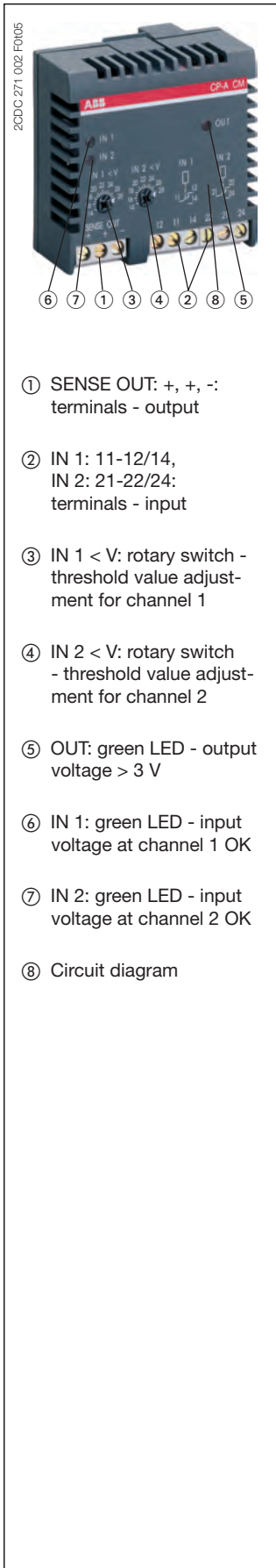


Control module CP-A CM

Accessory for CP-S and CP-C range power supplies

Data sheet



Features

- Pluggable onto redundancy unit CP-A RU
- Threshold values adjustable (14-28 V)
- One relay output per monitored input / channel

Approvals

- UL 508, CAN/CSA C22.2 No.14 pending
- UL 60950, CAN/CSA C22.2 No. 60950
- GOST
- CB scheme

Marks

- CE CE
- C-Tick pending

Order data

Type	Description	Order code
CP-A CM	Control module The CP-A CM provides monitoring of the input signals of the redundancy unit CP-A RU.	1SVR 427 075 R0000

Application

The control module CP-A CM provides monitoring of the input signals of the redundancy unit CP-A RU.

Operating mode

Control of input voltages of CP-A RU with CP-A CM

The control module CP-A CM indicates the presence of both input voltages of the CP-A RU via LEDs and energized output relays.

The threshold values for the output relays are adjustable separately per channel from 14 to 28 V. If, by a fault (e.g. failure of a power supply, blown fuse), the voltage in a channel drops below the adjusted threshold value, the corresponding output relay de-energizes. The green LEDs "IN 1", "IN 2" glow, if the corresponding voltage exceeds the adjusted threshold value. The green LED "OUT" glows, if the output voltage is higher than 3 V.

Control module CP-A CM

Accessory for CP-S and CP-C range power supplies

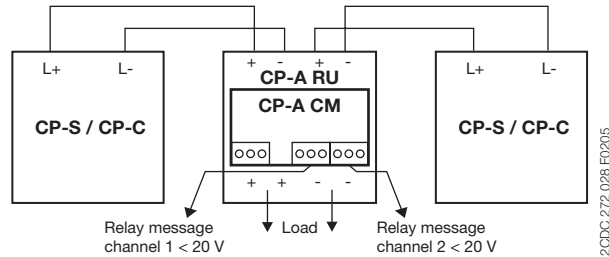
Data sheet

Example(s) of application

CP-A RU with CP-A CM for monitoring of two power supplies - In case of fault: Fault signal

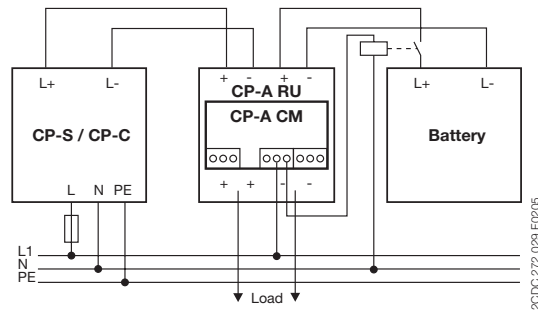
If both relays are de-energized, the voltages of both channels are below the adjusted threshold value (e.g. 20 V). This could mean, that both power supply units failed or are switched off, or that there is an overload on the secondary side. Momentary de-energization of the relays may be caused by inrush current of a connected load, during starting.

If one of the two relays de-energizes, this can indicate that the primary power supply unit failed or is switched off, and the redundant power supply is now supplying power to the load.



CP-A RU with CP-A CM for monitoring of one power supply - In case of fault: Transfer to an alternative power supply

The following example of application shows transferring to an alternative power supply (in this example a battery) after a failure in the primary power supply unit.



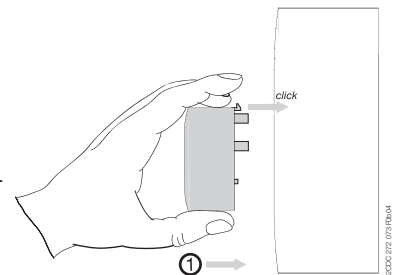
Installation

Mounting

The module is plugged and fixed as shown in the accompanying picture onto the front side of the redundancy unit CP-A RU.

Doing so, the pre-cut front foil of the redundancy unit is penetrated by the latching hooks and the plug contacts.

The module must not be plugged in when the power is on.



Control module CP-A CM

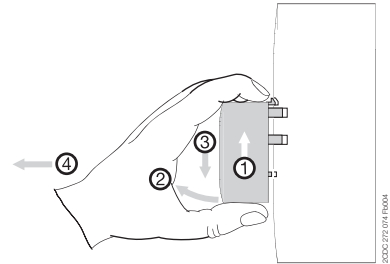
Accessory for CP-S and CP-C range power supplies

Data sheet

Installation

Demounting

The module is removed as shown in the accompanying picture. The module must not be removed when the power is on.



Electrical connection - Output side [SENSE OUT +-]

The terminals SENSE OUT + + - are situated on the + and - potential on the output side and can be used for signalling.

Electrical connection - Input side [IN 1 (11-12/14) and IN 2 (21-22/24)]

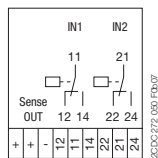
Message input 1 OK - Volt-free (dry/floating) change-over contact:

- 11-14 closed and 11-12 open, if the voltage in channel 1 (IN 1) of the CP-A RU exceeds the threshold value adjusted at "IN 1 <V".
- 11-12 closed and 11-14 open, if the voltage in channel 1 (IN 1) of the CP-A RU drops below the threshold value adjusted at "IN 1 <V".

Message input 2 OK - Volt-free (dry/floating) change-over contact

- 21-24 closed and 21-22 open, if the voltage in channel 2 (IN 2) of the CP-A RU exceeds the threshold value adjusted at "IN 2 <V".
- 21-22 closed and 21-24 open, if the voltage in channel 2 (IN 2) of the CP-A RU drops below the threshold value adjusted at "IN 2 <V".

Connection diagram(s)



IN 1 11-12/14

IN 2 21-22/24

Sense OUT +, +, -

Message input 1 (IN 1) OK

Message input 2 (IN 2) OK

+ and - potential of the output side

Control module CP-A CM

Accessory for CP-S and CP-C range power supplies

Data sheet

Technical data

Data at $T_a = 25\text{ °C}$, $U_{in} = 230\text{ V AC}$ and rated values, if nothing else indicated

Input circuits - Supply circuits		1SVR 427 075 R0000
Rated input voltage U_{in}		24 V DC
Typical current / power consumption		24 V DC
		24 V DC - / 1 W
Input voltage range DC		13-28 V DC
Rated input current at rated sense load and 24 V DC		120 mA
Measuring circuit		1SVR 427 075 R0000
Monitoring function		undervoltage monitoring
Measuring voltage		rated operational voltage
Threshold value(s)		14-28 V
Hysteresis related to the threshold value		fix: 3-5 %
Accuracy / Tolerance		10 % of full-scale value
Maximum measuring cycle		6 ms
Indication of operational states		1SVR 427 075 R0000
Status of input 1	IN 1: green LED	┌───┐: voltage at input 1 > than threshold 1 = no faults existing
Status of input 2	IN 2: green LED	┌───┐: voltage at input 2 > than threshold 2 = no faults existing
Status of output	OUT: green LED	┌───┐: $U_{out} > 3\text{ V}$ = no faults existing
Output circuits		1SVR 427 075 R0000
Kind of output	11-12/14	relay, 1 c/o (SPDT) contact
	21-22/24	relay, 1 c/o (SPDT) contact
Contact material		AgNi
Operating principle		closed-circuit principle
Rated operational voltage U_o (IEC/EN 60947-1, VDE 0110)		250 V
Minimum switching voltage / Minimum switching current		24 V / 10 mA
Maximum switching voltage / Maximum switching current		250 V / 1 A
Rated operational current I_o (IEC/EN 60947-1)	AC12 (resistive) at 230 V	1 A
	AC15 (inductive) at 230 V	1 A
	DC12 (resistive) at 24 V	1 A
	DC13 (inductive) at 24 V	1 A
Rating according UL 508		General purpose (GP) 250 V AC
Maximum fuse rating to achieve short-circuit protection	n/o contact	2 A, gL
	n/c contact	2 A, gL

Control module CP-A CM

Accessory for CP-S and CP-C range power supplies

Data sheet

Sense output (+, +, -)	1SVR 427 075 R0000	
Sense output voltage	13-28 V DC	
Sense output current	0.1 A	
Maximum fuse rating	For applications acc. UL the sense output shall be provided with a listed DC fuse 3 A	
General data	1SVR 427 075 R0000	
Duty time	100 %	
Dimensions (W x H x D) when mounted	56.5 x 54 x 24 mm (2.22 x 2.13 x 0.94 inches)	
Material of enclosure	UL 94 V0	
Weight	0.063 kg (0.14 lb)	
Mounting position	plugged onto redundancy unit CP-A RU	
Mounting	snap-on mounting without any tool	
Degree of protection enclosure / terminals	IP20 / IP20	
Class of protection	II	
Electrical connection	1SVR 427 075 R0000	
all circuits	Screw connection	
Wire size	fine-strand with wire end ferrule	0.2-2.5 mm ² (24-14 AWG)
	fine-strand without wire end ferrule	0.2-2.5 mm ² (24-14 AWG)
	rigid	0.2-4 mm ² (24-12 AWG)
Stripping length	7.5 mm (0.3 inches)	
Tightening torque	0.4-0.6 Nm	
Environmental data	1SVR 427 075 R0000	
Ambient temperature range	operation	-25...+70 °C
	storage	-40...+85 °C
Damp heat (IEC/EN 60068-2-3)	93 % at +40 °C, no condensation	
Climatic category (IEC/EN 60721)	3k3	
Vibration (IEC/EN 60068-2-6)		
Shock (IEC/EN 60068-2-27)		
Isolation data	1SVR 427 075 R0000	
Rated isolation voltage U_i (IEC/EN 60947-1, EN 50178, VDE 0160)	250 V	
Rated impulse withstand voltage U_{imp} (type test) (IEC 664, VDE 0160)	all circuits 2.5 V	
Power-frequency withstand voltage test (Test voltage, routine test)	all circuits 1.2 kV AC	
Basic insulation	500 V	
Protective separation (EN 50178) Input circuit / Output circuit	yes	
Pollution degree (IEC/EN 60950)	2	
Overvoltage category (IEC/EN 60950)	II	

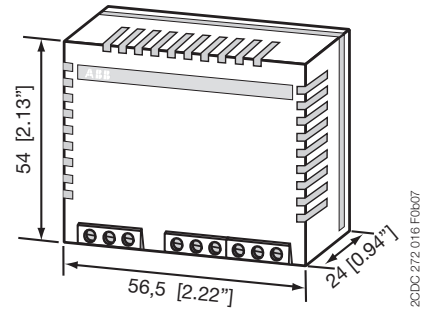
Control module CP-A CM

Accessory for CP-S and CP-C range power supplies

Data sheet

Dimensions

in mm



CP- A CM