NEW

Pluggable interface relays CR-P, CR-M and CR-U range

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Pluggable interface relays
CR-P, CR-M and CR-U range
Benefits and advantages, approvals / marks

2CDC 293 034 F0004

2CDC 293 035 F0004

2CDC 293 036 F0004

Pluggable pcb relays CR-P

- 9 different coil voltages
  DC versions:
  12 V, 24 V, 48 V, 110 V
  AC versions:
  24 V, 48 V, 110 V, 120 V, 230 V
- Output contacts:
  1 c/o (16 A) or
  2 c/o (8 A)
- Logical or standard sockets
- Cadmium-free contact material
- Width on socket: 15,5 mm
- Pluggable function modules:
  reverse polarity protection, LED indication, RC element, overvoltage protection

Pluggable miniature relays CR-M

- 11 different coil voltages:
  DC versions:
  12 V, 24 V, 48 V, 60 V, 110 V, 220 V
  AC versions:
  24 V, 48 V, 110 V, 120 V, 230 V
- Output contacts:
  2 c/o (12 A) or
  3 c/o (10 A) or
  4 c/o (6 A)
- Integrated test button for manual actuation and locking of the output contacts (blue = DC, orange = AC)
- With or without integrated LED
- 4-c/o contact version optionally equipped with gold contacts and LED
- Logical or standard sockets
- Cadmium-free contact material
- Width on socket: 27 mm
- Pluggable function modules:
  reverse polarity protection, LED indication, RC element, overvoltage protection

Pluggable universal relays CR-U

- 10 different coil voltages:
  DC versions:
  12 V, 24 V, 48 V, 110 V, 220 V
  AC versions:
  24 V, 48 V, 110 V, 120 V, 230 V
- Output contacts:
  2 c/o (10 A) or
  3 c/o (10 A)
- Integrated test button for manual actuation and locking of the output contacts (blue = DC, orange = AC)
- With or without integrated LED
- Cadmium-free contact material
- Width on socket: 38 mm
- Pluggable function modules:
  reverse polarity protection, LED indication, RC element, overvoltage protection

6

■ all devices
▪ some devices

Approvals	CR-P	CR-M	CR-U	CR-P Sockets	CR-M Sockets	CR-U Sockets	CR-P/M Modules	CR-U Modules
UL / c UL us	■/-	■/-	■/-	■/■	■/■	■/■	-/■	-/■
CSA	■	■	■	■	■	■		
DNV	■	■	■					
GOST	■	■	■	■	■	■	■	■
Lloyd's Register		▪	■					
Marks								
CE	■	■	■	■	■	■	■	■

Pluggable interface relays CR-P
Pcb relays
Ordering details

2CDC 293 034 F0004

CR-P

① interface relay
② Pluggable function module
③ Socket
④ Holder
⑤ Marker

2CDC 291 045 F0004

CR-P

2CDC 291 039 F0004

CR-PLS

2CDC 291 040 F0004

CR-PSS

2CDC 291 003 F0005

CR-PLC

2CDC 292 049 F0004

CR-PH

Type	Supply voltage	Order code	Pack. unit pieces	Price 1 piece
1 c/o contact: 250 V, 16 A				
CR-P012DC1	12 V DC	1SVR 405 600 R4000	10	
CR-P024DC1	**24 V DC**	**1SVR 405 600 R1000**	**10**	
CR-P048DC1	48 V DC	1SVR 405 600 R6000	10	
CR-P110DC1	110 V DC	1SVR 405 600 R8000	10	
CR-P024AC1	**24 V AC**	**1SVR 405 600 R0000**	**10**	
CR-P048AC1	48 V AC	1SVR 405 600 R5000	10	
CR-P110AC1	**110 V AC**	**1SVR 405 600 R7000**	**10**	
CR-P120AC1	120 V AC	1SVR 405 600 R2000	10	
CR-P230AC1	**230 V AC**	**1SVR 405 600 R3000**	**10**	
2 c/o contacts: 250 V, 8 A				
CR-P012DC2	12 V DC	1SVR 405 601 R4000	10	
CR-P024DC2	**24 V DC**	**1SVR 405 601 R1000**	**10**	
CR-P048DC2	48 V DC	1SVR 405 601 R6000	10	
CR-P110DC2	110 V DC	1SVR 405 601 R8000	10	
CR-P024AC2	**24 V AC**	**1SVR 405 601 R0000**	**10**	
CR-P048AC2	48 V AC	1SVR 405 601 R5000	10	
CR-P110AC2	**110 V AC**	**1SVR 405 601 R7000**	**10**	
CR-P120AC2	120 V AC	1SVR 405 601 R2000	10	
CR-P230AC2	**230 V AC**	**1SVR 405 601 R3000**	**10**	

Accessories - Sockets

Type	Version	Connection terminals	Order code	Pack. unit pieces	Price 1 piece
Sockets					
CR-PLS	**Logical socket** with safety isolation	screw	**1SVR 405 650 R0000**	**10**	
CR-PLSx	**Logical socket**		**1SVR 405 650 R0100**	**10**	
CR-PSS	**Standard socket**	screw	**1SVR 405 650 R1000**	**10**	
CR-PLC	**Logical socket**	spring connection	**1SVR 405 650 R0200**	**10**	
Socket accessories					
CR-PH	**Plastic Holder**		**1SVR 405 659 R0000**	**10**	

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Pluggable interface relays CR-M
Miniature relays
Ordering details

2CDC 293 035 F0004

CR-M

① Interface relay
② Pluggable function module
③ Socket
④ Holder
⑤ Marker

2CDC 291 046 F0004

CR-M

Type	Supply voltage	Order code	Pack. unit pieces	Price 1 piece
Interface relays without LED				
2 c/o contacts: 250 V, 12 A				
CR-M012DC2	12 V DC	1SVR 405 611 R4000	10	
CR-M024DC2	**24 V DC**	**1SVR 405 611 R1000**	**10**	
CR-M048DC2	48 V DC	1SVR 405 611 R6000	10	
CR-M060DC2	60 V DC	1SVR 405 611 R4200	10	
CR-M110DC2	110 V DC	1SVR 405 611 R8000	10	
CR-M220DC2	220 V DC	1SVR 405 611 R9000	10	
CR-M024AC2	**24 V AC**	**1SVR 405 611 R0000**	**10**	
CR-M048AC2	48 V AC	1SVR 405 611 R5000	10	
CR-M110AC2	**110 V AC**	**1SVR 405 611 R7000**	**10**	
CR-M120AC2	120 V AC	1SVR 405 611 R2000	10	
CR-M230AC2	**230 V AC**	**1SVR 405 611 R3000**	**10**	
3 c/o contacts: 250 V, 10 A				
CR-M012DC3	12 V DC	1SVR 405 612 R4000	10	
CR-M024DC3	**24 V DC**	**1SVR 405 612 R1000**	**10**	
CR-M048DC3	48 V DC	1SVR 405 612 R6000	10	
CR-M060DC3	60 V DC	1SVR 405 612 R4200	10	
CR-M110DC3	110 V DC	1SVR 405 612 R8000	10	
CR-M220DC3	220 V DC	1SVR 405 612 R9000	10	
CR-M024AC3	**24 V AC**	**1SVR 405 612 R0000**	**10**	
CR-M048AC3	48 V AC	1SVR 405 612 R5000	10	
CR-M110AC3	**110 V AC**	**1SVR 405 612 R7000**	**10**	
CR-M120AC3	120 V AC	1SVR 405 612 R2000	10	
CR-M230AC3	**230 V AC**	**1SVR 405 612 R3000**	**10**	
4 c/o contacts: 250 V, 6 A				
CR-M012DC4	12 V DC	1SVR 405 613 R4000	10	
CR-M024DC4	**24 V DC**	**1SVR 405 613 R1000**	**10**	
CR-M048DC4	48 V DC	1SVR 405 613 R6000	10	
CR-M060DC4	60 V DC	1SVR 405 613 R4200	10	
CR-M110DC4	110 V DC	1SVR 405 613 R8000	10	
CR-M220DC4	220 V DC	1SVR 405 613 R9000	10	
CR-M024AC4	**24 V AC**	**1SVR 405 613 R0000**	**10**	
CR-M048AC4	48 V AC	1SVR 405 613 R5000	10	
CR-M110AC4	**110 V AC**	**1SVR 405 613 R7000**	**10**	
CR-M120AC4	120 V AC	1SVR 405 613 R2000	10	
CR-M230AC4	**230 V AC**	**1SVR 405 613 R3000**	**10**	
Interface relays with LED				
2 c/o contacts: 250 V, 12 A				
CR-M012DC2L	12 V DC	1SVR 405 611 R4100	10	
CR-M024DC2L	**24 V DC**	**1SVR 405 611 R1100**	**10**	
CR-M048DC2L	48 V DC	1SVR 405 611 R6100	10	
CR-M060DC2L	60 V DC	1SVR 405 611 R4300	10	
CR-M110DC2L	110 V DC	1SVR 405 611 R8100	10	
CR-M220DC2L	220 V DC	1SVR 405 611 R9100	10	
CR-M024AC2L	**24 V AC**	**1SVR 405 611 R0100**	**10**	
CR-M048AC2L	48 V AC	1SVR 405 611 R5100	10	
CR-M110AC2L	**110 V AC**	**1SVR 405 611 R7100**	**10**	
CR-M120AC2L	120 V AC	1SVR 405 611 R2100	10	
CR-M230AC2L	**230 V AC**	**1SVR 405 611 R3100**	**10**	

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Pluggable interface relays CR-M
Miniature relays
Ordering details (continued)

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CR-M

2CDC 291 041 F0004

CR-M4SS

2CDC 291 042 F0004

CR-M4LS

2CDC 291 004 F0005

CR-M4LC

2CDC 292 072 F0004

CR-MH

Type	Supply voltage	Order code	Pack. unit pieces	Price 1 piece
Interface relays with LED				
3 c/o: 250 V, 10 A				
CR-M012DC3L	12 V DC	1SVR 405 612 R4100	10	
CR-M024DC3L	**24 V DC**	**1SVR 405 612 R1100**	**10**	
CR-M048DC3L	48 V DC	1SVR 405 612 R6100	10	
CR-M060DC3L	60 V DC	1SVR 405 612 R4300	10	
CR-M110DC3L	110 V DC	1SVR 405 612 R8100	10	
CR-M220DC3L	220 V DC	1SVR 405 612 R9100	10	
CR-M024AC3L	**24 V AC**	**1SVR 405 612 R0100**	**10**	
CR-M048AC3L	48 V AC	1SVR 405 612 R5100	10	
CR-M110AC3L	**110 V AC**	**1SVR 405 612 R7100**	**10**	
CR-M120AC3L	120 V AC	1SVR 405 612 R2100	10	
CR-M230AC3L	**230 V AC**	**1SVR 405 612 R3100**	**10**	
4 c/o: 250 V, 6 A				
CR-M012DC4L	12 V DC	1SVR 405 613 R4100	10	
CR-M024DC4L	**24 V DC**	**1SVR 405 613 R1100**	**10**	
CR-M048DC4L	48 V DC	1SVR 405 613 R6100	10	
CR-M060DC4L	60 V DC	1SVR 405 613 R4300	10	
CR-M110DC4L	110 V DC	1SVR 405 613 R8100	10	
CR-M220DC4L	220 V DC	1SVR 405 613 R9100	10	
CR-M024AC4L	**24 V AC**	**1SVR 405 613 R0100**	**10**	
CR-M048AC4L	48 V AC	1SVR 405 613 R5100	10	
CR-M110AC4L	**110 V AC**	**1SVR 405 613 R7100**	**10**	
CR-M120AC4L	120 V AC	1SVR 405 613 R2100	10	
CR-M230AC4L	**230 V AC**	**1SVR 405 613 R3100**	**10**	
Interface relays with LED and gold contacts				
4 c/o: 250 V, 6 A				
CR-M012DC4LG	12 V DC	1SVR 405 618 R4100	10	
CR-M024DC4LG	**24 V DC**	**1SVR 405 618 R1100**	**10**	
CR-M048DC4LG	48 V DC	1SVR 405 618 R6100	10	
CR-M060DC4LG	60 V DC	1SVR 405 618 R4300	10	
CR-M110DC4LG	110 V DC	1SVR 405 618 R8100	10	
CR-M220DC4LG	220 V DC	1SVR 405 618 R9100	10	
CR-M024AC4LG	**24 V AC**	**1SVR 405 618 R0100**	**10**	
CR-M048AC4LG	48 V AC	1SVR 405 618 R5100	10	
CR-M110AC4LG	**110 V AC**	**1SVR 405 618 R7100**	**10**	
CR-M120AC4LG	120 V AC	1SVR 405 618 R2100	10	
CR-M230AC4LG	**230 V AC**	**1SVR 405 618 R3100**	**10**	

Accessories - Sockets

Type	Version	Connection terminals	Order code	Pack. unit pieces	Price 1 piece
Sockets					
CR-M2LS	**Logical socket for 2 c/o**	screw	**1SVR 405 651 R1100**	**10**	
CR-M3LS	**Logical socket for 3 c/o**	screw	**1SVR 405 651 R2100**	**10**	
CR-M4LS	**Logical socket for 4 c/o**	screw	**1SVR 405 651 R3100**	**10**	
CR-M2SS	**Standard socket for 2 c/o**	screw	**1SVR 405 651 R1000**	**10**	
CR-M3SS	**Standard socket for 3 c/o**	screw	**1SVR 405 651 R2000**	**10**	
CR-M4SS	**Standard socket for 2/4 c/o**	screw	**1SVR 405 651 R3000**	**10**	
CR-M2LC	**Logical socket for 2 c/o**	spring connection	**1SVR 405 651 R1200**	**10**	
CR-M4LC	**Logical socket for 4 c/o**	spring connection	**1SVR 405 651 R3200**	**10**	
Socket accessories					
CR-MH	**Plastic holder**		**1SVR 405 659 R1000**	**10**	
CR-MH1	**Metal holder**		**1SVR 405 659 R1100**	**10**	

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Pluggable interface relays CR-P, CR-M - Accessories
Pluggable function modules
Ordering details, position of connecting terminals

2CDC 291 037 F0004

CR-P/M xx

Features

- Pluggable function modules to insert into logical or standard sockets for CR-P and CR-M interface relays
- Function modules: reverse polarity protection, LED indication, RC element, overvoltage protection

Type	Version	Order code	Pack. unit pieces	Price 1 piece
CR-P/M 22	Reverse polarity protection, 6-230 V DC, A1+, A2-	1SVR 405 651 R0000	10	
CR-P/M 42	Diode and LED red, 6-24 V DC, A1+, A2-	1SVR 405 652 R0000	10	
CR-P/M 42V	Diode and LED green, 6-24 V DC, A1+, A2-	1SVR 405 652 R1000	10	
CR-P/M 52B	RC element, 6-24 V AC	1SVR 405 653 R0000	10	
CR-P/M 52C	RC element, 110-240 V AC	1SVR 405 653 R1000	10	
CR-P/M 62	Red LED, 6-24 V AC/DC	1SVR 405 654 R0000	10	
CR-P/M 62V	Green LED, 6-24 V AC/DC	1SVR 405 654 R1000	10	
CR-P/M 92	Red LED, 110-230 V AC/DC	1SVR 405 654 R0100	10	
CR-P/M 92V	Green LED, 110-230 V AC/DC	1SVR 405 654 R1100	10	
CR-P/M 62C	Varistor and red LED, 6-24 V AC/DC	1SVR 405 655 R0000	10	
CR-P/M 62CV	Varistor and green LED, 6-24 V AC/DC	1SVR 405 655 R1000	10	
CR-P/M 92C	Varistor and red LED, 110-230 V AC/DC	1SVR 405 655 R0100	10	
CR-P/M 92CV	Varistor and green LED, 110-230 V AC/DC	1SVR 405 655 R1100	10	
CR-P/M 72	Varistor without LED, 24 V AC	1SVR 405 656 R0000	10	
CR-P/M 72A	Varistor without LED, 115 V AC	1SVR 405 656 R1000	10	
CR-P/M 82	Varistor without LED, 230 V AC	1SVR 405 656 R2000	10	

Position of connecting terminals

2CDC 291 050 F0004

CR-P/M 22

2CDC 291 051 F0004

CR-P/M 42
CR-P/M 42V

2CDC 291 052 F0004

CR-P/M 52B

2CDC 291 053 F0004

CR-P/M 52C

2CDC 291 054 F0004

CR-P/M 62
CR-P/M 62V

2CDC 291 055 F0004

CR-P/M 92
CR-P/M 92V

2CDC 291 056 F0004

CR-P/M 62C
CR-P/M 62CV

2CDC 291 057 F0004

CR-P/M 92C
CR-P/M 92CV

2CDC 291 058 F0004

CR-P/M 72

2CDC 291 059 F0004

CR-P/M 72A

2CDC 291 060 F0004

CR-P/M 82

Bold printed products = stocked products

Pluggable interface relays CR-U
Universal relays
Ordering details

CR-U

① Interface relay
② Pluggable function module
③ Socket
④ Holder

CR-U

CR-U3S

CR-U3SE

CR-UH

Type	Supply voltage	Order code	Pack. unit pieces	Price 1 piece
Interface relays without LED				
2 c/o contacts: 250 V, 10 A				
CR-U012DC2	12 V DC	1SVR 405 621 R4000	10	
CR-U024DC2	**24 V DC**	**1SVR 405 621 R1000**	**10**	
CR-U048DC2	48 V DC	1SVR 405 621 R6000	10	
CR-U110DC2	110 V DC	1SVR 405 621 R8000	10	
CR-U220DC2	220 V DC	1SVR 405 621 R9000	10	
CR-U024AC2	**24 V AC**	**1SVR 405 621 R0000**	**10**	
CR-U048AC2	48 V AC	1SVR 405 621 R5000	10	
CR-U110AC2	**110 V AC**	**1SVR 405 621 R7000**	**10**	
CR-U120AC2	120 V AC	1SVR 405 621 R2000	10	
CR-U230AC2	**230 V AC**	**1SVR 405 621 R3000**	**10**	
3 c/o contacts: 250 V, 10 A				
CR-U012DC3	12 V DC	1SVR 405 622 R4000	10	
CR-U024DC3	**24 V DC**	**1SVR 405 622 R1000**	**10**	
CR-U048DC3	48 V DC	1SVR 405 622 R6000	10	
CR-U110DC3	110 V DC	1SVR 405 622 R8000	10	
CR-U220DC3	220 V DC	1SVR 405 622 R9000	10	
CR-U024AC3	**24 V AC**	**1SVR 405 622 R0000**	**10**	
CR-U048AC3	48 V AC	1SVR 405 622 R5000	10	
CR-U110AC3	**110 V AC**	**1SVR 405 622 R7000**	**10**	
CR-U120AC3	120 V AC	1SVR 405 622 R2000	10	
CR-U230AC3	**230 V AC**	**1SVR 405 622 R3000**	**10**	
Interface relays with LED				
2 c/o contacts: 250 V, 10 A				
CR-U012DC2L	12 V DC	1SVR 405 621 R4100	10	
CR-U024DC2L	**24 V DC**	**1SVR 405 621 R1100**	**10**	
CR-U048DC2L	48 V DC	1SVR 405 621 R6100	10	
CR-U110DC2L	110 V DC	1SVR 405 621 R8100	10	
CR-U220DC2L	220 V DC	1SVR 405 621 R9100	10	
CR-U024AC2L	**24 V AC**	**1SVR 405 621 R0100**	**10**	
CR-U048AC2L	48 V AC	1SVR 405 621 R5100	10	
CR-U110AC2L	**110 V AC**	**1SVR 405 621 R7100**	**10**	
CR-U120AC2L	120 V AC	1SVR 405 621 R2100	10	
CR-U230AC2L	**230 V AC**	**1SVR 405 621 R3100**	**10**	
3 c/o contacts: 250 V, 10 A				
CR-U012DC3L	12 V DC	1SVR 405 622 R4100	10	
CR-U024DC3L	**24 V DC**	**1SVR 405 622 R1100**	**10**	
CR-U048DC3L	48 V DC	1SVR 405 622 R6100	10	
CR-U110DC3L	110 V DC	1SVR 405 622 R8100	10	
CR-U220DC3L	220 V DC	1SVR 405 622 R9100	10	
CR-U024AC3L	**24 V AC**	**1SVR 405 622 R0100**	**10**	
CR-U048AC3L	48 V AC	1SVR 405 622 R5100	10	
CR-U110AC3L	**110 V AC**	**1SVR 405 622 R7100**	**10**	
CR-U120AC3L	120 V AC	1SVR 405 622 R2100	10	
CR-U230AC3L	**230 V AC**	**1SVR 405 622 R3100**	**10**	

Accessories - Sockets

Type	Version	Order code	Pack. unit pieces	Price 1 piece
Sockets				
CR-U2S	**Socket for 2 c/o and module**	**1SVR 405 670 R0000**	**10**	
CR-U3S	**Socket for 3 c/o and module**	**1SVR 405 660 R0000**	**10**	
CR-U3E	**Socket for 3 c/o**	**1SVR 405 660 R0100**	**10**	
CR-U2SM	**Socket small for 2 c/o**	**1SVR 405 670 R1100**	**10**	
CR-U3SM	**Socket small for 3 c/o**	**1SVR 405 660 R1100**	**10**	
Socket accessories				
CR-UH	**Holder for CR-U socket**	**1SVR 405 669 R0000**	**10**	

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Pluggable interface relays CR-U - Accessories
Pluggable function modules
Ordering details, position of connecting terminals

2CDC 291 038 F0004

CR-U xx

Features

- Pluggable function modules to insert into sockets for CR-U interface relays
- Function modules: reverse polarity protection, LED indication, RC element, overvoltage protection

Type	Version	Order code	Pack. unit pieces	Price 1 piece
CR-U 21	Reverse polarity protection, 6-230 V DC, A1+, A2-	1SVR 405 661 R0000	10	
CR-U 41	Diode and LED red, 6-24 V DC, A1+, A2-	1SVR 405 662 R0000	10	
CR-U 41V	Diode and LED green, 6-24 V DC, A1+, A2-	1SVR 405 662 R1000	10	
CR-U 51B	RC element, 6-24 V AC	1SVR 405 663 R0000	10	
CR-U 51C	RC element, 110-240 V AC	1SVR 405 663 R1000	10	
CR-U 61	Red LED, 6-24 V AC/DC	1SVR 405 664 R0000	10	
CR-U 61V	Green LED, 6-24 V AC/DC	1SVR 405 664 R1000	10	
CR-U 91	Red LED, 110-230 V AC/DC	1SVR 405 664 R0100	10	
CR-U 91V	Green LED, 110-230 V AC/DC	1SVR 405 664 R1100	10	
CR-U 61C	Varistor and red LED, 6-24 V AC/DC	1SVR 405 665 R0000	10	
CR-U 61CV	Varistor and green LED, 6-24 V AC/DC	1SVR 405 665 R1000	10	
CR-U 91C	Varistor and red LED, 110-230 V AC/DC	1SVR 405 665 R0100	10	
CR-U 91CV	Varistor and green LED, 110-230 V AC/DC	1SVR 405 665 R1100	10	
CR-U 71	Varistor without LED, 24 V AC	1SVR 405 666 R0000	10	
CR-U 71A	Varistor without LED, 115 V AC	1SVR 405 666 R1000	10	
CR-U 81	Varistor without LED, 230 V AC	1SVR 405 666 R2000	10	
CR-U T	Multifunction time module	1SVR 405 667 R000		

Position of connecting terminals

2CDC 291 050 F0004

CR-U 21

2CDC 291 051 F0004

CR-U 41
CR-U 41V

2CDC 291 052 F0004

CR-U 51B

2CDC 291 053 F0004

CR-U 51C

2CDC 291 054 F0004

CR-U 61
CR-U 61V

2CDC 291 055 F0004

CR-U 91
CR-U 91V

2CDC 291 056 F0004

CR-U 61C
CR-U 61CV

2CDC 291 057 F0004

CR-U 91C
CR-U 91CV

2CDC 291 058 F0004

CR-U 71

2CDC 291 059 F0004

CR-U 71A

2CDC 291 060 F0004

CR-U 81

Bold printed products = stocked products

Input circuit - coil data

CR-P range

2CDC 291 045 F0004

	Rated voltage	Rated voltage frequency	Make voltage (at 20 °C)	Maximum voltage (at 20 °C)	Break voltage	Rated power	Coil resistance (at 20 °C)	Tolerance of coil resistance
DC coils	12 V DC	-	8.4 V DC	30.6 V DC	≥ 0.1 U_n	0.4-0.48 W	360 Ω	± 10%
	24 V DC	-	16.8 V DC	61.2 V DC	≥ 0.1 U_n	0.4-0.48 W	1440 Ω	± 10%
	48 V DC	-	33.6 V DC	122.4 V DC	≥ 0.1 U_n	0.4-0.48 W	5700 Ω	± 10%
	110 V DC	-	77 V DC	280 V DC	≥ 0.1 U_n	0.4-0.48 W	25200 Ω	± 10%
AC coils	24 V AC	50 / 60 Hz	19.2 V AC	28.8 V AC	≥ 0.15 U_n	0.75 VA	400 Ω	± 10%
	48 V AC	50 / 60 Hz	38.4 V AC	57.6 V AC	≥ 0.15 U_n	0.75 VA	1550 Ω	± 10%
	110 V AC	50 / 60 Hz	88 V AC	132 V AC	≥ 0.15 U_n	0.75 VA	8900 Ω	± 10%
	120 V AC	50 / 60 Hz	96 V AC	144 V AC	≥ 0.15 U_n	0.75 VA	10200 Ω	± 10%
	230 V AC	50 / 60 Hz	184 V AC	276 V AC	≥ 0.15 U_n	0.75 VA	38500 Ω	± 10%

CR-M range

2CDC 291 046 F0004

	Rated voltage	Rated voltage frequency	Make voltage (at 20 °C)	Maximum voltage (at 20 °C)	Break voltage	Rated power	Coil resistance (at 20 °C)	Tolerance of coil resistance
DC coils	12 V DC	-	9.6 V DC	13.2 V DC	≥ 0.1 U_n	0.9 W	160 Ω	± 10%
	24 V DC	-	19.2 DC	26.4 V DC	≥ 0.1 U_n	0.9 W	640 Ω	± 10%
	48 V DC	-	38.4 V DC	52.8 V DC	≥ 0.1 U_n	0.9 W	2600 Ω	± 10%
	60 V DC	-	48.0 V DC	66.0 V DC	≥ 0.1 U_n	0.9 W	4000 Ω	± 10%
	110 V DC	-	88 V DC	121 V DC	≥ 0.1 U_n	0.9 W	13600 Ω	± 10%
	220 V DC	-	176 V DC	242 V DC	≥ 0.1 U_n	0.9 W	54000 Ω	± 10%
AC coils	24 V AC	50 / 60 Hz	19.2 V AC	26.4 V AC	≥ 0.2 U_n	1.6 VA	158 Ω	± 10%
	48 V AC	50 / 60 Hz	38.4 V AC	52.8 V AC	≥ 0.2 U_n	1.6 VA	640 Ω	± 10%
	110 V AC	50 / 60 Hz	88 V AC	121 V AC	≥ 0.2 U_n	1.6 VA	3450 Ω	± 10%
	120 V AC	50 / 60 Hz	96 V AC	132 V AC	≥ 0.2 U_n	1.6 VA	3770 Ω	± 10%
	230 V AC	50 / 60 Hz	184 V AC	253 V AC	≥ 0.2 U_n	1.6 VA	16100 Ω	± 10%

CR-U range

2CDC 291 047 F0004

	Rated voltage	Rated voltage frequency	Make voltage (at 20 °C)	Maximum voltage (at 20 °C)	Break voltage	Rated power	Coil resistance (at 20 °C)	Tolerance of coil resistance
DC coils	12 V DC	-	9.6 V DC	13.2 V DC	≥ 0.1 U_n	1.5 W	110 Ω	± 10%
	24 V DC	-	19.2 DC	26.4 V DC	≥ 0.1 U_n	1.5 W	430 Ω	± 10%
	48 V DC	-	38.4 V DC	52.8 V DC	≥ 0.1 U_n	1.5 W	1750 Ω	± 10%
	110 V DC	-	88 V DC	121 V DC	≥ 0.1 U_n	1.5 W	9200 Ω	± 10%
	220 V DC	-	176 V DC	242 V DC	≥ 0.1 U_n	1.5 W	37000 Ω	± 10%
AC coils	24 V AC	50 / 60 Hz	19.2 V AC	26.4 V AC	≥ 0.15 U_n	2.8 VA (50 Hz) 2.5 VA (60 Hz)	75 Ω	± 10%
	48 V AC	50 / 60 Hz	38.4 V AC	52.8 V AC	≥ 0.15 U_n	2.8 VA (50 Hz) 2.5 VA (60 Hz)	305 Ω	± 10%
	110 V AC	50 / 60 Hz	88 V AC	121 V AC	≥ 0.15 U_n	2.8 VA (50 Hz) 2.5 VA (60 Hz)	1700 Ω	± 10%
	120 V AC	50 / 60 Hz	96 V AC	132 V AC	≥ 0.15 U_n	2.8 VA (50 Hz) 2.5 VA (60 Hz)	1910 Ω	± 10%
	230 V AC	50 / 60 Hz	184 V AC	253 V AC	≥ 0.15 U_n	2.8 VA (50 Hz) 2.5 VA (60 Hz)	7080 Ω	± 10%

Pluggable interface relays CR-P, CR-M and CR-U
Pcb-, miniature- and universal relays
Technical data (continued)

Type		CR-P...1	CR-P...2	CR-M...2	CR-M...3	CR-M...4	CR-U...2	CR-U...3
Output circuit(s) - relay contact(s)		11-12/14	11-12/14 21-22/24	11-12/14 21-22/24	11-12/14 21-22/24 31-32/34	11-12/14 21-22/24 31-32/34 41-42/44	11-12/14 31-32/34	11-12/14 31-32/34 31-32/34
Number of contacts		1 c/o	2 c/o	2 c/o	3 c/o	4 c/o	2 c/o	3 c/o
Contact material		AgNi		AgNi	AgNi	AgNi AgNi/Au 5 µm	AgNi	
Rated voltage	acc. to VDE 0110, IEC 60947-1	250 V		250 V			250 V	
Min. switching voltage		5 V		5 V			5 V	
Max. switching voltage	DC	300 V DC		250 V DC			250 V DC	
	AC	400 V AC		250 V AC			250 V AC	
Min. switching current		5 mA		5 mA			5 mA	
Rated current		16 A	8 A	12 A	10 A	6 A	10 A	
Rated operating current	AC-12 (resistive) 230 V	16 A	8 A	12 A	10 A	6 A	10 A	
acc. to IEC 60947-5-1	AC-15 (inductive) 230 V	6 A	3 A	5 A	5 A	4 A	5 A (n/o) / 3 A (n/c)	
	DC-12 (resistive) 24 V	16 A	8 A	12 A	10 A	6 A	10 A	
	DC-13 (inductive) 24 V	2 A	2 A	8 A	8 A	6 A	2 A	
Min. switching power		0.3 W		0.3 W (AgNi), 0.1 W (AgNi/Au)			0.3 W	
Max. switching power	AC-1	4000 VA	2000 VA	3000 VA	2500 VA	1500 VA	2500 VA	
Contact resistance		≤ 100 mΩ		≤ 100 mΩ			≤ 100 mΩ	
Max. switching capacity	rated load AC-1	600 switching cycles/h		1200 switching cycles/h			1200 switching cycles/h	
	without load	72000 switching cycles/h		18000 switching cycles/h			12000 switching cycles/h	
Max. lifetime	mechanical	> 3 x 10^7 switching cycles		> 2 x 10^7 switching cycles			> 2 x 10^7 switching cycles	
	electrical AC-1 (resistive)	> 10^5 switching cycles		> 10^5 switching cycles			> 10^5 switching cycles	
		(16 A, 250 V)	(8 A, 250 V)	(12 A, 250 V)	(10 A, 250 V)	(6 A, 250 V)	(10 A, 250 V)	
	cos φ	see load limit curve		see load limit curve			see load limit curve	
Response time		typ. 7 ms		typ. 13/10 ms			typ. 18 ms (DC), 12 ms (AC)	
Release time		typ. 3 ms		typ. 3/8 ms			typ. 7 ms (DC), 10 ms (AC)	
Isolation data								
Rated insulation voltage		400 V AC		250 V AC			250 V AC	
Insulation class		C250 / B400		C250 / B250			C250	
Insulation resistance	between coil and contacts	5 kV AC		2.5 kV AC			2.5 kV AC	
	between contacts	1 kV AC		1.5 kV AC			1.5 kV AC	
	between c/o contacts	- / 2.5 kV AC		2.5 kV AC / 2 kV AC			2 kV AC	
Clearance/creepage distance	betw. coil and contacts	≥ 10 mm / ≥ 10 mm		≥ 4 mm / ≥ 3.2 mm			≥ 3 mm / ≥ 4.2 mm	
General data								
Dimensions (L x W x H)		29 x 12.7 x 15.7 mm		27.5 x 21.2 x 35.6 mm			35 x 35 x 54.4 mm	
Weight		14 g (0.031 lb)		35 g (0.077 lb)			83 g (0.18 lb)	
Mounting position		any		any			any	
Degree of protection		IP 67		IP 40			IP 40	
Temperature range	operation DC	-40 °C ... +85 °C		-40 °C ... +70 °C			-40 °C ... +70 °C	
	AC	-40 °C ... +70 °C		-40 °C ... +55 °C			-40 °C ... +55 °C	
	storage	-40 °C ... +85 °C		-40 °C ... +85 °C			-40 °C ... +85 °C	
Connection		by socket		by socket			by socket	
Mounting		on socket (see accessories)		on socket (see accessories)			on socket (see accessories)	
Vibration resistance	n/o, n/c	10 g / 5 g		10 g / 5 g			10 g	
Shock resistance	10-150 Hz	30 g	20 g	5 g			5 g	
Standards								
Product standard		EN 61810-1, EN 60255-23 IEC 60664-1		EN 60810-1, EN 60255-23 IEC 61810-7			EN 60255-1-00	
Low Voltage Directive		73/23/EEC		73/23/EEC			73/23/EEC	
Approvals / marks								
Approvals		RU (UL), CSA, VDE, GOST		RU (UL), CSA, VDE, GOST Lloyd Type Approval (only 4 c/o version)			IEC 61810-7 Lloyd Type Approval	
Marks		CE		CE			CE	

Maximum switching power at resistive DC load

CR-P with 1 c/o contact

2CDC 292 005 F0004

CR-P with 2 c/o contacts

2CDC 292 010 F0004

CR-U with 2 and 3 c/o contacts

2CDC 292 028 F0004

CR-M with 2 c/o contacts

2CDC 292 015 F0004

CR-M with 3 c/o contacts

2CDC 292 019 F0004

CR-M with 4 c/o contacts

2CDC 292 023 F0004

Electrical lifetime at resistive AC load

CR-P with 1 c/o contact

2CDC 292 003 F0004

CR-P with 2 c/o contacts

2CDC 292 009 F0004

CR-U with 2 and 3 c/o contacts

2CDC 292 027 F0004

CR-M with 2 c/o contacts

2CDC 292 013 F0004

CR-M with 3 c/o contacts

2CDC 292 018 F0004

CR-M with 4 c/o contacts

2CDC 292 022 F0004

Position of connecting terminals

2CDC 292 001 F0004

CR-P with 1 c/o contact

2CDC 292 011 F0004

CR-M with 2 c/o contacts

2CDC 292 016 F0004

CR-M with 3 c/o contacts

2CDC 292 024 F0004

CR-U with 2 c/o contacts

2CDC 292 008 F0004

CR-P with 2 c/o contacts

2CDC 292 020 F0004

CR-M with 4 c/o contacts

2CDC 292 030 F0004

CR-U with 3 c/o contacts

Dimensions in mm

2CDC 292 002 F0004

CR-P

2CDC 292 012 F0004

CR-M with 2 c/o contacts

2CDC 292 017 F0004

CR-M with 3 c/o contacts

2CDC 292 021 F0004

CR-M with 4 c/o contacts

2CDC 292 025 F0004

CR-U with 2 c/o contacts

2CDC 292 026 F0004

CR-U with 3 c/o contacts

Dimensions in mm

CR-PLS

CR-PLSx

CR-PSS

CR-M2SS - CR-M3SS - CR-M4SS

CR-M2LS - CR-M3LS - CR-M4LS

CR-U2S - CR-U3S

CR-U2E

CR-U2SM

CR-U3SM

6

Dimensions in mm

CR-PLC

CR-M2LC , CR-M4LC

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