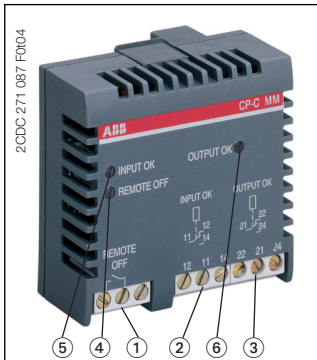


# Messaging module CP-C MM

## Accessory for CP-C range power supplies

### Data sheet



- ① REMOTE OFF: terminals - remote off
- ② INPUT OK 11-12/14: terminals - message supply voltage OK
- ③ OUTPUT OK 21-22/24: terminals - message output voltage OK
- ④ REMOTE OFF: green LED - remote off
- ⑤ INPUT OK: green LED - supply voltage OK
- ⑥ OUTPUT OK: green LED - output voltage OK

### Features

- Pluggable onto CP-C range primary switch mode power supplies
- REMOTE-OFF input to switch off the power supply unit remotely
- Monitoring of the input voltage of the power supply unit and messaging if below the limit value
- Monitoring of the output voltage of the power supply unit and messaging if below the limit value
- Output voltage monitoring is only in case of decoupled parallel operation possible

### Approvals

GOST  
 EAC

valid until August 3, 2014

valid from August 4, 2014

### Marks

CE  
 C-Tick

### Order data

Type	Description	Order code
CP-C MM	<b>Messaging module</b> The CP-C MM indicates the correct function of the power supply unit via LEDs and energized output relay.	1SVR 427 081 R0000

### Application

The messaging module CP-C MM monitors the input and output voltage of a CP-C range primary switch mode power supply.

### Operating mode

#### Indication of the correct function of the power supply with CP-C MM

The messaging module CP-C MM can be plugged onto a CP-C range primary switch mode power supply. It indicates the correct function of the power supply unit via LEDs and energized output relay.

The power supply unit can be switched off by closing of a volt-free (dry/floating) contact at the "REMOTE OFF" input.

If the supply voltage at the input of the power supply falls below 82 V AC (70 V DC), the output relay "INPUT OK" (contacts 11-12/14) de-energizes and the LED "INPUT OK" turns off.

If the output voltage of the power supply falls below 19.8 V DC, the output relay "OUTPUT OK" (contacts 21-22/24) de-energizes and the LED "OUTPUT OK" turns off.

Output voltage monitoring is only possible in decoupled parallel operation.

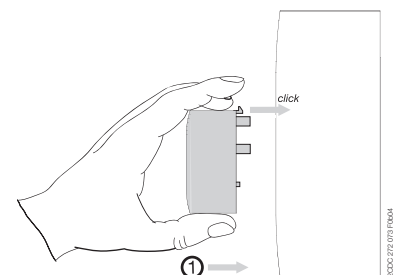
### Installation

#### Mounting

The module is plugged and fixed as shown in the accompanying picture onto the front side of a CP-C power supply.

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

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



# Messaging module CP-C MM

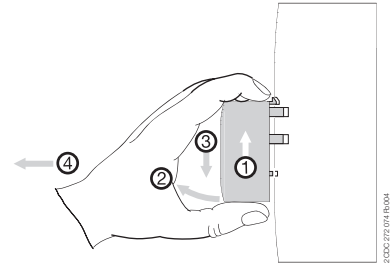
## Accessory for CP-C range power supplies

### 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

###### REMOTE OFF

If the terminals are short-circuited ( $R \leq 1 \text{ k}\Omega$ ) e.g. via a n/o contact, the power supply unit is switched off remotely.

If the resistance  $R$  between the terminals is  $\geq 10 \text{ k}\Omega$ , the power supply unit is switched on.

**Attention! Terminal potential = input voltage**

###### INPUT OK

Volt-free (dry/floating) change-over contact - closed-circuit principle

11-14 closed and 11-12 open, if the input voltage of the power supply unit is  $> 85 \text{ V AC} / 90 \text{ V DC}$ .

11-12 closed and 11-14 open, if the input voltage of the power supply unit is  $< 82 \text{ V AC} / 70 \text{ V DC}$ .

11-14 also closed, if REMOTE OFF.

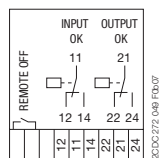
###### OUTPUT OK

Volt-free (dry/floating) change-over contact - closed-circuit principle

21-24 closed and 21-22 open, if the output voltage of the power supply unit is  $> 20.2 \text{ V DC}$ .

21-22 closed and 21-24 open, if the output voltage of the power supply unit is  $< 19.8 \text{ V DC}$ .

#### Connection diagram(s)



INPUT OK  
11-12/14

Message supply voltage OK

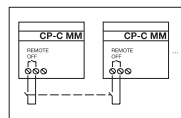
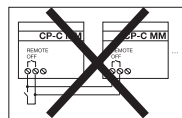
OUTPUT OK  
21-22/24

Message output voltage OK

REMOTE OFF

Remote off of power supply

#### Wiring instructions



2DDC272 000 FR005




# Messaging module CP-C MM

## Accessory for 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

<b>Input circuits - Supply circuits</b>		
Rated input voltage $U_{in}$		110-240 V AC / 100-350 V DC
Input voltage range		70-264 V AC / 80-350 V DC
Typical power consumption		2.5 VA / 1.5 W
<b>Input circuits - Control circuit</b>		
Kind of triggering		volt-free triggering
Control input, control function	REMOTE OFF	Remote off
Threshold value for switching off		$R \leq 1\text{ k}\Omega$
Threshold value for switching on		$R \geq 10\text{ k}\Omega$
Input current		typ. 1 mA (200 mA for 200 $\mu$ s)
Maximum cable length to the control input		25 m - 100 pF/m
<b>Measuring circuit - Input</b>		
		powered by the input circuit of the power supply unit
Monitoring function		undervoltage monitoring
Threshold value(s)		85 V AC / 90 V DC
Hysteresis related to the threshold value		AC: typ. -8 % / DC: -30 %
Accuracy / Tolerance		-5 % (at AC and DC)
Maximum measuring cycle		typ. < 50 ms
<b>Measuring circuit - Output</b>		
		powered by the output circuit of the power supply unit
Monitoring function		undervoltage monitoring
Threshold value(s)		20 V DC
Hysteresis related to the threshold value		typ. 5 %
Accuracy / Tolerance		$\pm 1\%$
Maximum measuring cycle		typ. < 10 ms
<b>Indication of operational states</b>		
Remote off	REMOTE OFF: green LED	 : "REMOTE OFF" input $\leq 1\text{ k}\Omega$
Supply voltage	INPUT OK: green LED	 : supply voltage OK
Output voltage	OUTPUT OK: green LED	 : output voltage OK
<b>Output circuits</b>		
Kind of output	11-12/14	relay, 1 c/o contact
	21-22/24	relay, 1 c/o contact
Contact material		AgNi
Rated output voltage (IEC/EN 60947-1, VDE 0110)		250 V
Operational principle		closed-circuit principle
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

# Messaging module CP-C MM

## Accessory for CP-C range power supplies

### Data sheet

Output circuits		
Mechanical lifetime		30 x 10 <sup>6</sup> switching cycles
Electrical Lifetime		0.1 x 10 <sup>6</sup> switching cycles
Maximum fuse rating in order to achieve short-circuit protection	n/o contact	2 A, gL
	n/c contact	2 A, gL
General data		
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		plastic
Weight		0.065 kg (0.14 lb)
Mounting position		plugged onto power supply unit
Mounting		snap-on mounting without any tool
Degree of protection	enclosure / terminals	IP20 / IP20
Class of protection (EN 61140)		II
Electrical connection		
Wire size	fine-strand with wire end ferrule	0.2-2.5 mm <sup>2</sup> (24-14 AWG)
	fine-strand without wire end ferrule	0.2-2.5 mm <sup>2</sup> (24-14 AWG)
	rigid	0.2-4 mm <sup>2</sup> (24-12 AWG)
Stripping length		7.5 mm (0.3 inches)
Tightening torque		0.4-0.6 Nm
Environmental data		
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 (EN 60721)		3k3
Vibration (IEC/EN 60068-2-6)		
Shock (IEC/EN 60068-2-27)		
Isolation data		
Rated isolation voltage U <sub>i</sub> (IEC/EN 60947-1, EN 50178, VDE 0160)		250 V
Rated impulse withstand voltage U <sub>imp</sub> (type test) (IEC 664, VDE 0110)	between all isolated circuits	4 kV; 1.2/50 μs
Power-frequency withstand voltage test (Test voltage, routine test)	all circuits	2.5 kV AC
Protective separation	all circuits	yes
Pollution degree (IEC/EN 60950)		2
Overvoltage category (IEC/EN 60950)		II
Standards / Directives		
Product standard		IEC/EN 61204
EMC Directive		2004/108/EC
Low Voltage Directive		2006/95/EC
Electrical safety		EN 50178, EN 60950, UL 60950, UL 508

# Messaging module CP-C MM

## Accessory for CP-C range power supplies

### Data sheet

Electromagnetic compatibility		
Interference immunity to		IEC/EN 61000-6-2
electrostatic discharge	IEC/EN 61000-4-2	Level 3 and 4 (6 kV / 8 kV)
radiated, radio-frequency, electromagnetic field	IEC/EN 61000-4-3	Level 3 (10 V/m)
electrical fast transient / burst	IEC/EN 61000-4-4	Level 4 and 2 (4 kV power input / 1 kV control input)
surge	IEC/EN 61000-4-5	Level 3 and 2 (4 kV symmetrical power input / 1 kV control input)
conducted disturbances, induced by radio-frequency fields	IEC/EN 61000-4-6	Level 3 (10 V)
Interference emission		IEC/EN 61000-6-3
high-frequency radiated	IEC/CISPR 22, EN 55022	Class B
high-frequency conducted	IEC/CISPR 22, EN 55022	Class B

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# Messaging module CP-C MM

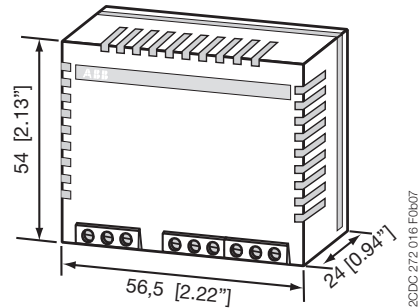
## Accessory for CP-C range power supplies

### Data sheet

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#### Dimensions

in mm



**CP-C MM**

#### 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 M020x

You can find the documentation on the internet at [www.abb.com/lowvoltage](http://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

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