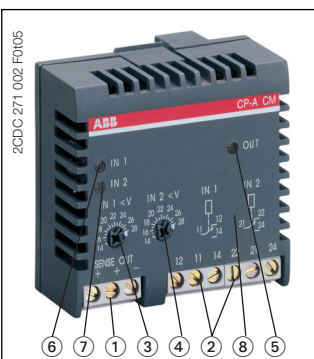


Control module CP-A CM

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

Data sheet



- ① SENSE OUT: +, +, -: terminals - output
- ② IN 1: 11-12/14, IN 2: 21-22/24: terminals - input
- ③ IN 1 < V: rotary switch - threshold value adjustment for channel 1
- ④ IN 2 < V: rotary switch - threshold value adjustment for channel 2
- ⑤ OUT: green LED - output voltage > 3 V
- ⑥ IN 1: green LED - input voltage at channel 1 OK
- ⑦ IN 2: green LED - input voltage at channel 2 OK
- ⑧ Circuit diagram

Features

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

Approvals

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.

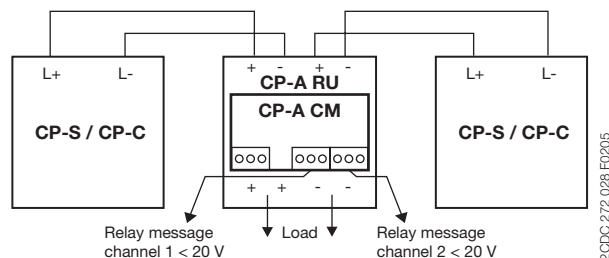
The threshold values for the output relays are adjustable separately per channel from 14 to 28 V. If, by a fault (e.g. failure of a power supply, blown fuse), the voltage in a channel drops below the adjusted threshold value, the corresponding output relay de-energizes. The green LEDs "IN 1", "IN 2"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

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

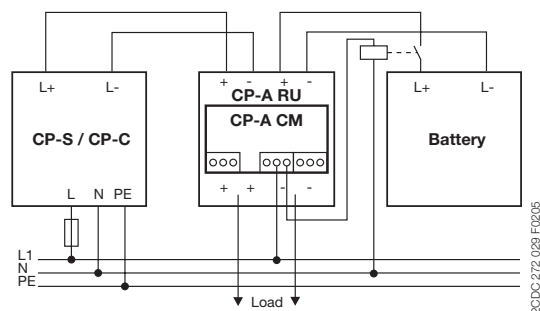
Data sheet

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

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.

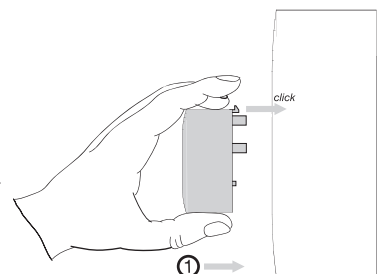


The following example of application shows transferring to an alternative power supply (in this example a battery) after a failure in the primary power supply unit.



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

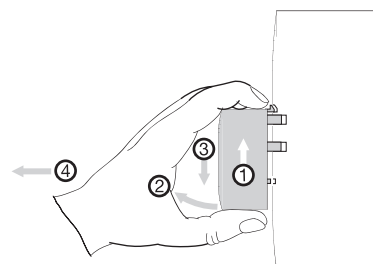
Accessory for CP-S and CP-C range power supplies

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)]

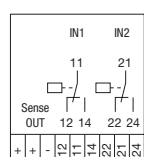
Message input 1 OK - Volt-free (dry/floating) change-over contact:

- 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, unless otherwise indicated

Input circuits - Supply circuits		1SVR 427 075 R0000
Rated input voltage U_{in}		24 V DC
Typical power consumption		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	1 A
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 housing		plastic
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	housing / 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

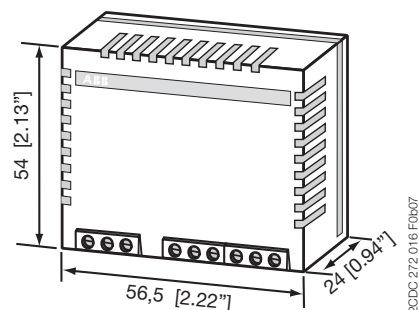
Control module CP-A CM

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

Data sheet

Dimensions

in mm



CP-A CM

Further Documentation

Document title	Document type	Document number
Electronic Products and Relays	Technical catalogue	2CDC 110 004 C02xx
Power Supply Units	Application manual	2CDC 114 048 M0201
Redundancy unit CP- A RU	Data sheet	2CDC 114 036 D0202

You can find the documentation on the internet at www.abb.com/lowvoltage → Control Products → Power Supplies

CAD system files

You can find the CAD files for CAD systems at <http://abb-control-products.partcommunity.com/PARTcommunity/Portal/abb-control-products>
-> Low Voltage Products & Systems -> Control Products -> Power Supplies

Contact us

ABB STOTZ-KONTAKT GmbH

P. O. Box 10 16 80
69006 Heidelberg, Germany
Phone: +49 (0) 6221 7 01-0
Fax: +49 (0) 6221 7 01-13 25
E-mail: info.desto@de.abb.com

You can find the address of your
local sales organisation on the
ABB home page
<http://www.abb.com/contacts>
-> Low Voltage Products and Systems

Note:

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB AG.

Copyright© 2010 ABB
All rights reserved