fixed guiding plates.



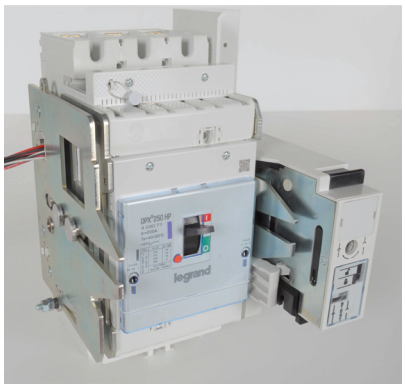


The system can be operated, the circuit-breaker can be inserted or drawn-out with the supplied crank handle. It can be equipped with padlocks to be placed on the system by pulling on the handle located under the withdrawable block only when the the circuit-breaker is drawnout.
It is possible to install a maximum of 3 padlocks, with a minimum diameter of 5 mm and a maximum of 8 mm.

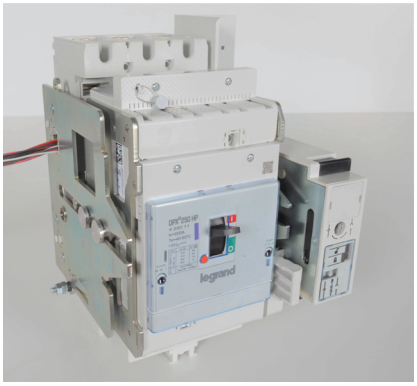




Plugged-in



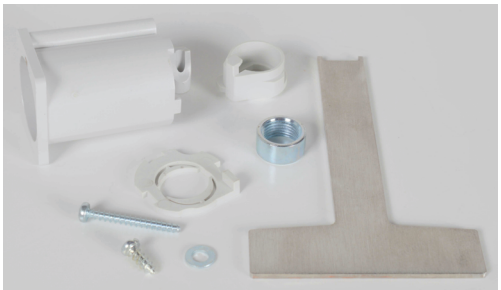
Drawn-out



To finalize the mounting, accessories complete the system :

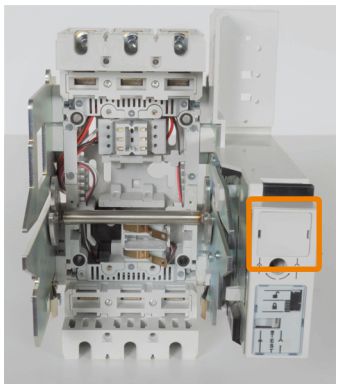
PADLOCK ACCESSORY (CAT.NO 4 238 64) OR KEYLOCK (CAT.NO 4 238 62)

These locks are additional to the one present on the system. When locking with the key or padlock, the block lock lever is automatically extended.



MECHANICAL ACCESSORIES

Location of locks.



It is possible to insert a maximum of 3 padlocks of 5 mm diameter (example with 2 padlocks below).



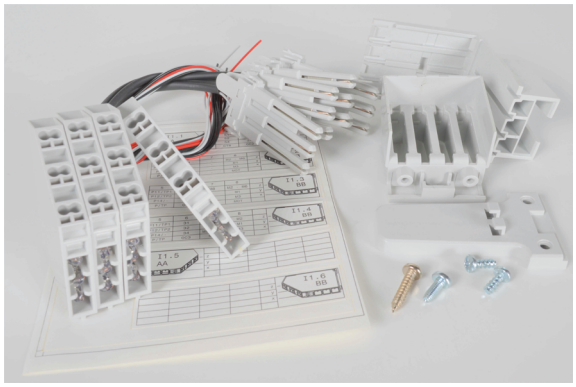
DPX³ in the drawn-out position: the key can be removed.



DPX³ in inserted position: the key cannot be removed.

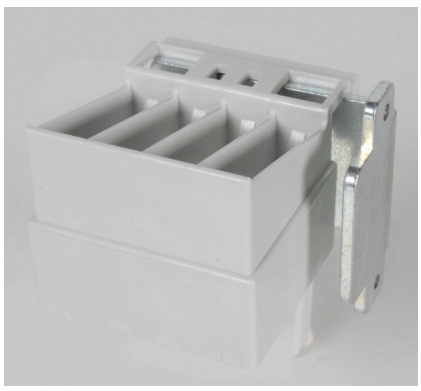


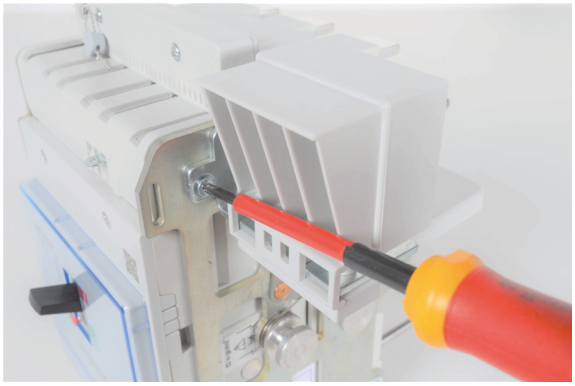
CONTACT BLOCKS: CAT.NO 4 222 30

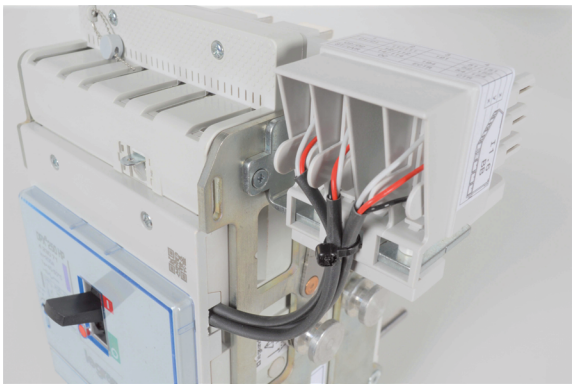


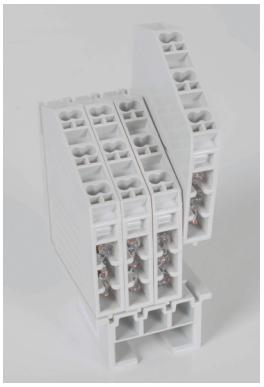
This accessory is another alternative for wiring electrical accessories. It is mounted on one side of the draw-out unit and on the other side of the mobile base.

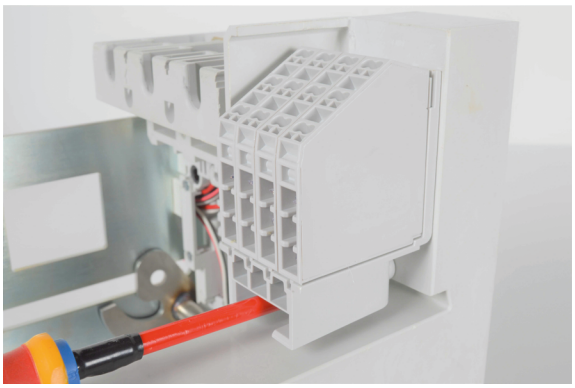
MOBILE BLOCK



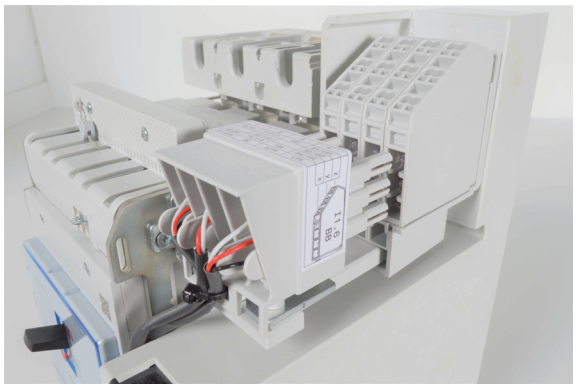




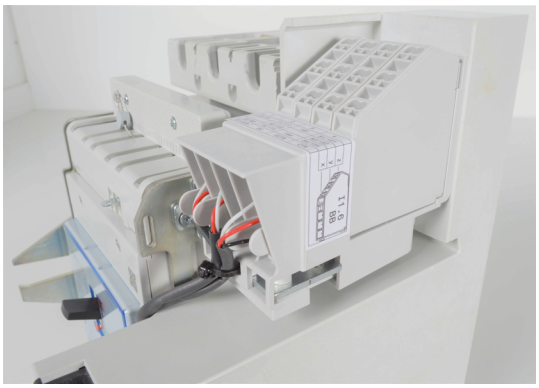




FUNCTIONAL FIXED AND MOBILE BLOCKS IN DRAWN-OUT POSITION



FUNCTIONAL FIXED AND MOBILE BLOCKS IN INSERTED POSITION



FRONT PANEL FOR DRAW-OUT VERSION

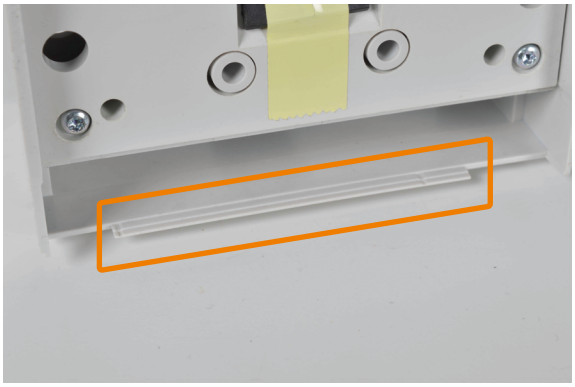


Cat.No 4 238 55 for a DPX³ 250 HP and Cat.No 4 238 56 for a circuit-breaker equipped with a motor.

MECHANICAL ACCESSORIES

Setting up

Depending on the type of circuit-breaker (thermal-magnetic, electronic), the preparation of the front panel is slightly different, by removing the right plastic parts.

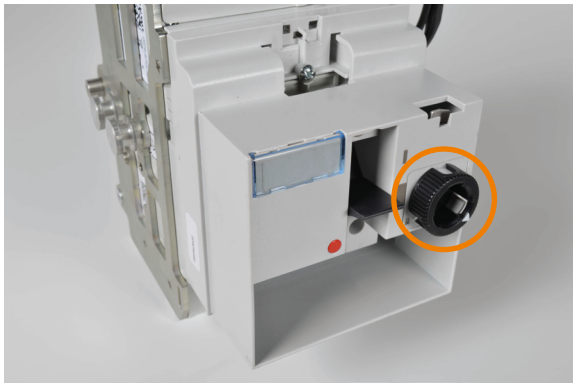






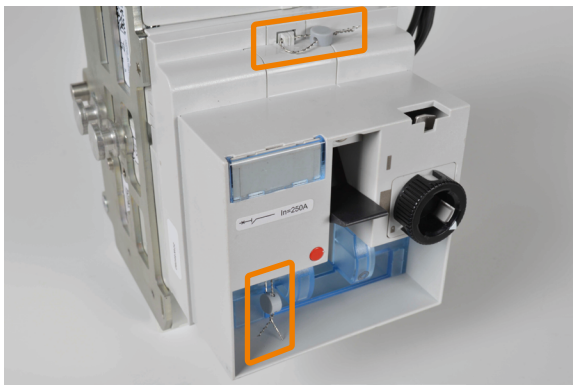
Installation is identical to the direct rotary handles (see page 50) by drilling 3 holes of 4.5 mm in the front panel of the circuit-breaker and removing and discarding the blue plastic part of the circuit-breaker front.

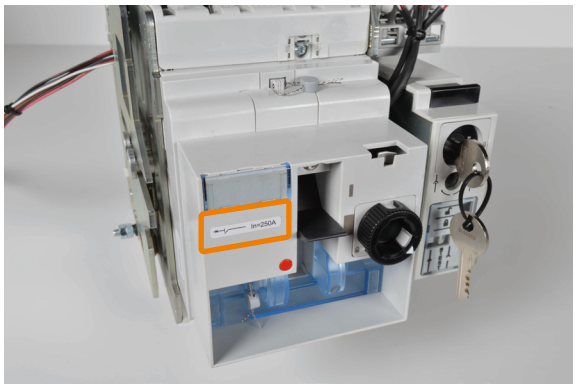
A padlock is supplied mounted on the front panel. It has the same characteristics as the Cat.No 4 238 64 (3 padlocks with a maximum diameter of 5 mm).



The keylock accessory for the drawn-out unit can also be mounted on the front panel. This locking device replaces the locking device supplied. They allow the circuit-breaker to be locked in the open position. The installation of these locks is carried out before installing the front panel on the circuit-breaker (fixing by screw on the back of the front panel).

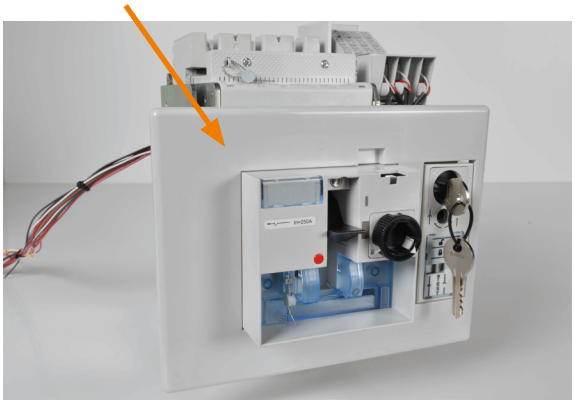
There are 2 places to seal the front panel, and stickers are provided to show the settings made on the DPX³ 250 HP as well as the current rating of the breaker.

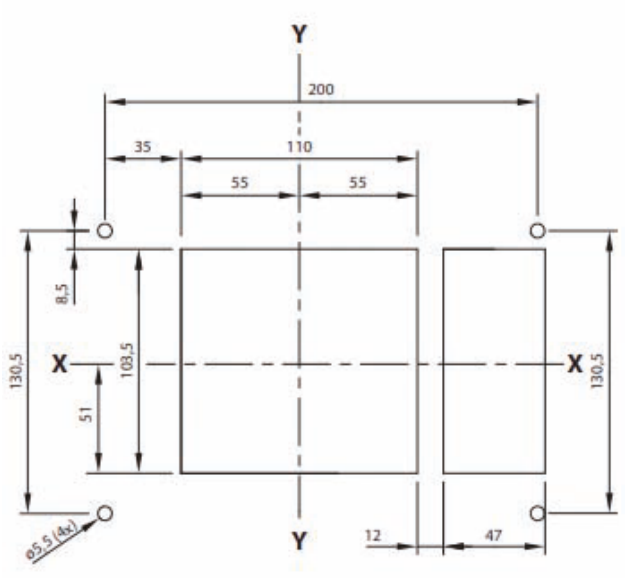




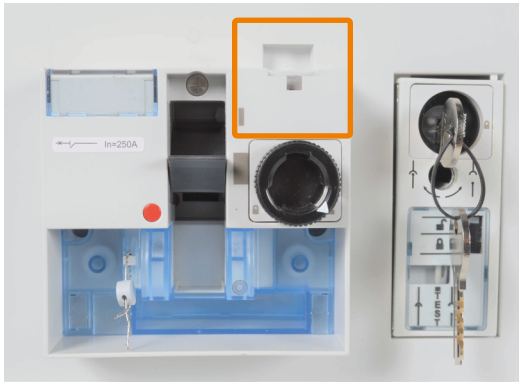
A finishing plate to be fixed on a faceplate is delivered with the catalogue number. It also prevents the faceplate from being opened if the circuit-breaker is in the closed position. This lock can be disengaged with a screwdriver.

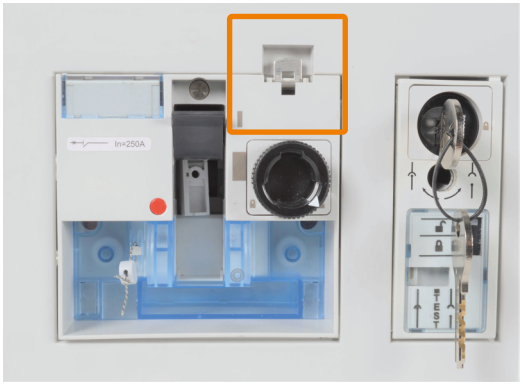
The finishing plate is fixed on a faceplate.

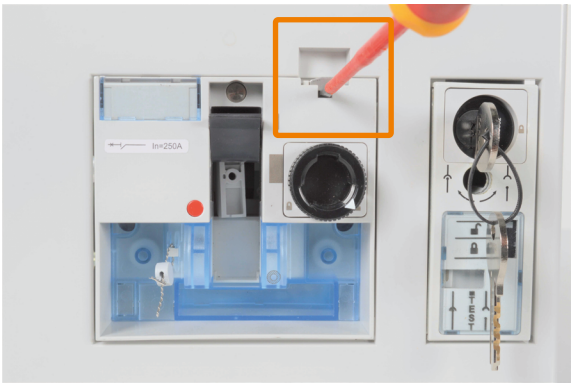












When the circuit-breaker is in the open or tripped position, the lock is down. When the circuit-breaker is in the closed position, the lock is up, the faceplate cannot be opened. Pressing the lock latch opens the closed circuit-breaker faceplate.

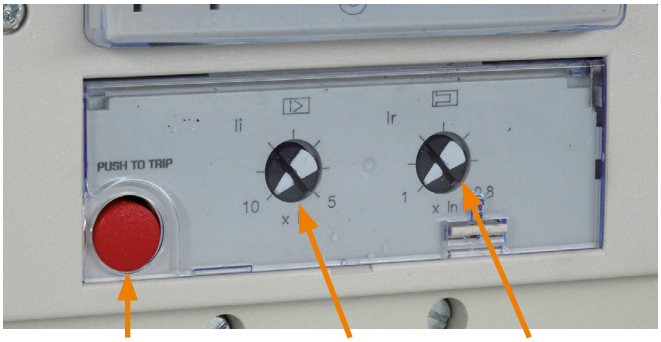


PRODUCT DESCRIPTION

1. Front face of the circuit-breaker



Example of settings on a thermal magnetic circuit-breaker:



Mechanical test button

Magnetic protection setting

Thermal protection setting

Settings are sealable.

2. Front face of the switch

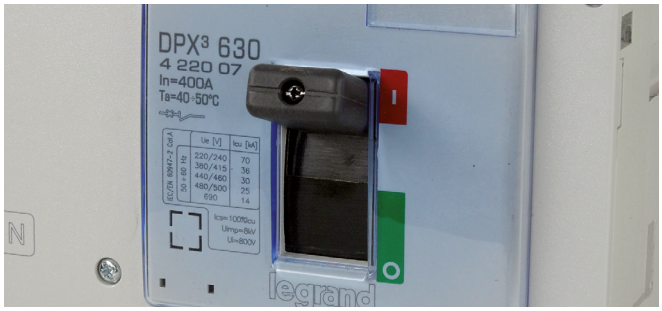
The DPX ³-I 630 switches provide on-load circuit breaking and disconnection of electrical circuits.

The DPX ³-I switches are easily identifiable with the gray handle.

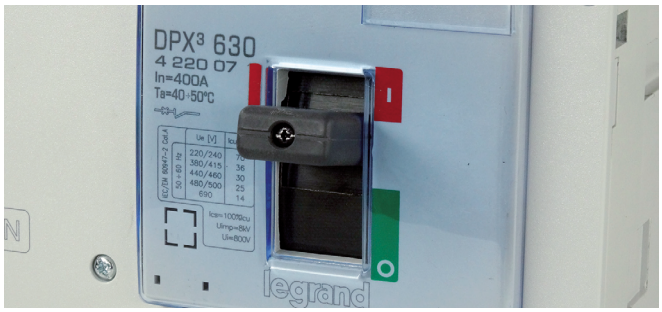
3. Handle position (ON/Tripped/OFF)

Below the 3 positions of the circuit-breaker's handle according to its status:

- Closed (ON).



- Tripped.



- Open (OFF).



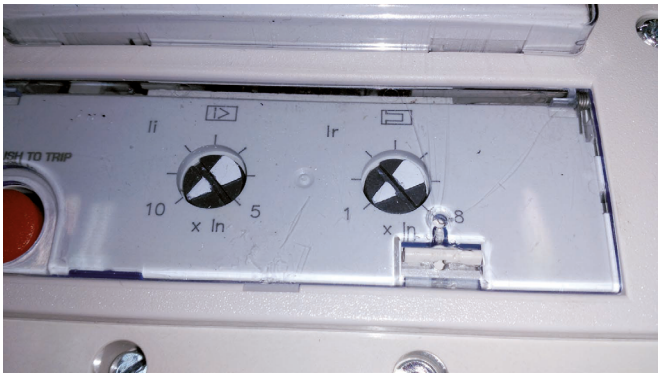
4. DPX³ 630 settings

	Thermal overload protection		Magnetic short circuit protection			Earth faults protection		Neutral setting	Associable residual current protection unit		Fault current	Fault current trip delay
			Short delay		Instantaneous							
	Ir	tr[2]	Isd	tsd (t = k, I2t = k)[3]	Ii	Ig	tg (t= k, I²t = k)[4]	N	IΔn	Δt	Id	Td
Thermal magnetic	0,8 to 1 x In	-	-	-	Ii adjustable 5 to 10 x In	-	-	-	0,03 A - 0,3 A - 1 A - 3 A	0 s - 0,3 s - 1 s - 3 s[1]	-	-
Electronic S1	0,4 to 1 x In	Fixed = 5 s (MEM ON)	1,5 - 2 - 2,5 - 3 - 4 - 5 - 6 - 7 - 8 - 10 x Ir	Fixed = 100 ms	-	-	-	OFF - 0,5 - 1 x In	0,03 A - 0,3 A - 1 A - 3 A	0 s - 0,3 s - 1 s - 3 s[1]	-	-
Electronic S10 : local on the product	0,2 to 1 x In, per 1 A steps	3 - 5 - 10 - 15 - 20 - 25 - 30 s	1,5 to 3 x Ir, par pas de 0,5 x Ir 3 to 10 x Ir, per 1 x Ir steps	40 ms, 80 ms, 160 ms, 240 ms, 320 ms 400 ms, 480 ms	-	0,2 to 1 x In, per 0,1 x In steps	80 to 480 ms and 1 s (6 steps)	50 %, 100 %, 150 %, 200 %, OFF	0,03 A - 0,3 A - 1 A - 3 A	0 s - 0,3 s - 1 s - 3 s[1]	30 mA, 300 mA, 1 A, 3 A	0 ms, 300 ms, 1 s, 3 s
Electronic S10 : via Software or Application	0,2 to 1 x In - OFF, per 1 A steps	3 to 30 s, per 40 ms steps	1,5 to 10 x Ir, per 1 A steps	40 to 480 ms per 40 ms steps	2 to 15 x In, per 1 A steps	0,2 to 1 x In, per 0,1 x In steps	80 ms to 1 s, per 40 ms steps	50 %, 100 %, 150 %, 200 %, OFF	0,03 A - 0,3 A - 1 A - 3 A	0 s - 0,3 s - 1 s - 3 s[1]	30 mA, 300 mA, 1 A, 3 A	0 ms, 300 ms, 1 s, 3 s
Magnetic only	-	-	-	-	Ii adjustable 5 - 10 x In	-	-	-	0,03 A - 0,3 A - 1 A - 3 A	0 s - 0,3 s - 1 s - 3 s[1]	-	-
Magnetic only Electronic	-	-	1,5 - 2 - 2,5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 x In	-	-	-	-	-	0,03 A - 0,3 A - 1 A - 3 A	0 s - 0,3 s - 1 s - 3 s[1]	-	-
AB	260 A or 280 A or 300 A or 320 A or 340 A or 360 A or 380 A or 400 A	(memory ON or memory OFF) 3 - 5 - 10 - 15 - 20 - 25 - 30 s	1,5 - 2 - 2,5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 x Ir	(I²t = k or I = k) 0 - 0,1 - 0,2 - 0,3 - 0,4 - 0,5 s	-	-	-	OFF, 50 %, 100 %	0,03 A - 0,3 A - 1 A - 3 A	0 s - 0,3 s - 1 s - 3 s[1]	-	-

[1] The setting to 0.03 A must have a time delay of 0 seconds.
[2] It is possible to select the thermal memory « On » or « Off » and to stop the Modbus.
[3] Modbus can be stopped.
[4] It is possible to stop the Modbus and the navigation on the product.

PRODUCT DESCRIPTION

For thermal magnetic circuit-breakers, only the settings corresponding to the marking positions have been tested. The other setting values are given as an indication.



Electronic card consumptions:

- Electronic DPX³: 50 mA.
- Electronic DPX³ with measure: 62.5 mA.
- Electronic DPX³ with earth leakage: 50 mA.

DPX³ 630 MT							
Thermal : Ir			Intensity (A)				
Catch	Multiplying factor of Ir	Mark	250	320	400	500	630
1	0,80	0,8	200	256	320	400	504
2	0,83	-	208	266	332	415	523
3	0,86	-	215	275	344	430	542
4	0,90	-	225	288	360	450	567
5	0,93	-	233	298	372	465	586
6	0,96	-	240	307	384	480	605
7	1,00	1	250	320	400	500	630

Magnetic : Ii			Intensity (A)				
Crans	Multiplying factor of Ir	Mark	250	320	400	500	630
1	5,0	5	1250	1600	2000	2500	3150
2	5,8	-	1450	1856	2320	2900	3654
3	6,7	-	1675	2144	2680	3350	4221
4	7,5	-	1875	2400	3000	3750	4725
5	8,3	-	2075	2656	3320	4150	5229
6	9,2	-	2300	2944	3680	4600	5796
7	10,0	10	2500	3200	4000	5000	6300

The normative tolerances of the Ir and Ii values are at +/-20% at 40-50 °

DPX³ 630 ELECTRONIC S1							
Thermal : Ir			Intensity (A)				
Catch	Multiplying factor of Ir	Mark	250	320	400	500	630
1	0,40	0,40 *	100 *	128 *	160 *	200 *	252 *
2	0,45	0,45 *	113 *	144 *	180 *	225 *	284 *
3	0,50	0,50 *	125 *	160 *	200 *	250 *	315 *
4	0,55	0,55 *	138 *	176 *	220 *	275 *	347 *
5	0,60	0,60 *	150 *	192 *	240 *	300 *	378 *
6	0,65	0,65 *	163 *	208 *	260 *	325 *	410 *
7	0,70	0,70 *	175 *	224 *	280 *	350 *	441 *
8	0,75	0,75 *	188 *	240 *	300 *	375 *	473 *
9	0,85	0,85 *	213 *	272 *	340 *	425 *	536 *
10	0,95	0,95 *	238 *	304	380 *	475 *	599 *
-	1,00	-	250	320	400	500	630

*adjustable settings at 0 - 0,005 - 0,01 - 0,015 - 0,02 - 0,025 - 0,03 - 0,035 - 0,04 - 0,05.
Values Ir at +/- 10 % in amps.

Magnetic : Isd			Intensity (A)				
Catch	Multiplying factor of Ir	Mark	250	320	400	500	630
1	1,5	1,5	150 to 375	192 to 480	240 to 600	300 to 750	378 to 945
2	2,0	2,0	200 to 500	256 to 640	320 to 800	400 to 1000	504 to 1260
3	2,5	2,5	250 to 625	320 to 800	400 to 1000	500 to 1250	630 to 1575
4	3,0	3,0	300 to 750	384 to 960	480 to 1200	600 to 1500	756 to 1890
5	4,0	4,0	400 to 1000	512 to 1280	640 to 1600	800 to 2000	1008 to 2520
6	5,0	5,0	500 to 1250	640 to 1600	800 to 2000	1000 to 2500	1260 to 3150
7	6,0	6,0	600 to 1500	768 to 1920	960 to 2400	1200 to 3000	1512 to 3780
8	7,0	7,0	700 to 1750	896 to 2240	1120 to 2800	1400 to 4500	1764 to 4410
9	8,0	8,0	800 to 2000	1024 to 2560	1280 to 3200	1600 to 4000	2016 to 5000
10	10,0	10,0	1000 to 2500	1280 to 3200	2600 to 4000	2000 to 5000	2520 to 5000

Values Isd at +/- 10 % in amps.

For S1 circuit-breakers, tr is permanent at 5 sec.
tsd=100ms permanent



PRODUCT DESCRIPTION

DPX³ 630 ELECTRONIC S10							
Thermal : Ir			Intensity (A)				
LCD	Settings	Adjustment range	250	320	400	500	630
	0.2 to 1 x In	from 1 A to 1 A	50 to 250	64 to 320	80 to 400	100 to 500	126 to 630

Magnetic : Isd		Intensity (A)				
LCD	Multiplying factor of Ir	250	320	400	500	630
	1,5	75 to 375	96 to 480	120 to 600	150 to 750	189 to 945
	2.0	100 to 500	128 to 640	160 to 800	200 to 1000	252 to 1260
	2.5	125 to 625	160 to 800	200 to 1000	250 to 1250	315 to 1575
	3.0	150 to 750	192 to 960	240 to 1200	300 to 1500	378 to 1890
	4.0	200 to 1000	256 to 1280	320 to 1600	400 to 2000	504 to 2520
	5.0	250 to 1250	320 to 1600	400 to 2000	500 to 2500	630 to 3150
	6.0	300 to 1500	384 to 1920	480 to 2400	600 to 3000	756 to 3780
	7.0	350 to 1750	448 to 2240	560 to 2800	700 to 3500	882 to 4410
	8.0	400 to 2000	512 to 2560	640 to 3200	800 to 4000	1008 to 5000
	9.0	450 to 2250	576 to 2880	720 to 3600	900 to 4500	1134 to 5000
	10.0	500 to 2500	640 to 3200	800 to 4000	1000 to 5000	1260 to 5000

tsd (settings on the product) : 40 - 80 - 160 - 240 - 320 - 400 - 480 ms.
tsd (settings via the softxare or the application) : 40 to 480 ms per 40 ms steps.
Values Isd at +/- 10 % amps.

If the settings are done via the softxare or the application, the adjustement ranges are from 1 A to 1 A.

Earth fault protection Ig Current (A)		Intensity (A)				
LCD	Multiplying factor of Ir	250	320	400	500	630
	0.2	50	64	80	100	126
	0.3	75	96	120	150	189
	0.4	100	128	160	200	252
	0.5	125	160	200	250	315
	0.6	150	192	240	300	378
	0.7	175	224	280	350	441
	0.8	200	256	320	400	504
	0.9	225	288	360	450	567
	1.0	250	320	400	500	630

5. Transfer switches

The transfer switches plates are supplied with mechanical interlock and accessories.
Catalogue numbers of the fixing devices + mounting plates + faceplate depending on the mounting:

Version	Position	Configuration	Accessory	XL³		
				Fixing device	Plate	Faceplate
Fixed	Vertical	Transfer switch	-	0 210 66	-	0 210 67
Plugged-in	Vertical	Single	Nothing	0 210 60	0 210 62	0 210 64
			Earth leakage	0 210 61	0 210 63	0 210 65
		Transfer switch	Nothing	0 210 66	-	0 210 67
			Motor	0 210 66	-	0 210 67
	Horizontal	Transfer switch	Nothing	0 210 73	-	0 210 76
Draw-out	Vertical	Single	Nothing	0 210 60	0 210 62	0 210 70
			Earth leakage	0 210 61	0 210 63	0 210 71
			Motor	0 210 60	0 210 62	0 210 72
		Transfer switch	Nothing	0 210 66	-	0 210 68
			Motor	0 210 66	-	0 210 69
	Horizontal	Transfer switch	Nothing	0 210 73	-	0 210 74
			Motor	0 210 73	-	0 210 75

New Legrand Cat.Nos	Old Legrand Cat.Nos	Description
0 210 60	0 207 21	Fixing device for DPX³ 630 Plug-in/draw-out
0 210 61	0 207 23	Fixing device for DPX³ 630 Plug-in/draw-out with earth leakage
0 210 62	0 207 87	Mounting plate for DPX³ 630 Plug-in/draw-out
0 210 63	0 207 88	Mounting plate for DPX³ 630 Plug-in/draw-out with earth leakage
0 210 64	0 212 20	Faceplate for DPX³ 630 Plug-in
0 210 65	0 212 22	Faceplate for DPX³ 630 Plug-in with earth leakage
0 210 66	0 206 76	Fixing device for DPX³ 630 Fixed/plug-in/draw-out vertical transfer switch
0 210 67	0 209 76	Faceplate for DPX³ 630 Fixed vertical transfer switch
0 210 68	0 212 94	Faceplate for DPX³ 630 Draw-out vertical transfer switch
0 210 69	0 212 95	Faceplate for DPX³ 630 + Motor driven handle + Draw-out vertical transfer switch
0 210 70	0 212 21	Faceplate for DPX³ 630 Draw-out
0 210 71	0 212 23	Faceplate for DPX³ 630 Draw-out + Earth leakage
0 210 72	0 212 04	Faceplate for DPX³ 630 Draw-out + Motor driven handle
0 210 73	0 206 77	Fixing device for DPX³ 630 Horizontal transfer switch
0 210 74	0 212 93	Faceplate for DPX³ 630 Draw-out horizontal transfer switch
0 210 75	0 212 97	Faceplate for DPX³ 630 + Draw-out motor driven handle + Horizontal transfer switch
0 210 76	0 212 98	Faceplate for DPX³ 630 Horizontal transfer switch

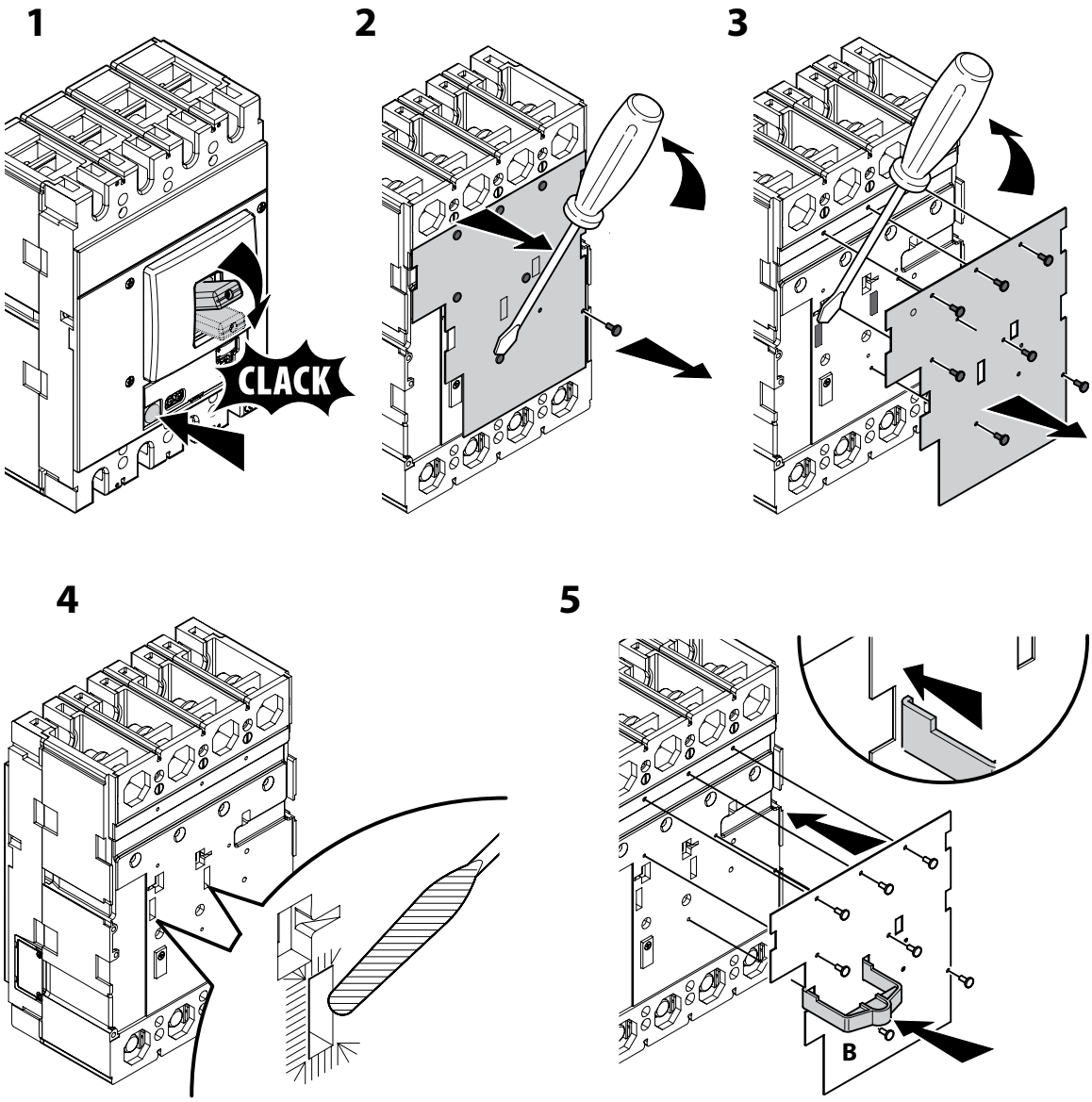
PRODUCT DESCRIPTION

PRINCIPLE

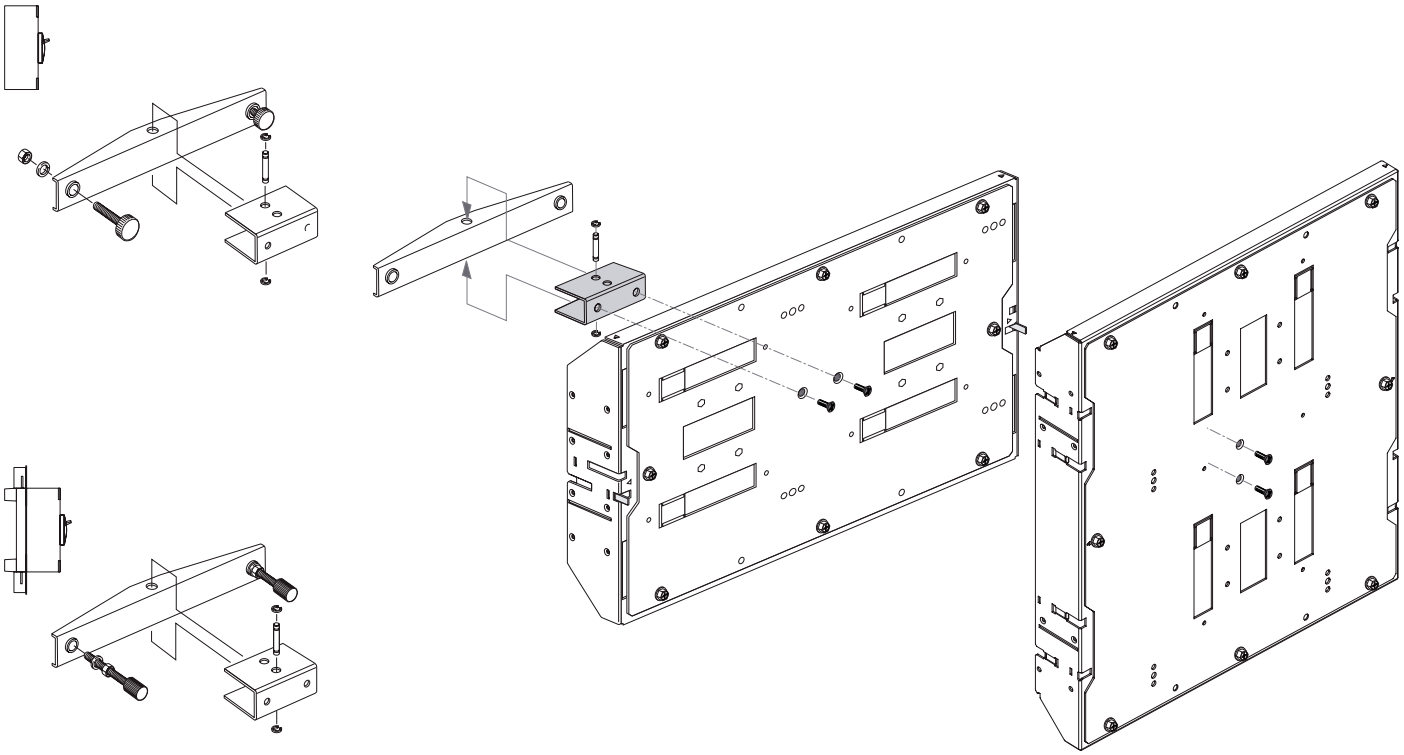
The aim is to combine 2 devices motorized or not and to prevent the possibility of closing the 2 at the same time using the mechanical interlock.

PRODUCT PREPARATION

Prepare your devices based on instruction sheet, according to the configuration.



Set up the mechanical interlock according to the illustrations below:



Points to check and settings:

- Check that the U-shaped parts mounted on the circuit-breakers slide freely without any special effort. If not, check that the cutoutis done correctly.
- Load the spring manually on the 2 devices (Q1 and Q2) and close Q1.
- Adjust the wide head screw so that it has the same length, touch the U-piece on the Q1 side, and adjust (Q2 side) the distance between the screw head and the U-piece (distance between 0.5 and 1 mm).
- Open Q1, load the spring, then close Q2.
- Repeat the same operation for Q1 (distance).

These adjustment operations are identical for the fixed, plugged-in and draw-out versions.



ELECTRICAL ACCESSORIES

AUXILIARY CONTACT (OC) / AUXILIARY FAULT SIGNALLING (CTR)

Cat.No	Voltage
4 210 11	24/48/110/230 V⎓ 110/230 V~

SHUNT RELEASES

Cat.Nos	Voltage
4 222 39	24 V~/⎓
4 222 40	48 V~/⎓
4 222 41	110 V~/⎓
4 222 42	230 V~/⎓
4 222 43	400 V~/⎓

UNDERVOLTAGE RELEASES

Cat.Nos	Voltage
4 222 44	24 V⎓
4 222 45	24 V~
4 222 46	48 V⎓
4 222 47	110 V~
4 222 48	230 V~
4 222 49 (power supply included)	400 V~
4 226 23	To be combined with Cat.No 0 261 90 or 0 261 91 according to the desired voltage

TIME-LAG MODULES

Cat.Nos	Voltage
0 261 90	230 V~
0 261 91	400 V~

BATTERIES FOR DPX³

Cat.No	Content
4 210 82	Set of 2 batteries CR1616 for circuit-breakers + supports

MOTOR OPERATOR (FRONT INSTALLATION)

Cat.Nos	Voltage
0 261 40	24 V~/⎓
0 261 41	48 V~/⎓
0 261 42	110 V~
0 261 44	230 V~
0 261 48	220 - 250 V⎓
4 226 26	110 - 277 V~
4 226 30	230 V~ (stantard)

LOCKING FOR MOTOR OPERATOR

Cat.Nos	Support and type of barrel
4 228 06	Mechanical support for key lock
4 238 80	Barell and flat key with random marking
4 238 81	Barell and flat key EL43525
4 238 82	Barell and flat key EL43363
4 238 83	Barell and star key with random marking

EXTERNAL POWER SUPPLY

Cat.No	Voltage	Intensity
4 210 83	24 V~/⎓	250 mA

SET OF CONNECTORS – 6 CONTACTS (REAR INSTALLATION)

Cat.No	Versions
0 098 19	Plug-in versions and « Debro-lift »

SET OF CONNECTORS - 8 CONTACTS (REAR INSTALLATION)

Cat.No	Versions
0 263 99	Plug-in versions and « Debro-lift »

SET OF CONNECTORS – 24 CONTACTS (LATERAL INSTALLATION)

Cat.No
4 222 29

SIGNALLING CONTACT

Cat.No	Position
0 265 74	Plugged-in/Drawn-out

SET OF CONTACTS (12) (LATERAL INSTALLATION)

Cat.No	Version
4 222 30	Darw-out

ELECTRONIC EARTH LEAKAGE MODULES

Cat.Nos	Intensity
0 260 60	Standard 3P/400 A
0 260 61	Standard 4P/400 A
0 260 63	LED 4P/400 A
0 260 64	Standard 3P/630 A
0 260 65	Standard 4P/630 A
0 260 67	LED 4P/630 A

1. Auxiliary contact (OC) / Auxiliary fault signalling (CTR), Cat.No 4 210 11



All DPX ^{3} circuit-breakers and switches can be equipped with electrical auxiliaries to ensure control functions.

The auxiliary contact Cat.no 4 210 11 is common to the entire DPX^3 range.

Depending on its insertion position in the DPX^3, the contact acts either as an auxiliary contact or as a fault signalling contact.

The auxiliary contact (OC) allows the signalling of the position of the main contacts of the circuit-breaker or switch (open or closed).

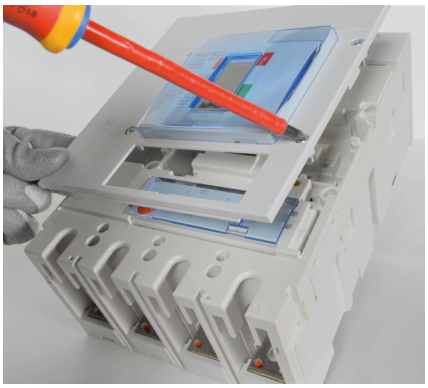
It is neither anticipated nor delayed.

The fault signalling contact (CTR) indicates that the circuit-breaker has opened on fault, per action of a trigger, by a drawout operation or by mechanical action on the red "test" button.

These contacts are of the changeover type (NO-NC) with dry contact (potential free).

Setting up the OC contact

1. Press the red "test" button to trigger the product and have the handle in the intermediate position.
2. Remove the 4 screws from the product cover
3. Place the contact OC.

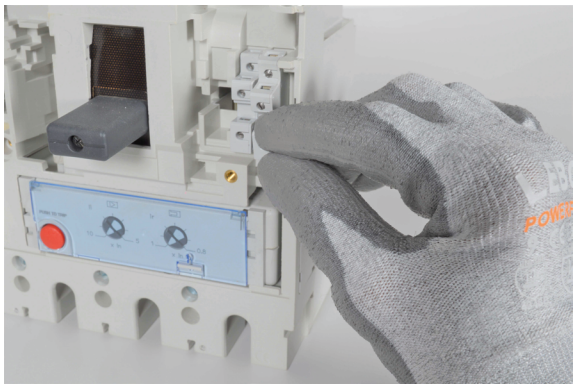


OC contact presentation :



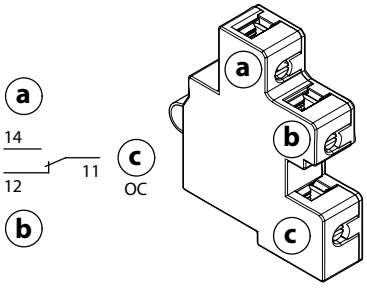


⚠ Its location is dedicated (possibility to put 2 OC Max. on the DPX ^{3} 630).



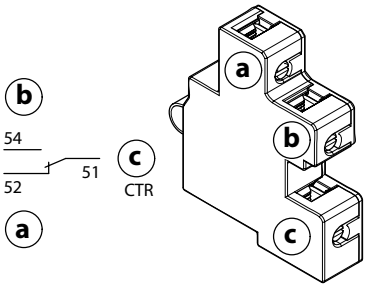
ELECTRICAL ACCESSORIES

OC contact status :



OC	
OFF	12, 14, 11
Tripped	12, 14, 11
ON	12, 14, 11

CTR contact presentation :

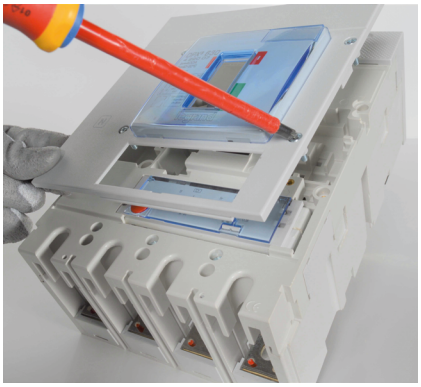


CTR contact status :

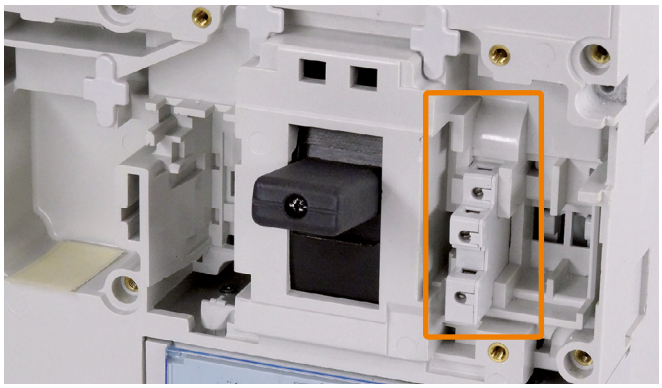
CTR	
OFF	52, 54, 51
Tripped	52, 54, 51
ON	52, 54, 51

Setting up the fault signalling contact

1. Press the red "test" button to trigger the product and to have the handle in the intermediate position.
2. Remove the 4 screws from the product cover.



3. Insert the CTR contact (only 1 possible location):



Electrical characteristics (OC & CTR)

Voltage	Intensity (A)
24 V⎓	5
48 V⎓	1,7
110 V⎓	0,5
230 V⎓	0,25
110 V∿	4
230 V∿	3

OC and CTR cabling:

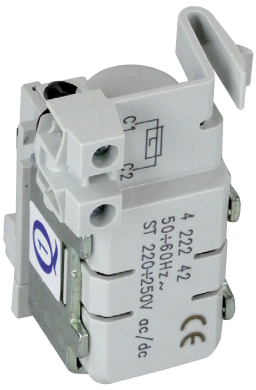
The wires must be pulled out on the side of the circuit-breaker, the permissible section extends from 0.35 mm² to 1.5 mm².
In the case where several OC and CTR contacts are present, the recommended section is 0.50 mm ².



Electrical characteristics

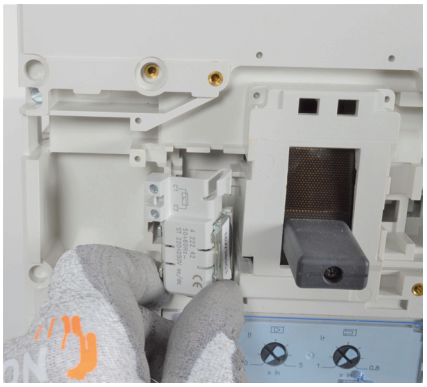
Operating Voltage	∿ : 24 V/110 V/230 V/400 V ⎓ : 24 V/48 V
Operating range IEC 60947-2	70 to 110 % - Un
Operating time	≤ 50 ms
Inrush power	300 VA/W
Request time	> 50 ms
Insulation voltage	2,5 kV

2. Shunt releases (example Cat.No 4 222 42)



SETTING UP

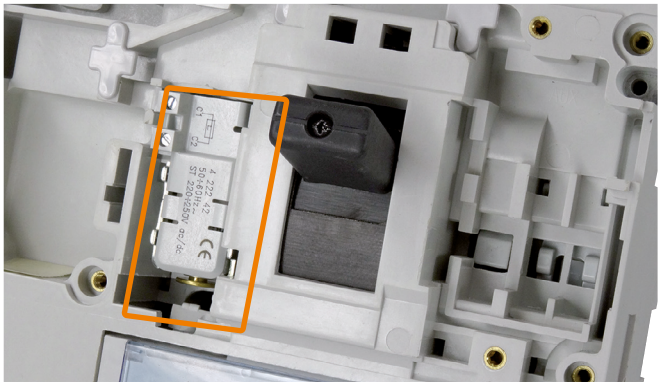
A single location is provided for mounting regardless of the product of the DPX³ 630 range.
These triggers are mounted to the left side of the product (front view).



Shunt releases allow the instantaneous opening (≤ 50ms) of the device by the power of their coil:

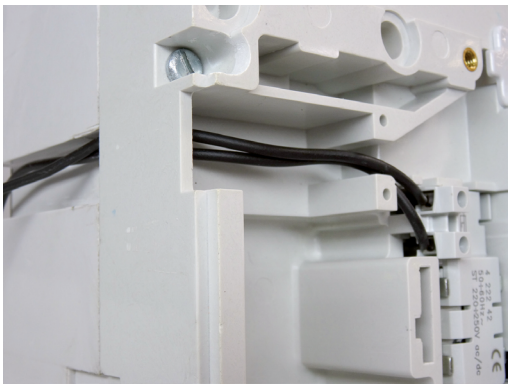
- External contact control NO.

The contact incorporated into the shunt release switch shuts off the power supply during an opening operation (e.g., emergency stop), thus avoiding the heating problem. The permanent supply of the shunt release is possible, prohibiting the closure of the DPX³.

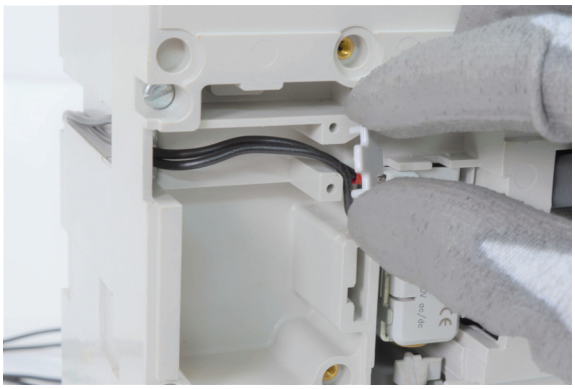


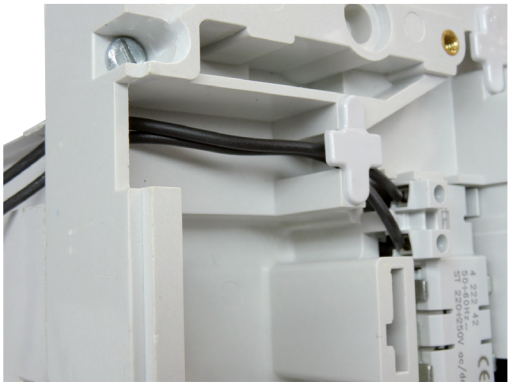
CONNECTION – CABLE OUTPUT

Only one output is possible: lateral output.

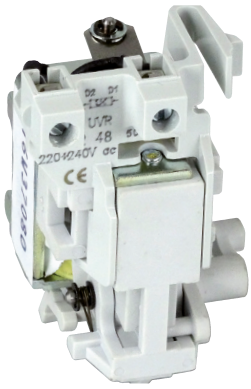


The accessory Cat.No 9 803 86 can be used to maintain the cables in place:





3. Undervoltage releases (example Cat.No 4 222 48)



The undervoltage release allows the instantaneous opening (≤ 50 ms) of the device by switching off the power supply (< 85% UN) of the coil:

- positive safety (e.g. emergency stop by external contact NF).

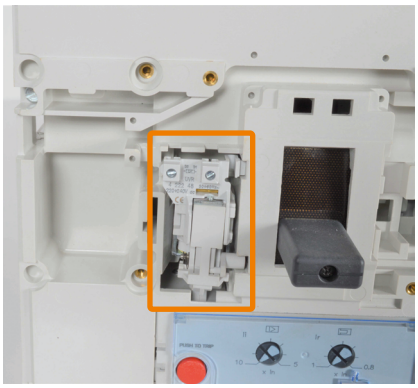
The undervoltage release must be pre-energized before putting the associated DPX³ in the rearming position (OFF) to reset the product.

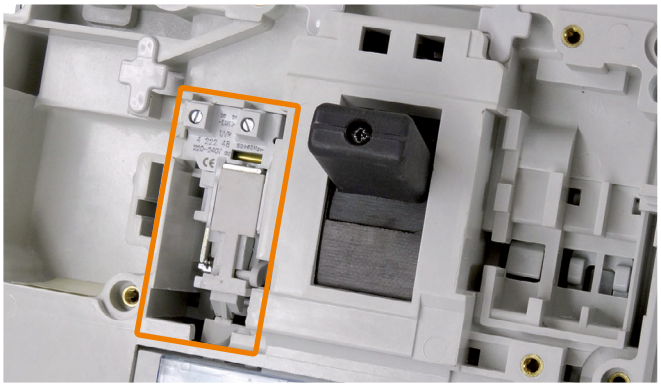
Electrical characteristics

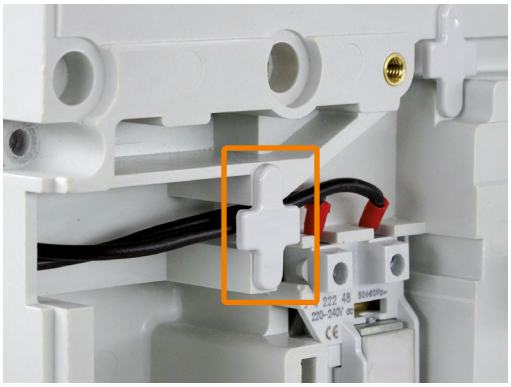
OPERATING VOLTAGE	∿ : 24 V/110 V/230 V/400 V ⎓ : 24 V/48 V
Operating range IEC 60947-2	85 to 110 % Un
Operating time	< 50 ms
Holding power	1.6 W/5 VA

SETTING UP

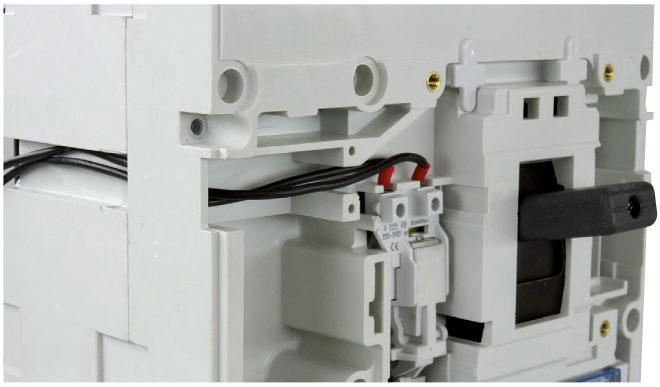
A single location is provided for mounting regardless of the product of the DPX³ 630 range.
These triggers are mounted to the left of the product (front view).







Connection – cable output
Only one output is possible: lateral output.



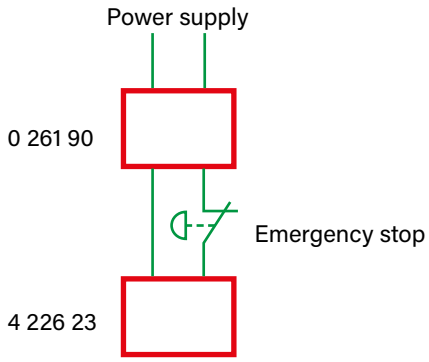
The accessory Cat.No 9 803 86 can be used to maintain the cables in place:



4. 800 magnetic only time-lag modules

Cat.Nos	Voltage
0 261 90	230 V~ (supplied with 2 terminal covers and 1 rail)
0 261 91	400 V~ (supplied with 2 terminal covers and 1 rail)
4 226 23	Specific trigger to be associated with 0 261 90 or 0 261 91 according to the desired voltage.

The wiring is done in parallel.
Example :



5. Battery for DPX³ Cat.No 4 210 82

The internal battery allows the protection unit of the DPX³ electronic and with earth leakage to be set before installing the product.

Cat.No 4 210 82 composition : 2 batteries CR1616 + two battery holders (1 for DPX³ 160/250 and 1 for DPX³ 630/1600).

SETTING UP



Holder for DPX³ 160/250.

Holder for DPX³ 630/1600

1. Remove the battery holder using a small flat screwdriver.
2. Place the 2 batteries with the "+" upwards.
3. Insert the whole into the product and set the protection unit.







6. Motor operator (front installation)

The motor operator of the DPX³ 630 offers a significant advantage in all commercial building installations, it allows to close/open a circuit-breaker or a switch remotely.

When used in automatic transfer switch, its control is managed using the automation box.

Its front panel has:

- a controller to charge the spring;
- a status indicator of the spring : "loaded" or "unloaded";
- a multifunction selector (auto-man lock);
- an opening button;
- a closing button;
- a locking device.

It is available in many ratings:

- ∿ → 24 V/48 V/110 V/230 V.
- ⎓ → 24 V/48 V/110-125 V/220-250 V.

It is only available in front panel version → does not exist lateral version

2 possibilities of electric controls:

- impulse;
- sustained.

In automatic mode

the motorized control allows to open, close or remotely rearm the DPX³.

In manual mode

Electrical orders are not taken into account. The front handle allows you to load the spring manually and then close the associated device. To open the device press the red button.

In locked mode

It is not possible to drive the motorized control electrically or manually.

This mode is only possible when the DPX ³ is in the open position "0".

It is possible to fit them with a keylock (Cat.Nos 4 228 06 + 4 238 80 or 4 238 81 or 4 238 82 or 4 238 83) or 1 or more padlocks (quantity: 3 Maxi. diameter 6 mm Maxi, for example with padlock Cat.no 0 227 97), prohibiting the closing of the DPX ³ and the cancellation of all the electrical orders.

For the safety of persons and equipment, when the motorized control cover is removed, a safety contact makes it ineffective to operate.

In the case of the use of a transfer switch,the switching time between the main line and the backup line (time between the opening of the main line and the closure of the backup line) is greater than or equal to 6s.

There are 2 versions of motorized control:

- a premium version;
- a standard version.

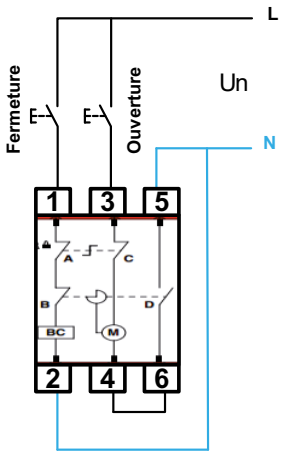
Presentation and composition of the premium version (Cat.Nos 0 261 40/41/42/44/48 and 4 226 26):



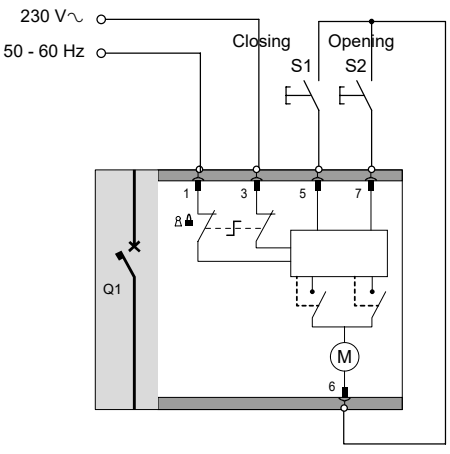
Presentation and composition of the standard version (Cat.No 4 226 30 only):



Principle scheme of the premium version:



Principle scheme of the standard version:



ELECTRICAL ACCESSORIES

Electrical characteristics of the premium version:

Voltage – Un (V)	Power consumption	Opening + rearming [1]	Closing[1]
24 V⎓	300 W	2 s	≤ 100 ms
48 V⎓	300 W	2 s	≤ 100 ms
24 V∿	300 VA	2 s	≤ 100 ms
48 V∿	300 VA	2 s	≤ 100 ms
110 V∿	300 VA	2 s	≤ 100 ms
230 V∿	300 VA	2 s	≤ 100 ms

[1] provided that these voltages/powers conform to the specifications given.

Electrical characteristics of the standard version :

In the case of the use of a transfer switch, the switching time between the main line and the backup line (time between the opening of the main line and the closure of the backup line) is greater than 6s motor alone without accessories.

Voltage – Un (V)	230 V∿ – 50/60 Hz	
	Opening	Closing
Inrush current	240 W	200 W
Hold consumption	80 W	120 W
Request time/electrical operation(s)	0,45 s	0,55 s
Operating time/main contacts state change	0,27 s	0,55 s

MOUNTING (SAME FOR THE 2 VERSIONS)

It is forbidden to remove the protective cover in operating mode. This operation will result in an inhibition of the electrical function (internal safety contact).

Function of the markers of the instruction sheet :

- The reference part G is a delay of the OFF button of the motor. In the absence of this part, it is not possible to mechanically open the associated device using the OFF button (trigger button).
- The reference part H is an axis to position the carry-over of the OFF button on the cover.
- Part D is a power supply connector
- Part C is an associated device power contact position (from the I/O front panel indicator).
- Screws B and F are fastening screws.
- The reference part E is an XL³ faceplate power terminal cover.

1. Make the two cuts (they must be made in a very clean way, in case of large burr, they will prevent the correct sliding of the status report).
2. Drill the holes as indicated in the instruction sheet.





3. Place the metal bracket and its axle (toothed part towards the handle) in the intended location.





mechanism (I - 0).



The bracket must be free in its movement. Any improper implementation will result in the inability to open the associated device via the OFF button in manual mode.

4. Install the status indicator. It follows the movement of the circuit-breaker



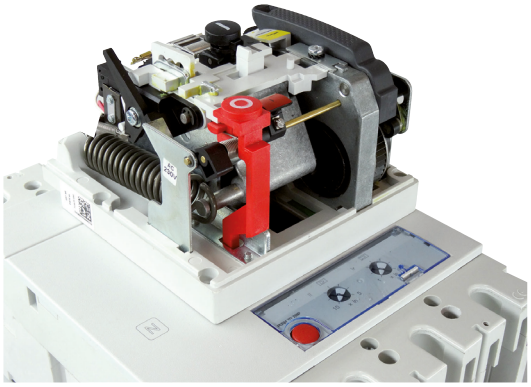
5. Reposition the DPX³ cover.



6. Remove the protective cover from the motorized control and position it by being vigilant on the insertion position of the circuit-breaker handle.



ELECTRICAL ACCESSORIES



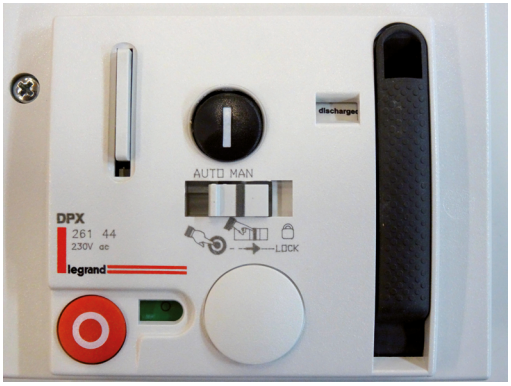
7. Set up the 4 screws for securing the motorized control (tightening torque 2 Nm).
8. Place the motor cover using the 2 screws supplied (tightening torque 1 Nm).
9. Perform a few closing and opening operations manually.

⚠ The function selector must be on MAN in order to check the correct mechanical functioning of the whole

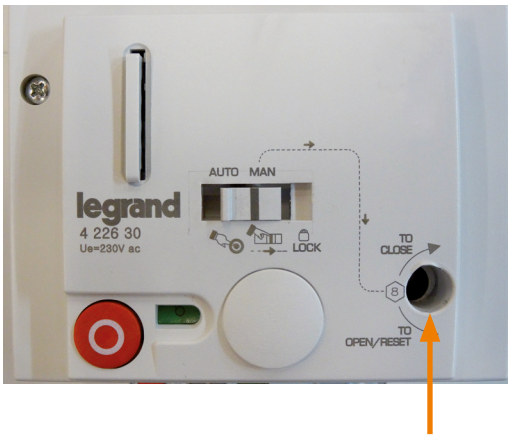


VISUAL AND OPERATING DIFFERENCES:

Premium version



Standard version



Hole for manual opening/closing

- The push button is no longer present on the standard version.
- Absence of the spring reload lever and the status display on the standard version.
- Presence of an orifice (passage of an 8 mm hexagonal key supplied) in case of manual reset.

As the standard version motor drive has no loading spring, the mechanical opening/ closing test is always carried out in manual position but only by using the supplied tool (8 mm hexagonal key) in the intended orifice.

- clockwise direction → closing the DPX³.
- counterclockwise direction → open/reset.

Illustration photo for mechanical operations on the standard version :



7. Locking accessories for motor drive

There are two possibilities to lock the motor drive:

- By padlock, the maximum number is 3 of 6 mm maximum. Example with a padlock Cat.No 0 227 97:



- By key with a mechanical support Cat.No 4 228 06 + a barrel Cat.No. 4 238 80 or 4 238 81 or 4 238 82 or 4 238 83 (see description page 78).

Example of mounting of the Cat.Nos 4 228 06 + 4 238 80 :

1. Composition



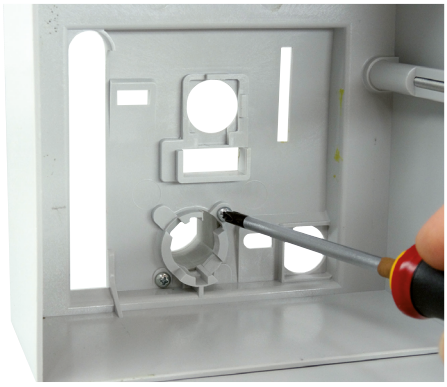
2. Remove the protective cover.



3. Drill 2 holes (3 mm) using the drill jig provided.

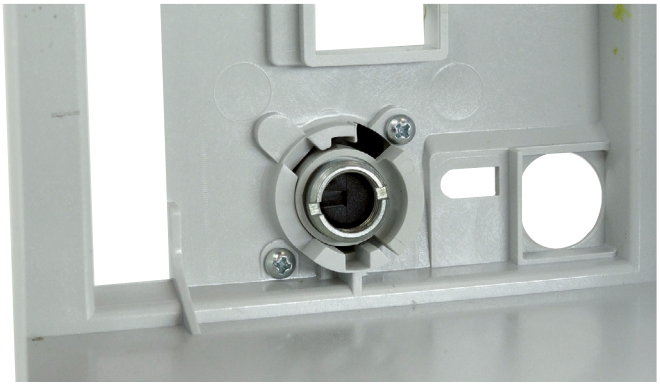


4. Fasten the square piece from the rear using the 2 screws provided (tightening torque 2 Nm).



5. Insert the key barrel and fasten it using the supplied nut after inserting the narrowest plastic cam provided for(tightening torque 2 Nm).

⚠ The barrel key hole must face upwards during assembly.



6. Horizontal key position → the key cannot be removed, and the motor is not locked.



7. Position of the vertical key with the red button "0" pressed → the key can be removed, and the motor is locked.



To lock, it is necessary to press the red button "0" then turn the key in the vertical position. To unlock, press the red button "0" and turn the key to the horizontal position.

8. External power supply (Cat.No 4 210 83)







It allows the DPX³ electronic units to be supplied when the circuit-breaker is not energized or when the current passing through it is insufficient. It also provides power to several circuit-breakers (maximum output 250 mA) and allows keeping all the "measure" functions activated.
Sidewalls with a specific connector are provided and connected to the side of the circuit-breakers.





The electronic circuit-breakers DPX³ 630 type S1 do not allow the addition of an external power supply.

9. Set of connectors (Cat.Nos 0 098 19 and 0 263 99) → Rear installation

See the details of the installation in the "mechanical accessories", page 98 (Plug-in/« Debro-lift »). The mounting is also illustrated in the instruction sheet of the Cat.Nos 4 222 31/32/33.
It is not possible to install these connectors in the case of products mounted using a transfer switch.

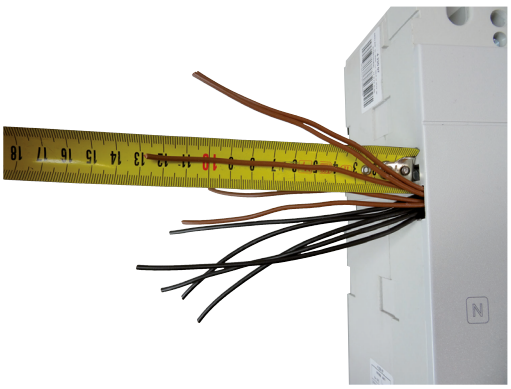
10. Set of connectors for plug-in version (Cat.No 4 222 29) → Side installation

This catalogue number is composed of 2 male/female connectors of 12 terminals each (24 terminals in total) allowing the connection of the accessories (OC – CTR – motor drive – coils).
It is only available in the international catalog.



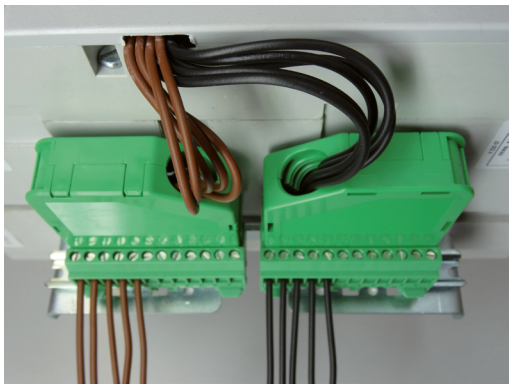
The mounting is carried out by following the steps of the installation instructions (supplied with the product but also available on the instructions of the base Cat.Nos 4 222 22/23/24/25/26/27) in accordance with the following point:

- Leave a necessary length of wires coming out of the product (triggers, OC/CTR, etc.) → 13 cm.

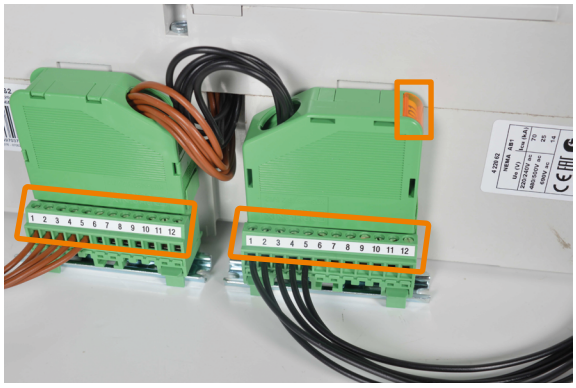




Final mounting:



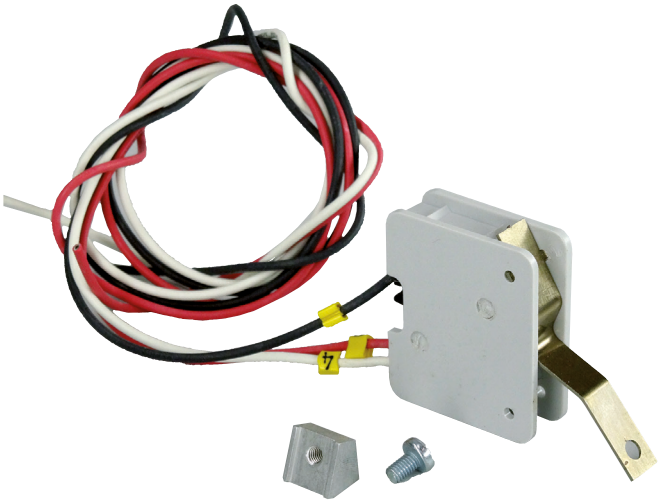
Marking is possible thanks to the orange part and the marking plate of numbers supplied (for the green connectors terminals):



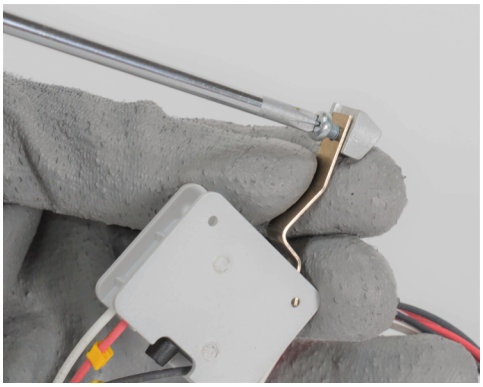
The different cable sections as well as the location recommendations of the wires are indicated on the instruction sheet according to the accessories present.

Signalling contact plug-in/draw-out (Cat.No 0 265 74)

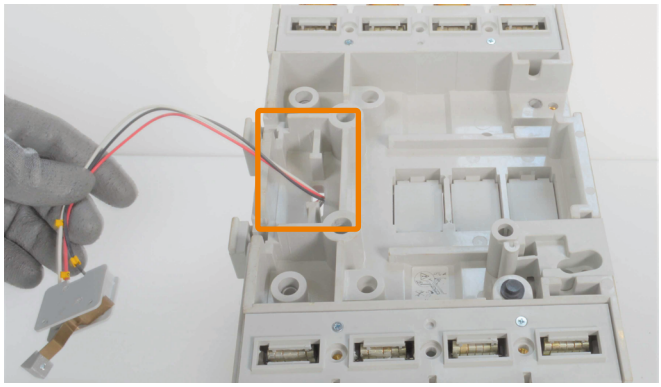
This contact is inserted into the base for a plugged-in or draw-out version.



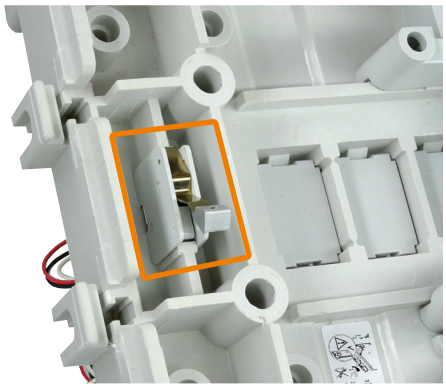
1. Secure the contact tab in the metal wedge using the screw (these 2 parts are supplied).



2. Pass the contact wires in the dedicated hole of the base



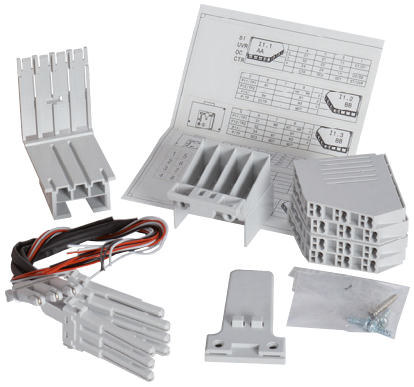
3. Insert the contact.



12. Set of contacts for draw-out version (Cat.No 4 222 30)

This Cat.No is composed of 4 contacts of 3 terminals each. We can install up to 8 contacts per DPX³ (2 Cat.Nos to order). These contacts are positioned on the side of the associated device. They can be on a product alone but also on 2 products for automatic transfer switch configuration.

Composition of the catalogue number:



In addition to the parts composing the Cat.No, others are necessary to complete the assembly. They are supplied with the base and the « Debro-lift » mechanism:

- Necessary parts in the base

(Cat.Nos 4 222 22/23/24/25/26/27) : marks J, K and L.

- Necessary parts in the « Debro-lift » mechanism

(Cat.Nos 4 222 31/32/33) : marks T and U.

The mounting is detailed on the instruction sheet of the base (for the female part of the contacts) and the « Debro-lift » mechanism (for the male part of the contacts). The different cable sections as well as the position of the wires are indicated on the instruction sheet according to the accessories.

13. Electronic earth leakage modules

An earth leakage module is a protection device, usually associated with a circuit-breaker, but can be a switch.
It detects a current difference between the active conductors of an installation and initiates an action when the threshold is reached or crossed.

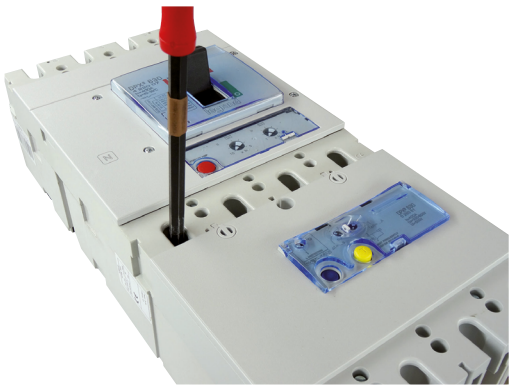
It is mounted downstream the MCCB.



1. Press the red mechanical test button.
2. Join the earth leakage module to the DPX^3.
3. Insert the 2 coupling seals.



4. Block the 4 screws (or 3 if it is tripolar) according to the tightening torque indicated in the instruction sheet → 24 Nm.



ELECTRICAL ACCESSORIES

Flat flexible bars, cables or cable with ferrules can be set up in the downstream terminal blocks of the earth leakage module.

Flat bars

- Maximum width is 32 mm.
- Center of the hole for the screw passage must be in the middle of the width of the bar and at a maximum of 16 mm from its end.
- The diameter of this hole is 11 mm.
- The tightening torque of the screws is 24 Nm.

Cables

- Maximum diameter 26 mm (bare and without insulation).
- The tightening torque of the screws of the cage terminals is 24 Nm.

For installation, the cage terminals Cat.No 0 262 50 must be ordered.

Cables with ferrules

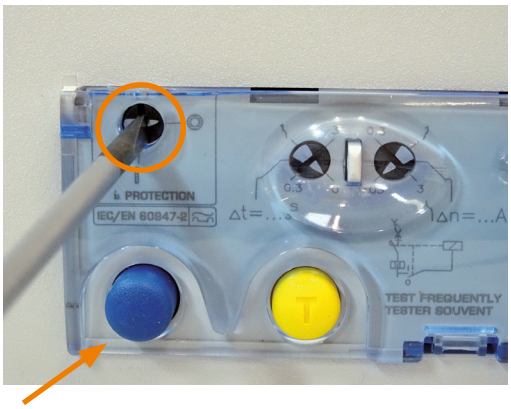
- Maximum width is 32 mm.
- The diameter of the ferrule hole must be 11 mm.
- The tightening torque of the screws is 24 Nm.

It is forbidden to put 2 ferrules on each other in the same terminal.

Several checks are required to verify the correct functioning:

Assembly verification

1. Put the DPX³ in position « I ».
2. Position the earth leakage module slider on « 0 ».



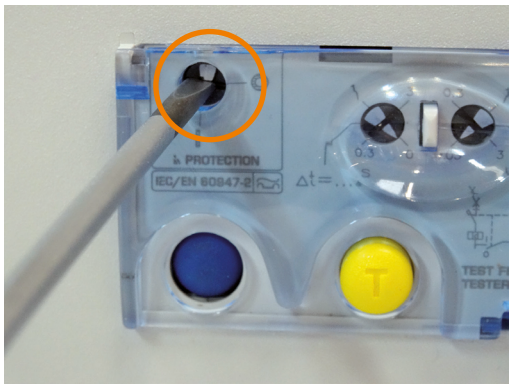
The blue reset button must be released and the DPX³ handle must move to the intermediate position. In this case, the operation is correct.

In this configuration, you are not supposed to be able to move the DPX³ handle on « 0 » position.

Checking the possibility of rearming

1. Position the earth leakage module slider to « I ».
2. Push the blue reset button.

If you can switch the DPX³ handle on the « 0 » position and then on « I », the operation is correct.





Blue button pressed

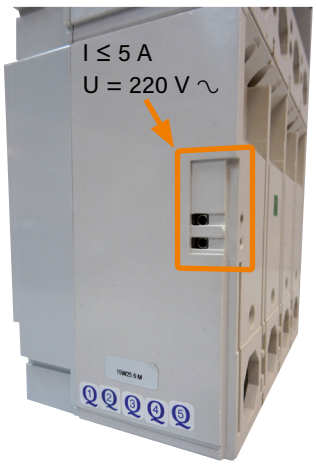
Checking of the earth leakage tripping

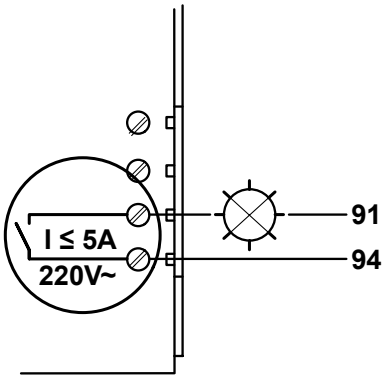
This operation must be performed under voltage (400 V three phase).

When pressing the yellow test button with the DPX³ in the « I » position, the blue button must extend, and the product must be placed on the intermediate position.

It is possible to remotely view the tripping on an earth leakage fault.

You simply need to connect a LED on the 2 terminals located on the side of the earth leakage module







MECHANICAL ACCESSORIES

DPX³ BASE FOR PLUG-IN VERSION

Cat.Nos	Bases	Poles	Outlets
4 222 22	DPX³ only	3P	Front
4 222 23	DPX³ only	4P	Front
4 222 24	DPX³ only	3P	Rear (90° orientable)
4 222 25	DPX³ only	4P	Rear (90° orientable)
4 222 26	DPX³ with earth leakage	4P	Front
4 222 27	DPX³ with earth leakage	4P	Rear (90° orientable)

TERMINALS FOR PLUG-IN/DRAW-OUT VERSION

Cat.Nos	Poles
4 222 20	For DPX³ 3P
4 222 21	For DPX³ 4P

CONNECTION TERMINALS

Cat.Nos	Section
0 262 50	1 x 300 mm² maxi. rigid or 240 mm² maxi. flexible → set of 4 terminals
0 262 51	2 x 240 mm² rigide or 2 x 185 mm² souple → set of 4 terminals

DIRECT ROTARY HANDLE

Cat.Nos	Versions
0 262 41/62*	Standard (black)
4 222 38/75*	Emergency (red and yellow)

*Only for India

VARI-DEPTH ROTARY HANDLE

Cat.Nos	Versions
0 262 81/63*	Standard (black)
0 262 82/76*	Emergency (red and yellow)

*Only for India

LOCKING FOR DIRECT ROTARY HANDLE

Cat.No
0 262 25

LOCKING ACCESSORY FOR LOCKING DPX³ IN OPEN POSITION

Cat.No
0 262 40

LOCKING SYSTEM FOR « DEBRO-LIFT »

Cat.Nos	Accessories	Versions
4 228 10 4 238 80	Mechanical support + barrel and random marking flat key	DPX³ in drawn-out position
4 228 10 4 238 81	Mechanical support+ barrel and flat key EL43525	DPX³ in drawn-out position
4 228 10 4 238 82	Mechanical support+ barrel and flat key EL43363	DPX³ in drawn-out position
4 228 10 4 238 83	Mechanical support + barrel and random marking star key	DPX³ in drawn-out position
4 228 08 4 238 80	Mechanical support + barrel and random marking flat key	DPX³ in drawn-out position and equipped motor operator or a rotary handle
4 228 08 4 238 81	Mechanical support+ barrel and random marking flat key EL43525	DPX³ in drawn-out position and equipped motor operator or a rotary handle
4 228 08 4 238 82	Mechanical support+ barrel and flat key EL43363	DPX³ in drawn-out position and equipped motor operator or a rotary handle
4 228 08 4 238 83	Mechanical support + barrel and star key	DPX³ in drawn-out position and equipped motor operator or a rotary handle

LOCKING FOR VARI-DEPTH ROTARY HANDLE

Cat.Nos	Accessories/Barrel types
4 228 07 4 238 80	Mechanical support + barrel and random marking flat key
4 228 07 4 238 81	Mechanical support+ barrel and flat key EL43525
4 228 07 4 238 82	Mechanical support+ barrel and flat key EL43363
4 228 07 4 238 83	Mechanical support + barrel and random marking star key

« DEBRO-LIFT » MECANISMS

Cat.Nos	Poles
4 222 31	For DPX³ 3P
4 222 32	For DPX³ 4P
4 222 33	For DPX³ 4P + earth leakage

INSULATED HANDLE FOR DRAWING-OUT FOR « DEBRO-LIFT »

Cat.No
0 265 75

MOUNTING PLATE FOR TRANSFER SWITCH

Cat.Nos	Version
0 264 04	For 2 DPX³ Fixed version
0 264 09	For 2 DPX³ Plug-in or Draw-out version

MOUNTING PLATE FOR SIGNALLING CONTACT

Cat.No	Version
4 222 36	For DPX³ Draw-out version

RETROFIT KIT DPX 630/DPX³ 630

Cat.No	Version
4 222 37	For DPX³ Plug-in version

EXTENDED CONNECTION SPREADERS

Cat.Nos	Poles
0 262 48	3P
0 262 49	4P

FLAT REAR SOCKET SET UPSTREAM AND DOWNSTREAM

Cat.Nos	Poles
0 263 52	3P
0 263 53	4P

SET OF 4 EXTENDERS FOR BAR CONNECTIONS

Cat.No
0 262 47

SET OF 2 HANDLE EXTRACTION

Cat.No	Version
4 222 28	Plug-in only

SET OF 2 SEALABLE TERMINAL COVERS IP 20 (FLAT)

Cat.Nos	Poles
4 222 34	3P
4 222 35	4P

SET OF 2 TERMINAL COVERS

Cat.Nos	Poles
0 262 44	3P
0 262 45	4P

SET OF 4 ADAPTERS FOR LUGS

Cat.No
0 262 46

SET OF 3 INSULATED SHIELDS

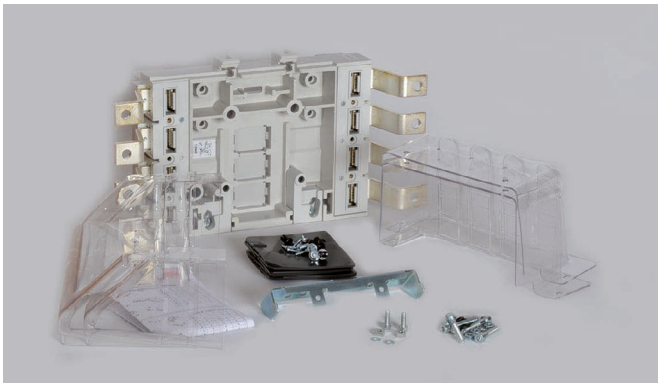
Cat.No
0 262 30

1. Plug-in version

3P	4 222 22 → 3P front outlet base	+ 4 222 20 → 3P terminal sets
	4 222 24 → 3P rear outlet base	
4P	4 222 23 → 4P front outlet base	+ 4 222 21 → 4P terminal sets
	4 222 25 → 4P rear outlet base	
	4 222 26 → 4P base with earth leakage front outlet	
	4 222 27 → 4P base with earth leakage rear outlet	

BASE FIXED BASE FRONT OR REAR OUTLETS (CAT.NOS 4 222 22/23/24/25/26/27)

Composition (e.g. for Cat.No 4 222 23):



2. Special terminal for plug-in version 3P/4P (Cat.Nos 4 222 20/21)

Composition (ex. for the Cat.No 4 222 21) :



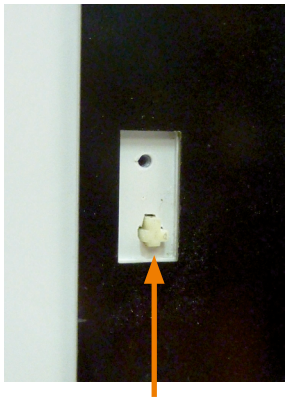
Trigger mechanism for plug-in and draw-out versions

Connection or disconnection operations (on or off) must be carried out with the devices in open position.

In the case of unintentional extraction with a closed circuit-breaker, the internal safety mechanism opens the unit at the first disconnection operation. This device prevents on-load disconnection of the DPX³.

1. Remove the protection plate from the trigger mechanism at the back of the circuit-breaker.





Poussoir.

When removing the protection plate, the circuit-breaker or switch triggers (if it is in the closed or open position).

- As a result, the handle is in the intermediate position → middle.

To close the unit, the push button must be pressed

2. Put the device in the open position and close it.
3. Secure the metal plate (supplied with the set of terminals Cat.No 4 222 20 or 4 222 21) of the mobile connector bracket at the back of the circuit-breaker using the 4 screws provided (tightening torque 1 Nm).

When using the connectors Cat.no 0 098 19 or 0 263 99, attach the male part of these connectors to the mounting brackets using the nut provided with these catalogue numbers.

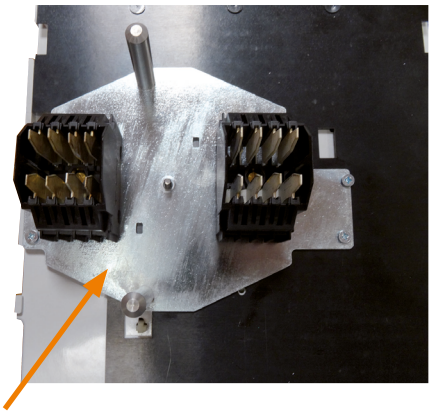
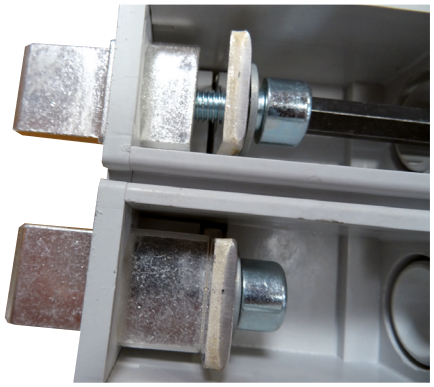
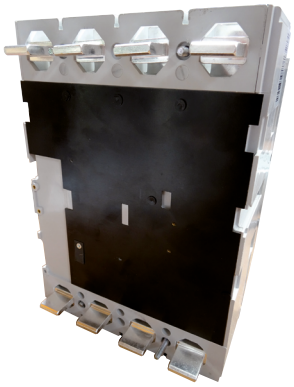


Plate – connectors Cat.No 0 263 99.

The different cable sections as well as the position of the wires are indicated in the instruction sheet according to the 5accessories.

4. Set up the upstream and downstream rear connections and use the supplied M8 screws (without tightening them to put the protective covers in place without difficulty).





5. Place the protection cover.

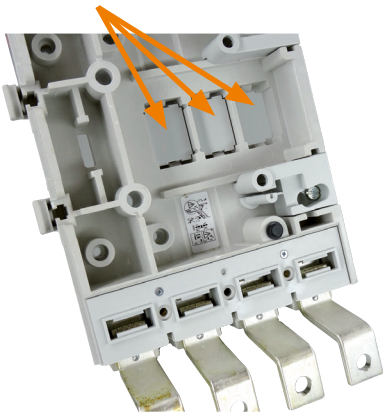
6. Tighten the screws at the recommended tightening torque → 25 Nm.

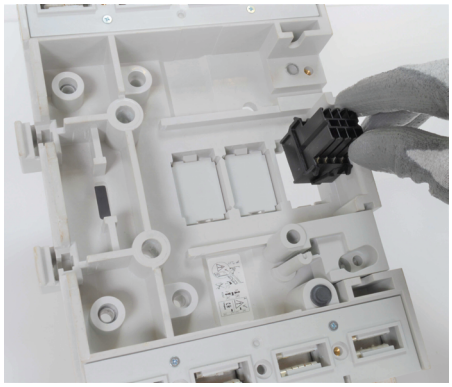


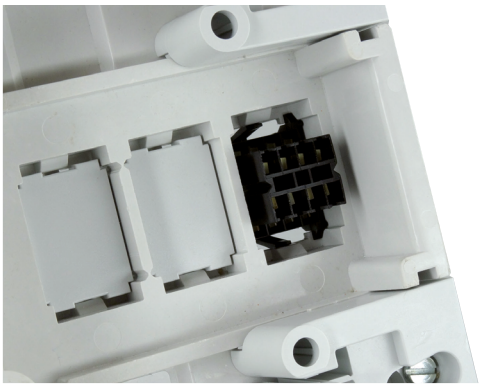
Carry out the operations described in the terminal Cat.No 4 222 20/21 instruction sheet.

7. Place the terminal shields on the circuit-breaker.

In case of using connectors referenced 0 098 19 or 0 263 99, remove the now unnecessary plastic part and then clip the female part of these connectors to the dedicated location (3 available slots).



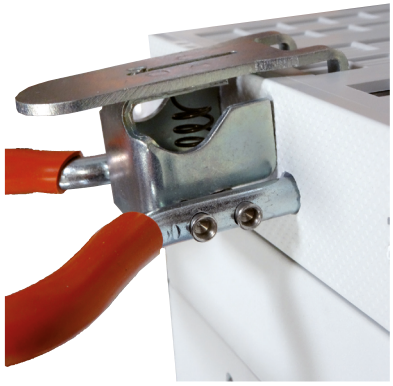


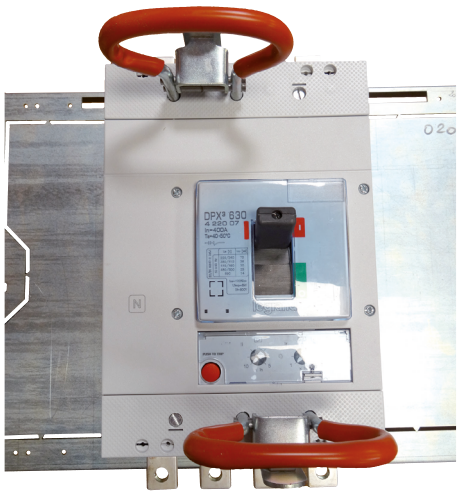


3. Set of 2 extractor handles (Cat.No 4 222 28)

These handles allow to extract the product and have a comfortable grip for its removal.







⚠ The extraction handles for DPX 630 are not compatible with those for DPX³ 630

4. Draw-out version « Debro-lift »

The Debro-lift mechanism allows the operation of plugging or unplugging without removing the faceplate and holding the circuit-breaker or switch in its base.

A draw-out version DPX³ is a plugged-in DPX³ equipped with a « Debro-lift » :

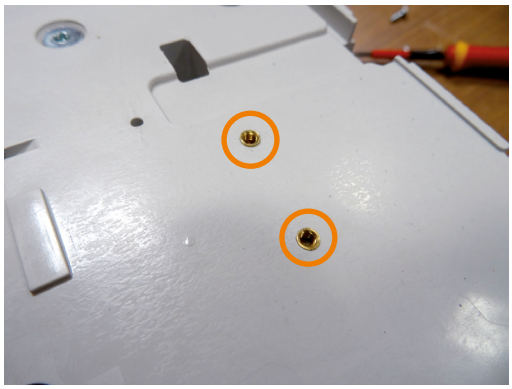
- Cat.No 4 222 31 (for DPX³ 630 3P base).
- Cat.No 4 222 32 (for DPX³ 630 4P base).
- Cat.No 4 222 33 (for DPX³ 630 4P with earth leakage base).

+

1 base + 1 set of terminals → see catalogue numbers in Chapter 1 ▶ page 97

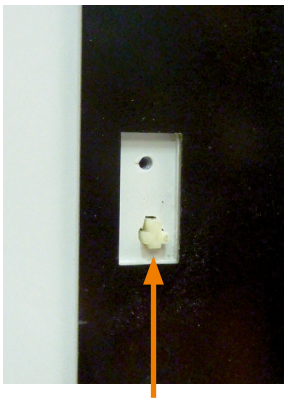
MOUNTING

1. Check that the circuit-breaker is open by pressing the red test button.
2. Remove the nuts (upstream and downstream) and their brackets using a screwdriver.
3. Fix the 4 inserts supplied as shown in the instructions



4. Remove the protection plate from the trigger mechanism at the back of the circuit-breaker



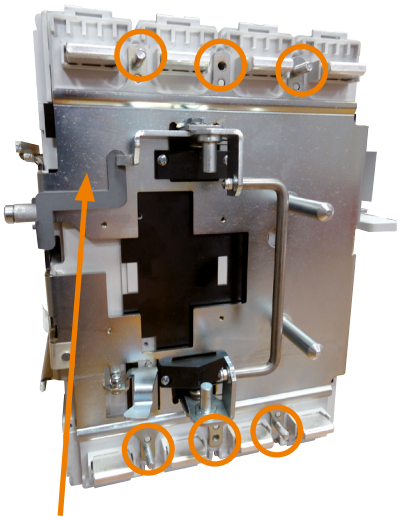


Push-button.

5. Remove the front face of the DPX³.

6. Attach the metal frame of the « Débro-lift » to the back of the circuit-breaker using the 6 long screws provided.

When using connectors Cat.No 0 098 19 or 0 263 99, the plate Cat.No 4 222 36 must be added at the rear of the frame using the 4 screws provided (tightening torque 2 Nm.)



« Debro-lift » metal frame.

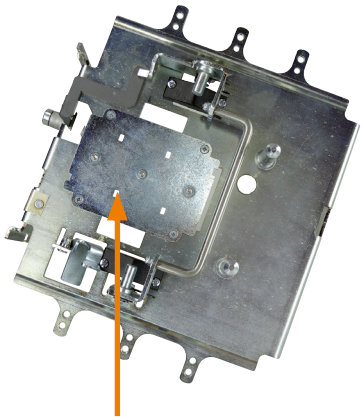
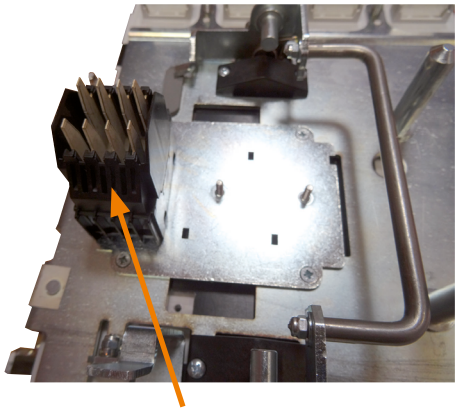


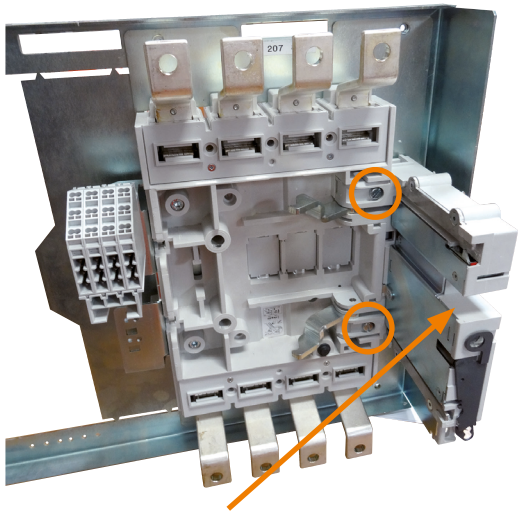
Plate Cat.No 4 222 36.

7. Fasten the male part of these connectors to the studs of the plate (3 possible slots) using the nut supplied with the connectors Cat.No (tightening torque 1 Nm).



Cat.No 0 263 99.

8. On the base, place the part marked « I » the instruction sheet using the 2 screws supplied with the « Debro-lift ».



Part « I » on the instruction sheet

Follow the installation of the last 2 parts as shown in the instructions

Assemble the upstream and downstream rear connections, terminal covers and the female part of the connectors Cat.No 0 098 19 or 0 263 99 (if present) as described above for the plug-in version.

5. Locking system for « Debro-lift »

5.1 Locking mechanism (Cat.Nos 4 228 10 + 4 238 80/81/82/83)

This accessory locks the product (non-motorized) in drawn-out position → carry out a consignment operation.

+

The product comes with a unique key.

ⓘ The mounting is detailed on the instruction sheet of the « Debro-lift » mechanism (Cat.Nos 4 222 31/32/33).

Set composition Cat.Nos 4 228 10 + 4 238 80 :



For the mounting, follow the instruction sheet steps, respecting the following points:

1. Take off the cover of the support.



2. Check cam positioning (rear).
3. Once the mounting is done, check the key movement.



5.2 Locking mechanism (Cat.Nos 4 228 08 + 4 238 80/81/82/83)

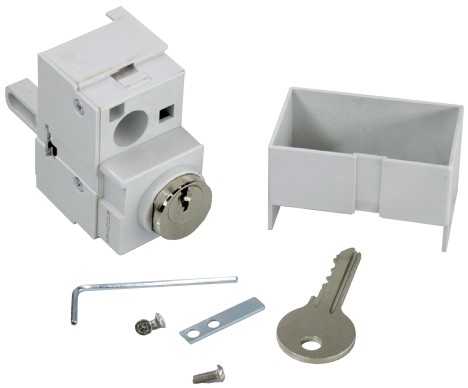
This accessory locks the product (motorized or rotary handle) in draw position → carry out a consignment operation.

+

The producted is supplied with a unique key.

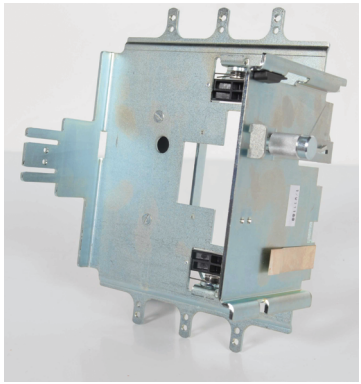
ⓘ The mounting is detailed in the instruction sheet of the « Debro-lift » mechanism (Cat.Nos 4 222 31/32/33).

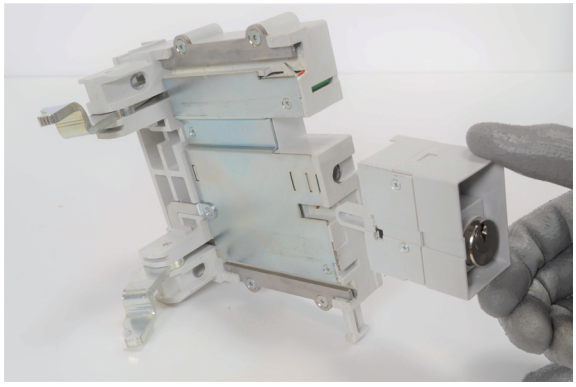
Set composition Cat.Nos 4 228 08 + 4 238 80 :



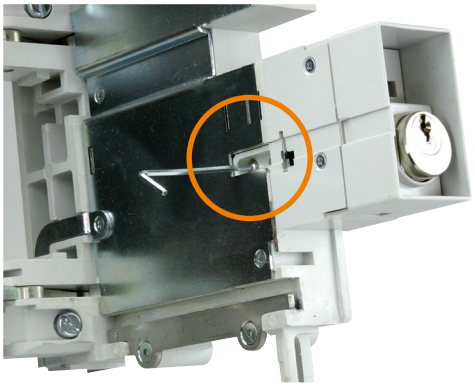
For the mounting, follow the instruction sheet steps, respecting the following points:

1. On the « Debro-lift » mechanism (mobile part), fix the metal plate (this part prevents locking in the plug-in position) in the holes provided.











2. Place the locking block in the slot provided, and tighten with the screw supplied.

It is possible to get a personnalized key number by contacting the company STI Montreuil (http://www.servtrayvou.com/web/contact) by sending them the profiled number:
- flat key: n° ABA90GEL6149.
- star key: n° HBA90GPS6149.

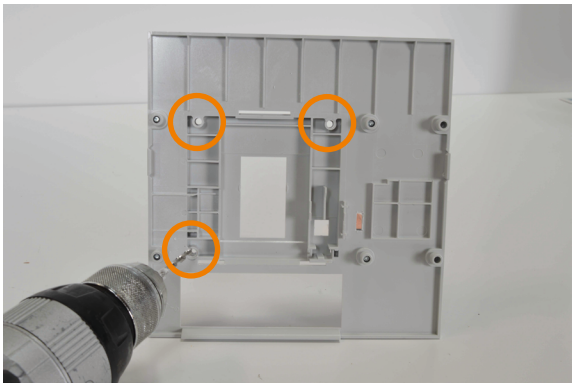
6. Direct rotary handle Standard (Cat.No 0 262 41) or emergency (Cat.No 4 222 38)

Set composition Cat.No 0 262 41:



MOUNTING

1. Remove the circuit-breaker cover by unscrewing the 4 screws.
2. Remove the transparent cover.
3. Drill three 4 mm diameter holes in the locations indicated.



4. Attach the cover to the circuit-breaker.



5. Position the frame (part "E" in the instruction sheet) on the front of the circuit-breaker and check that the frame is perfectly flush.



6. Mount the mechanism on the circuit-breaker, while respecting the orientation.
7. Secure the assembly using the screws supplied.

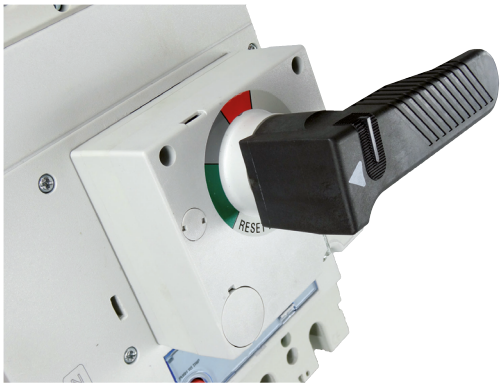


8. Check that the protective tab is extended (faceplate opening safety device).



9. Fix the lever in place, respecting the coding.

10. When opening and closing, the tab must follow the movement (output in position « I » and input in position « 0 »).





With the key marked « F » dans la notice, in the instruction sheet, it is possible to open the faceplate with a closed device (the key allows to retract the tab)





LOCKING

- In the open position, up to 3 padlocks with a maximum diameter of 5 mm can be fitted.



7. Vari-depth rotary handle Standard (Cat.No 0 262 81) or emergency (Cat.No 02 62 82)

Composition de la Cat.No 0 262 81 :



MECHANICAL ACCESSORIES

Define the length of the axis to cut according to the information mentionned in the instruction sheet, including the drilling to be carried out on the door:

- Total axis length = 290 mm, square of 8 mm x 8 mm.

LOCKING WITH PADLOCKS

- In open position, it is possible to fit 3 padlocks maximum with a 5 mm diameter maximum.

8. Locking accessory for direct rotary handle (Cat.No 0 262 25)

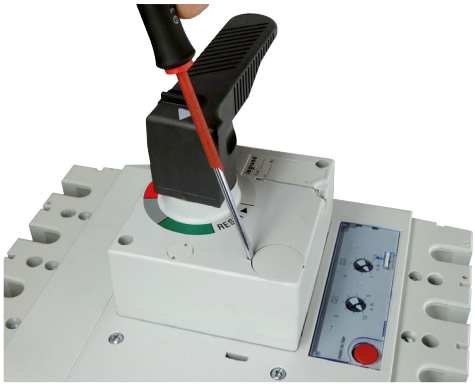
This accessories locks the DPX³ in open position → carry out a consignment operation.

Composition of the Cat.No 0 262 25 :

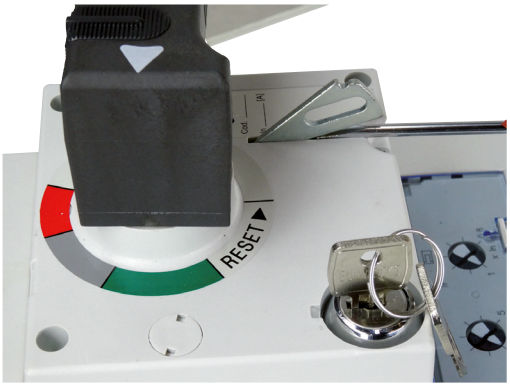


MOUNTING

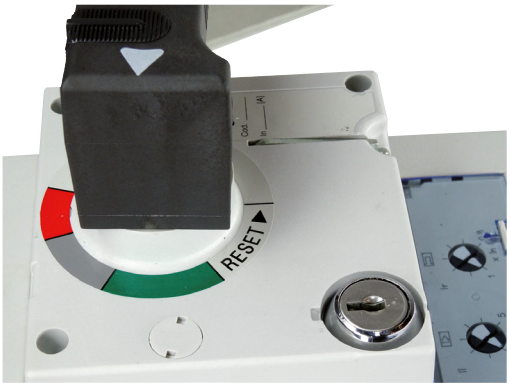
1. Set the device on « 0 » position before installation.
2. Remove the plastic cover.



3. Lift the plate for the padlock slot by using a screwdriver.
4. Insert the key in the barrel an position the assembly vertically - 30° approximately.
5. Insert the barrel and its key in the operator.



- Device in « 0 » position : the key can be removed.



- Device in « 1 » position: the key cannot be removed.



9. Locking for vari-depth rotary handle (Cat.Nos 4 228 07 + 4 238 80/81/82/83)

This accessories locks the DPX³ in open position → carry out a consignment operation.

Composition of the set Cat.Nos 4 228 07 + 4 238 83 :
Picture of the mounted set on the handle on « 0 » and with the key removed:



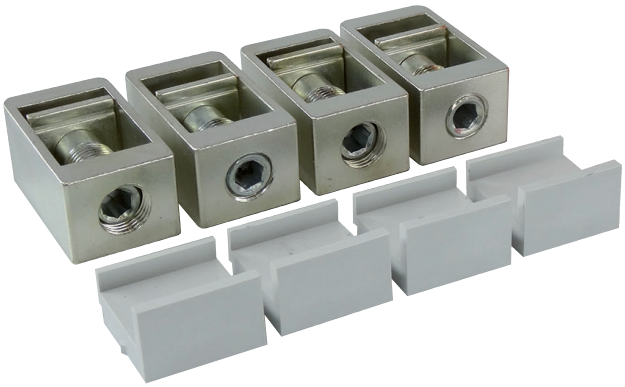
Assemble the components as indicated in the instruction sheet and check the overall functionality.

The key can be removed with the handle in « 0 » position.
The key cannot be removed with the handle in « I » position.

It is possible to combine this locking mechanism with padlock locking (up to 3 padlocks, with a minimum diameter of 5 mm and a maximum of 8 mm)



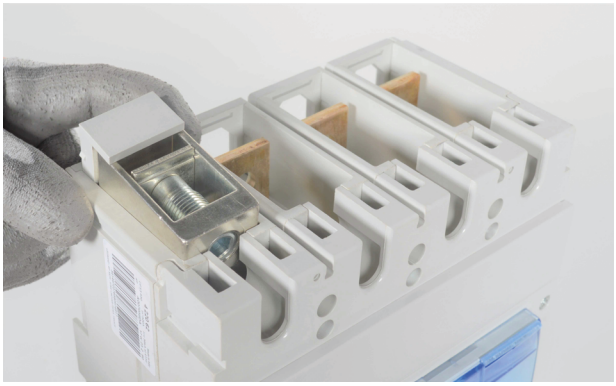
10. Connection terminal (Cat.No 0 262 50) (set of 4)

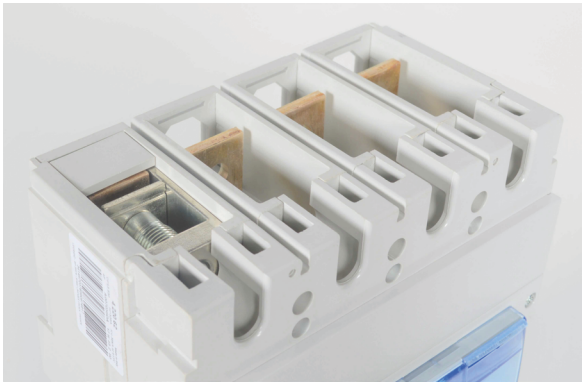


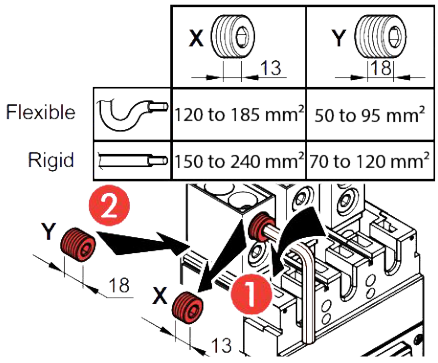
1. Position the plastic part on the terminal as shown below.



2. Insert the whole into the product.







Repeat these operations for the other terminals.

- The maximum diameter. of the cable to be used without its insulation is 26 mm, the tightening torque of the cable in the cage terminal is 24 Nm.
- The maximum section permissible by the cage terminal is 300 mm² (rigid cable) or 240 mm² (flexible cable).

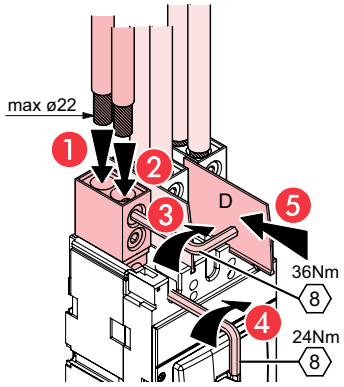
11. Connection terminals (Cat.No 0 262 51) (set of 4)



This terminal is commonly referred to as a « large capacity cage terminal».

- The Cat.No is supplied with 4 non-head screws – BTR type (length: 2x13 mm + 2x18 mm).
- The length of the screw to be used is different according to the section of the cable and the fact that it is rigid or flexible (see table below).

- The maximum diameter of the cable to be used without its insulation is 22 mm.
- The tightening torque of the cage terminal in the DPX³ is 24 Nm.
- The tightening torque of the cable in the large capacity cage terminal is 36 Nm.



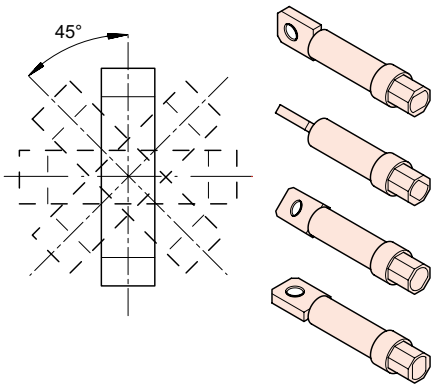
12. Set of rear terminals (Cat.Nos 0 263 52/3P and 0 263 53/4P)

This Cat.No makes it possible to turn a DPX³ front terminal into a rear terminal, which makes the connection easier.

Composition of the Cat.No 0 263 53 :



These terminals are adjustable by angle of 45°.





3. Turn the adjustable terminal to the desired angle and then tighten (25 Nm) the rear terminal using the product screw (8 mm hexagonal key).

SETTING UP

1. Remove the nut holder + the circuit-breaker nut.
2. Insert the brackets according below photos.









MECHANICAL ACCESSORIES

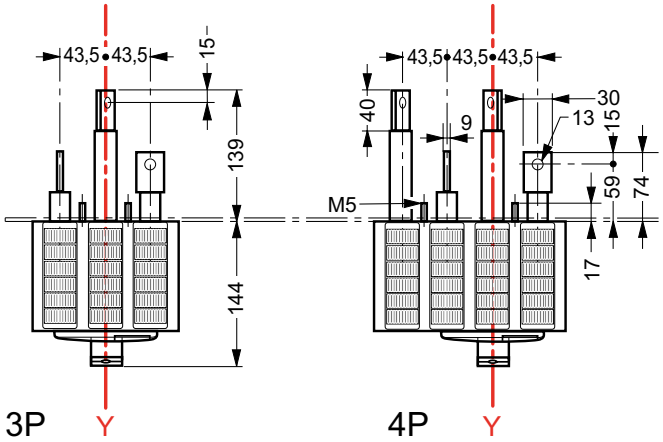


4. After installing all the rear terminals (6 or 8), put the terminal cover, it is possible to seal it.





Here are the different dimensions of the rear terminals as well as the permissible lengths and diameters of the connection ranges:

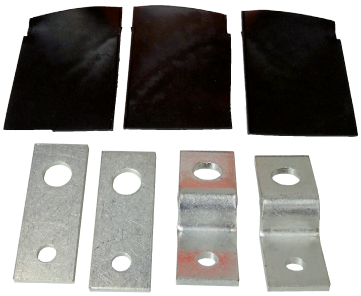


13. Set of 4 lugs adaptors (Cat.No 0 262 46)

This accessory can be connected on one side to a cage terminal and on the other on lugs. It is not possible to install a terminal cover.

- The material of these adaptors is silver coated copper.

Composition:



14. Set of 4 extenders for bar connections (Cat.No 0 262 47)

This accessory facilitates the connection of cables with lug (2 Maxi).

- The material of these extended front terminals is silver coated copper.

Composition:



15. Set of 3 (Cat.No 0 262 48) or 4 (Cat. No 0 262 49) extended connection spreaders

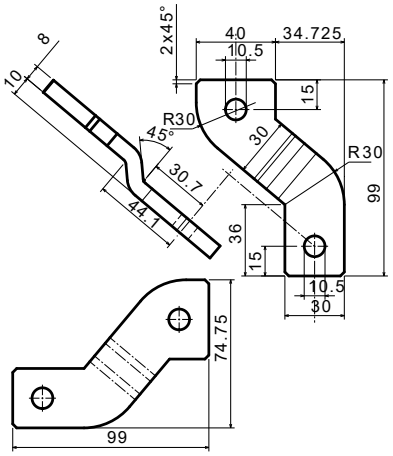
This accessory is used to facilitate cable connection.

Composition of the Cat.No 0 262 48 :

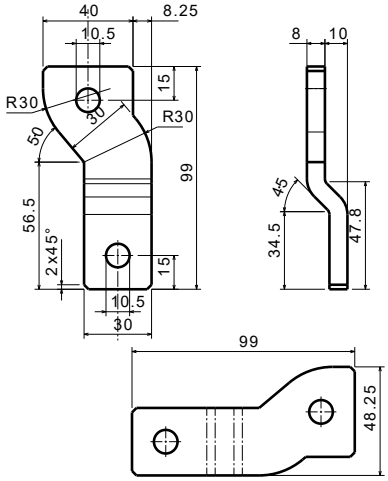


In the case of use of spreaders, it is possible to use insulated shields but no terminal cover.

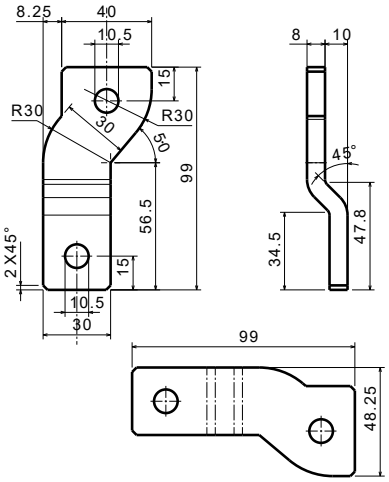
Dimensions of the part A (not shown on the picture, corresponding to the neutral for a 4P product):



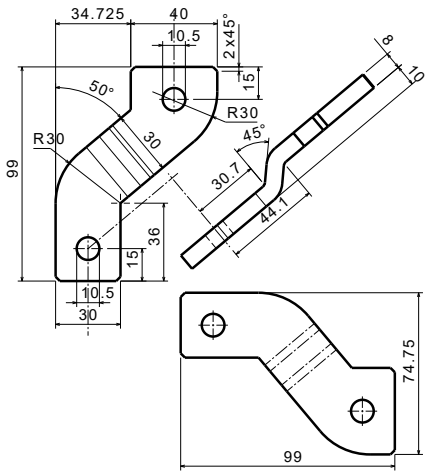
Dimensions of the part B (L1)



Dimensions of the part C (L2)



Dimensions of the part D (L3)



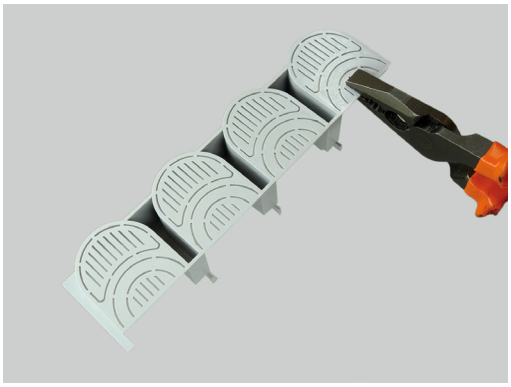
16. Set of 3 insulated shields (Cat.No 0 262 30)

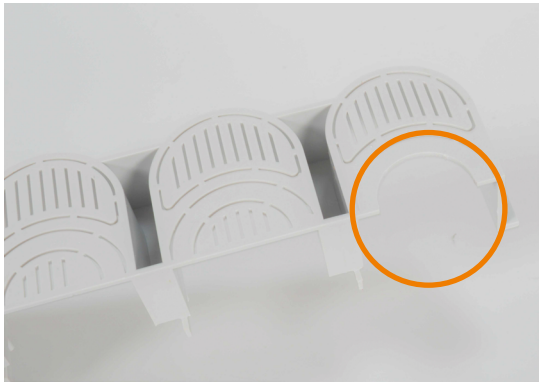
Their role is to avoid the propagation of an electric arc in the event of a short circuit.
Composition:



17. Set of 2 terminal shields (Cat.No 0 262 44/3P or 0 262 45/4P) → upstream and downstream

Pre-cut cuts are present. They allow to adapt the passage of the cables in the terminal cover.





Here is the setting up of a cable (2 maxi.) with the 2 pre-cut parts on both sides as well as the mounted terminal cover.

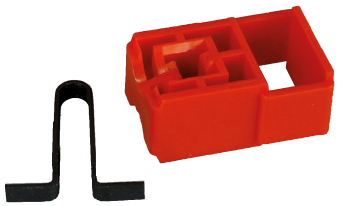


A sealing is also possible and supplied with the Cat.No (X4)



18. Padlock accessories for locking in open position (Cat.No 0 262 40)

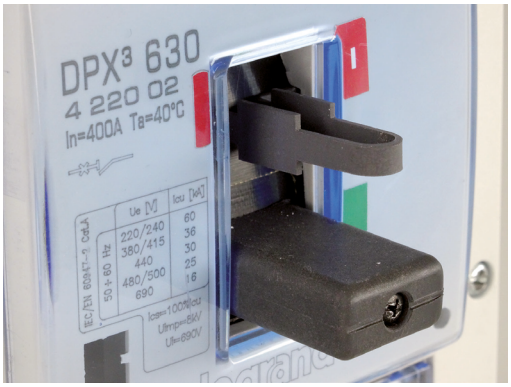
Composition:



MISE EN PLACE

1. Open the product in a way to place it in position « 0 ».
2. Insert the omega-shaped (Ω) part into the designated slot.

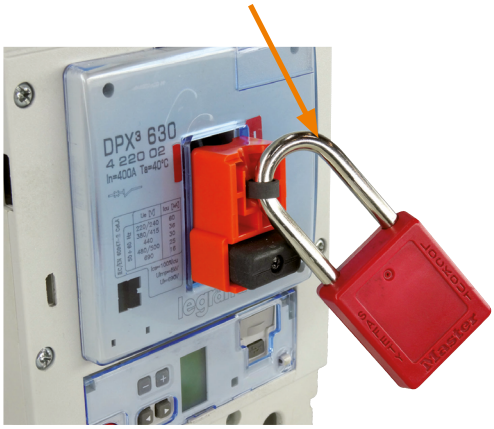




3. Place the red plastic part in position.

4. Insert a padlock with a minimum diameter of 4 mm and a maximum diameter of 6 mm.

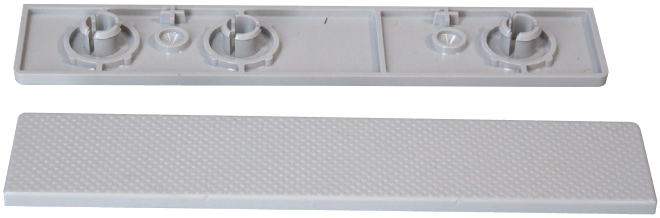
Padlock 6 mm diameter Cat.No 0 227 97.



19. Set of 2 screw cover IP 20 (Cat.No 4 222 34/3P or 4 222 35/4P)

The clipwise is on the front side of the screw holes.

Composition of the Cat.No 4 222 35 :

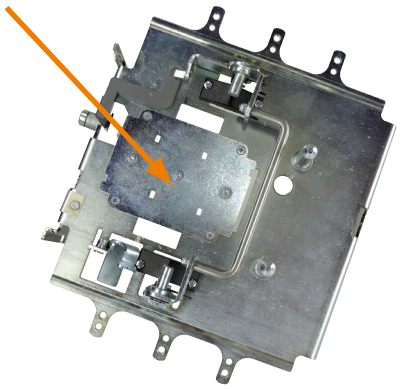


20. Mounting plate for signalling contact (Cat.No 4 222 36)

This plate is required when you want to install the contacts Cat.No 0 263 99 or 0 098 19 on the back of a draw-out DPX³.

- It comes with 4 fixing screws.

Plate once set up behind the « Debro-lift » mechanism:



For mounting details, see paragraph 2 in the section "mechanical accessories" as well as the instructions sheet for the « Debro-lift » Cat.No 4 222 31 or 4 222 32 or 4 222 33.

21. Retrofit kit for DPX 630 – DPX³ 630 (Cat.No 4 222 37)

This kit is necessary for installing a DPX³ 630 in a plug-in version. This kit is also required when replacing a DPX 630 with a DPX ³ 630 in plug-in, draw-out or motor drive version.



The instruction sheet gather :

- the setting up of :
  - the screws ;
  - the metal tab
- le positionning of :
  - the axis ;
  - the inserts.

An additional mounting information about the metal tab and the axis is also available on page 87.

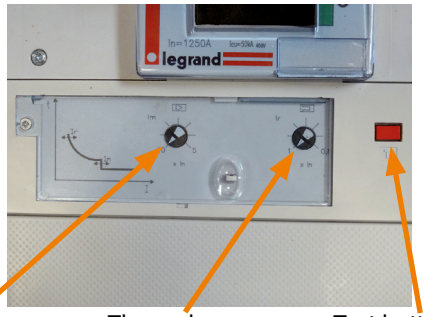


PRODUCT DESCRIPTION

1. Front face of the circuit-breaker



Example of setting a thermal magnetic circuit-breaker:



Magnetic adjustment | Thermal adjustment | Test button

The settings are sealable using Cat.No 4 210 95. (1 exemplaire est également livré avec chaque disjoncteur).

2. Front face of the switch

Like all DPX³ trip-free switches, the switches have a gray color handle.



3. Position of the handle (ON/Tripped/OFF)

- Closed (ON).



- Tripped.



- On (OFF).



4. Settings

	Overloads thermal protection		Short-circuits magnetic protection			Earth fault protection		Adjustment of the neutral	Fault current	Fault current trip delay
			Short delay		Instantaneous					
	Ir	tr[1]	Isd	tsd (t = k, I²t = k)[2]	Ii	Ig	tg (t= k, I²t = k)[3]	N	Id	Td
Thermal magnetic	0,8 to 1 x In	-	5 to 10 x In	-	-	-	-	-	-	-
Electronic S1	0,4 to 1 x In	Fixed = 5 s (Memory ON)	1,5 - 2 - 2,5 - 3 - 4 - 5 - 6 - 7 - 8 - 10 x Ir	Fixed = 100 ms	-	-	-	OFF - 0,5 - 1 x In	-	-
Electronic S10 : local sur le produit	0,2 to 1 x In, per 1 A steps	3 - 5 - 10 - 15 - 20 - 25 - 30 s	1,5 to 3 x Ir, per 0,5 x Ir steps 3 to 10 x Ir, per 1 x Ir steps	40 ms, 80 ms, 160 ms, 240 ms, 320 ms 400 ms, 480 ms	-	0,2 to 1 x In, per 0,1 x In steps	80 to 480 ms and 1 s (6 steps)	50 %, 100 %, 150 %, 200 %, OFF	30 mA, 300 mA, 1 A, 3 A	0 ms, 300 ms, 1 s, 3 s
Electronic S10 : via Software or Application	0,2 to 1 x In - OFF, per 1 A steps	3 to 30 s, per 40 ms steps	1,5 to 10 x Ir, per 1 A steps	40 to 480 ms per 40 ms steps	2 to 15 x In, per 1 A steps	0,2 to 1 x In, per 0,1 x In steps	80 ms to 1 s, per 40 ms steps	50 %, 100 %, 150 %, 200 %, OFF	30 mA, 300 mA, 1 A, 3 A	0 ms, 300 ms, 1 s, 3 s
Magnetic only	-	-	5 - 10 x In	-	-	-	-	-	-	-

[1] It is possible to select thermal memory « On » or « Off » and stop Modbus.
[2] It is possible to stop the Modbus.
[3] Modbus and product navigation can be stopped.

THERMAL MAGNETIC SETTINGS

For thermal magnetic circuit-breakers, only the settings corresponding to the marking positions have been tested.
The other setting values are given as an indication.

ELECTRONIC CARD CONSUMPTIONS

- DPX³ 1600 Electronic S10 : 74 mA.
- DPX³ 1600 Electronic S10 avec measure : 100 mA.

DPX³ 1600 MAGNETIC ONLY

Catch	Thermal : Ir		Intensity (A)				
	In multiplying factor	Marking	500	630	800	1000	1250
1	0,80	0,8	400	504	640	800	1000
2	0,83	-	415	523	664	830	1038
3	0,87	-	435	548	696	870	1088
4	0,90	-	450	567	720	900	1125
5	0,93	-	465	586	744	930	1163
6	0,96	-	480	605	768	960	1200
7	1,00	1	500	630	800	1000	1250

Catch	Magnetic ≤ 1000 A		Intensity (A)				Crans	Magnetic 1250 A		Intensity A
	In multiplying factor	Marking	500	630	800	1000		In multiplying factor	Marking	1250
1	5,0	5	2500	3150	4000	5000	1	5,0	5	6250
2	5,8	-	2900	3654	4640	5800	2	5,8	-	7250
3	6,7	-	3350	4221	5360	6700	3	6,7	-	8375
4	7,5	-	3750	4725	6000	7500	4	7,5	-	9375
5	8,3	-	4150	5229	6640	8300	5	8,3	-	10375
6	9,2	-	4600	5796	7360	9200	6	9,2	-	11500
7	10,0	10	5000	6300	8000	10000	7	10,0	10	12500

Values Ii at +/- 20 %.



MOULDED CASES DPX³ 1600

PRODUCT DESCRIPTION

DPX³ 1600 ELECTRONIC S1								
Catch	Thermal : Ir		Intensity (A)					
	In multiplying factor	Marking	500	630	800	1000	1250	1600
1	0.40	0.40 *	200 *	252 *	320 *	400 *	500 *	640 *
2	0.45	0.45 *	225 *	284 *	360 *	450 *	563 *	720 *
3	0.50	0.50 *	250 *	315 *	400 *	500 *	625 *	800 *
4	0.55	0.55 *	275 *	347 *	440 *	550 *	688 *	880 *
5	0.60	0.60 *	300 *	378 *	480 *	600 *	750 *	960 *
6	0.65	0.65 *	325 *	410 *	520 *	650 *	813 *	1040 *
7	0.70	0.70 *	350 *	441 *	560 *	700 *	875 *	1120 *
8	0.75	0.75 *	375 *	473 *	600 *	750 *	938 *	1200 *
9	0.85	0.85 *	425 *	536 *	680 *	850 *	1063 *	1360 *
10	0.95	0.95 *	475 *	599 *	760 *	950 *	1188 *	1520 *
	1.00	-	500	630	800	1000	1250	1600

* adjustable settings at : 0/0,005/0,01/0,015/0,02/0,025/0,03/0,035/0,04/0,05.

Catch	Magnetic : Isd		Intensity (A)					
	In multiplying factor	Marking	500	630	800	1000	1250	1600
1	1.5	1.5	300 to 750	378 to 945	480 to 1200	600 to 1500	750 to 1875	960 to 2400
2	2.0	2.0	400 to 1000	504 to 1260	640 to 1600	800 to 2000	1000 to 2500	1280 to 3200
3	2.5	2.5	500 to 1250	630 to 1575	800 to 2000	1000 to 2500	1250 to 3125	1600 to 4000
4	3.0	3.0	600 to 1500	756 to 1890	960 to 2400	1200 to 3000	1500 to 3750	1920 to 4800
5	4.0	4.0	800 to 2000	1008 to 2520	1280 to 3200	1600 to 4000	2000 to 5000	2560 to 6400
6	5.0	5.0	1000 to 2500	1260 to 3150	1600 to 4000	2000 to 5000	2500 to 6250	3200 to 8000
7	6.0	6.0	1200 to 3000	1512 to 3780	1920 to 4800	2400 to 6000	3000 to 7500	3840 to 9600
8	7.0	7.0	1400 to 3500	1764 to 4410	2240 to 5600	2800 to 7000	3500 to 8750	4480 to 11200
9	8.0	8.0	1600 to 4000	2016 to 5040	2560 to 6400	3200 to 8000	4000 to 10000	5120 to 12800
10	10.0	10.0	2000 to 5000	2520 to 6300	3200 to 8000	4000 to 10000	5000 to 12500	6400 to 16000

Values Ir and Isd to +/- 10 % in amps.

For S1, the tr is fixed to 5 secondes.
tsd = 100 ms fixed.

DPX³ 1600 ELECTRONIC S10								
LCD	Thermal : Ir		Intensity (A)					
	In multiplying factor	Marking	500	630	800	1000	1250	1600
	0,2 to 1	De 1 A en 1 A	100 to 500	126 to 630	160 to 800	200 to 1000	250 to 1520	320 to 1600

	Magnetic : Isd	Intensité (A)					
	Ir multiplying factor	500	630	800	1000	1250	1600
LCD	1,5	150 to 750	189 to 945	240 to 1200	300 to 1500	375 to 1875	480 to 2400
	2,0	187,5 to 1000	252 to 1260	310 to 1600	400 to 2000	500 to 2500	640 to 3200
	2,5	250 to 1250	315 to 1575	400 to 2000	500 to 2500	625 to 3125	800 to 4000
	3,0	300 to 1500	378 to 1890	480 to 2400	600 to 3000	750 to 3750	960 to 4800
	4,0	400 to 2000	504 to 2520	640 to 3200	800 to 4000	1000 to 5000	1280 to 6400
	5,0	500 to 2500	630 to 3150	800 to 4000	1000 to 5000	1250 to 6250	1600 to 8000
	6,0	600 to 3000	756 to 3780	960 to 4800	1200 to 6000	1500 to 7500	1920 to 9600
	7,0	700 to 3500	882 to 4410	1120 to 5600	1400 to 7000	1750 to 8750	2240 to 11200
	8,0	800 to 4000	1008 to 5040	1280 to 6400	1600 to 8000	2000 to 10000	2560 to 12800
	9,0	900 to 4500	1134 to 5670	1440 to 7200	1800 to 9000	2250 to 11250	2880 to 14400
	10,0	1000 to 5000	1260 to 6300	1600 to 8000	2000 to 10000	2500 to 12500	3200 to 16000

tsd (settings on the product) : 40 - 80 - 160 - 240 - 320 - 400 - 480 ms.
tsd (settings via the Software or the application) : 40 to 480 ms per 40 ms steps.
Values Isd to +/- 10 % in amps.

If adjusted via the software or the application, the adjustment ranges are in 1 A steps.

	Earth fault protection Ig	Intensity (A)					
	In multiplying factor	500	630	800	1000	1250	1600
LCD	0,2	100	126	160	200	250	320
	0,3	150	189	240	300	375	480
	0,4	200	252	320	400	500	640
	0,5	250	315	400	500	625	800
	0,6	300	378	480	600	750	960
	0,7	350	441	560	700	875	1120
	0,8	400	504	640	800	1000	1280
	0,9	450	567	720	900	1125	1440
	1,0	500	630	800	1000	1250	1600



ELECTRICAL ACCESSORIES

AUXILIARY CONTACT (OC)/FAULT SIGNALLING CONTACT (CTR)

Cat.No	Voltage
4 210 11	24/48/110/230 V⎓ 110/230 V∿

SHUNT RELEASES

Cat.Nos	Voltage
4 222 39	24 V∿/⎓
4 222 40	48 V∿/⎓
4 222 41	110 V∿/⎓
4 222 42	230 V∿/⎓
4 222 43	400 V∿/⎓

UNDERVOLTAGE RELEASES

Cat.Nos	Voltage
4 222 44	24 V⎓
4 222 45	24 V∿
4 222 46	48 V⎓
4 222 47	110 V∿
4 222 48	230 V∿
4 222 49 (power supply included)	400 V∿
4 226 23	To associate with Cat.No 0 261 90 or 0 261 91 according to the voltage wanted.

TIME-LAG MODULES

Cat.Nos	Voltage
0 261 90	230 V∿
0 261 91	400 V∿

LOCKING MOTOR OPERATOR

Cat.Nos	Support and barrel type
4 228 06 + 4 238 80	Mechanical support + barrel and flat key plate with random marking
4 228 06 + 4 238 81	Mechanical support + barrel and falt key EL43525
4 228 06 + 4 238 82	Mechanical support + barrel and flat key EL43363
4 228 06 + 4 238 83	Mechanical support + barrel and star key with random marking

SIGNALLING CONTACT

Cat.No	Position
0 265 74	Drawn-in/Drawn-out

MOTOR OPERATOR (FRONT ONLY)

Cat.Nos	Voltage	Intensity
0 261 19	24 V∿/⎓	In ≤ 1600 A
0 261 23	230 V∿/⎓	In ≤ 1250 A
0 261 24	24 V∿/⎓	In ≤ 1250 A
0 261 25	48 V∿/⎓	In ≤ 1250 A
0 261 26	110 V∿/⎓	In ≤ 1250 A
0 261 27	230 V∿/⎓	In ≤ 1600 A
0 261 28	48 V∿/⎓	In ≤ 1600 A
0 261 29	110 V∿/⎓	In ≤ 1600 A
0 261 50 (factory mounting : motor + DPX³/DPX³ - I)	24 V∿/⎓	-
0 261 51 (factory mounting : motor + DPX³/DPX³ - I)	48 V∿/⎓	-
0 261 54 (factory mounting : motor + DPX³/DPX³ - I)	230 V∿	-

SET OF CONNECTORS - 6 CONTACTS (REAR INSTALLATION)

Cat.No	Versions
0 098 19	For « Debro-lift » version

SET OF CONNECTORS - 8 CONTACTS (REAR INSTALLATION)

Cat.No	Versions
0 263 99	For « Debro-lift » version

SET OF CONNECTORS – 24 CONTACTS (SIDE INSTALLATION)

Cat.No
4 222 29

SET OF 12 CONTACTS (SIDE INSTALLATION)

Cat.No	Version
4 222 30	Débrochable

EXTERNAL NEUTRAL

Cat.No
4 225 92

MOUNTING PLATE FOR SIGNALLING CONTACT

Cat.No	Version
4 225 95	DPX³ draw-out

1. Auxiliary contact (OC)/fault signalling contact (CTR)



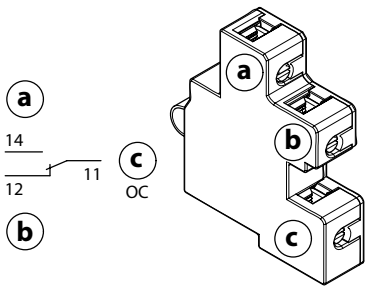
⚠ All DPX ³ circuit-breakers and switches can be equipped with electrical auxiliaries to ensure control functions.

The auxiliary contact Cat.No 4 210 11 is common to the entire DPX ³ range.
Depending on its insertion position in the DPX ³ case, the contact acts either as an auxiliary contact or as a fault signalling contact.
The auxiliary contact OC allows the signalling of the position of the main contacts of the circuit-breaker or the switch (open or closed).
It is neither anticipated nor delayed.
The fault signalling contact (CTR) indicates that the circuit-breaker has opened on default, by action of a trigger, a draw-out operation or by mechanical action on the red "test" button.
These contacts are of the changeover type (NO-NC) with dry contact (potential free).

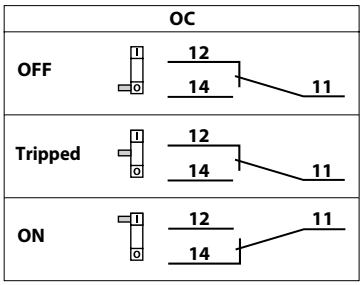
Electrical characteristics (OC and CTR)

Voltage	Intensity (A)
24 V⎓	5
48 V⎓	1,7
110 V⎓	0,5
230 V⎓	0,25
110 V∿	4
230 V∿	3

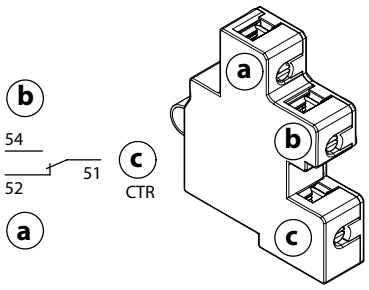
OC contact presentation



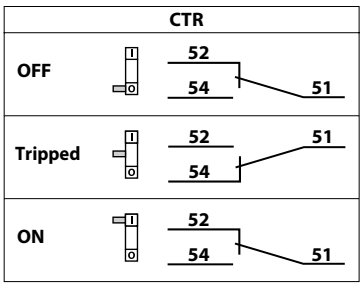
OC contact status



CTR contact presentation



CTR contact status



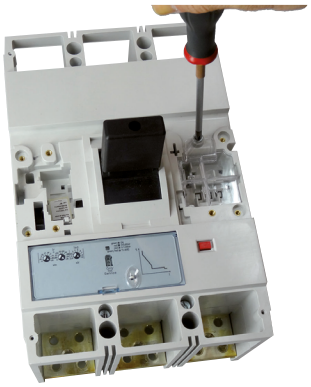
ELECTRICAL ACCESSORIES

Setting up OC/CTR contacts

1. Press the red "test" button to trigger the product and have the handle in the intermediate position (triggered).
2. Remove the 4 screws from the cover.



3. Remove the transparent cover by removing the screw.



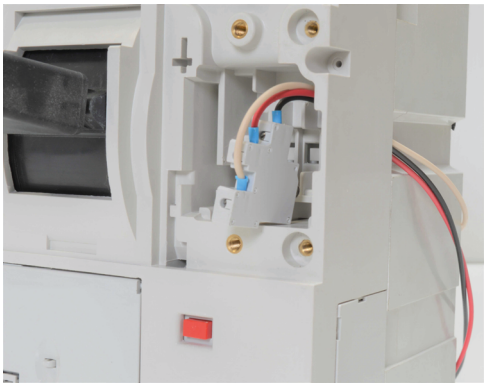
4. Insert the OC contacts

⚠ It is possible to install a maximum of 3 OC contacts (the 3 rightmost positions).



Cable exit can be:

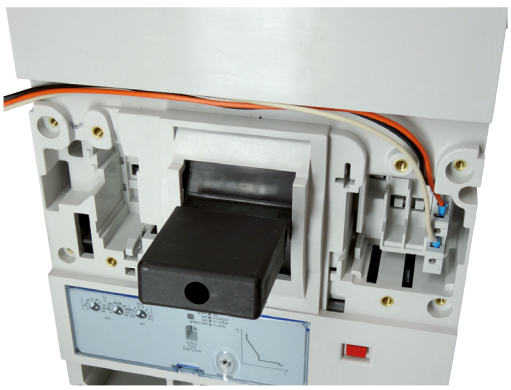
- From the back.



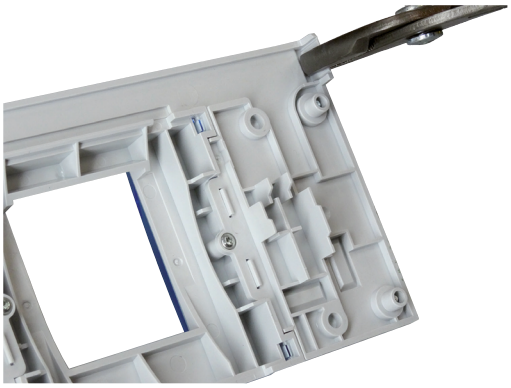
- From the right side.



- From the left side.



For the lateral output, the pre-cut of the front cover must be broken in order to clear the passage.







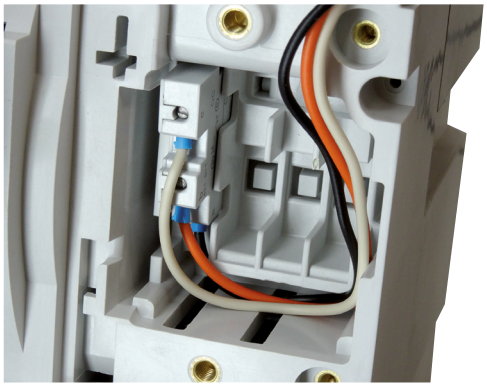
Set up the CTR contact

Its location is dedicated. Only one location is possible (the leftmost).

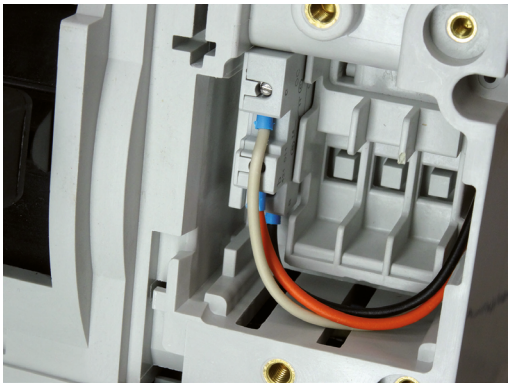


Cable exit can be:

- From the back.



- From the right side.

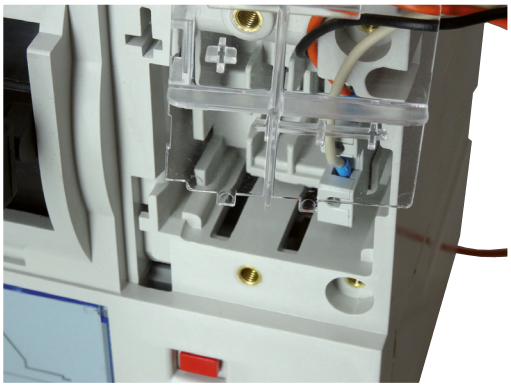


The CTR contact is mounted 180° in the housing in relation to an OC contact: the wires go down (see pictures below).

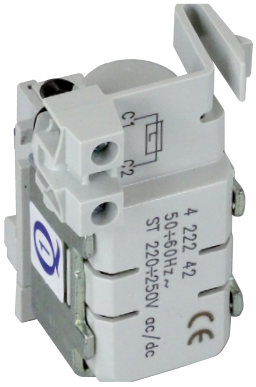
ELECTRICAL ACCESSORIES

The permissible section of the cables extends from 0.35 mm² to 1.5 mm². In the case where several OC and CTR are present, the recommended section is 0.50 mm².

To replace the transparent cover, make sure that the 2 tabs (before setting the screw) are correctly placed at the bottom in their housing.



2. Shunt release (example Cat.No 4 222 42)



Shunt releases allow the instantaneous opening (≤ 50ms) of the device by the power of their coil:

- External contact control NO

The contact incorporated into the shunt release shuts off the power supply during an opening control (e.g., emergency stop to snap), thus avoiding the heating problem.
The permanent supply of the shunt release is possible, preventing DPX³ contacts to close.

Electrical characteristics

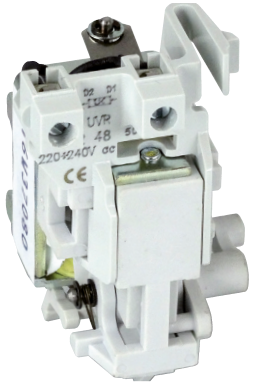
Operating voltage	∿ : 24 V/110 V/230 V/400 V ⎓ : 24 V/48 V
Operating range IEC 60947-2	70 to 110 % Un
Response time	≤ 50 ms
Inrush power	300 VA/W
Request time	> 50 ms
Isolation voltage	2.5 kV

SETTING UP

A single location is provided for mounting regardless of the product of the DPX³ 1600 range.
These shunt releases are mounted on the left of the product (front view).
Only one cable output is possible:

- Side output.

3. Undervoltage releases (example Cat.No 4 222 48)



Undervoltage releases allow the instantaneous opening (≤ 50ms) of the device by switching off the power supply (< 85% UN) of the coil:

- Positive safety (e.g. emergency stop by external contact NF).

Undervoltage releases must be pre-energized before putting the associated DPX³ in the reset position (OFF) to reset the product.

Electrical characteristics

Operating voltage	∿ : 24 V/110 V/230 V/400 V ⎓ : 24 V/48 V
Operating range IEC 60947-2	85 to 110 % Un
Response time	< 50 ms
Holding power	1.6 W/5 VA

SETTING UP

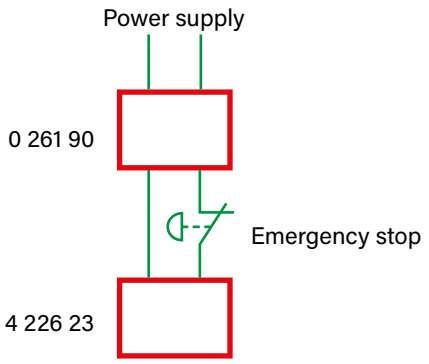
A single location is provided for mounting regardless of the product of the DPX³ 1600 range.
These undervoltage releases are mounted on the left of the product (front view).
Wiring and cable passage are identical to shunt releases.

4. 800 magnetic only time-lag modules

The wiring is done in parallel.

Cat.Nos	Voltage
0 261 90	230 V~ (supplied with 2 terminal covers + 1 rail)
0 261 91	400 V~ (supplied with 2 terminal covers + 1 rail)
4 226 23	Specific time-lag module release to join with Cat.No 0 261 90 or 0 261 91 according to the voltage wanted.

Example:



5. Motor drive (front installation)

5.1 PRINCIPLE

The DPX ³ 1600 engine offers a significant advantage in all commercial building installations, allowing to close or open a switch or circuit-breaker remotely.

If used as a transfer switch, its control is autonomous using the automatic transfer switch control units Cat.Nos 4 226 80/4 226 82/4 226 83.

Two motor ranges are available for the DPX³ 1600:

- a standard range
- a factory-configured only range

The **standard** range has on the front:
- a controller to charge the spring;
- an operation indicator;
- an operation selector;
- a multifunction selector (AUTO - MAN - Lock);
- an opening button;
- a closing button
- a locking device;

Available in several voltages, either continuously or alternatively:
- 24 V/48 V⎓.
- 24 V/48 V/110 V/230 V~.

There are also two possibilities of electric controls:
- by impulse;
- sustained.

The **configured** range has on the front:
- a controller to charge the spring;
- a spring status indicator "loaded - unloaded ";
- a multifunction selector (AUTO - MAN - Lock);
- an opening button;
- a closing button
- a locking device;

In automatic mode

The motorized control allows to open, close or rearm remotely a DPX³.

In manual mode

electrical orders are not taken into account.
The front handle allows you to manually load the spring, then close the associated device.
To open the unit, simply press the red button.

In locked mode

It is not possible to control the motor electrically or manually.

This mode is only possible when the DPX³ handle is in the "0" position (open).

It is possible to equip them with a lock:
- by key (Cat.Nos 4 228 06 + 4 238 80 or 4 238 81 or 4 238 82 or 4 238 83);
- by padlock (3 maxi. – diameter 6 mm maxi).

The locking mechanism then prevents the closure of the DPX3 and the cancellation of all electrical commands.

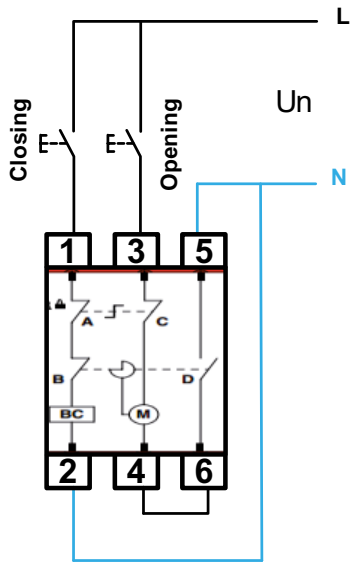
ELECTRICAL ACCESSORIES

For the safety of personnel and equipment, when the motor cover is removed, a safety contact disables all electrical operation of the motor.

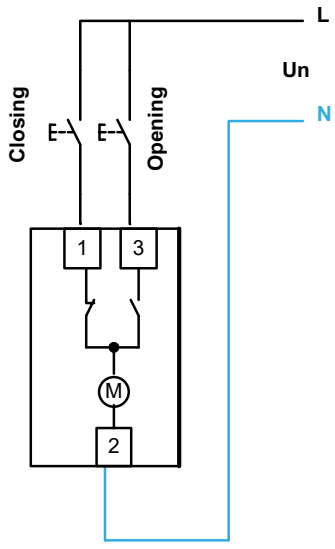
In the case of a transfer siwtch use, the switching time between the main line and the backup line (time between the opening of the main line and the closure of the backup line) is greater than or equal to 6s..

5.2 SCHEMES

Configured motor:



Standard motor:



5.3 ELECTRICAL CHARACTERISTICS

Configured motor:

Voltage - Un (V)	Power absorbed (VA/W)		Opening + rearming time	Closing time
	Inrush power	Steady state power		
24 V⎓	460	160	6 s	≤ 100 ms
48 V⎓	460	160	6 s	≤ 100 ms
24 V∿	460	160	6 s	≤ 100 ms
48 V∿	460	160	6 s	≤ 100 ms
110 V∿	460	160	6 s	≤ 100 ms
230 V∿	460	160	6 s	≤ 100 ms

Standard motor:

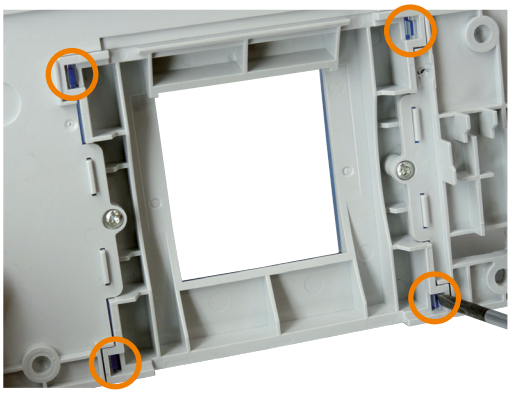
Voltage - Un (V)	Power absorbed (VA/W)		Closing time	Opening time
	Inrush power	Steady state power		
24 V⎓	460	110	4 s	8 s
48 V⎓	460	110	4 s	8 s
24 V∿	460	110	4 s	8 s
48 V∿	460	110	4 s	8 s
110 V∿	460	110	4 s	8 s
230 V∿	460	110	4 s	8 s

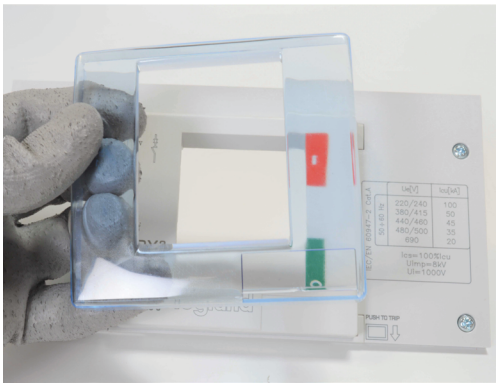
5.4 MOUNTING (EXAMPLE WITH CAT.NO 0 261 27)

Composition:

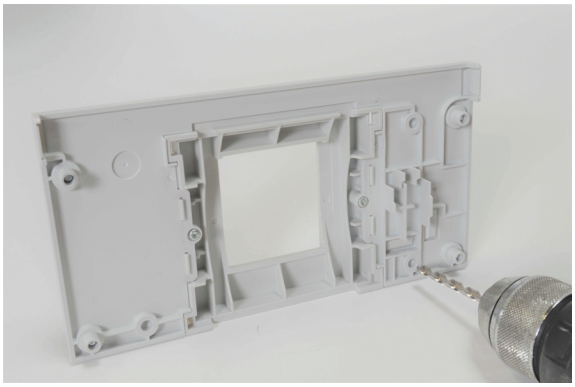


1. Press the red test button (once activated, the lever moves to the intermediate position).
2. Remove the 4 screws and pull out the circuit-breaker cover.
3. Remove the transparent plastic cover.



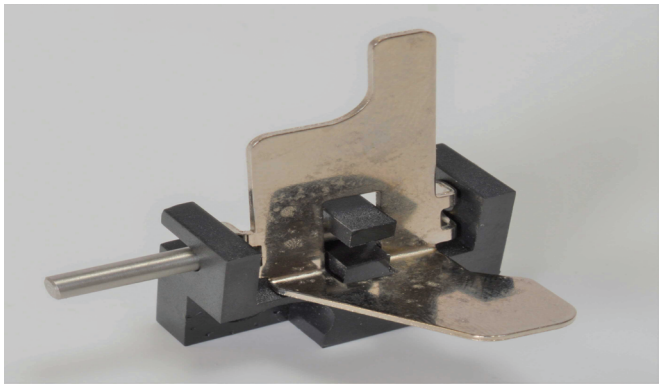


4. Drill a 5 mm diameter hole and make the cuts for the information reports (button OFF – status report).





5. On the front of the product, in the hole, retrieve the blank label and note the Cat.No of the associated device.
6. Stick the label on the front of the motor in the designated spot.
7. Put the frame back in place using the 4 screws.
8. Assemble the tab and its axis on the support and fasten the whole to the product.





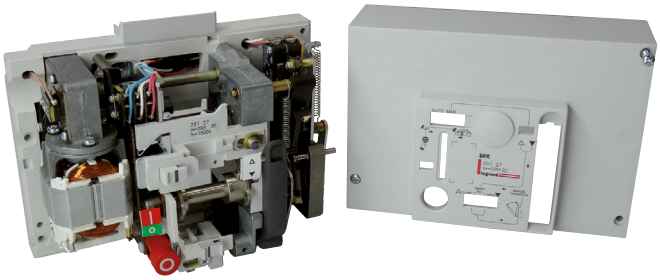
ELECTRICAL ACCESSORIES

9. Remove the protective screw from the handle.



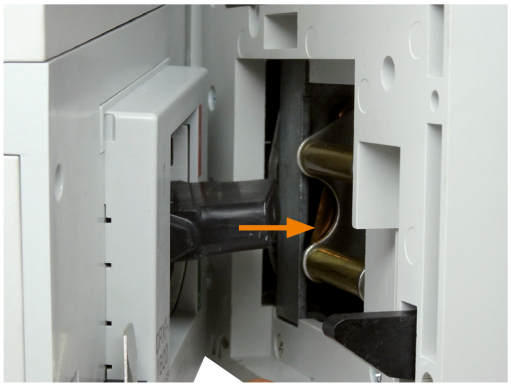
10. Set the motor drive slider to "MAN" and remove its cover.



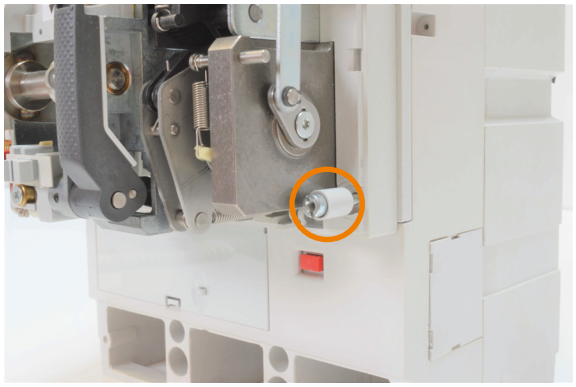


11. Reload the spring of the motor drive with the handle.

12. Insert the control into the product making sure that the handle is correctly positioned in the intended housing.



13. Fasten the motor with the 4 screws supplied (tightening torque of 2 Nm) the screw at the bottom right is different from the other 3

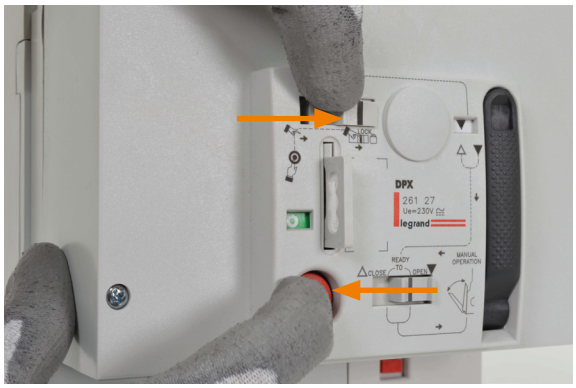


14. Fasten the motor cover with the screws supplied (tightening torque of 1 Nm. Maxi).

Perform some closing and opening operations in order to verify the proper functioning of the assembly.

It is possible to perform a lockout in theopen position:

1. Press the « 0 » button on the motorized control, hold it down, and move the slider to « LOCK » to extend the tab.



2. Insert a maximum of 3 padlocks with a diameter of 5 mm minimum to 6 mm maximum.

Example with a padlock Cat.No 0 227 97:



6. Locking accessory for motor drive (Cat.Nos 4 228 06 + 4 238 80/81/82/83)

Mounting is identical to the DPX³ 630 except the cam to be put in place at the rear (page 89).



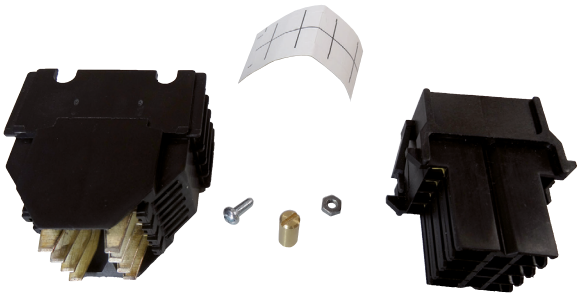
For DPX³ 630



For DPX³ 1600

7. Set of connectors - 8 contacts (Cat.No 0 263 99) rear installation

Composition:



Connection by Faston terminals.
See Chapter 13 (mounting plate Cat.No 4 225 95, page 132).

8. Set of connectors - 6 contacts (Cat.No 0 098 19) rear installation

Composition:



Terminal connection.
See Chapter 13 (mounting plate Cat.No 4 225 95, page 133).

9. Set of connectors – 24 contacts (Cat.No 4 222 29) side installation

This reference consists of 2 male/female connectors of 12 terminals each (24 terminals in total) allowing the connection of the accessories (OC – CTR – motor drive – coils).

It is only available in the international catalog.
The use of this product for a DPX ³ 1600 will only be useful for the fixed version.



In the draw-out version we will use the catalogue numbers:
- Cat.No 0 263 99;
- Cat.No 0 098 19 for rear contacts;
- Cat.No 4 222 30 for rear contacts.

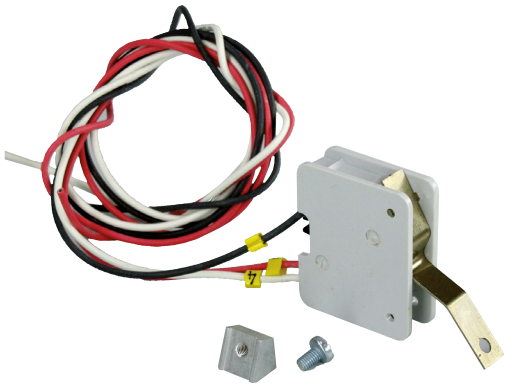
For fixed mounting, use the 2 rails supplied, which will be fixed either to the board or to the uprights, in either case close to the product so that it can be easily disconnected.
Wiring and labelling will be identical to DPX³ 630 (page 91).

The different cable cross-sections and wire location recommendations are indicated in the instruction sheet, depending on the accessories.

10. Signal contact (Cat.No 0 265 74)

This contact is used to send visual information on the status of a « Debro-lift » mechanism:
- drawn-in;
- not drawn-in.

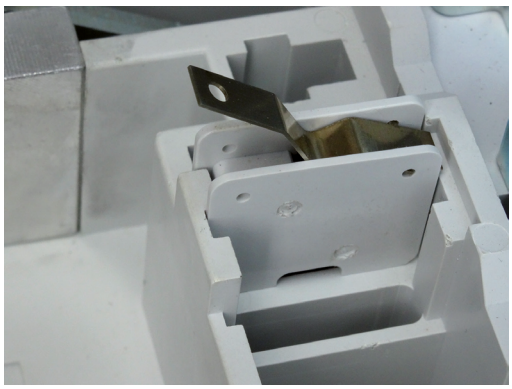
Composition:



For the mounting, do not use the screws nor the metal plate.



1. Pass the contact wires through the hole in the base.
2. Then insert the contact into the dedicated slot, respecting the direction.



11. Set of 4 contacts (Cat.No 4 222 30) Side installation

This Cat.No has 4 contacts with 3 terminals each.

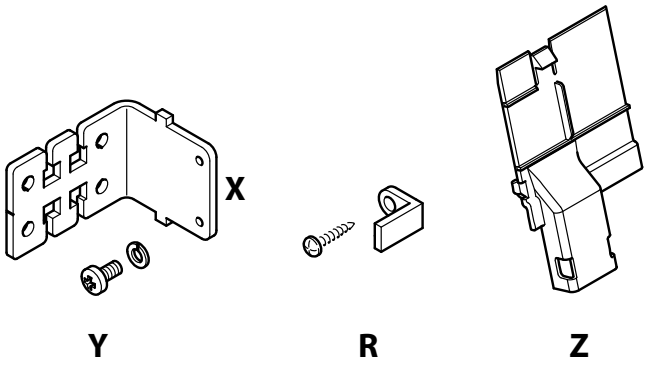
It is possible to install a maximum of 8 contacts per DPX³ (2 Cat.Nos to order).
These contacts are positioned on the side of the associated product. They can be installed on a single product or 2 products mounted in source inversion.

Composition:
In addition to the parts listed in this Cat.No, others are required for complete assembly.



They can be found in the “Debro-lift” mechanism Cat.No.
Necessary parts are in the “Debro-lift” mechanism Cat.Nos 4 225 93/94:

The mounting is detailed in the instruction sheets of the base or the « Debro-lift » mecanism :



- common instruction sheet.

The different cable cross-sections and wire location recommendations are indicated in the manual, according to the accessories present.

12. External neutral (Cat.No 4 225 92)

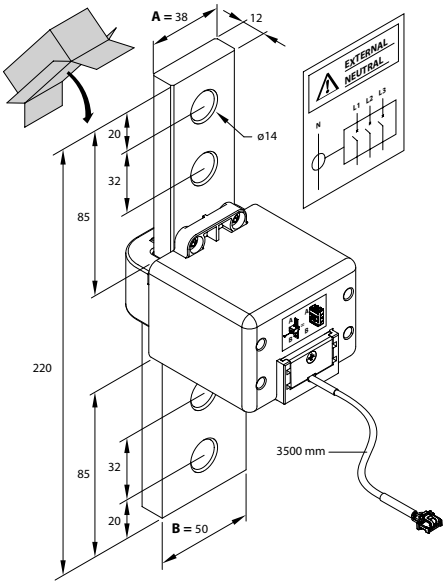
The external neutral comes with a 3.5 m length cable equipped at its end with a connector.



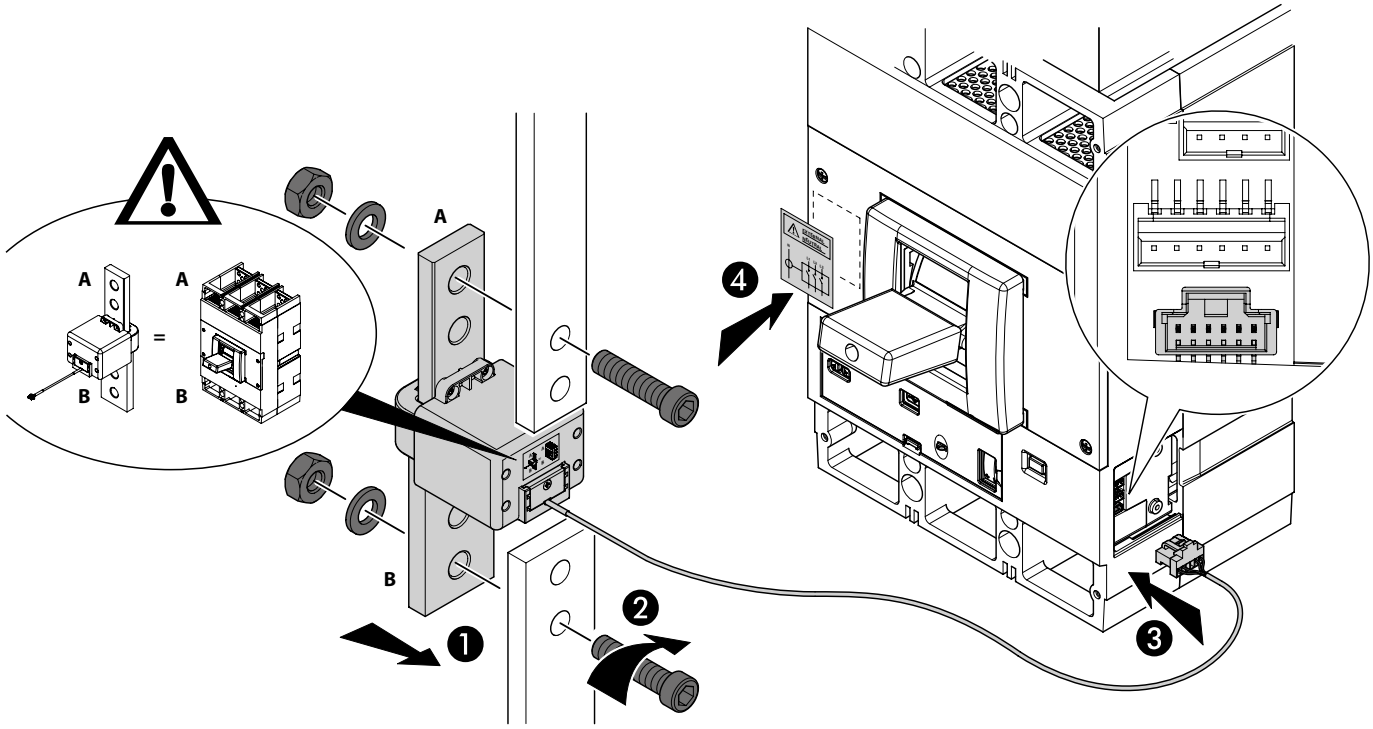
By its very simple and fast implementation, it allows to switch from a DPX³-3P to a DPX³-3P + N (neutral) without replacing the circuit-breaker.
It is compatible with :

- all DPX³ 1600 3P equipped with type S2 and SG trigger manufactured from date 15W50 (technical version revision 1).
- all DPX³ 1600 3P equipped with type S10 trigger.

⚠ It is mandatory to have the DPX³ in the open position (OFF) before plugging/ unplugging the connector from the external neutral. Respect the direction of installation according to the direction of flow of the load current.



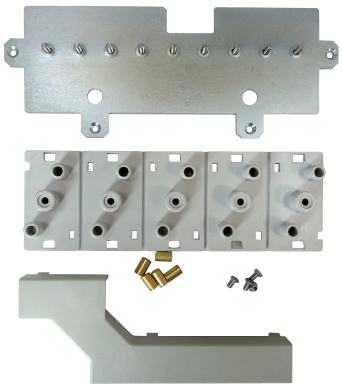
CONNECTION



13. Mounting plate for signalling contacts (Cat.No 4 225 95)

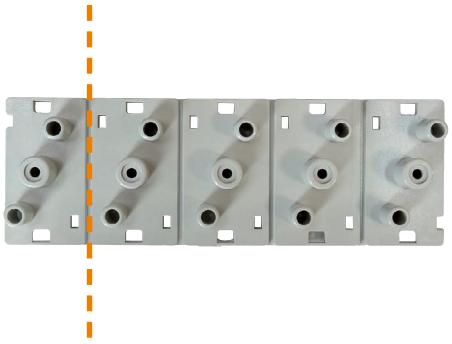
This plate is necessary for the mounting of the signalling contacts Cat.No 0 263 99 or 0 098 19 in the case of a DPX³ in a draw-out version.

Composition:

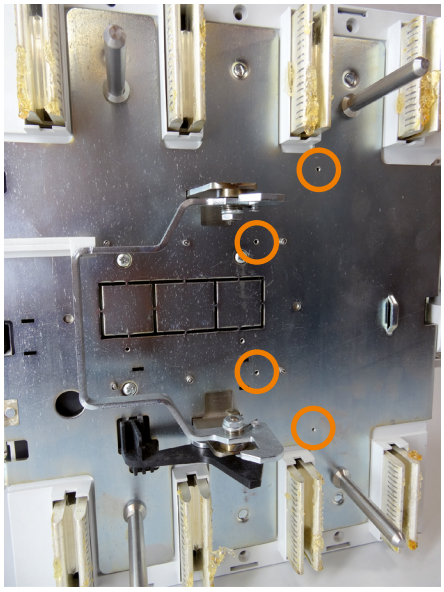


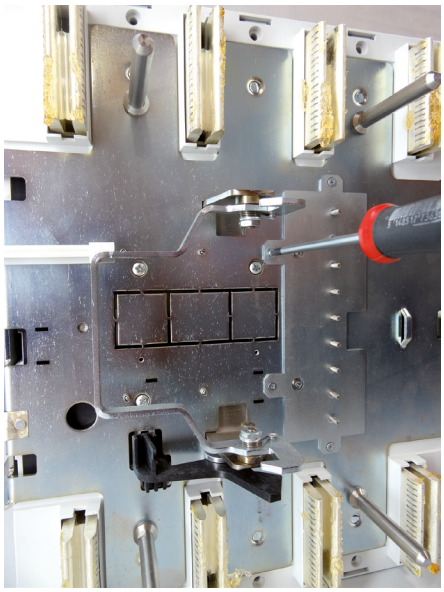
MOUNTING

In case of mounting on a DPX ³ 3P, one of the 5 parts of the supplied plastic part must be broken :



1. Fasten the metal plate using the 4 screws provided at the intended locations of the« Debro-lift » (Philips n° 1, tightening torque 1 N.m).





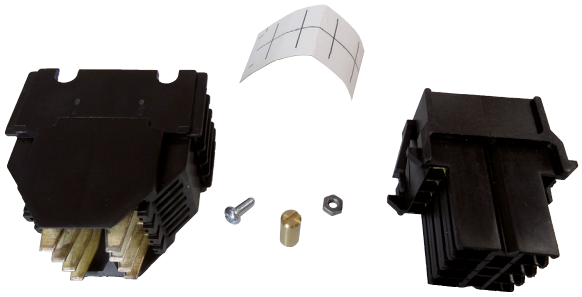
2. Fix the plastic part on the metal plate using the 5 brass nuts supplied (screwing with 4 mm flat screwdriver, 1 N.m. tightening torque).





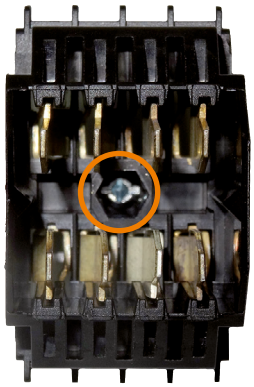
With the set of connectors Cat.No 0 263 99.

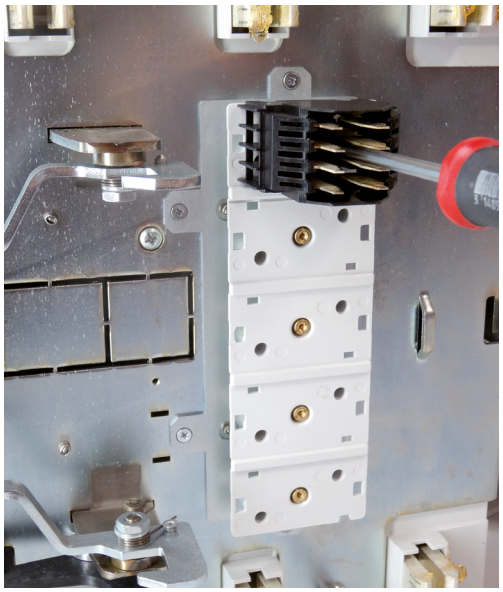
Composition of Cat.No :



ELECTRICAL ACCESSORIES

1. The screw provided must be insert it in the center of the male part in the hole provided.
2. Fasten the whole with a screwdriver Pozidriv No. 1 to the torque of 0.5 N.m.





Repeat these steps according to the number of connectors desired (5 maximum).

For the female part of the connector:

1. Remove the corresponding plastic part from the draw-out base.





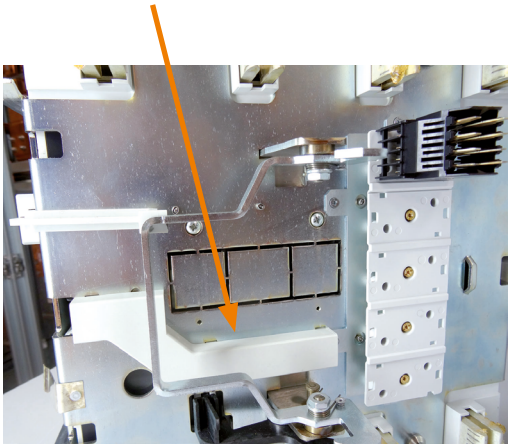
2. Clip the female part of the contact into the draw-out base (from the front of the base).





After wiring all the cables of the accessories, auxiliary contacts, etc. :

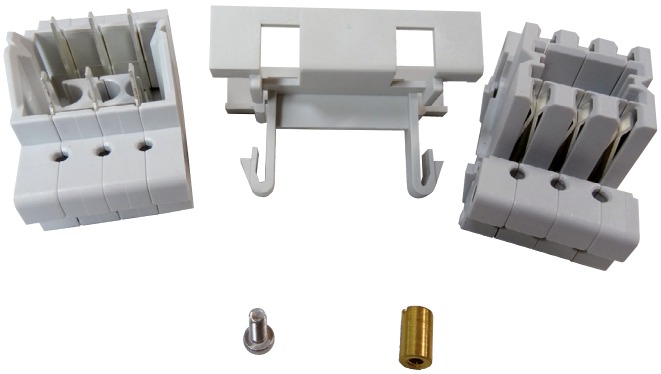
1. Install the clip-on plastic channel supplied with the Cat.No 4 225 95 in order to conceal all the wires located to the right of the DPX³ (front view).



Location of wires (according to mounted accessories) detailed in the instruction sheet « Debro-lift » Cat. Nos 4 225 93/94.

SET OF CONNECTORS (CAT.NO 0 098 19)

Composition:



1. The screw provided must be insert it in the center of the male part in the hole provided.



2. Fasten the whole with a 4 mm flat screwdriver to the torque of 0.5 N.m.

Repeat these steps according to the number of connectors desired (5 maximum).

For the female part of the connector :

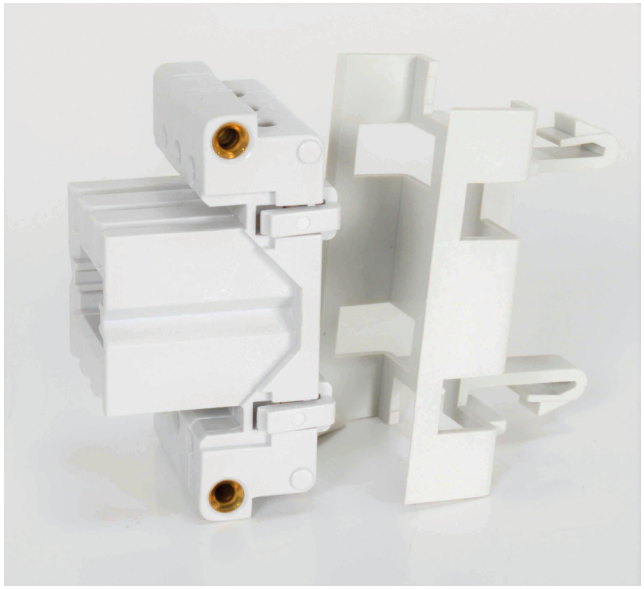
1. First remove the corresponding plastic part from the draw-out base.



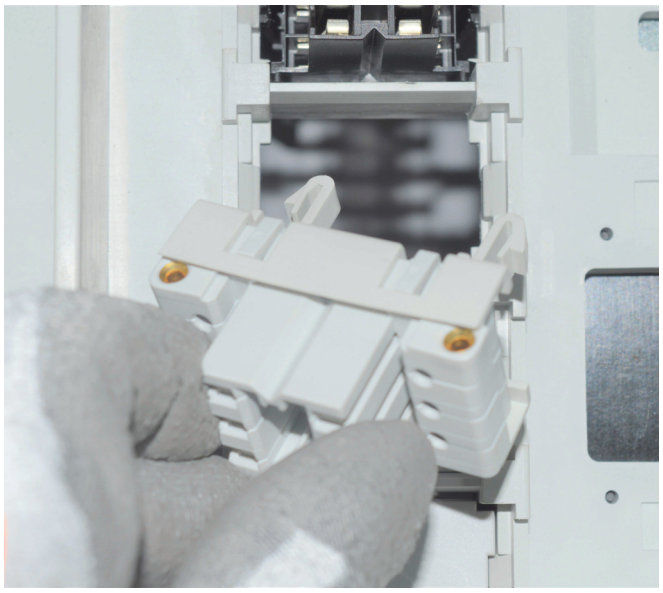


ELECTRICAL ACCESSORIES

2. Clip the female part of the contact into the supplied plastic frame.



3. Clip the whole into the base (from the front of the base).

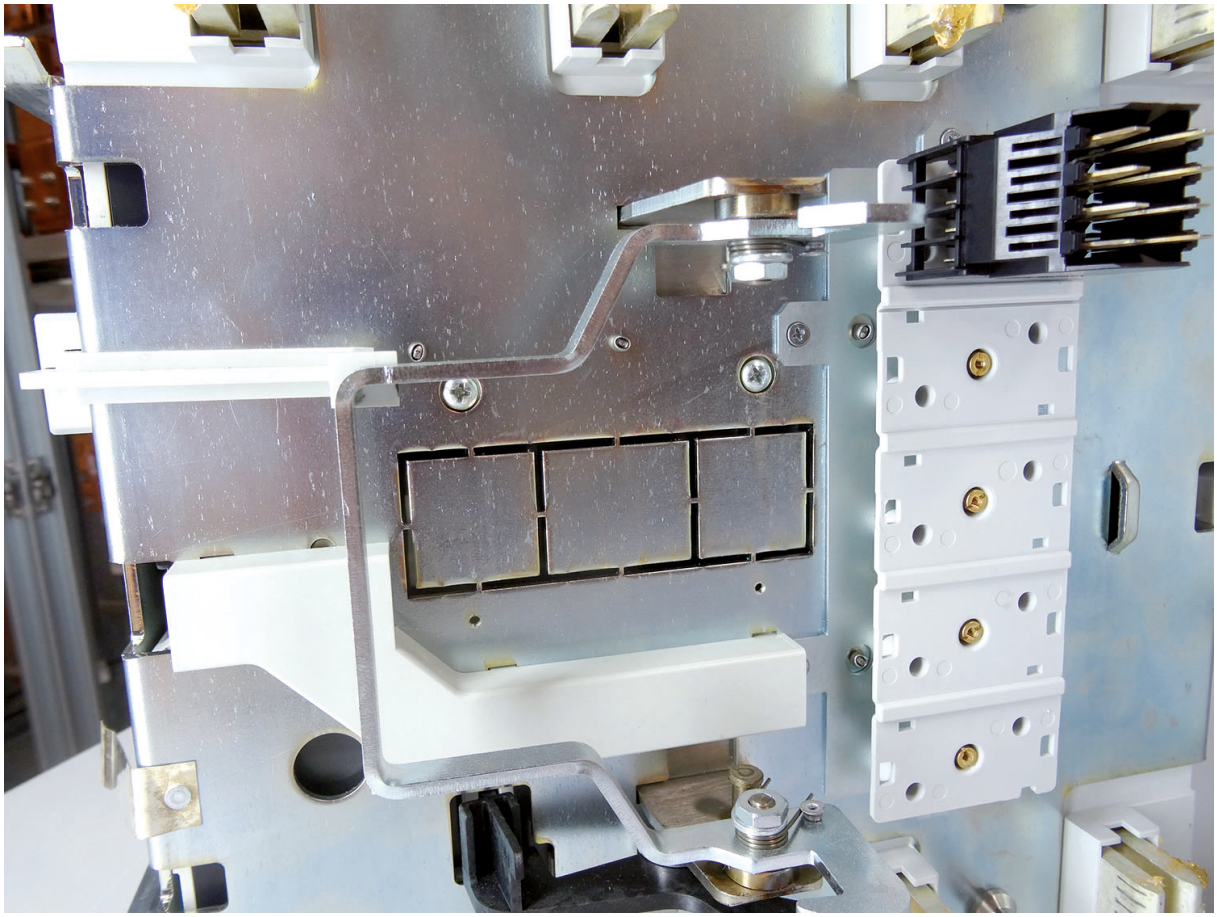






After wiring all the cables (Ø 0.35 mm² mini, 1.5 mm² Maxi) of the accessories, auxiliary contacts, etc. :

1. Install the clip-on plastic channel supplied with the Cat.No 4 225 95 in order to conceal all the wires located to the right of the DPX³.



Location of wires (according to mounted accessories) detailed the « Debro-lift » mechanism instruction sheet Cat.Nos 4 225 93/94.



MECHANICAL ACCESSORIES

BASES DPX³ DRAW-OUT VERSION

Cat.Nos	Poles	Outlets
4 225 86	3P	AV
4 225 87	4P	AV
4 225 88	3P	AR
4 225 89	4P	AR

« DEBRO-LIFT » MECHANISMS

Cat.Nos	Poles
4 225 93	For DPX³ 3P
4 225 94	For DPX³ 4P

DRAWING-OUT INSULATED HANDLE FOR « DEBRO-LIFT » DPX³

Cat.No
0 265 75

KEY-LOCK FOR « DEBRO-LIFT »

Cat.Nos	Versions	Type of support and barrel
4 228 10 4 238 80	DPX³ in drawn-out position	Mechanical support + barrel and flat key with random marking
4 228 10 4 238 81	DPX³ in drawn-out position	Mechanical support + barrel and flat key EL43525
4 228 10 4 238 82	DPX³ in drawn-out position	Mechanical support + barrel and flat key EL43363
4 228 10 4 238 83	DPX³ in drawn-out position	Mechanical support + barrel and star key with random marking
4 228 09 4 238 80	DPX³ in drawn-out position and equipped with a motor operator or a rotary handle	Mechanical support + barrel and flat key with random marking
4 228 09 4 238 81	DPX³ in drawn-out position and equipped with a motor operator or a rotary handle	Mechanical support + barrel and flat key EL43525
4 228 09 4 238 82	DPX³ in drawn-out position and equipped with a motor operator or a rotary handle	Mechanical support + barrel and flat key EL43363
4 228 09 4 238 83	DPX³ in drawn-out position and equipped with a motor operator or a rotary handle	Mechanical support + barrel and star key with random marking

DIRECT ROTARY HANDLE

Cat.No	Version
0 262 61	Standard (black)

VARI-DEPTH ROTARY HANDLE

Cat.Nos	Versions
0 262 83	Standard (black)
0 262 84	For emergency (red and yellow)

LOCKING FOR VARI-DEPTH ROTARY HANDLE

Cat.Nos	Type de support and barrel
4 228 07 4 238 80	Mechanical support + barrel and flat key with random marking
4 228 07 4 238 81	Mechanical support + barrel and flat key EL43525
4 228 07 4 238 82	Mechanical support + barrel and flat key EL43363
4 228 07 4 238 83	Mechanical support + barrel and star key with random marking

EUROLOCK FOR DIRECT ROTARY HANDLE

Cat.No
0 262 25

CONNECTION TERMINALS (x 1)

Cat.Nos	Sections
0 262 69	2 x 240 mm² maxi. rigid or 2 x 185 mm² maxi. flexible
0 262 70	4 x 240 mm² maxi. rigid or 4 x 185 mm² maxi. flexible

EXTENDERS FOR BAR CONNECTIONS

Cat.Nos	Instensity
0 262 67	Up to 1250 A
0 262 68	1600 A

EXTENDED CONNECTION SPREADERS

Cat.Nos	Poles
0 262 73	3P
0 262 74	4P

SET OF 3 INSULATED SHIELDS

Cat.No
0 262 66

SET OF 2 TERMINAL SHIELDS

Cat.Nos	Poles
0 262 64	3P
0 262 65	4P

SET OF 2 SCREW COVER IP 20 (FLAT)

Cat.Nos	Poles
4 225 90	3P
4 225 91	4P

PADLOCK ACCESSORY FOR LOCKING DPX³ IN OPEN POSITION

Cat.No
0 262 60

SET OF REAR TERMINALS UPSTREAM AND DOWNSTREAM

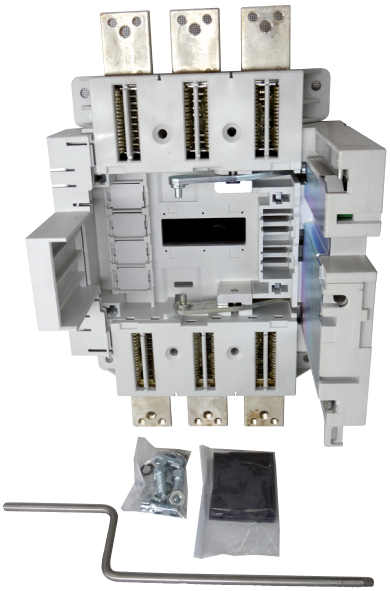
Cat.Nos	Type and Poles
0 263 80	Short 3P
0 263 81	Long 3P
0 263 82	Short 4P
0 263 83	Long 4P

1. Base DPX³ draw-out version

This product is required in the case of mounting the DPX³ in draw-out version.

It is fixed on the plate; the inversion of sources is possible. It can be installed in vertical or horizontal position, front or rear terminals, 3 poles or 4 poles.

EXAMPLE OF A FRONT TERMINAL BASE



2. « Debro-lift » mecanisms (Cat.No 4 225 93/3P - 4 225 94/4P)

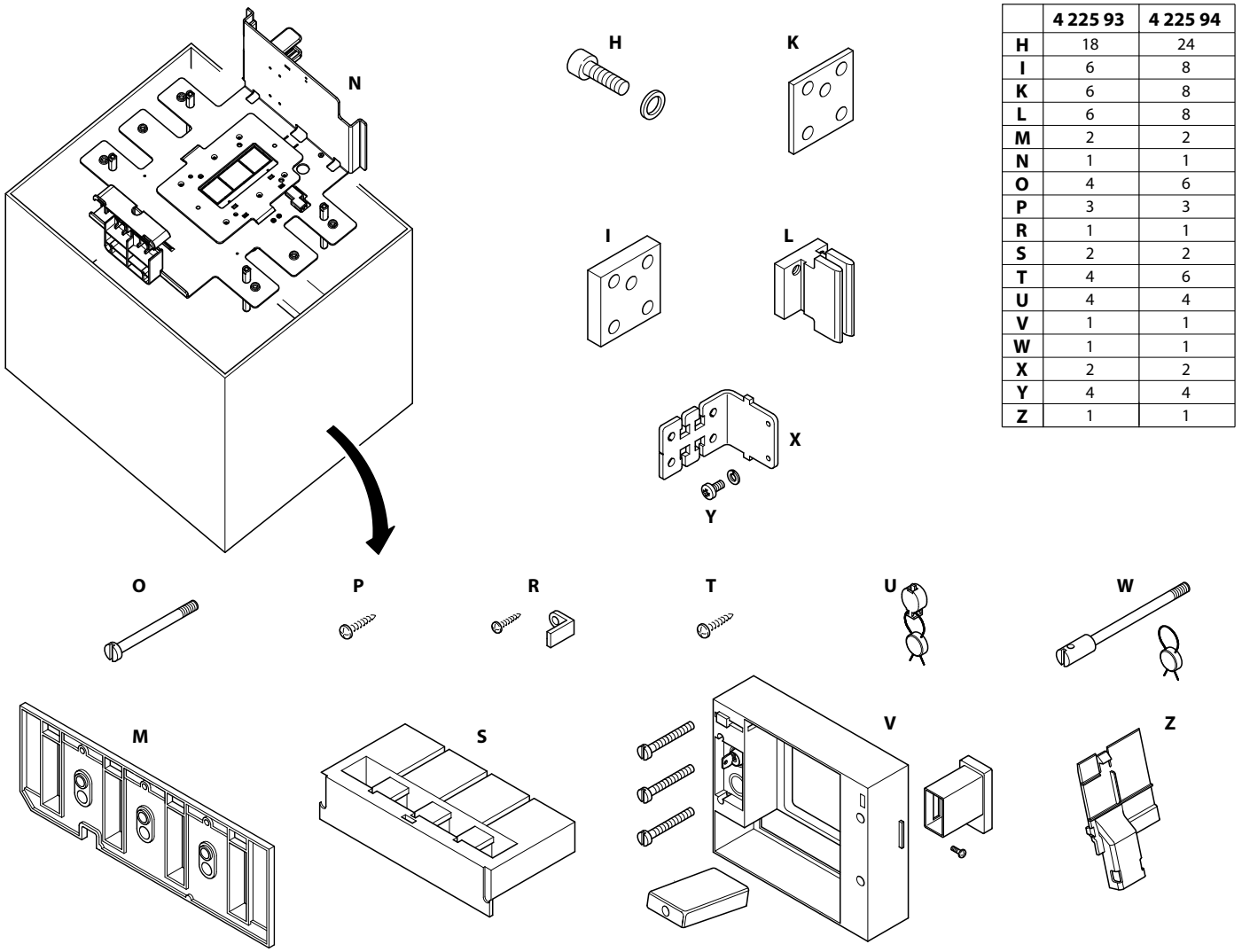
The Debro-lift mechanism allows the operation of drawing-in / drawing-out without removing the faceplate and holding the circuit-breaker or switch in its base. A draw-out DPX³ is a DPX³ with a debro-lift mechanism + a base.

Composition of the Cat.No 4 225 94 :



MECHANICAL ACCESSORIES

View of all the parts included in the Cat.No:



	4 225 93	4 225 94
H	18	24
I	6	8
K	6	8
L	6	8
M	2	2
N	1	1
O	4	6
P	3	3
R	1	1
S	2	2
T	4	6
U	4	4
V	1	1
W	1	1
X	2	2
Y	4	4
Z	1	1

1. Equip the product with the rear connections supplied with the debro-lift mechanism (mark L).

Use:

- 2 shims (K and I marks) for In < 1000 A;
- 1 shims only (K) for In ≥ 1000 A.

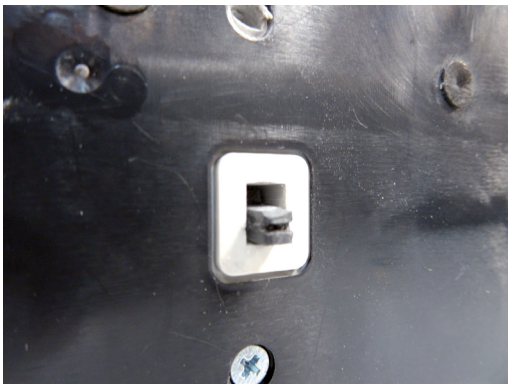
The tightening torque of the screws is 14 N.m.

2. Then put the 2 plastic covers on the back (Mark M).

3. Pull the tab out at the back so that the product is triggered in case of unintentional extraction with a closed circuit-breaker.

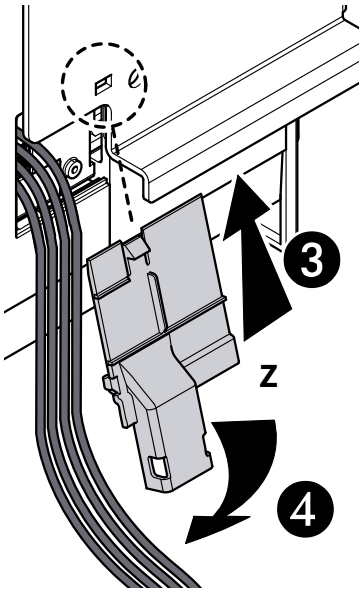
The internal safety mechanism opens the unit at the first disconnection operation. This device prevents the circuit-breaker from being disconnected. The handle must be in the triggered position (intermediate).





4. Fix the DPX³ on the « Débro-lift » with the screws of the product (tightening torque of 3 Nm).

5. After having set up the contacts and/or trigger inside the DPX³ and in case of wires passing on the side of the product, put the protective plastic cover of the wires (Mark Z).



6. Place the metal tab (R-mark) in the intended location and fasten it with the screw to the 2 Nm torque (this part is used to prevent the locking in the drawn-in position).

7. Remove the handle cover, remove the 4 screws from the front cover for the 3P.

For the 4P, leave the 2 fastening screws at the leftmost.

8. Fasten the frame for the « Debro-lift » using the screws provided.

The screw marked W is placed on the top right.

9. Set up the new handle cover and tighten the screw to 0.5 Nm.

10. Fix the terminal shields at the rear of the screws marked T to the torque of 1 Nm.

It is possible to seal them (mark U).

11. With the handle, turn the mechanism of the base to the maximum counter clockwise.

12. Insert the product equipped with its « Debro-lift » mechanism.

Perform a full cycle of drawing-in/ drawing-out and check that the visual positions are correct:
green → drawn-out;
yellow → test;
red → drawn-in.

3. Insulated crank handle for « Debro-lift » DPX³ (Cat.No 0 265 75)



4. Isolated handle for drawing-out « Debro-lift » (Cat.No 4 228 10 + 4 238 80/81/82/83)

The assembly is identical to the DPX³ 630 (see page 102). However, be careful to take the correct cam at the back, it is different.



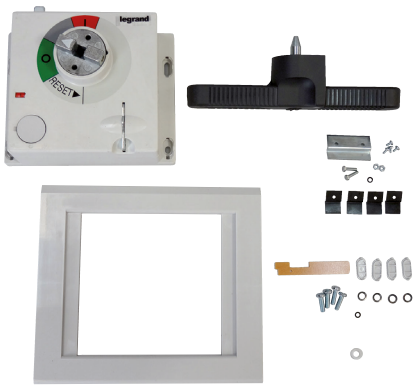
Cam for DPX³ 1600



Cam for DPX³ 630

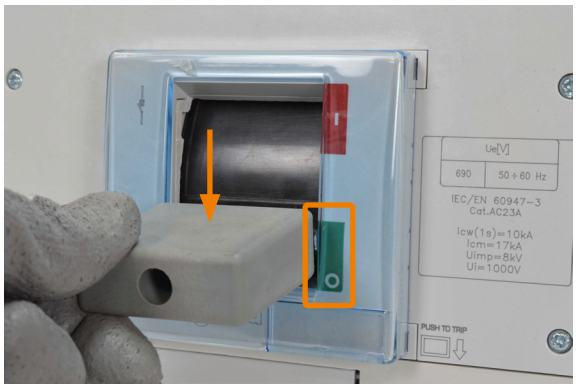
5. Direct rotary handle (Cat.No 0 262 61)

Composition:

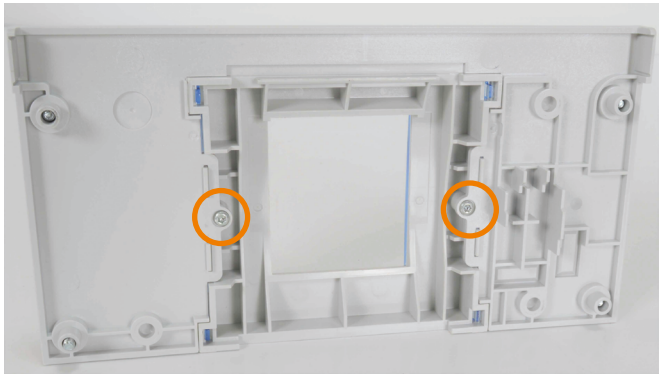


MOUNTING

1. Position the DPX ³ in the open position (OFF).



2. Remove the 4 screws (3P) or 6 screws (4P) from the front panel.
3. Remove the 2 retaining screws from the identification frame (Torx T10) and remove it.

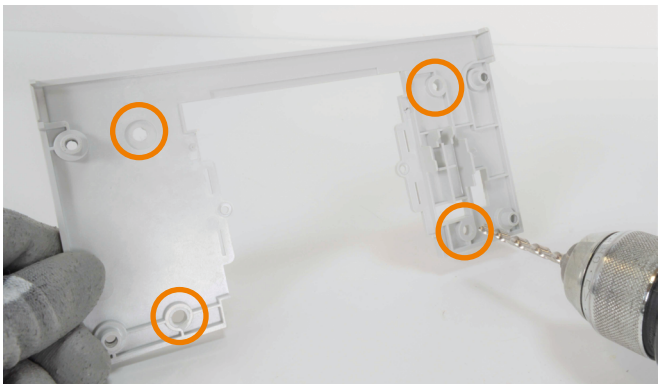




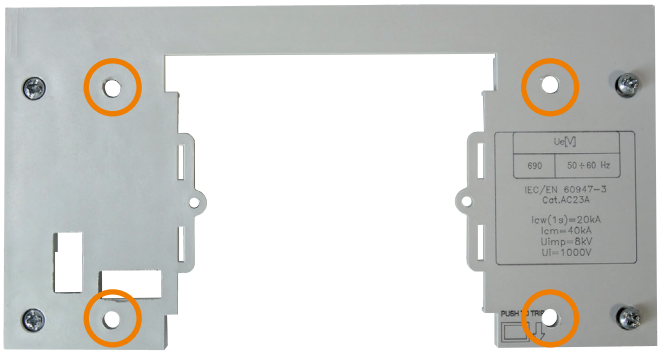


4. Drill 4 holes using a 5 mm drill bit as shown in the instruction sheet.

Back view



Front view



5. Position the yellow tab and the plastic spacer in the indicated places.

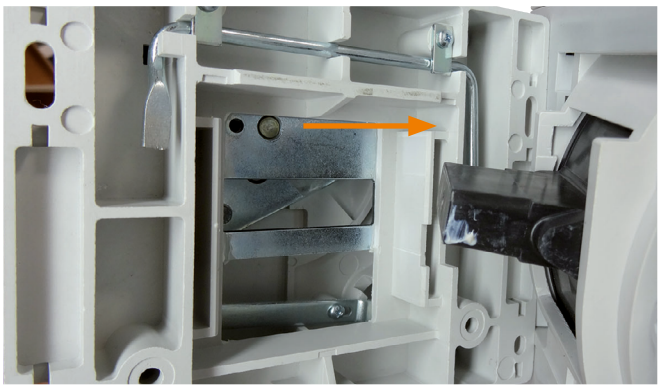




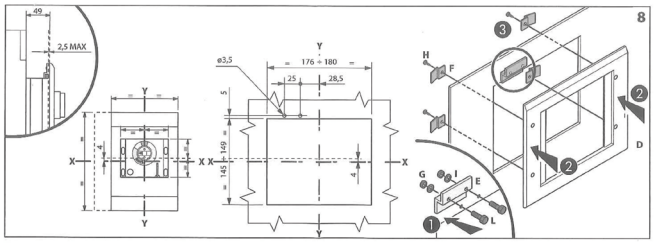
6. Replace the front panel and fasten it.
7. Remove the handle retaining screw and then the handle.
8. Take the mechanism of the rotary handle and position it so that the metal tab is out.



9. Press the Red "test" button on the DPX ³ (product position: triggered).
10. Set up the rotary handle mechanism and secure it with the supplied screws by placing the handle correctly.

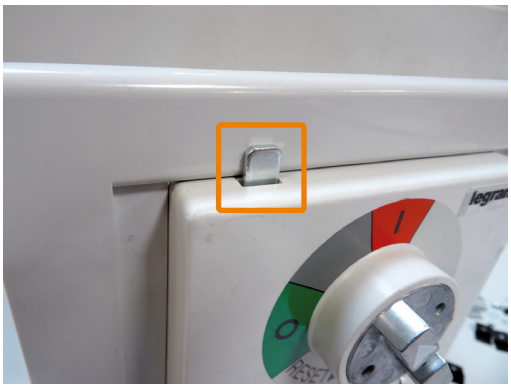


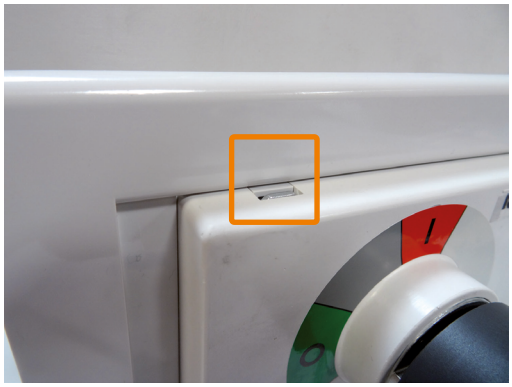
11. Place the plastic frame on the faceplate as well as the retaining tabs.



12. Set up the screw covers.

Check the correct operation of the whole as well as the tab.





Position « I » :
- Impossible to open the faceplate

Position Test (triggered) :
- Impossible to open the faceplate.

Position « 0 » :
- Possible to open the faceplate.

6. Key-lock in draw-out position, motorised or with rotary handle (Cat.No 4 228 09 + 4 238 80/81/82/83)

This accessory allows you to lock the product (motorized or with rotary handle) in in drawn-out position → perform a consignment operation.
- The product comes with a unique key.

It is possible to have the key number customizable with the company STI Montreuil (http://www.servtrayvou.com/web/contact) by giving the profile number:
- flat key : n° ABA90GEL6149.
- star key : n° HBA90GPS6149.

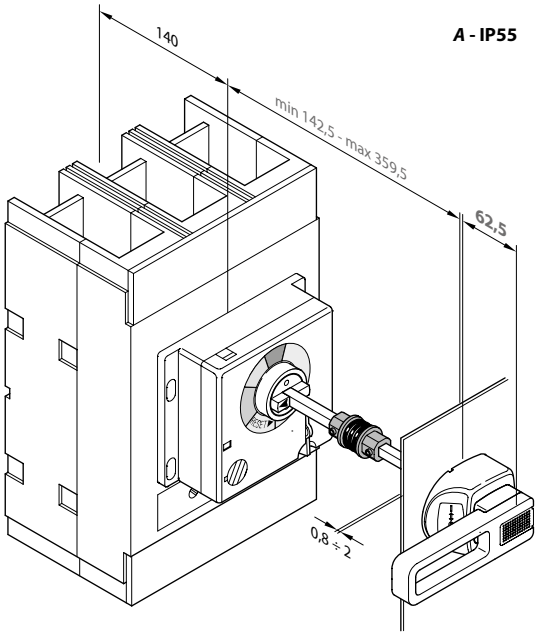
The mounting is detailed in the instruction sheet of « Debro-lift » mechanism (Cat.Nos 4 225 93/94).

Refer to paragraph 5.2 of the « Mechanical accessories» for DPX³ 630 (see page 102).

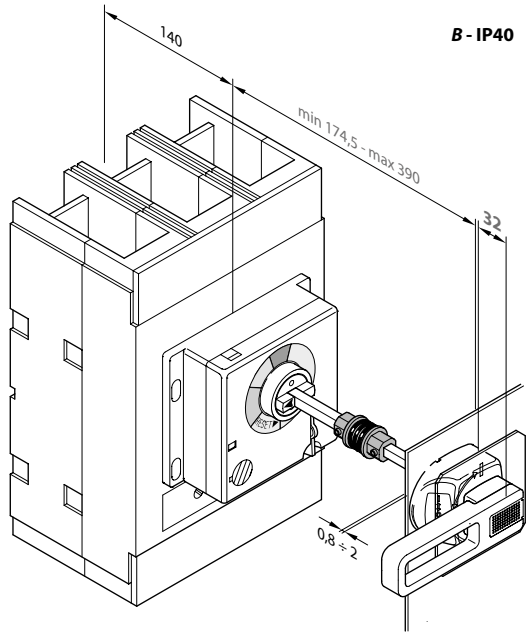
7. Vari-depth ROTARY HANDLE (Cat.No 0 262 83 - standard or 0 262 84 - emergency)

Perform the same operations as the rotary handle direct and then define the need for the IP and the presence of a lock or not.

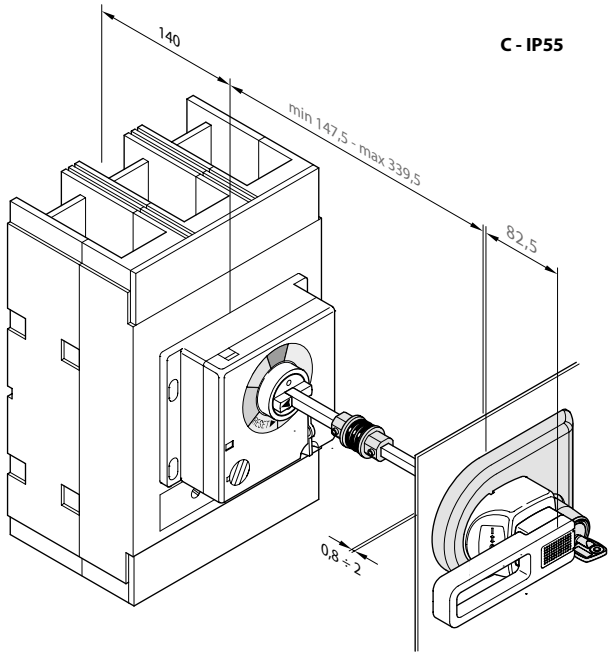
- IP 55 without locking, follow the steps A of the instruction sheet (see configuration below).



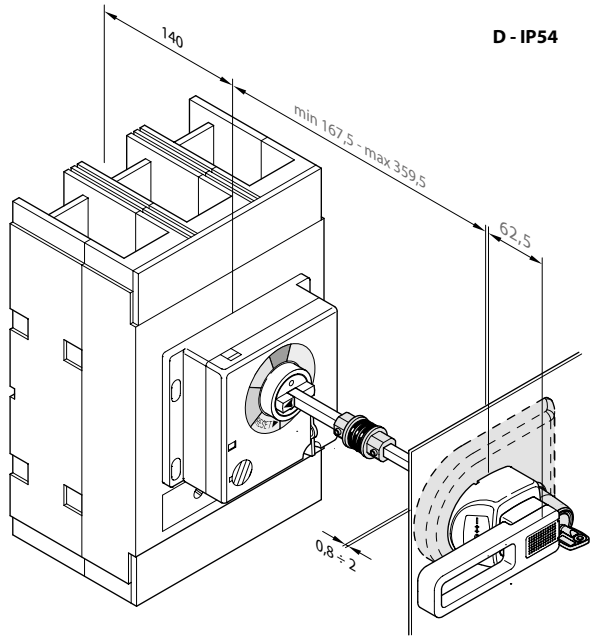
- IP 40 without locking, follow the steps B of the instruction sheet (see configuration below).



- IP 55 with locking, follow steps C of the instructions (see configuration below).

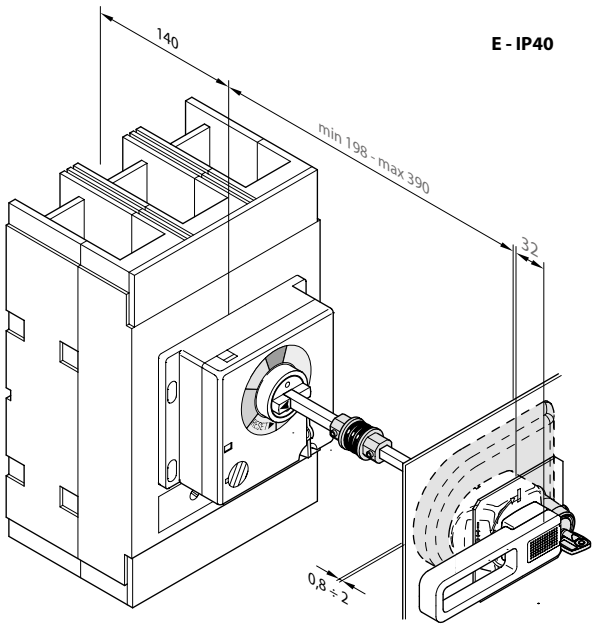


- IP 54 with locking, follow steps D of the instructions (see configuration below).



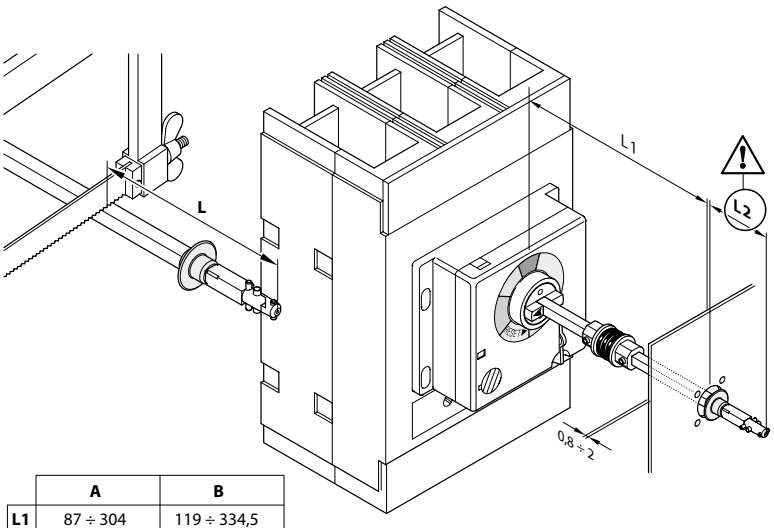
MECHANICAL ACCESSORIES

- IP 40 with locking, follow steps E of the instructions (see configuration below).



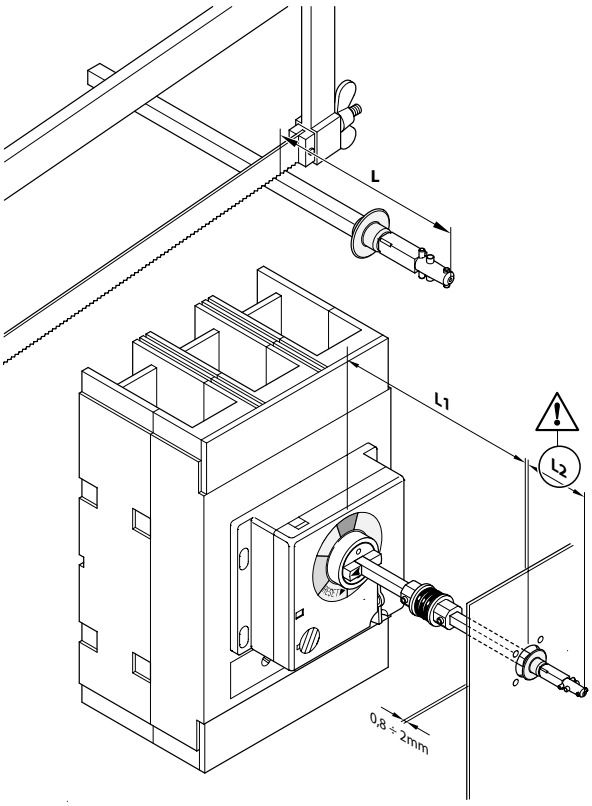
It is then necessary to define the length of the axis according to the configuration: A, B, C, D or E.

- Configuration A and B.



	A	B
L1	87 ÷ 304	119 ÷ 334,5
L	L1 - 69,5	L1 - 100
L2	56	25,5

- Configuration C, D and E.



	C	*D*	*E*
L1	92 ÷ 284	112 ÷ 304	142,5 ÷ 335
L	**L1** - 49,5	**L1** - 69,5	**L1** - 100
L2	76	56	25,5

Once the axis has been cut, carry out the mounting (depending on the IP) of the handle following the instruction sheet.



⚠ The opening of the door or the faceplate is only possible with the handle of the DPX³ in position "0" (OFF).

- Example of the installation in IP55 without locking:

8. Keylockfor vari-depth rotary handle (Cat.Nos 4 228 07 + 4 238 80/81/82/83)

This accessory allows the DPX³ to be locked in the open position → perform a consignment operation.

Composition of the set Cat.Nos 4 228 07 + 4 238 83 :



Make the mounting as shown in the instructions and check the correct operation of the whole: the key can be removed with the handle in position « 0 », it cannot be with the handle in position « I ».

+

This lock can receive padlocks (3 maximum from 5mm to 8 mm).

Picture of the set mounted with the handle on « 0 » and the key removed.



9. Eurolock for direct rotary handle (Cat.No 0 262 25)

Mounting identical to DPX³ 630 (see page 106).

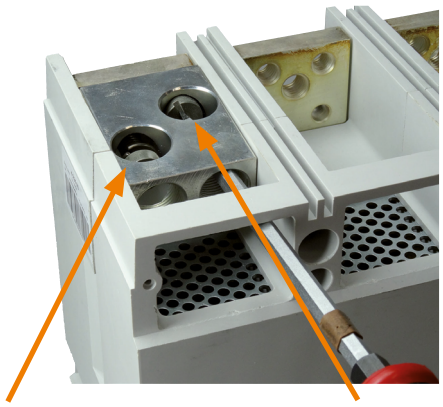
10. Connection cage terminal (x 1) (Cat.Nos 0 262 69/70)

Composition of the Cat.No 0 262 69 :



MECHANICAL ACCESSORIES

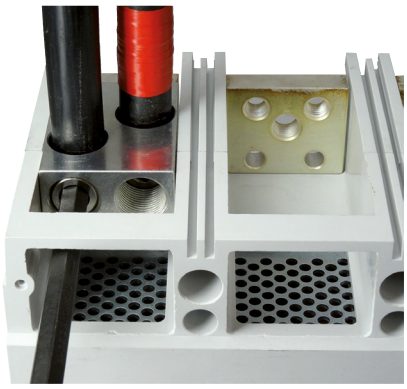
1. Insert the 2 screws respecting the 2 different lengths and tighten the cage terminal on the product to the torque of 14 N.m.



Location of the large screw.

Location of the small screw.

2. Put the cables in place.
3. Tighten the screws to the torque of 36 N.m. (10 mm hexagonal key).



CABLES CHARACTERISTICS

Stripping length → 25 mm.
- Ø maxi. of the cable → 22 mm.

Maximum section copper/aluminium.
- 2 x 240 mm² rigid.
- 2 x 185 mm² flexible.

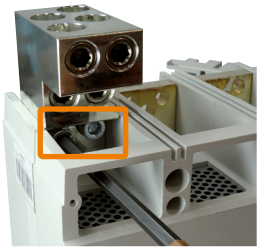
Minimum section copper/aluminium.
- 2 x 120 mm² rigid.
- 2 x 95 mm² flexible.

CAT.NO 0 262 70

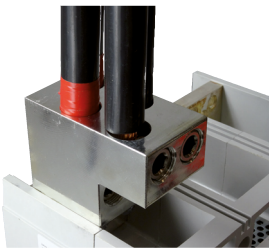




1. Insert the 2 screws into the cage terminal.
2. Tighten it on the product using an hexagonal key of 8 mm hexagonal key the torque of 14 Nm.



3. Put the cables in place.
4. Tighten the screws to the torque of 36 N.m. (10 mm hexagonal key).



CABLES CHARACTERISTICS

- Stripping length
→ 58 mm for the 2 rear terminals.
→ 30 mm for the 2 front terminals
- Ø maxi. of the cable
→ 22 mm.
- Maximum section copper/aluminium
4 x 240 mm² rigid.
4 x 185 mm² flexible.
- Minimum section copper/aluminium
4 x 120 mm² rigid.
4 x 95 mm² flexible.

11. Extenders for bar connections (Cat.Nos 0 262 67/68)

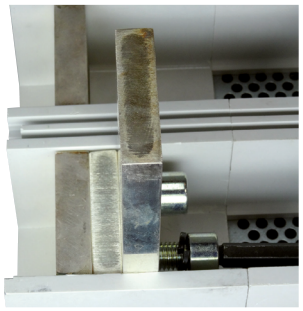
CAT.NO 0 262 67 (UP TO 1250 A)

For flat bars or lugs.

The Cat.No includes only one piece, to be ordered by the required number.

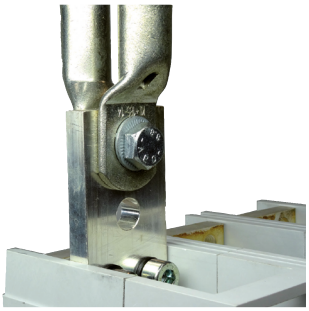
- Flat bars → 50 mm maxi. (width) x 10 mm (thickness) maxi. Ø 14 mm hole drilling.
- Lugs → 50 mm maxi. (width) Ø 14 mm hole drilling

1. Install the spacer (2 holes) for the extenders.
2. Fasten the whole with the screws provided (8 mm hexagonal key, 14 Nm tightening torque).





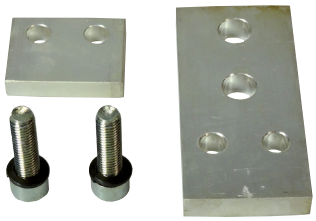
Forbidden to position 2 lugs side by side, they must be placed on either side of the extender.



The mounting bolts of the bars or terminals on the extender are not provided.

CAT.NO 0 262 68 (1600 A)

For flat bars

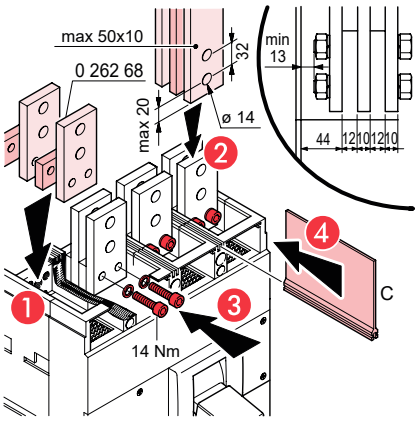


The flat bars must be rigid and must have a width of 50 mm maximum.

The thickness of the bars must be 10 mm. The catalogue number includes only one range, to be multiplied by the desired number.

The diameter of the drilling hole must be 14 mm.

1. Start by putting a spacer, an extender, the other spacer and the second extender
2. Insert the 2 screws into the extended front terminal and the DPX ³ terminal without tightening.
3. Set up the flat bars (2 or 3) equipped with the bolts (not supplied).
4. Block the bolts.
5. Finish tightening the terminal screws using an 8 mm hexagonal key to the torque of 14 Nm.



12. Extended connection spreaders (Cat.Nos 0 262 73/3P - 0 262 74/4P)

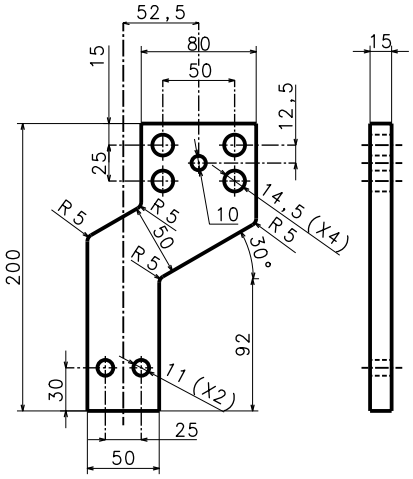
Composition of the Cat.No 0 262 73 :



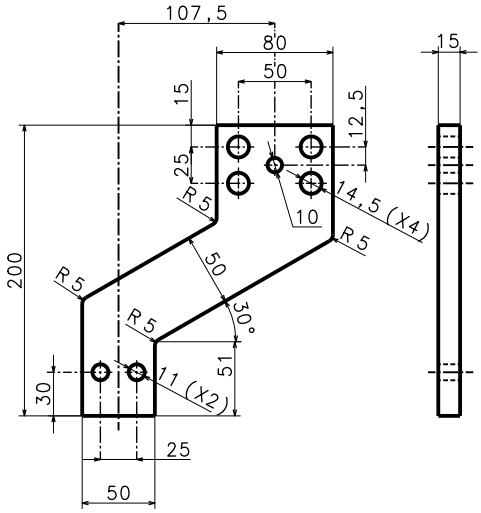
1. Put in place the extended front terminals and tighten the fastening screws (2/ extended front terminals) using an 8 mm hexagonal key to the torque of 14 Nm.

⚠ For the 3P Cat.No 0 262 73, there are 2 small (identical) and 1 large.
For the 4P (Cat.no 0 262 74), there are 2 small (identical in the middle) and 2 large (located at the ends).

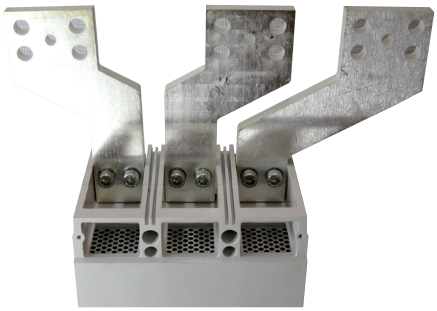
L1 and L2 dimensions:



L3 and Neutral dimensions if 4 poles :

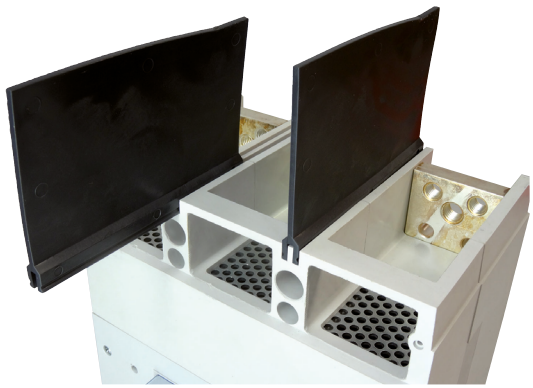


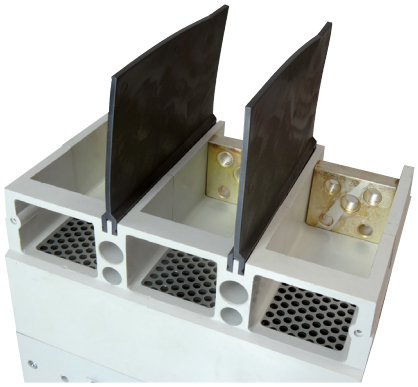
Example of mounting Cat.No 0 262 73 :



13. Set of 3 insulated shields (Cat.No 0 262 66)

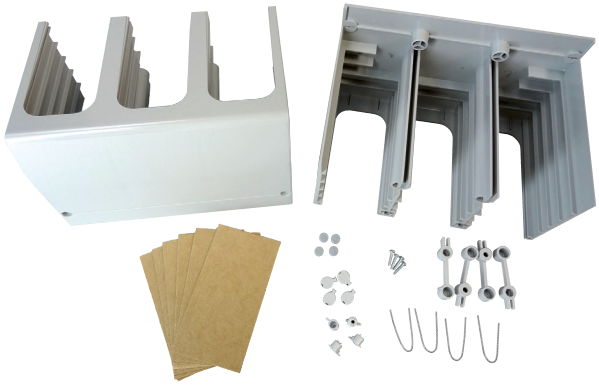
Their role is to avoid the propagation of an electric arc in the event of a short circuit. We only need 2 insulated shields downstream (or upstream) for a DPX³ 3P.



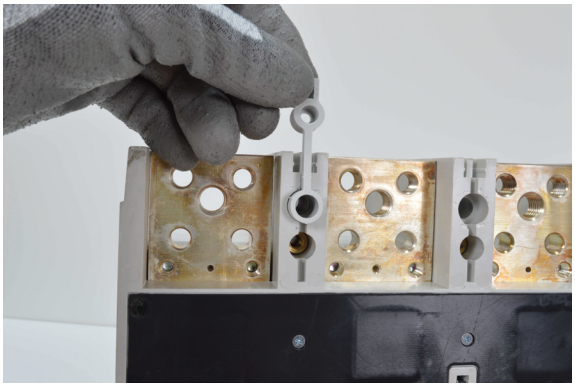


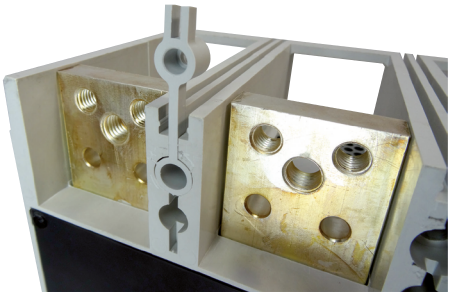
14. Set of 2 terminal shields (Cat.Nos 0 262 64/3P - 0 262 65/4P)

Composition of the Cat.No 0 262 64 :

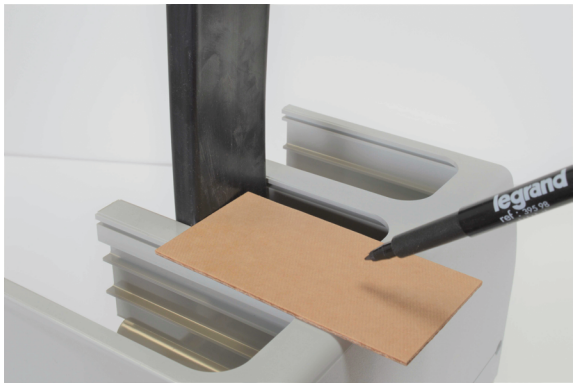


1. Set up the guide-stoppers in the intended housing.





2. Fix a bar (without tightening) to the connection range of the DPX³.
3. position the sealable terminal shields and place the protection on it so as to make the marking for the cutting.



4. Perform the same for the rear part of the bar.
5. Remove the bar, insert the first part of the protection then the bar (with a definitive tightening) then the second part of the protection.



Repeat these operations for all connection ranges.

Perform the sealing(s) of the sealable terminal shields if necessary.

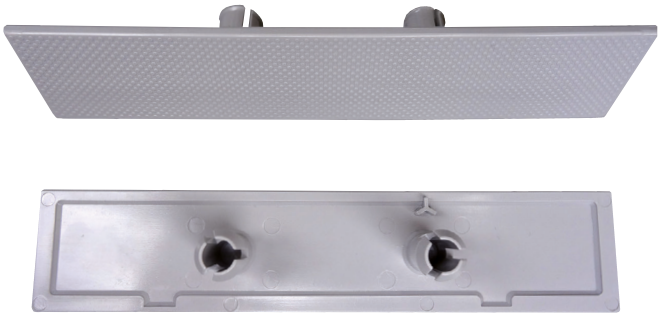


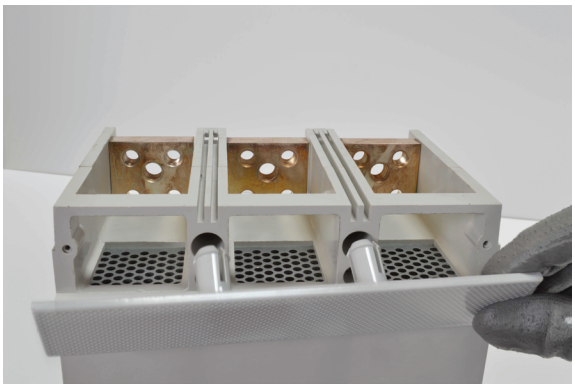
In case of cable installation, make the cuts of the protections using a file according to the section.

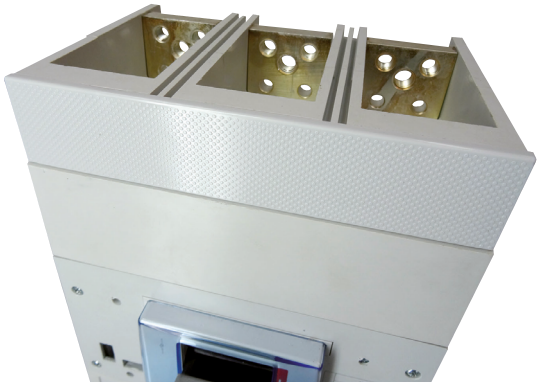
15. Set of 2 screw covers IP 20 (flat) (Cat.Nos 4 225 90/3P - 4 225 91/4P)

Example of screw cover 3P mounting:

1. Insert the screw cover into the holes provided in the DPX³ to the clip

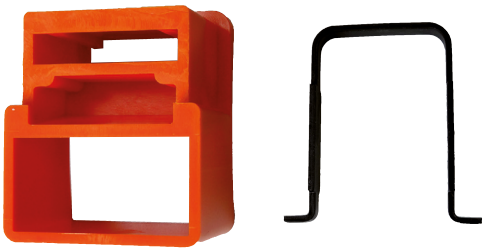






16. Locking accessory for locking in open position of the DPX³ (Cat.No 0 262 60)

Composition:



1. Position the product in the open position (OFF).
2. Insert the part in the form of Omega (Ω) in the lateral openings of the DPX³ at the position 1.



3. Place the orange plastic piece on the handle and the Omega-shaped part (Ω).



4. Insert the padlock(s).

It is possible to put 4 maximum padlocks with a diameter of 6 mm minimum to 8 mm maximum.

Example with 1 pladlock Cat.No 0 227 97:



17. Set of rear terminals, upstream and downstream)

Example of composition:
Long connections for DPX³ 3P.



MOUNTING

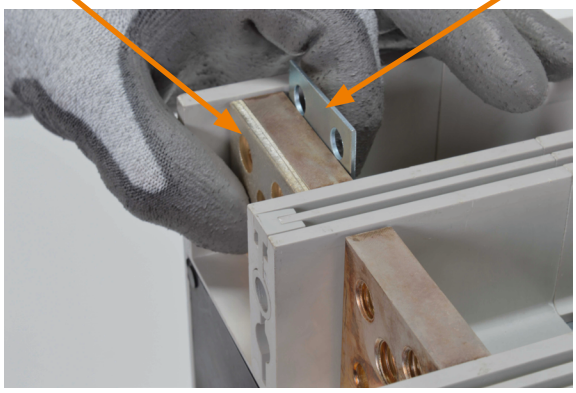
Adapt the installation of the shims according to the intensity:

- I ≤ 800 A → spacer 1.5 mm thick + spacer 4 mm.
- I ≥ 1000 A → spacer 1.5 mm thick.

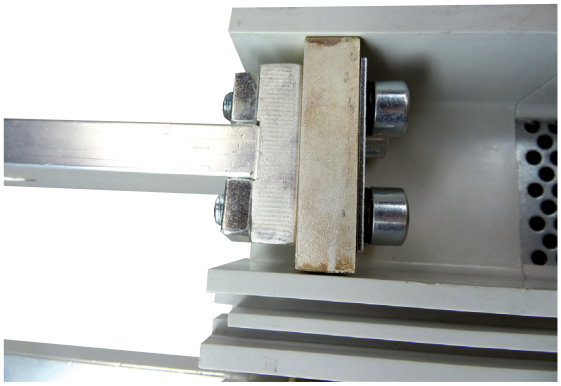
Example with the mounting of the 2 spacers:

4 mm spacer behind the connection area.

1.5 mm spacer in front of the connection area



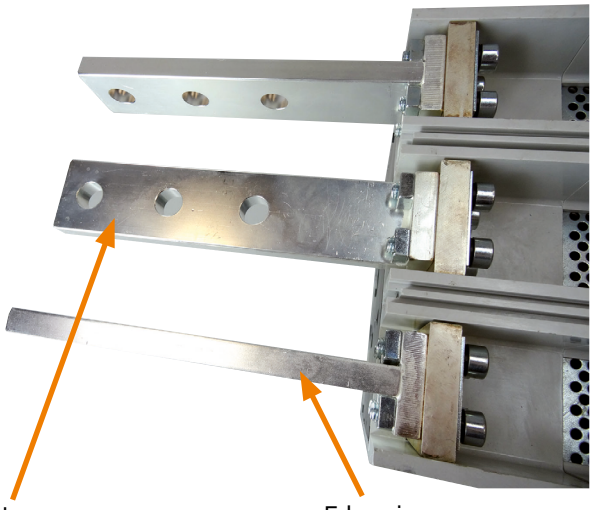
1. Set up a rear terminal with 4 square nuts, the 4 Spring lock washers type Grower and the 4 CHC screws.
2. Tighten the 4 screws to the torque of 15 Nm (6 mm hexagonal key).

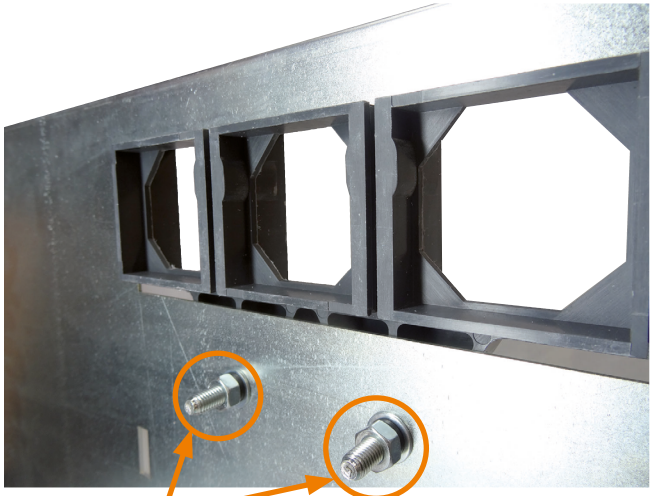


It is possible to position the rear terminals (horizontal) or in vertical position (90°), the fixing holes of the lugs or bars are therefore on the top or on the side.

MECHANICAL ACCESSORIES

Example of the 2 mounting:





Rear part

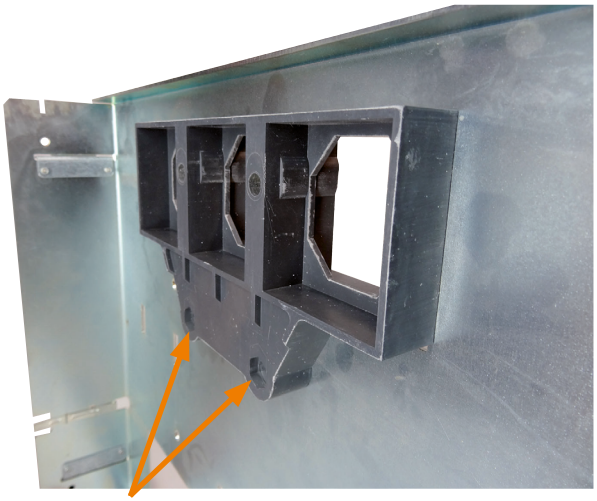
3. Place the guide-stoppers in the places indicated on the DPX³ as well as the insulated shields on the plastic frames.

Guide-stoppers



Repeat these operations for all rear terminals (6 or 8).

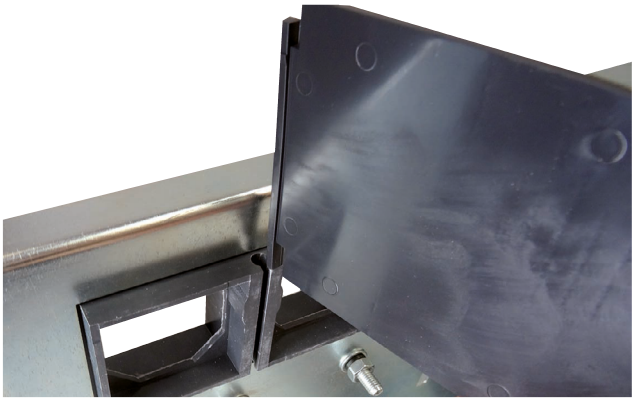
1. Set up the 2 grey plastic fixing frames.
2. Fix them to the plate using the hexagon head screws (M8), flat washers, spring washers and nuts.



Location for inserting screws (front part).



Insulated shields







4. Fix the DPX³ in the inserts of the plastic frame using the screws supplied with the circuit-breaker (or switch).



5. Set up the 2 sealable terminal shields as well as the seal(s) if necessary.

PCS SOFTWARE AND APPLICATION



PRODUCT DESCRIPTION

Protection units can be managed :
- directly on the product using the rotary selector;
- on a PC pre-equipped with the Power Control Station software;
- on a tablet;
- on a smartphone via the EnerUp+ Project application with a Bluetooth dongle Cat.No 0 283 10.

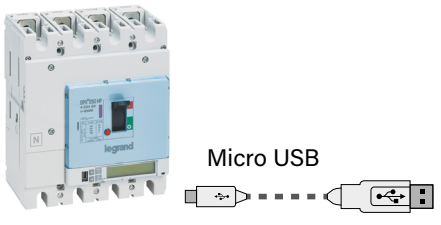
The Power Control Station software for PC or the EnerUp+ Project application for smartphone/tablet can be used to exchange data with the S10 protection unit of the DPX³

The software or application can be used to:

- monitor the status of the circuit-breaker;
- display information such as firmware and device versions, alarms, measurements, parameters, fault history, etc.;
- configure the various protections(1);
- update the firmware of the protection unit(2);
- generate reports based on data stored and read by the protection unit(1);
- perform diagnostic tests;
- upload data related to your profile and installation to the Cloud (only with the EnerUp+ Project application)

Configuration on a laptop

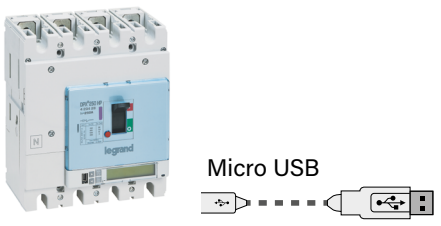
WITH THE POWER CONTROL STATION SOFTWARE.





EXAMPLE OF START-UP MENU

This menu displays the values of I1, I2, I3, IN, and Ig, the type and status of the circuit-breaker, the breaking capacity, the number of poles, the neutral position, the intervention threshold for temperature and overheating.





EXAMPLE OF CONFIGURATION MENU

This menu allows you to set various parameters of the circuit-breaker according to the tripping curves (time/current and earth fault)..

(1) Only with the Power Control Station software (version 5.0 minimum).
(2) Only performed by Legrand technical support via the Power Control Station software.

Management on a smartphone/tablet with the EnerUp+ Project application available on the Apple Store and Google Play.

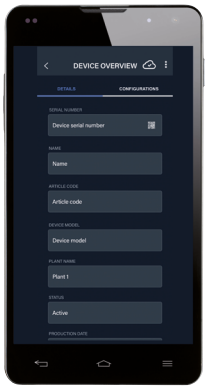






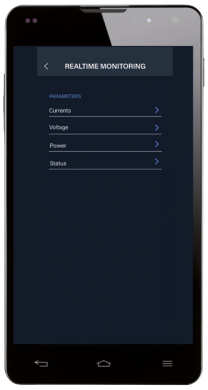
Start-up menu

This menu provides access to various options such as: overview of connected devices, real-time monitoring, device testing, etc.



Device presentation menu

This menu displays essential information related to the circuit-breaker such as: name, serial number, location, status, and parameters of the circuit-breaker.



Real-time monitoring menu

This menu displays the values of current, voltage, power, and the status of the circuit-breaker.

SPECIFIC FUNCTIONS



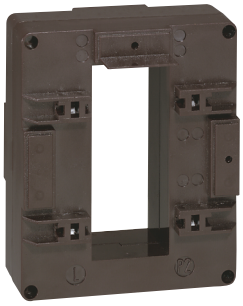
INTEGRATED MEASURE

With the new DPX³ Electronics circuit-breakers with integrated measurement, it is very easy to monitor the parameters of the various circuits of the installation without any external device, without a current transformer or additional voltage tap.
The measured data can also be remotely viewed on a PC equipped with supervision software, via the communication interface Cat.No 0 046 89.
The integrated measurement is available on the DPX³, ensuring that the DPX³ Electronic card is powered by the external power supply Cat.No 4 210 83 or by the MODBUS module Cat.No 4 210 75.
The measured values are displayed directly on the LCD screen on the front of the devices or available on the MODBUS network.
The measurement part of the Electronic card remains independent of the proper functioning of the protection part of the DPX³.
The internal batteries, accessible from the front of the product, allow the consultation and adjustment of the various protection parameters without a network voltage source.
The integrated measurement function is available in the DMX³, DPX³, and DX³ ranges.

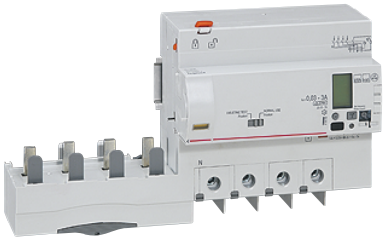












For more information, consult the selection guide on energy management as well as the EMS CX3 technical guide. These two documents can be downloaded from the online catalog at: http://www.legrand.fr/

The integrated measurement function in DPX³ 630/1600 allows the following quantities to be collected in the order displayed::

I1	Current phase 1 - A [1].
I2	Current phase 2 - A [1].
I3	Current phase 3 - A [1].
In	Neutral current (for DPX³ 4P - A [1].
Ig	Earth current for SG - A [1] version.
U12	Compound voltage between phases 1 and 2 for the DPX³ 3P/4P - V.
U23	Compound voltage between phases 2 and 3 for the DPX³ 3P/4P - V.
U31	Compound voltage between phases 3 and 1 for the DPX³ 3P/4P - V.
U1N	Single voltage between neutral and phase 1 for the DPX³ 4P - V.
U2N	Single voltage between neutral and phase 2 for the DPX³ 4P - V.
U3N	Single voltage between neutral and phase 3 for the DPX³ 4P - V.
Freq	Frequency - Hz.
Ptot	Active power - kW.
Qtot	Reactive power - kvar.
PF	Power factor.
Ep ↓	Active energy meter consumed or returned, with a direction of passage from the top terminals to the bottom - kWh terminals
Ep ↑	Active energy meter consumed or returned, with a direction of passage from the bottom terminals to the top - kWh terminals.
Eq ↓	Reactive energy meter consumed or returned, with a direction of passage from the top terminals to the bottom - kvarh terminals.
Eq ↑	Reactive energy meter consumed or returned, with a direction of passage from the bottom terminals to the top - kvarh terminals.
THDU12	Harmonic rate of the compound voltage between phases 1 and 2 for the DPX³ 3P/4P - %.
THDU23	Harmonic rate of the compound voltage between phases 2 and 3 for the DPX³ 3P/4P - %.
THDU31	Harmonic rate of the compound voltage between phases 1 and 3 for the DPX³ 3P/4P - %.
THDU1N	Harmonic rate of the single voltage between neutral and phase 1 for the DPX³ 4P - %.
THDU2N	Harmonic rate of the single voltage between neutral and phase 2 for the DPX³ 4P - %.
THDU3N	Harmonic rate of the single voltage between neutral and phase 3 for the DPX³ 4P - %.
THDI1	Phase 1-% current harmonic rate.
THDI2	Phase 2-% current harmonic rate.
THDI3	Phase 3-% current harmonic rate.

[1] Also accessible on electronic DPX³ without measuring unit.

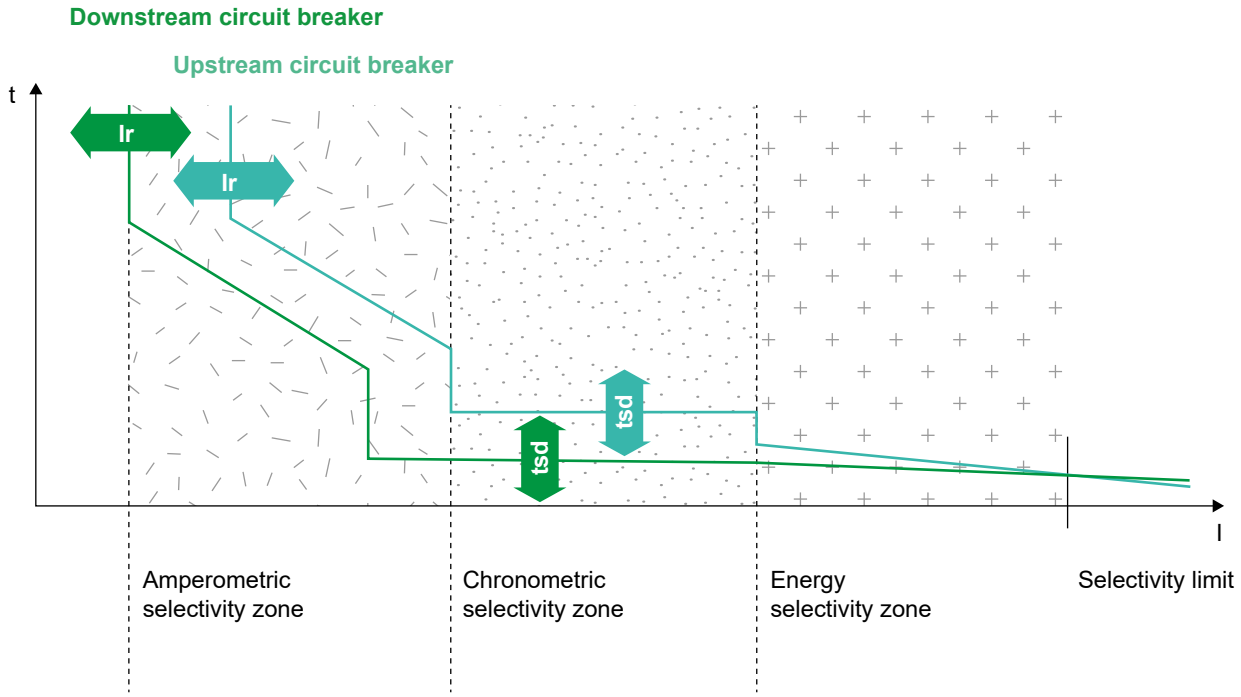
To navigate from one value to another, you have to press « ▶ ». Going back is impossible, you have to take a whole tour.

INTEGRATED MEASURE

Selectivity

Several techniques are used to achieve selectivity:

- current sensing selectivity, used for final circuits with low short-circuit levels;
- time selectivity, ensured by a delay in triggering the upstream circuit-breaker;
- logical selectivity, taking advantage of the possibilities of communication between devices in the energy zone.



AMPERE-METRIC SELECTIVITY

This technique is based on the intensity of the upstream and downstream circuit-breaker tripping curves. It is checked by comparing these curves making sure that they do not overlap. It applies to the overload area and the short circuit area and the further apart the ratings of the devices, the better the selectivity.

On overloads:
To have selectivity in the overload area, the ratio of the adjustment currents (Ir) must be at least equal to 2.

On short-circuits:
For selectivity in the short-circuit area, the ratio of the magnetic adjustment currents (Isd) must be at least equal to 1.5.

The ampere-metric selectivity is well suited for final circuits where short circuit levels are relatively low.

TIME SELECTIVITY

This technique is based on the time lag of series circuit-breaker tripping curves. It is checked by comparison of curves and applies for selectivity in the area of short circuits. It is used in addition to the current sensing selectivity in order to obtain a selectivity beyond the magnetic adjustment current of the upstream circuit-breaker.

Necessary conditions:

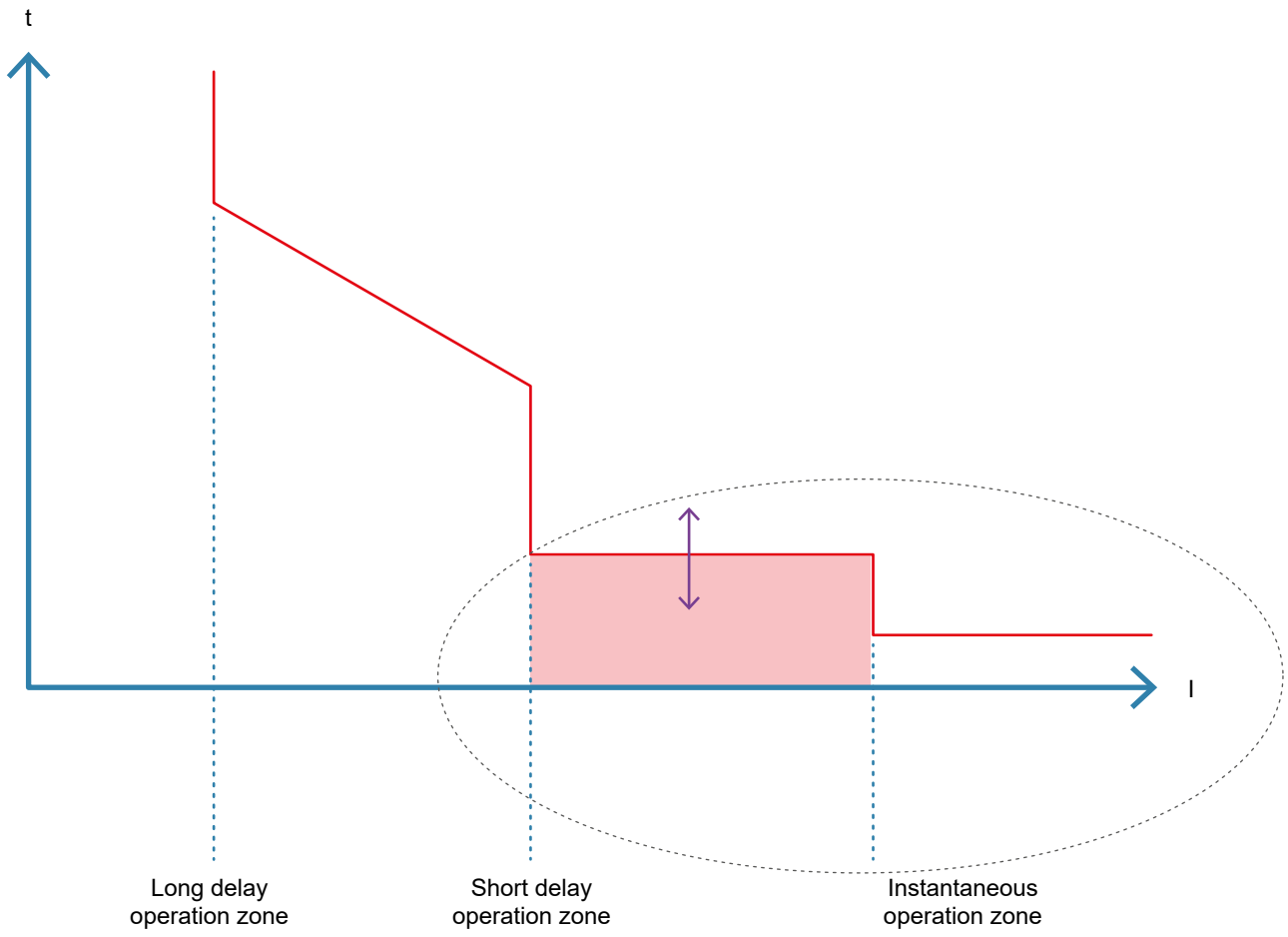
- it must be possible to set a time delay on the circuit-breaker; the upstream circuit-breaker is capable of withstanding the short circuit current and its effects for the duration of the delay;
- the trunking through which travelled by this current passes can withstand the thermal stresses (I2t).

The non-triggering time of the upstream unit shall be longer than the breaking time (including a possible delay) of the downstream device. DPX^3 circuit-breakers have several adjustment positions for their time-out in order to achieve multi-stage selectivity.

LOGICAL SELECTIVITY

Logical selectivity is a "smart" selectivity that is achieved by communicating between the interconnected DPX ³/DMX ³ electronic circuit-breakers through an external wired connection.
The logical selectivity intervenes on the short-delay and instantaneous operating areas of the tripping curve.
It concerns short-circuits of medium and high intensity (energy part).
It does not act on the long delay part of the curve (ampere-metric selectivity) dealing with overloads.

Electronic release



Disjoncteur aval	Downstream circuit breaker
Disjoncteur amont	Upstream circuit breaker
Zone de séléctivité ampèremétrique	Amperometric selectivity zone
Zone de séléctivité chronométrique	Chronometric selectivity zone
Zone de séléctivité énergétique	Energy selectivity zone
Limite de séléctivité	Selectivity limit
Zone de fonctionnement long retard	Long delay operation zone
Zone de fonctionnement court retard	Short delay operation zone
Zone de fonctionnement instantané	Instantaneous operation zone

RESIDUAL CURRENT PROTECTION RELAY FUNCTION CAT.NO 0 260 88

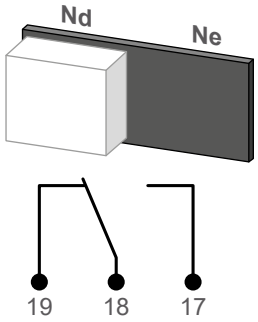
Principle

Residual current relays make it possible to transform DPX³ circuit-breakers and switches into differential, which are not originally foreseen, but must be equipped with a trigger.

Schemes

With the use of a coil with a lack of tension, it is necessary to reset the DPX³.

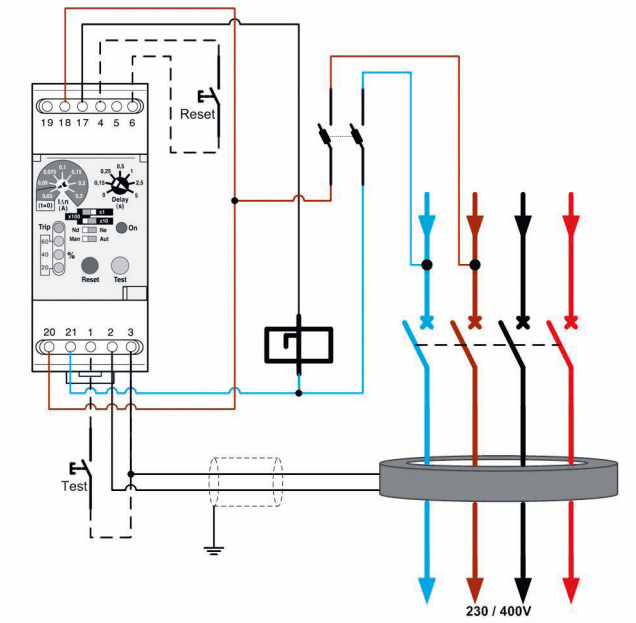
POSITIVE SAFETY POSITION SLIDER IN ND



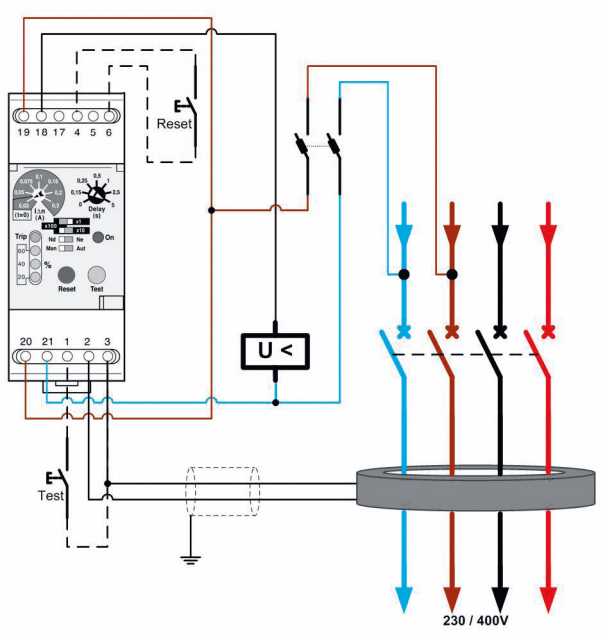
Position of contacts in powered device condition.

⚠ in case of fault of the connection coil-relay, the contact closes between terminals 17 and 18 irrespective of the position programmed on the selector.
n addition, in case of no voltage, the contact closes between 17 and 18 (opening of the associated circuit-breaker).

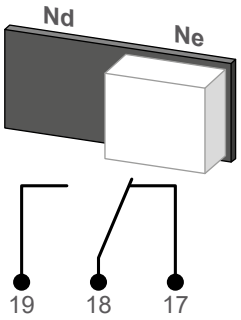
With a shunt release



With an undervoltage coil



STANDARD SAFETY POSITION SLIDER IN NE



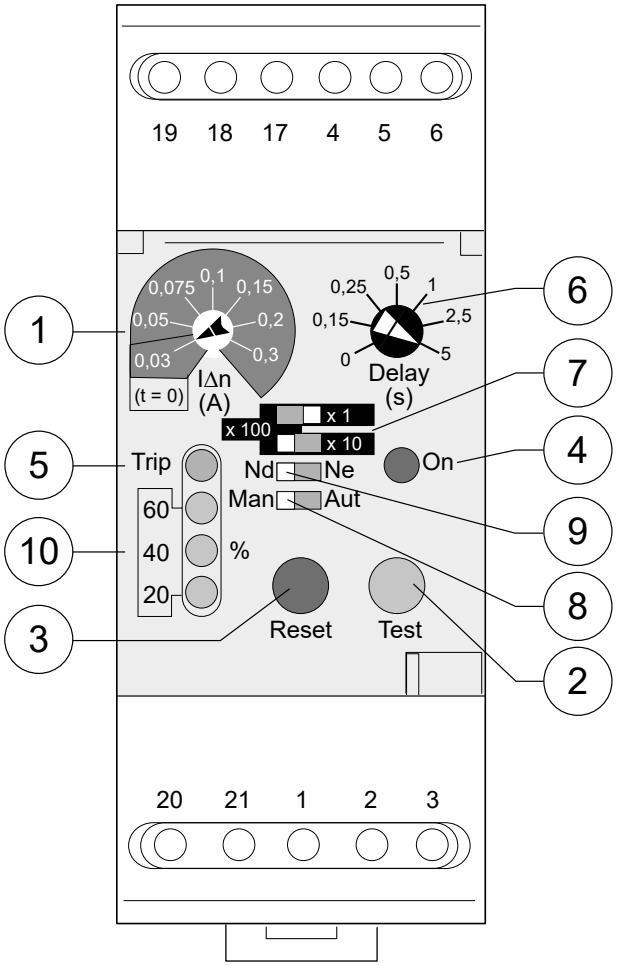
Position of contacts in powered device condition.

⚠ In case of fault of the connection coil-relay, the contact closes between terminals 18 and 19 irrespective of the position programmed on the selector.

All active conductors must pass through the coil for proper operation of the relay, this excludes PE and PEN.

Front face

1. Setting the IΔn.
2. Test button.
3. Reset button.
4. Power indicator light (green).
5. Indicator of the triggering of the residual current relay (red)/interruption relay-torus connection (flashing red)
6. Selection of the multiple of the IΔn calibre.
7. Reset mode selection.
8. Selecting the status of the output relay.
9. Fault current indication in% IΔn.



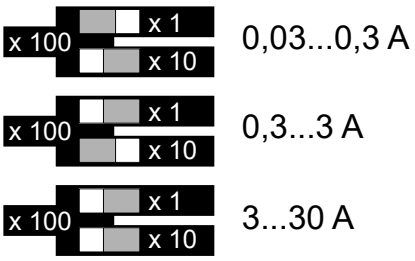
Settings

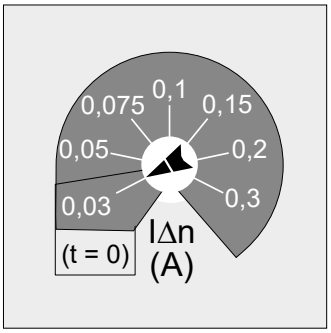
SENSITIVITY SETTING IΔN

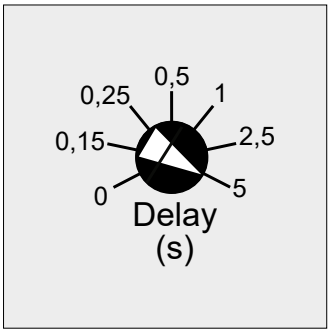
The sensitivity of the residual current relay is obtained by a first combination of switch ⑦ used to determine the multiple of the rotary slider ① refining the setting of the IΔn. Depending on the torus used, the mini sensitivity may vary. If the set value of the IΔn is less than its mini value, it is the latter that will be taken into account.

TIME-LAG

Time-lag allows the trigger of the associated DPX ³ to be delayed if the defect is maintained during this period. With a setting of IΔn at 0.03 A, regardless of the time delay recorded, the trigger will be instantaneous.







The residual current relay must be adjusted according to the need for differential selectivity in time and sensitivity.

RESIDUAL CURRENT PROTECTION RELAY FUNCTION CAT.NO 0 260 88

Coil characteristics

Cat.Nos	0 260 92	0 260 93	0 260 94	0 260 95	0 260 96	0 260 97	0 260 98
Diameter (mm)	35	80	110	140	210	150	310
IΔn - mini (mA)	30	30	100	300	300	500	1000
In (A)	70	170	250	250	400	250	630
I max = (6 × In)	420	1020	1500	1500	2400	1500	3780

CHOICE AND RECOMMENDATION

This depends on the minimum residual current to be detected and the inner diameter of the coil to pass all active conductors.
For a high transient current application, the standard requires on the manufacturer a maximum test threshold at 6 x In (immunization with false homopolar currents according to EN/IEC 60947-2 Annex M).

Example 1:
an installation consisting of ventilation systems with a nominal current of 150A.

According to EN/IEC 60947-2 Annex M, the coil to be selected is Cat.No 0 260 93.

- In = 170 A.
- 6 x In = 1020 A.

For a low transient current application less than 6 x in, this formula can be applied 6 x in (see table above).

- In (nominal current of the unit).

Example 2:
For the coil Cat.No 0 260 93 avec un appareil In = 150 A.

$$\text{Maximum permissible overload coefficient} = \frac{\text{Imax}}{\text{In}} = \frac{1020}{150} = 6{,}8$$

The maximum permissible overload is 6,8 x In.

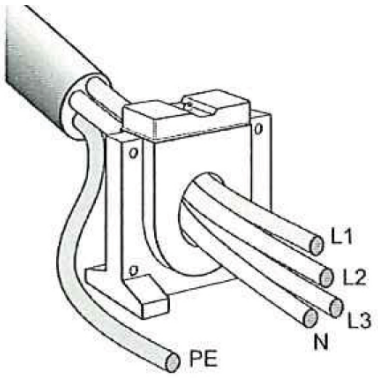
IΔn mini
Minimum threshold to be set on the differential relay depending on the size of the coil to avoid unintentional triggering.

In
Nominal current of the device.

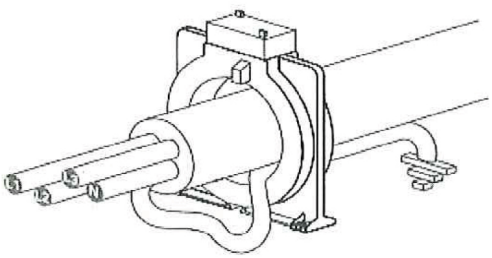
I max
See choice and recommendation.
To ensure proper operation of the residual current relay, please follow the recommendations below:
- Reduce the distance between the coil and the residual current relay to a minimum.
- Use shielded or twisted cables.
- Do not put the connection cables of the coil and the residual current relay in parallel to the power conductors or close to electromagnetic fields (e.g. high voltage transformer).
- To achieve optimum accuracy, conductors must be centered in the coil.

Different implementation options:

Case 1
Flexible or conductive bars must be ensured that the 4 active conductors are inside the coil and centered.



Case 2
With a 5G cable for example, in case the PE passes through the coil, then this conductor must be put back in the opposite direction to regularize the field as the image below.



INTERFACE MODULAIRE ELECTRONIC

Electronic modular interface RS485 (Cat.No 4 210 75)

The interface Cat.No 4 210 75 allows Legrand products such as DPX³ (except DPX³ 630/1600 S1 Electronics) and adaptable residual current protection blocks to be connected to a MODBUS RS485 communication network.
It is fitted with a contact signalling the tripped state of the associated circuit-breaker.



Characteristics

- RS485 communication interface for DPX³ and adaptable residual current protection unit Cat.No 4 210 75.
- Current consumption 90 mA.
- RS485 serial communication port.
- Modbus parameter setting by jumpers.
- Potential-free contact for circuit-breaker tripped status information, max 220 V/0,2 A.

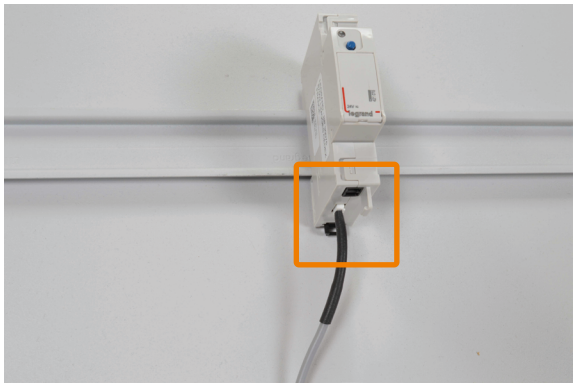
Choice of the product

Communication interface Cat.No 4 210 75 must be used with the DPX³ communicating and the adaptable residual current protection unit.

The connection

CONNECTION BETWEEN THE INTERFACE (CAT. NO 4 210 75) AND THE LEGRAND PRODUCT

- Connection under the communication interface.
- The connection cable is supplied with the interface.



The length of the cable supplied with the interface Cat.No 4 210 75 is 200 cm.

INTERFACE POWER SUPPLY

- Power supply 24 V⎓/∿.
- Use a power supply with double galvanic isolation or equivalent, e.g. Cat.No 1 466 23.
- Connection by connector.



RS485 BUS CONNECTION

- Connecting the interface to the RS485 BUS. The wiring principle for an RS485 BUS and the connection schemes are shown in the instruction sheet.
- Connection by connector.



USE OF A STATUS CONTACT

Information on the tripped state of the circuit-breaker is present on a potential-free contact.

- NF = circuit-breaker tripped.
- Push button function, relay test, press = NF.
- Connected by connector.



The setting

The Cat.No 4 210 75 communication interface is set via jumpers.

- A1/A2/A3 : Modbus adress.
- M : Modbus transmission mode (RTU/ASCII, parity, stop bit).
- B : Transmission speed.
- Jumper 6 : Not used.

Details of the settings are given in the technical data sheet.
Configuration jumpers are available under Cat.Nos :

- Complete kit from 0 to 9 : Cat.No 3501K (10 jumpers each).
- Set of 10 individual jumpers : Cat.No 3501/X (example Cat. No 3501/1 = a set 10 jumpers number 1).





DATA FORWARDING AND MODBUS ADDRESSING

La Cat.No 4 210 75 remains a communication interface that allows the information on Legrand circuit breakers to be retranscribed in Modbus RS485 protocol.

The various register tables are available in the DPX³ and adaptable residual current protection blocks « product sheets ».

INTERFACE CX³ EMS/DPX³

Product sheet

The communication interface CX³ EMS/DPX³ Cat.No 4 238 90 enables the conversion of data from a DPX³ to the CX³ EMS network,in order to integrate DPX³ into an EMS system/ network.



Characteristics

INTERFACE
- CX³ EMS/DPX³ Cat.No 4 238 90.

POWER SUPPLY VOLTAGE
- 12 V⎓ via the power supply module CX³ EMS Cat.No 4 149 45.

MAXIMUM CONSUMPTION
- 27 mA - 0,324 W.

OUTPUT
- Via specific communicating cords (Cat.Nos 4 149 07/08/09) for downstream connection via dedicated connectors (maximum length of a communicating cord that can be obtained with the extension end-piece Cat.No 4 149 10: 3 meters)
- Via specific communicating rails (Cat.Nos 4 149 01/02/03) for rear connection via dedicated connectors.
- Via specific cable (length: 2 metres) Cat.No 9 812 43 to the DPX³ circuit breaker.

EQUIPED WITH 3 LED
- ER = Error.
- TX = Transmission.
- RX = Reception.

MOUNTING
- On DIN rail.

DIMENSIONS
- 1 module.

Choice of products

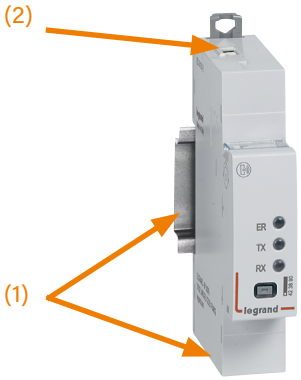
CX³ EMS/DPX³ interface can be used with the electronic circuit-breakers S10 version (DPX³ 250 HP/DPX³ 630/ DPX³ 1600) requiring an EMS connection.

Connection

POWER SUPPLY
- 12 V⎓ by the bus CX³ EMS via communicating cords or communicating rails (1).

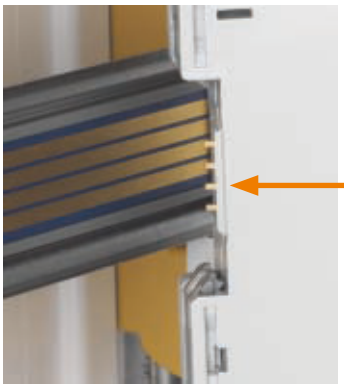
BUS EMS CX³ CONNECTION
- Via communicating cords or communicating rails (1).

DPX³ CIRCUIT-BREAKER CONNECTION
- Via specific cord (2 m) to connect to the top of the interface (2).



BUS CX³ EMS

- 2 solutions are for the connection to the bus:



From the rear of the modules via communicating rails Cat.No 4 149 01/02/03.

Downstream of the modules via communicating cables Cat.Nos 4 149 07/08/09.



The specifications for connection to the CX³ EMS bus are common to all CX³ EMS products and are detailed in the product technical data sheets.

Use of the configuration software is described in detail in the « CX³ EMS Configuration Software » section of the CX³ EMS technical guide available in the online catalogue.

Settings

On the CX³ EMS DPX³ interface, it is not necessary to set the EMS communication parameters.

- Connection characteristics: specific cord (2 m) linking the interface (on the top) to the DPX³.

Adressing

- Addressing is possible locally on the product: from 1 to 9 by thumbwheel.
- On software: addressing from 1 to 247. The thumbwheel remains on 0.



Local setting of the thumbwheel has priority over software setting. In the event of a malfunction, check that it is set to zero.

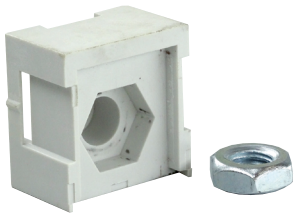
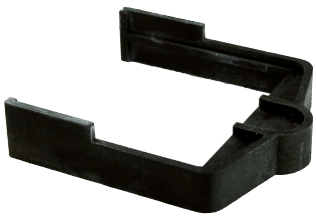
SPARE PARTS & ACCESSORIES



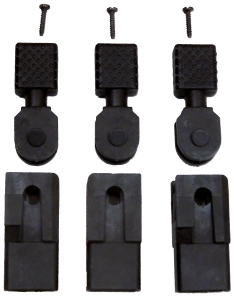
CAT.NOS OF THE PARTS

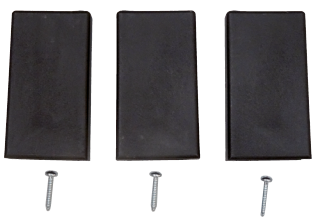
The DPX³ and the accessories of the range have dedicated spare parts.

Products	Cat.Nos	Designations	Content	
DPX³ 630	0 262 30	Insulated shields		x 3
	0 263 50	Threaded rear sockets		Upstream and downstream 3P
	0 263 51	Threaded rear sockets		Upstream and downstream 4P
	9 802 56	Part piece kit for DPX³ 630		3 insulated shields, 8 M8 screws, 8 washers, 4 fixing screws, 4 insulators for screws, 4 nuts, 4 flat washers and 4 Grower lock washers

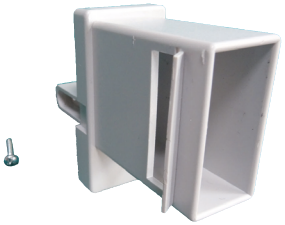
Products	Cat.Nos	Designations	Content	
DPX³ 630 (continued)	9 802 64	Connection terminal for lug or bar		1 plastic insulator and 1 nut
	9 802 68	Crank guide		1 plastic guide and 1 screw
	9 802 69	Spare parts for motor operator		1 connector with 8 wires, 1 plastic protection, 4 metric screws, 2 fixing screws for plastic protection, 1 motor fault lever + 1 axis, and 1 plastic tab
	9 802 97	Fork for switch		x 1
	9 812 40	Spare handles kit		7 black handles for circuit breaker, 3 grey handles for switch and 10 fixing screws

CAT.NOS OF THE PARTS

Products	Cat.Nos	Designations	Content	
DPX³ 630 (continued)	9 812 41	Handle kit for draw-out version		3 black handles + 3 fixing screws
	9 812 42	Front cover for draw-out version		1 handle + 1 cover
	9 803 86	Internal wiring clip		x 12
DPX³ 1600	9 802 71	Plastic cover for 3P rear terminal base		2 covers + 4 screws
	9 802 72	Plastic cover for 4P rear terminal base		2 covers + 6 screws

Products	Cat.Nos	Designations	Content	
DPX³ 1600 (continued)	9 802 57	Parts kit for DPX³ 1600		3 insulated shields, 2 screw covers 4P, 2 screw covers 3P, 8 M8 screws x 60 mm + 8 flat washers + 8 Grower lock washers, 24 M10 screws + 24 Grower lock washers
	9 802 70	Motor operator spare parts		1 connector 8 wires, 1 connector 7 wires, 1 fault motor lever, 1 screw kit, 2 toothed washers, 1 axis and 1 plastic cap
	9 802 98	Fork kit for switch		2 plastic forks, 2 mounting plastic parts, 2 finger lever, 4 metric screws and 4 insert-nuts
	9 812 50	Handle kit		7 black handles for circuit breaker, 3 grey handles for switch and 10 fixing screws
	9 812 51	Handle kit for draw-out version		3 black handles + 3 fixing screws

CAT.NOS OF THE PARTS

Products	Cat.Nos	Designations	Content	
DPX³ 1600 (continued)	9 812 52	Front cover kit for draw-out version		1 handle + 1 cover, 1 guide manivelle + 1 screw, fixing screws kit
	9 802 73	Handle guide		1 plastic guide and 1 screw
	9 803 85	Auxilary contacts cover		1 plastic transparent cover + 1 screw (x 5)
DPX³ 630/1600	0 290 52	Contact terminals		x 1
	4 210 82	Batteries kit		1 drawer for DPX³ 160/250 1 drawer for DPX³ 630/1600 2 batteries CR1616

Products	Cat.Nos	Designations	Content	
DPX³ 630/1600 (continued)	4 210 89	Mini-USB cover		x 20
	4 210 92	Connector for DPX³ auxiliary power supply		x 20
	4 210 95	Sealing kit		x 4
	4 222 37	Retrofit kit DPX 630/DPX³ 630		1 lever, 4 countersunk screws, 4 flat head screws, 1 axis and 4 insert-nuts







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