

Technical data sheet

Load monitoring · LOCC-Box-Net

Electronic circuit breaker rated up to DC 10 A, with communication, without rotary switch

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

Adjustable characteristic: fast, medium, slow 1, -2, -3



Identification

Type	LOCC-Box-Net 7-6411
Part No.	716411

Product version

Hardware revision	2.0
Software version	2.6
Datasheet version	03

Input

Type of function	1-channel 1 pin switching
Rated voltage U_N	DC 12/24 V
Operation voltage range	DC 10–32 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
OFF	Pulse with falling edge >100 ms, <800 ms
ON	Pulse with falling edge > 1 s

Output

Switching element	MOSFET
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Output current	Max. DC 10 A
Voltage drop	Max. 215 mV (10 A)
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 software, EtherCAT, Profibus, CANopen)
Characteristic	Fast (1), medium (2), slow 1 (3), slow 2 (4), slow 3 (5), (adjustable via software, EtherCAT, Profibus, CANopen), see 'characteristic curves'

Signal output

Signal level	DC 12/24 V: operating voltage on standby, no error, DC 0 V: error, output switched off, and manual "OFF" (parameterized)
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)
Color of the housing	Basalt grey
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
Relative air humidity	10 % – 95 %, without condensation
Vibration resistance	4 g acc. to EN 60068-2-6
Shock resistance	15 g acc. EN 60068-2-27

Certifications/Standards

Conformity	CE UKCA
Certifications	cULus (E135145) URus (E490188)

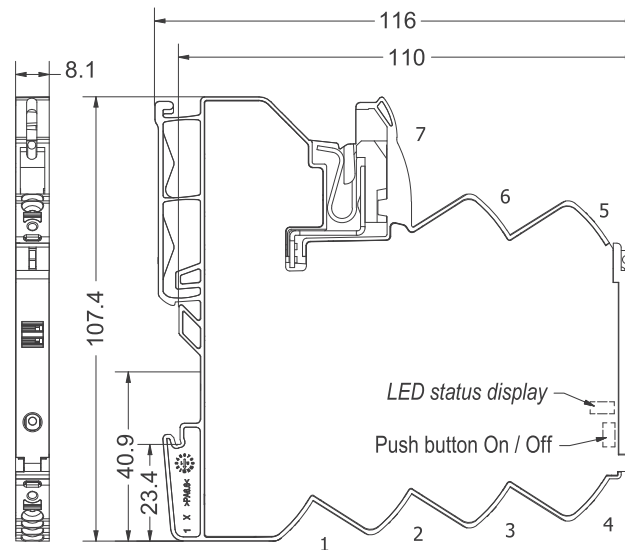
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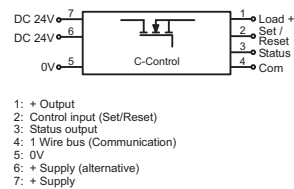
Standards

EN 61000-6-2
EN 61000-6-3
UL 60947-5-1
UL 2367
DNVGL-CG-0339
Temperature Class D – not certified
Humidity Class B – not certified
Vibration Class B – not certified
EMC Class A – not certified
Enclosure Class A – not certified

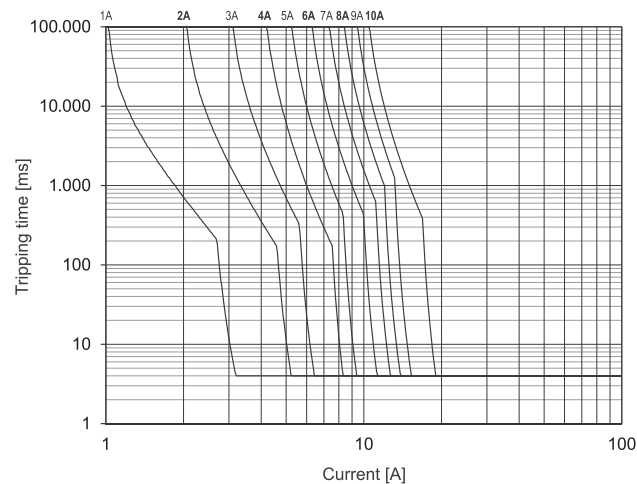
Dimensions



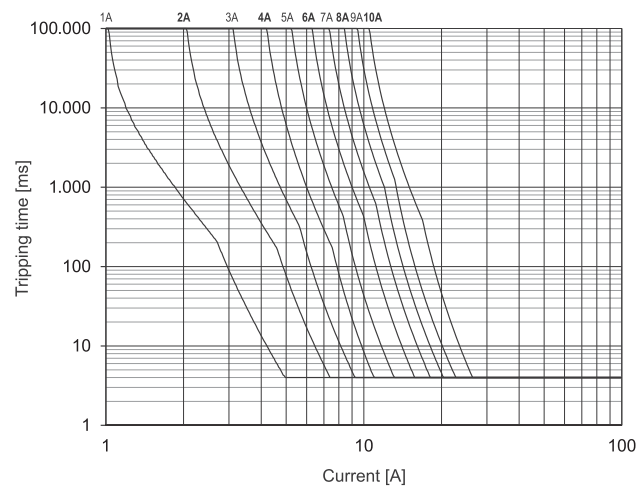
PIN assignment



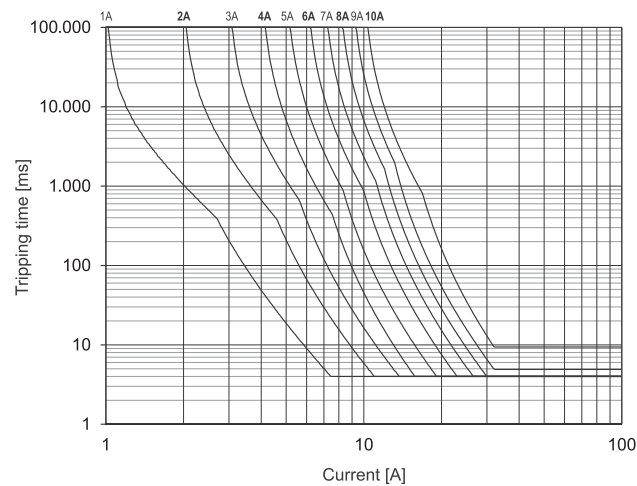
1: Characteristic fast



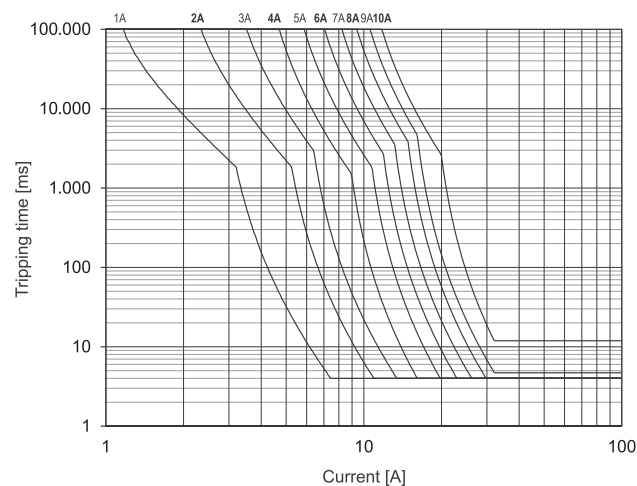
2: Characteristic medium



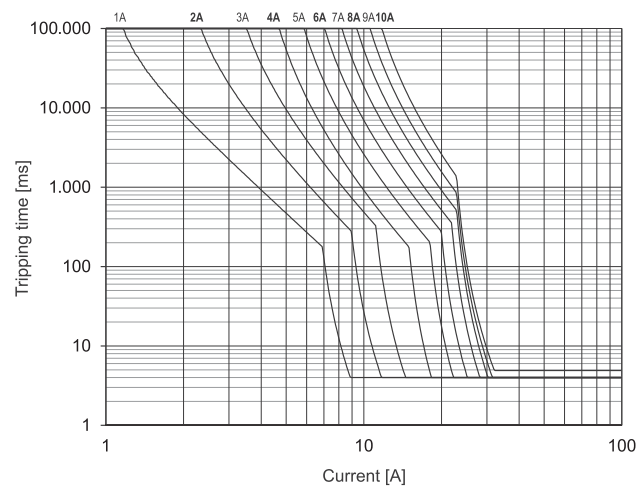
3: Characteristic slow-1



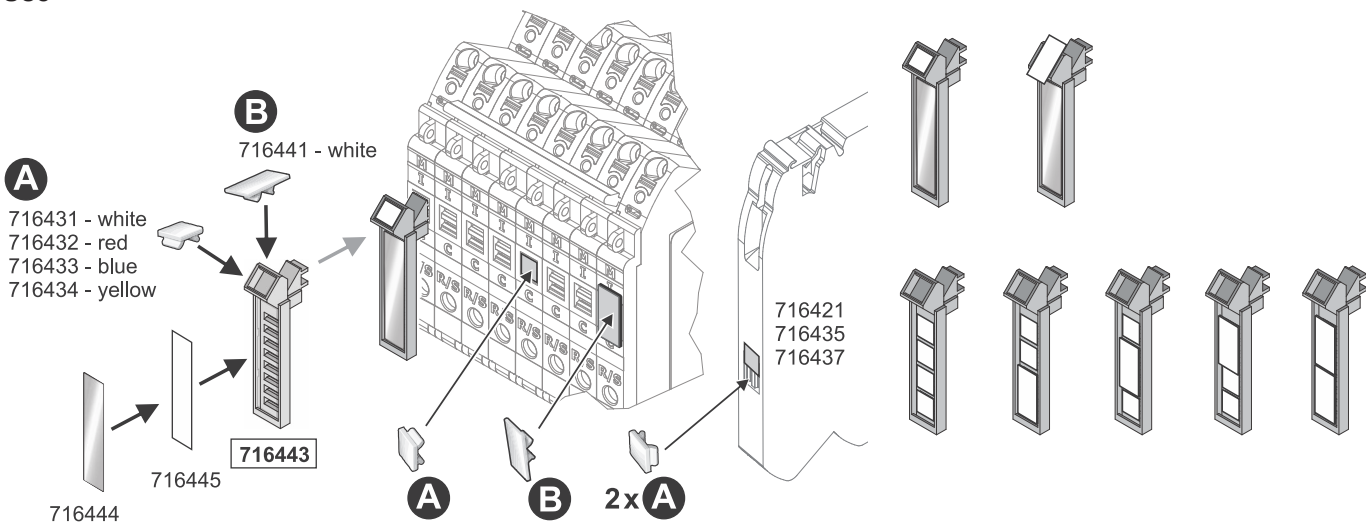
4: Characteristic slow-2



5: Characteristic slow-3



Use



LED status

LED Status, Button, Rotary Switch

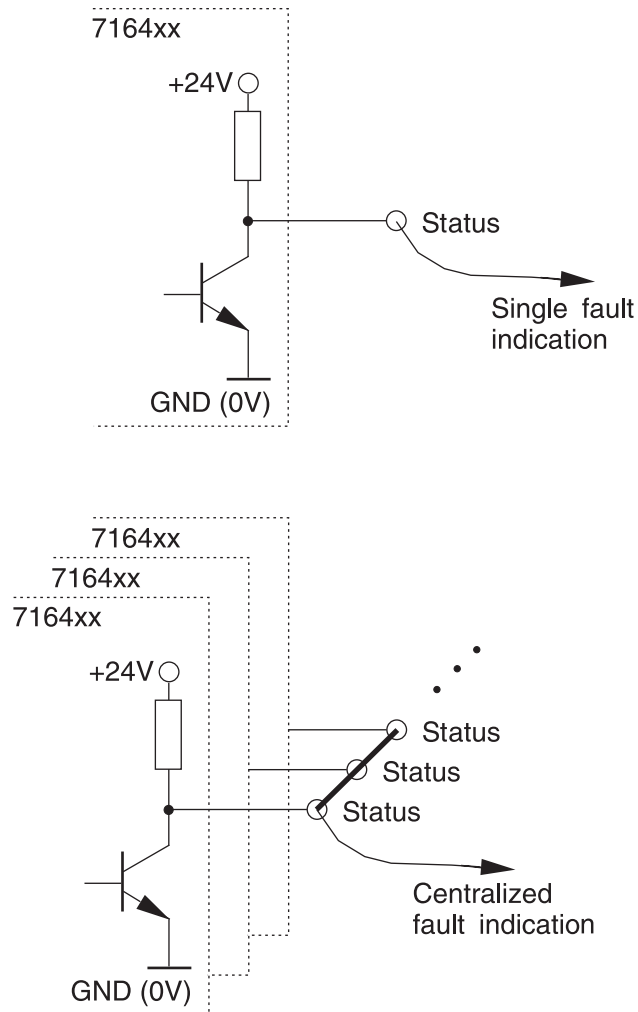
LED green	ON	Function is OK*
LED green, flashing 1 Hz	Overload	Load above 90 % of I nominal
LED green, flashing 5 Hz	Overload	Load above 100 % of I nominal
LED red	OFF	Module switched off or acknowledged*
LED red, flashing 1 Hz	Overload	Output off due to overload/short circuit*
LED red, flashing 5 Hz	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

* If the operating voltage is switched off, the last status is saved (Default).

** Master function - switch off via push button, can only be switched on again via push button

For further information see also the operating instructions

Signal output



Mounting diagram

