

Technical data sheet

Load monitoring · LOCC-Box-EC

Electronic circuit breaker rated up to DC 10 A

Single-channel design, adjustable current range: DC 1 A – 10 A

Fixed characteristic: medium



Identification

Type	LOCC-BOX-EC I-C2
Part No.	716412.0200

Product version

Hardware revision	2.0
Software version	2.6
Datasheet version	02

Input

Type of function	1-channel 1 pin switching
Rated voltage U_N	DC 12/24 V
Operation voltage range	DC 10–30 V
Rated current I_N	DC 10 A
Supply current	DC 40 A over Cu-rails 10 × 3 mm
Reverse voltage protection	Internal electronics
Connection type input	Screwless contact slide

Control input (Set / Reset)

Signal level	DC 12/24 V acc. to IEC 61131-2
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Output

Switching element	MOSFET
Output current	Max. DC 10 A
Voltage drop	Max. 215 mV (10 A)

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Status display output	LED green: operating voltage present, no error LED red: error in load circuit
Switch-on capacity	10000 µF
Current range	1 A – 10 A (adjustable via switch in 1 A steps)
Characteristic	2 (medium)
Power Dissipation	2,15 W

Signal output

Signal level	DC 12/24 V: operating voltage on standby, no error, DC 0 V: error, output switched off and manual "OFF"
Switching element	Transistor, collector with pull-up resistance

General

Dimensions (w × h × d)	8.1 mm × 107.4 mm × 116.0 mm
Housing material	PA 6.6 (UL 94 V-0, NFF I2, F2)
Mounting	DIN rail mountable TS35 (EN 60715)
Installation position	Any
MTBF	690000 h
Degree of protection	IP20 (only as complete system with supply terminal and end block)
Connection type	Push-In 0.25 mm ² – 2.5 mm ² AWG 24 – AWG 14
Weight/unit	0.07 kg
PU (units)	1

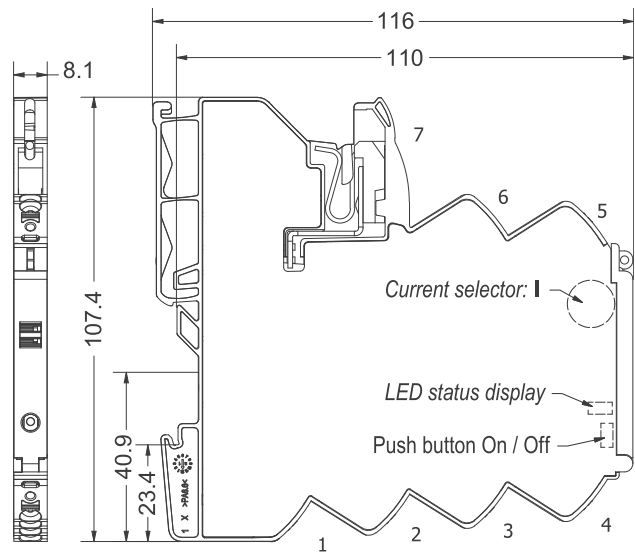
General ambient conditions

Operation temperature range	-25 °C ... +50 °C
Storage temperature range	-40 °C ... +85 °C

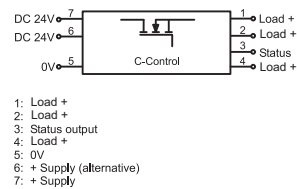
Certifications/Standards

Conformity	CE UKCA
Certifications	cULus (E135145) URus (E490188)
Standards	EN 61000-6-2 EN 61000-6-3 UL 60947-5-1 UL 2367

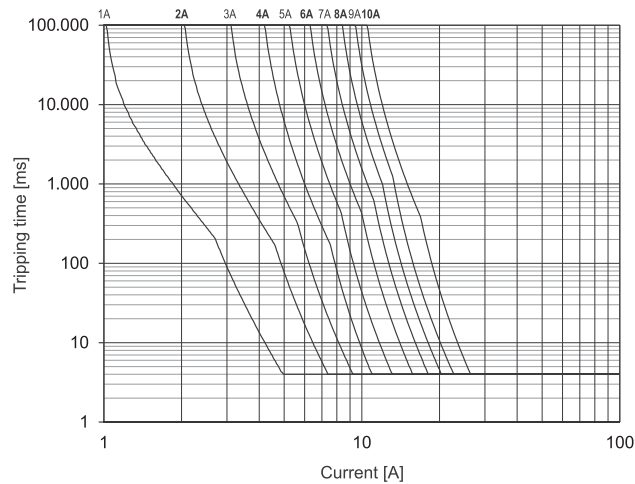
Dimensions



PIN assignment



2: Characteristic medium



A

716431 - white
716432 - red
716433 - blue
716434 - yellow

B

716441 - white

716443

716444

716445

A

B

2x **A**

716421
716435
716437

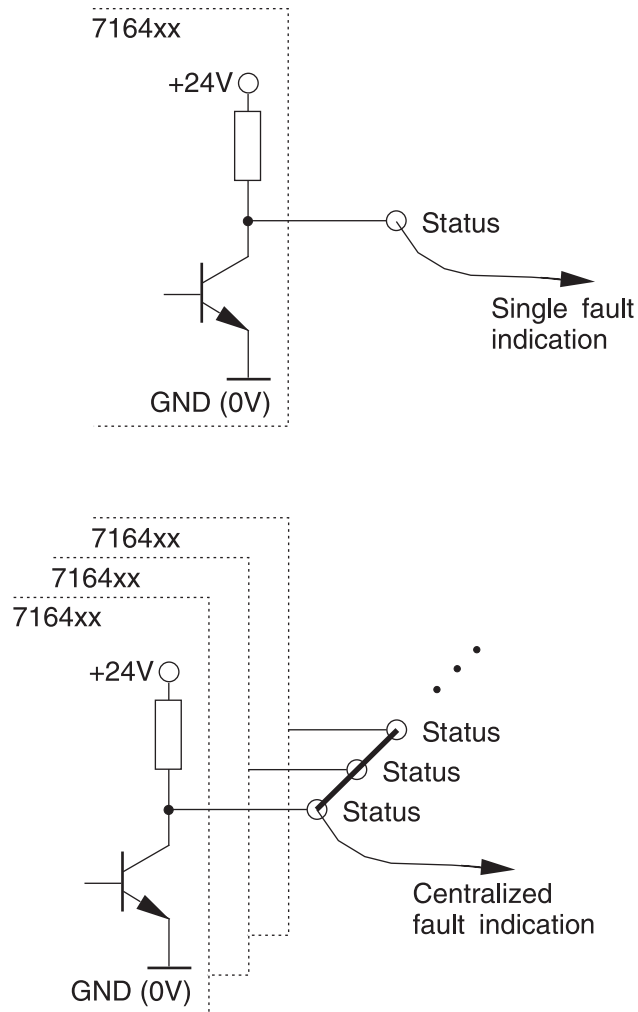
The graph shows the current I in Amperes [A] as a function of temperature θ in degrees Celsius [°C]. The current is zero for temperatures below -25 °C. At -25 °C, it jumps to 10 A and remains constant until 50 °C. Between 50 °C and 60 °C, the current decreases linearly from 10 A to 9 A. Above 60 °C, the current drops back to zero.

Temperature θ [°C]	Current I [A]
$\theta \leq -25$	0
-25	10
50	10
60	9
$\theta \geq 60$	0

LED green	ON	Function is OK*
LED green, flashing 1 Hz	Overload	Load above 90 % of I nominal
LED green, flashing 5 Hz	Overload	Load above 100 % of I nominal
LED red	OFF	Module switched off or acknowledged*
LED red, flashing 1 Hz	Overload	Output off due to overload/short circuit*
LED red, flashing 5 Hz	Error	Wiring error – feedback (internal error)
LED red, flashing shortly	OFF	Output off via remote set/reset
LED red/green, flashing 1 Hz	ON	Target settings via rotary switch deviate from actual settings. NOTICE: Switching off and on via pushbutton required.
Button ***	ON/OFF	Nominal operation: ON/OFF
	Load monitoring tripped:	1st push: acknowledge
		2nd push: ON
Rotary Switch (I) – Switch Position**		
		Rated current

For further information see also the operating instructions

Signal output



Mounting diagram

