

SELECTION GUIDE

Industrial Thermoregulation products and accessories for electrical panels

7T Series - Thermo-Hygrostats and Thermostats

7F Series - Filter Fans

7H Series - Panel Heaters

7L Series - LED panel lights

7U Series - Modular power outlets

9D Series - High Current Terminal Blocks



ABOUT US



Finder was founded in Italy in 1954. Since then it has been designing and manufacturing a wide range of electromechanical and electronic components for both the residential and industrial sectors.

Today, thanks to its global vision, Finder now distributes its products around the world through a network of 29 company-owned subsidiaries and more than 80 trade partnerships.

Finder is an international family made up of more than 2000 individuals, all united by the same values and passion for our products.



14,000+ different products to satisfy a myriad of applications. From products at the heart of automation to the control of machines, power, time, temperature, liquid level and light

OUR PRODUCTS CARRY MORE CERTIFICATIONS THAN ANY OTHER RELAY MANUFACTURER



FINDER IS AN ITALIAN BRAND WITH A WORLDWIDE PRESENCE

4 PRODUCTION PLANTS IN EUROPE

29 SUBSIDIARIES

80+ OFFICIAL DISTRIBUTORS



ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG)

Finder considers social and environmental sustainability as fundamental principles of doing business, just as it believes that business growth must develop in synergy with a conscious vision of the future.

That is why Finder is committed to reducing and eliminating CO2 emissions, focusing on circularity, caring for its employees to foster a safe, fair and inclusive work environment, spreading a culture of integrity and transparency, and collaborating with stakeholders who share its values.

AUTONOMY AND INDEPENDENCE

Finder's managerial, financial and technological autonomy allows optimal control over all its business processes, the results of which include simplified customs procedures and a high reliability of commercial relations.



ISO 9001:2015
Quality management system



IECEx
Equipment for Use in Explosive Atmospheres



ISO 14001:2015
Environmental management system



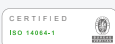
ISO 27001-27701
Information Security and Privacy Management System



ISO 45001:2018
Health and safety management system



ISO 50001:2018
Energy management system



ISO 14064-1:2019
Carbon Footprint verification



AEOF
Simplified customs and enhanced supply chain security



FSC
Forest Stewardship Council



Cribis Prime Company
Recognition of highest reliability of commercial relations



Industrial Thermoregulation products and accessories for electrical panels

7T Series

Thermo-hygrostat and Thermostats 4

Ensuring the performance of components and instrumentation within control panels and enclosures - often enhancing product life.

7F Series

Filter Fans 6

Filter fan range to ventilate and safeguard against high enclosure temperatures.

7H Series

Heaters 10

Preventing the formation of condensation and ensuring the optimum temperature within electrical enclosures. Heating power from 25 W to 400 W.

7L Series

LED panel lights 12

Available in two brightness levels, 600 lumens or 1200 lumens, these 7L Series LED panel lights featuring magnetic mounting are the ideal solution for perfect lighting for machines and electrical panels.

7U Series

Modular power outlets 14

For a secure and approved power outlet for use within electrical enclosures. Two versions available.

9D Series

High Current Terminal Blocks 16

For the combining and distribution of high current power cables within electrical panels and cabinets.

Industrial configurator 17

Simplifies the calculation process for obtaining the optimum temperature within electrical enclosures.



Type 7T.51.0.230.4360

- Thermo-Hygrostatic control
- Small, compact size (17.5 mm wide)
- 1 NO 10 A - 250 V AC
- 4 functions
- Nominal voltage 110...240 V AC/DC
- Temperature ranges from +10° to +60°C
- Humidity range up to 90%
- LED status indication contact ON

Approvals (according to type):



Drying kilns



Industrial refrigeration



Road / tunnel lighting



Industrial furnaces and ovens



Automatic car-washes



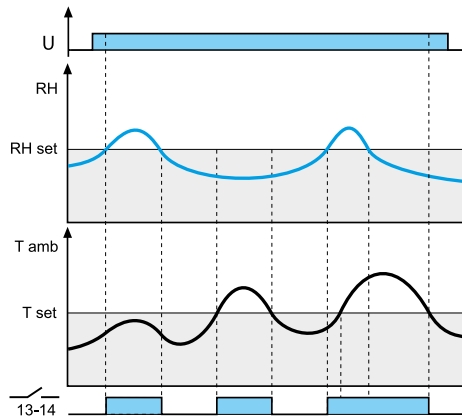
Panels for electrical distribution



Control panels

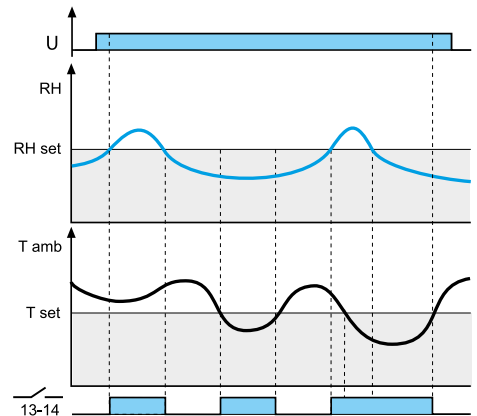


Forced-air ventilators



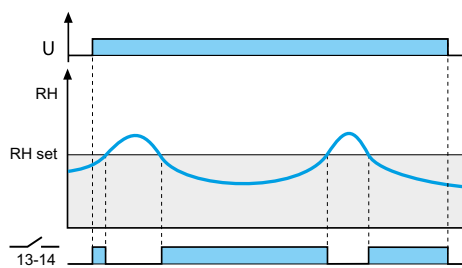
HT: RH > RHset or T amb > Tset

Power is permanently applied to the thermo-hygrostat. The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset) OR if the ambient temperature (T amb) is > of set temperature (Tset). When contact is closed, LED is ON.



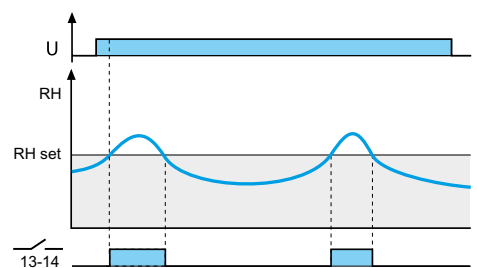
TH: RH > RHset or T amb < Tset

The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset) OR if the ambient temperature (T amb) is < of set temperature (Tset). When contact is closed, LED is ON.



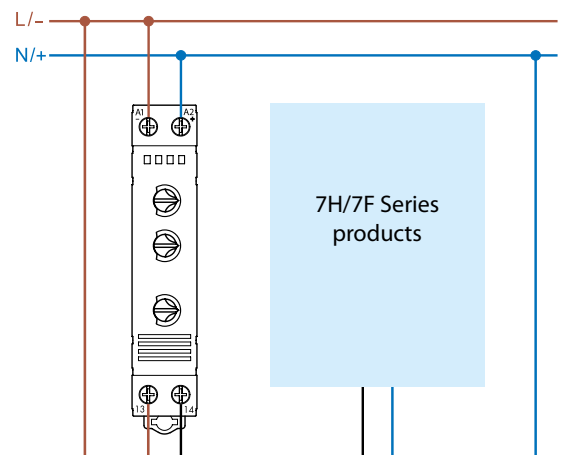
HL: RH < RHset

The contact 13-14 closes if the ambient humidity (RH) is < of set humidity (RHset). When contact is closed, LED is ON.



HM: RH > RHset

The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset). When contact is closed, LED is ON.



Thermostats

- Small, compact size (17.5 mm wide)
- 1 NO - 1 NC 10 A - 250 V AC1
- Snap action thermostatic Bimetal sensor
- Wide temperature setting range
- Long electrical life

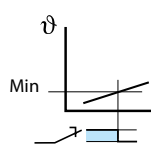
Approvals (according to type):     



Type 7T.81.0.000.240x

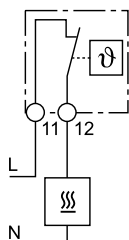


Type 7T.81.0.000.230x



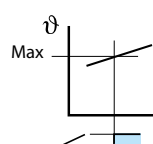
Heating control

Should the panel temperature fall below the (minimum) set temperature the contact will close to call for heat. The contact will open when this set temperature is exceeded.



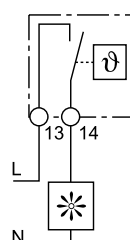
Heating: Red Dial

Temperature ranges: -20° to +40°C
-20° to +60°C
0° to +60°C



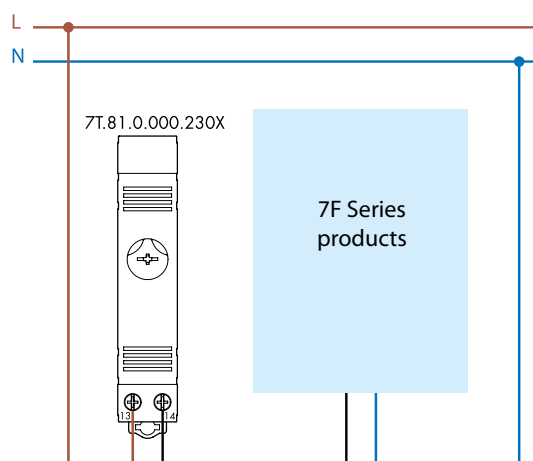
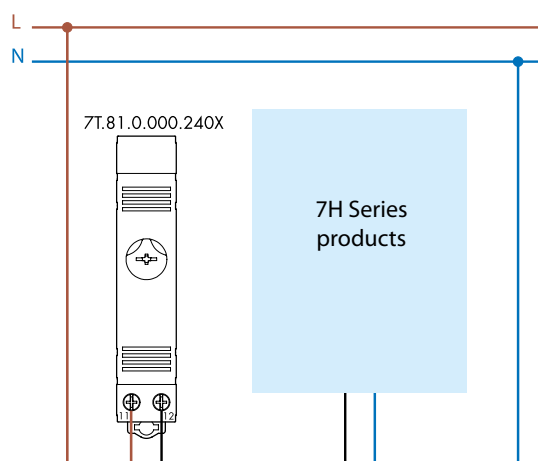
Ventilation control

Should the panel temperature exceed the (maximum) set temperature then the contact will close to call for cooling. The contact will open when the temperature falls below this set temperature.



Ventilation: Blue Dial

Temperature ranges: -20° to +40°C
-20° to +60°C
0° to +60°C



7F Series

Filter Fans

- Operating voltage: 120 V AC, 230 V AC or 24 V DC (according to type)
- Easily replaceable filter mat
- Minimal depth within enclosure
- Air volume (24...700)m³/h
- Time-saving installation and maintenance
- Very low acoustic noise
- Protection category according to EN 60529: IP 54
- Protection category according to EN 62262: IK 08
- UL Type 12 (Type 7F.2x)
- UL Type 3R (Type 7F.3x)
- Reverse air flow versions available (7F.21 and 7F.31)
- Black colour RAL 9004 available (7F.20)
- Dimensions from 120 mm up to 320 mm

Approvals (according to type):      



Drying kilns



Textile machines



Machines for paper processing



Machines for ceramics



Wood-processing machines



Panels for electrical distribution



Control panels



Forced-air ventilators

Exhaust Filters

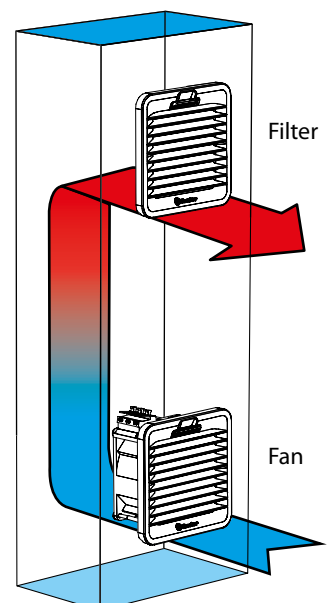
The size of the Exhaust Filter should match the size of the Filter Fan to achieve the best ventilation within the cabinet.

- Minimal depth within enclosure
- Time-saving installation and maintenance
- Easily replaceable filter mat
- Protection category according to EN 60529: IP 54
- Protection category according to EN 62262: IK 08
- UL Type 12 (Type 7F.2x)
- UL Type 3R (Type 7F.3x)
- Black colour RAL 9004 available (7F.02)

Approvals (according to type):      



Mounting arrangement of Filter Fan and Exhaust Filter

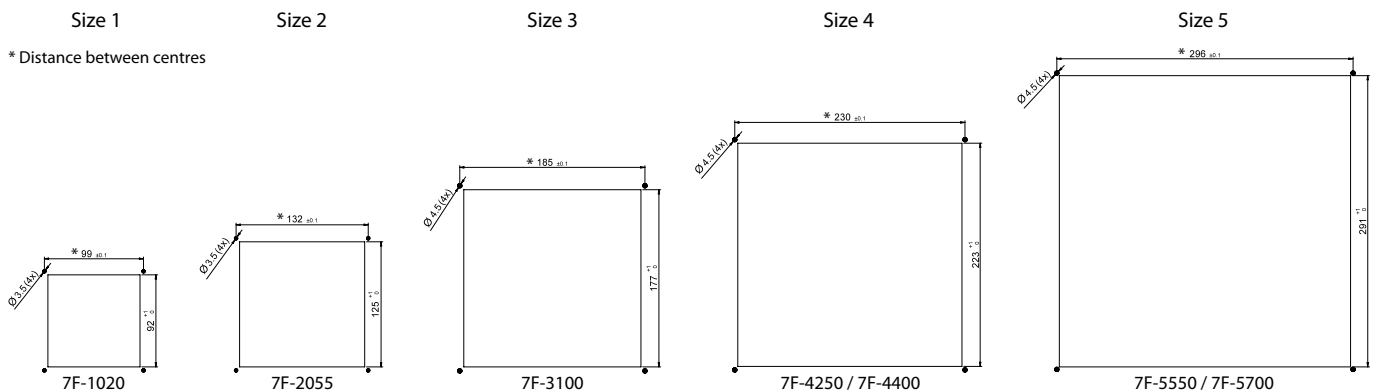


Design by MINELLI | FOSSATI

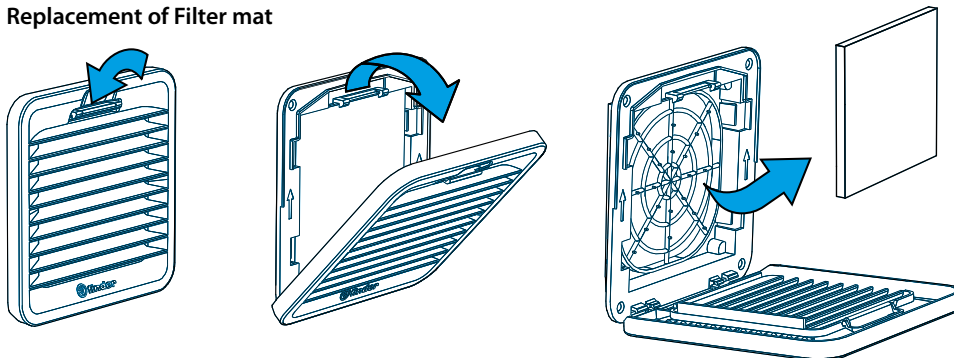
Filter Fans and Exhaust Filters

Standard Filter Fan	Reverse flow versions Filter Fan	Operating voltage (V AC 60 Hz)	Operating voltage (V DC)	Air volume (m³/h) free flow (50/60 Hz)	Air volume (m³/h) exh. filter installed (50/60 Hz)	Rated power (W) (50/60 Hz)	Size	Exhaust Filter	Filter mat
7F.x0.8.120.1020	7F.x1.8.120.1020	120 V AC	—	24/29	14/16.5	27/21	1 (120 x 120 mm)	7F.0x.0.000.1000	07F.15
7F.x0.8.230.1020	7F.x1.8.230.1020	230 V AC	—	24/29	14/16.5	23/18	1 (120 x 120 mm)	7F.0x.0.000.1000	07F.15
7F.x0.9.024.1020	7F.x1.9.024.1020	—	24 V DC	24	14	3.6	1 (120 x 120 mm)	7F.0x.0.000.1000	07F.15
7F.x0.8.120.2055	7F.x1.8.120.2055	120 V AC	—	55/63	40/45.5	30/25	2 (155 x 155 mm)	7F.0x.0.000.2000	07F.25
7F.x0.8.230.2055	7F.x1.8.230.2055	230 V AC	—	55/63	40/45.5	29/25	2 (155 x 155 mm)	7F.0x.0.000.2000	07F.25
7F.x0.9.024.2055	7F.x1.9.024.2055	—	24 V DC	55	40	7	2 (155 x 155 mm)	7F.0x.0.000.2000	07F.25
7F.x0.8.120.3100	7F.x1.8.120.3100	120 V AC	—	100/115	75/85.5	30/25	3 (209 x 209 mm)	7F.0x.0.000.3000	07F.35
7F.x0.8.230.3100	7F.x1.8.230.3100	230 V AC	—	100/115	75/85.5	29/25	3 (209 x 209 mm)	7F.0x.0.000.3000	07F.35
7F.x0.9.024.3100	7F.x1.9.024.3100	—	24 V DC	100	75	7	3 (209 x 209 mm)	7F.0x.0.000.3000	07F.35
7F.x0.8.120.4250	7F.x1.8.120.4250	120 V AC	—	250/295	195/228	42/48	4 (255 x 255 mm)	7F.0x.0.000.4000	07F.45
7F.x0.8.230.4250	7F.x1.8.230.4250	230 V AC	—	250/295	195/228	46/50	4 (255 x 255 mm)	7F.0x.0.000.4000	07F.45
7F.x0.9.024.4250	7F.x1.9.024.4250	—	24 V DC	250	195	43	4 (255 x 255 mm)	7F.0x.0.000.4000	07F.45
7F.x0.8.120.4400	7F.x1.8.120.4400	120 V AC	—	400/445	270/300	72/120	4 (255 x 255 mm)	7F.0x.0.000.4000	07F.46
7F.x0.8.230.4400	7F.x1.8.230.4400	230 V AC	—	400/445	270/300	69/112	4 (255 x 255 mm)	7F.0x.0.000.4000	07F.46
7F.x0.8.120.5550	7F.x1.8.120.5550	120 V AC	—	550/605	400/440	75/102	5 (320 x 320 mm)	7F.0x.0.000.5000	07F.56
7F.x0.8.230.5550	7F.x1.8.230.5550	230 V AC	—	550/605	400/440	76/116	5 (320 x 320 mm)	7F.0x.0.000.5000	07F.56
7F.x0.8.120.5700	7F.x1.8.120.5700	120 V AC	—	660/700	550/600	110/140	5 (320 x 320 mm)	7F.0x.0.000.5000	07F.55
7F.x0.8.230.5700	7F.x1.8.230.5700	230 V AC	—	660/700	550/600	106/120	5 (320 x 320 mm)	7F.0x.0.000.5000	07F.55

Drilling template and mounting cut-outs for Filter Fans and Exhaust Filter



Replacement of Filter mat



7F Series

Filter Fans and Exhaust Filters for indoor use (7F.20)



Drying kilns



Textile machines



Machines for paper processing



Machines for ceramics



Wood-processing machines



Panels for electrical distribution



Control panels



Forced-air ventilators

7F.20.x.xxx.1020
7F.20.x.xxx.2055
7F.20.x.xxx.3100



7F.02.0.000.1000
7F.02.0.000.2000
7F.02.0.000.3000



7F.20.8.xxx.4250



7F.02.0.000.4000



7F.20.8.xxx.4400



7F.02.0.000.4000



7F.20.8.xxx.5550



7F.02.0.000.5000



7F.20.8.xxx.5700



7F.02.0.000.5000



Design by MINELLI | FOSSATI

Filter Fans and Exhaust Filters for outdoor use (7F.30)

7F.30.x.xxx.1020
7F.30.x.xxx.2055
7F.30.x.xxx.3100



7F.03.0.000.1000
7F.03.0.000.2000
7F.03.0.000.3000



7F.30.8.xxx.4250



7F.03.0.000.4000



7F.30.8.xxx.4400



7F.03.0.000.4000



7F.30.8.xxx.5550



7F.03.0.000.5000



7F.30.8.xxx.5700



7F.03.0.000.5000



7H Series

Heaters fan assisted

- Nominal voltage 120 or 230 V AC
- PTC resistor, self regulating heating system
- Fast wiring terminals
- Safe touch
- Clip for 35 mm rail (EN 60715) mount

Approvals (according to type):    



Drying kilns



Hoists and cranes



Road / tunnel lighting



Plastic moulding machines



Automatic car-washes



Panels for electrical distribution



Control panels

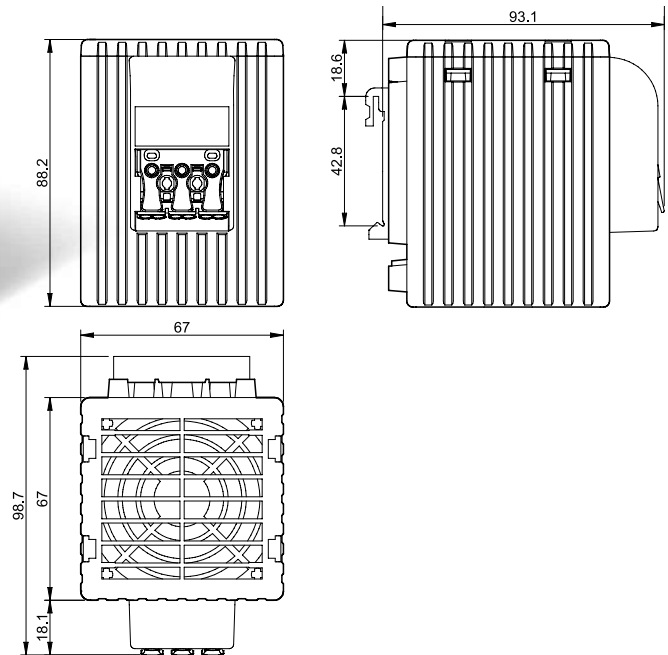


Forced-air ventilators

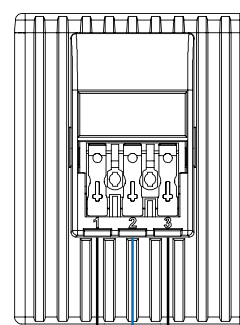
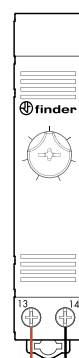


Type 7H.51.8.230.0250
Heater power 250 W

Type 7H.51.8.230.0400
Heater power 400 W



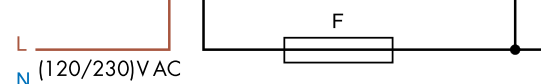
7T.81.0.000.240x



7H.51.8.230.0xx0

1 = L (heater)
2 = N
3 = L (fan)

F = 6.3 A



NOTE

Separate supply (L) terminals for the heater and the internal fan allow them to be powered independently. So, dependent on the specific situation, the installer might wish the heating element to be controlled by an upstream thermostat but require the fan to run continuously (although the latter will significantly reduce the product's life).

Heaters

- Nominal voltage (110...230)V AC/DC
- PTC self regulating heating system
- Screw terminals
- Safe touch
- Clip for 35 mm rail (EN 60715) mount

Approvals (according to type): **CE** **UK** **ER** **UL**[®] **us**



Type 7H.51.0.230.0025
Heater power 25 W



Type 7H.51.0.230.0100
Heater power 100 W
Dimensions (w x h x d): 70 x 138 x 63 mm

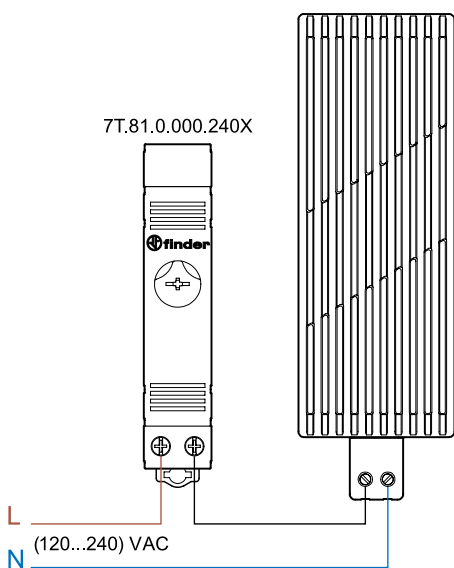


Type 7H.51.0.230.0150
Heater power 150 W
Dimensions (w x h x d): 70 x 218 x 63 mm

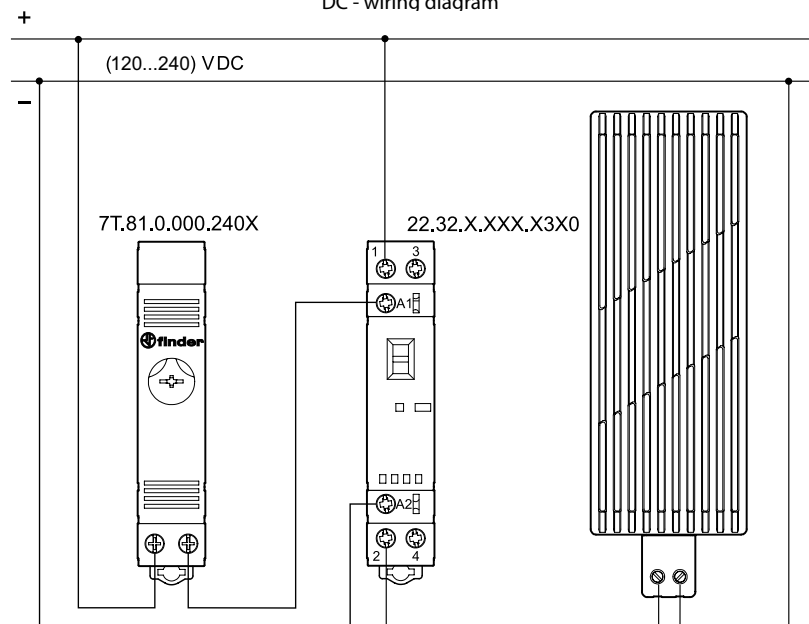
Type 7H.51.0.230.0050
Heater power 50 W

Dimensions (w x h x d): 41 x 125 x 41 mm

AC - wiring diagram



DC - wiring diagram



7L Series

LED panel lights

Type 7L.43.0.xxx.xx00 - Brightness level: 600 lumens

Type 7L.46.0.xxx.xx00 - Brightness level: 1200 lumens

- Direct magnetic mounting or through a screw-fixed metallic support
- Power supply - Multi-voltage: 12...48 V AC/DC and 110...240 V AC/DC
- Low energy consumption
- Nominal power consumption: 6 W (600 lm), 9 W (1200 lm)
- Push-in terminals for the connection to a single unit
- Plug-in terminals for the connection to a single or multiple units

Approvals (according to type):     



Panels for
electrical
distribution



Control
panels



Radiation angle: 120°



Colour temperature: 5000 K



Multi-voltage



Protection category: IP20



Push-in terminals for the
connection to a single unit



Plug-in terminals for the
connection to a single or
multiple units (up to 7 lamps)

Design by MINELLI | FOSSATI

LED panel lights

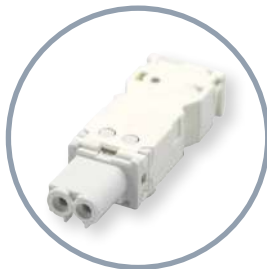
Code Lamps	Lumen	Code Lamps	Lumen	Supply voltage	Switching	Connections
7L.43.0.024.0100	600	7L.46.0.024.0100	1200	024 = (12...48)V AC/DC	Direct switching	Push-in terminals
7L.43.0.024.0200	600	7L.46.0.024.0200	1200	024 = (12...48)V AC/DC	Direct switching	Plug-in terminals
7L.43.0.230.0100	600	7L.46.0.230.0100	1200	230 = (110...240)V AC/DC	Direct switching	Push-in terminals
7L.43.0.230.0200	600	7L.46.0.230.0200	1200	230 = (110...240)V AC/DC	Direct switching	Plug-in terminals
7L.43.0.024.1100	600	7L.46.0.024.1100	1200	024 = (12...48)V AC/DC	Via ON/OFF switch	Push-in terminals
7L.43.0.024.1200	600	7L.46.0.024.1200	1200	024 = (12...48)V AC/DC	Via ON/OFF switch	Plug-in terminals
7L.43.0.024.2100	600	7L.46.0.024.2100	1200	024 = (12...48)V AC/DC	Via movement detector	Push-in terminals
7L.43.0.024.2200	600	7L.46.0.024.2200	1200	024 = (12...48)V AC/DC	Via movement detector	Plug-in terminals
7L.43.0.230.1100	600	7L.46.0.230.1100	1200	230 = (110...240)V AC/DC	Via ON/OFF switch	Push-in terminals
7L.43.0.230.1200	600	7L.46.0.230.1200	1200	230 = (110...240)V AC/DC	Via ON/OFF switch	Plug-in terminals
7L.43.0.230.2100	600	7L.46.0.230.2100	1200	230 = (110...240)V AC/DC	Via movement detector	Push-in terminals
7L.43.0.230.2200	600	7L.46.0.230.2200	1200	230 = (110...240)V AC/DC	Via movement detector	Plug-in terminals

①

Direct switching



Magnetic fixing direct
to metallic panel



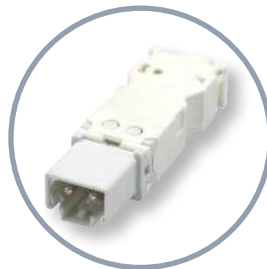
Type 07L.11
Socket for connection to a 2-core cable
(2 x 1.5 mm²), e.g. H05VV-F, 2 x 1.5 mm²
Loose item - for the input side
(included in the package)

②

Switching via
motion detector



Magnetic fixing via
screw-fixed metallic support



Type 07L.12
Plugs for connection to a 2-core cable
(2 x 1.5 mm²), e.g. H05VV-F, 2 x 1.5 mm²
Loose item - for the output side
(not included)

③

Switching via ON/OFF
soft latch switch



Rotational adjustment
30 °



7U Series

Modular power outlets

- Nominal voltage: 250 V AC
- Voltage indication LED version available
- 45 mm wide
- Panel or rail 35 mm (EN 60715) mounting

Approvals (according to type):



(pending)



Panels for
electrical
distribution



Control
panels

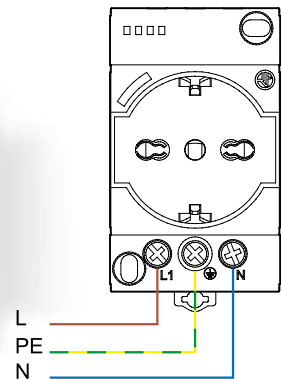
Schuko + Italian Bipasso - Type F and Type L 10/16 A



Type 7U.00.8.230.00x0
Grey RAL 7035



Type 7U.00.8.230.00x2
Yellow RAL 1021



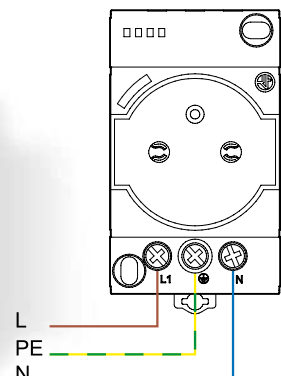
French standard - Type E 16 A



Type 7U.01.8.230.00x0
Grey RAL 7035



Type 7U.01.8.230.00x2
Yellow RAL 1021



Electric shock hazard

Safety notes

Any equipment within an electrical system that remains live after turning off at the main switch, must be marked in compliance with standards DIN VDE 0105-1 and IEC 204-1 / EN 60204-1 / DIN VDE 0113 Part 1, as well as the VBG 4 accident prevention regulations. For these applications use the yellow power outlet.

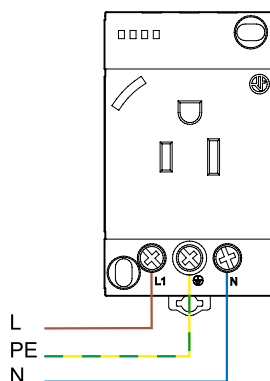
Modular power outlets

- Nominal voltage: 125 V AC
- Voltage indication LED version available
- 45 mm wide
- Panel or rail 35 mm (EN 60715) mounting

Approvals (according to type):



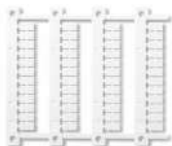
North America - Type B system 15 A



Type 7U.02.8.120.00x0
Grey RAL 7035

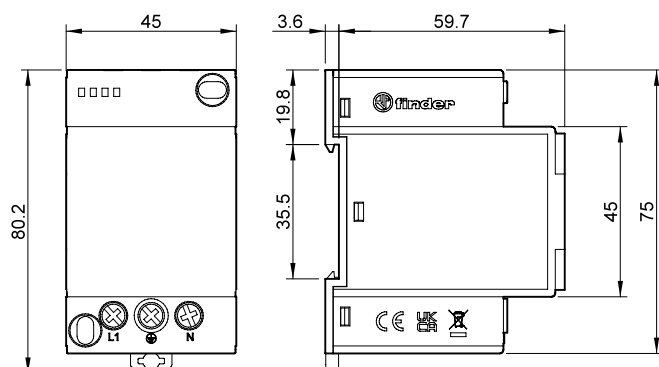


Screw terminals
for types 7U.00, 7U.01, 7U.02



Accessories - Type 060.48

Sheet of 48 marker tags, (CEMBRE Thermal transfer printers)
6 x 12 mm, for types 7U.00, 7U.01, 7U.02



9D Series

3 configurations available in a single product:

- Single, pole splitter:
Split of main power input into 4, 6, 10 or 11 outputs
- Multiple, pole splitters:
Splitting with increased number of outputs
- Grouping: Combining several inputs to make a single output (eg. solar applications)

High Current Terminal Blocks

- Nominal current: 80, 125, 160, 250 or 400 A
- Available with 7, 8 or 12 connections (according to type)
- Daisy chain blocks for further expansion of output terminals
- Cable connection capacity up to 185 mm² cross section
- Screw terminals
- 35 mm rail (EN 60715) mount

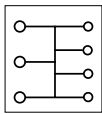
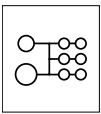
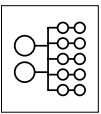
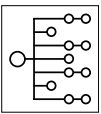
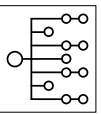
Approvals (according to type):



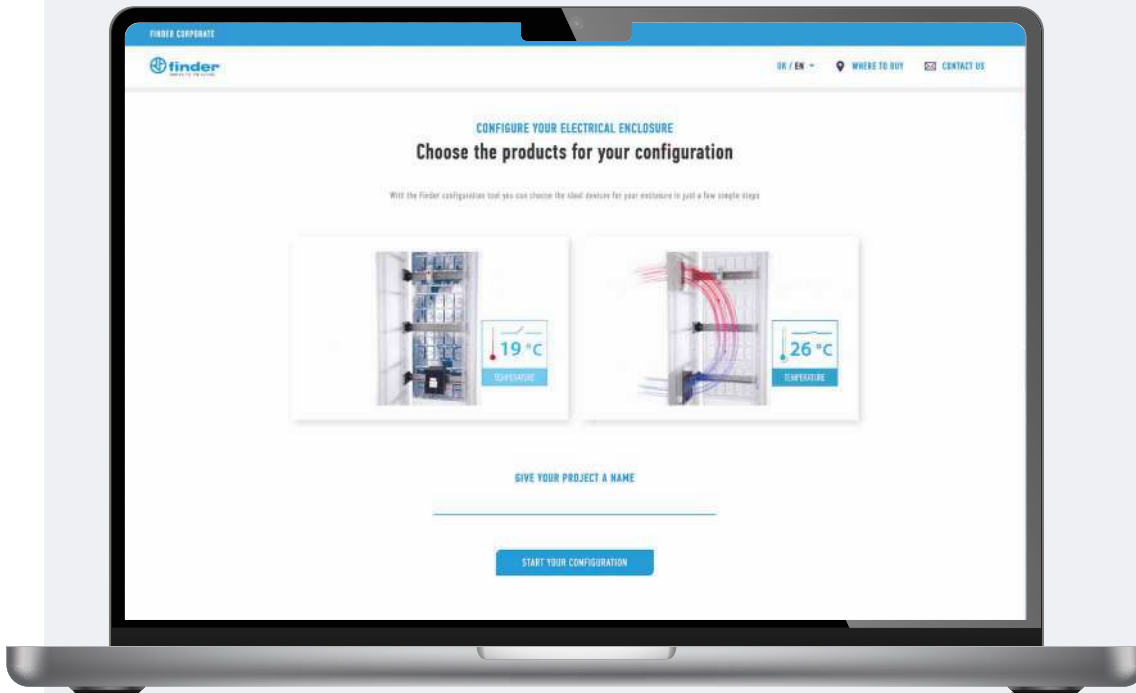
Panels for electrical distribution



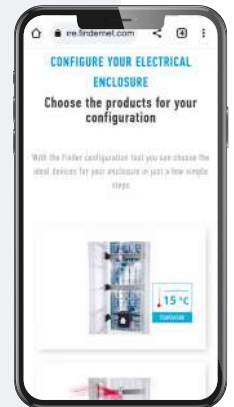
Control panels

	9D.01.5.080.0304	9D.01.5.125.0206	9D.01.5.175.0210	9D.01.5.250.0111	9D.01.5.400.0111
					
	80 A 7 connections	125 A 8 connections	175 A 12 connections	250 A 12 connections	400 A 12 connections
					
INPUT WIRE SPECIFICATION (Solid/Stranded)					
Number of input	3	1	2	1	1
Terminal diameter	Ømm	6.6	9.8	11.8	15.3
Min. wire size	mm ²	2.5	10	10	35
	AWG	14	8	6	2
Max. wire size	mm ²	16	35	70	120
	AWG	6	2	2/0	250 Kcmil
Wire input stripping length	mm	15	15	15	28
Tool	Posidriv - flat screwdriver	Allen Key	Allen Key	Allen Key	Allen Key
Tool dimension	mm	5.5/PZ2	4	5	6
Torque	Nm	1.5...2	3.5...5	6...10	19...21
OUTPUT WIRE SPECIFICATION (Solid/Stranded)					
Number of output	4	1	6	10	2
Terminal diameter	Ømm	4.5	6.8	6.4	6.4
Min. wire size	mm ²	2.5	6	2.5	2.5
	AWG	14	10	14	14
Max. wire size	mm ²	6	16	16	35
	AWG	10	6	6	2
Wire input stripping length	mm	11	11	11	11
Tool	Posidriv - flat screwdriver	Allen Key	Posidriv-flat screwdriver	Posidriv - flat screwdriver	Allen Key
Tool dimension	mm	4/PZ1	3	5.5/PZ2	4
Torque	Nm	0.8...12	2...3	2...3	3.5...5

Industrial configurator



<https://configuratore.findernet.com/en/>



Configure your electrical enclosure Choose the products for your configuration

For the **optimal performance** of an electrical panel it is necessary, at the design stage, to consider all those components that will influence the need to heat or cool the enclosure. Maintaining an ideal temperature and good air quality is important for the safety and optimal performance of the installed devices and the overall reliability of the system.

Finder have been supporting industry professionals for over 65 years in the installation of electronic and electromechanical devices, having developed a wide range of **thermostats, thermo-hygrostats, fans and panel heaters** - devices you can rely on to ensure the optimal climate is maintained within the electrical switchboard and with the confidence that comes with their numerous national and international approvals and certification.

Using the new Finder configurator for industrial thermoregulation greatly **simplifies the calculation process**, providing data and characteristics of the required products in a intuitive, downloadable and shareable report.

Once the configuration is complete, it is possible to request a quote as well as draw on the expertise of Finder technicians in the application and incorporation of other devices, such as **timers, modular contactors, industrial relays** and much more.



FINDER S.p.A. sole proprietorship
Via Drubiaglio, 14 - 10040 ALMESE (TO) ITALY
tel +39 011 9346211 - export@findernet.com

findernet.com

