

Technical data sheet

Load monitoring · LOCC-Box-Net

Electronic load monitoring up to DC 10 A, with communication

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

Adjustable characteristics, fast, medium, slow 1, -2, -3



Identification

Type	LOCC-Box-Net 7-6410
Part No.	716410.0050

Product version

Hardware revision	2.0
Software version	2.6
Datasheet version	05

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
OFF	Pulse with falling edge >100 ms, <800 ms
ON	Pulse with falling edge > 1 s

Output

Switching element	MOSFET
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Part No. [716410.0050](#) • Datasheet version: 05

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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 switch in 1 A steps)
Characteristic	Fast (1), medium (2), slow 1 (3), slow 2 (4), slow 3 (5), can be configured (19) see 'characteristic curves'

Signal output

Signal level	DC 12/24 V: operating voltage on standby, no error, DC 0 V: error, output switched off or 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)
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)	50

General ambient conditions

Operation temperature range	-25 °C ... +50 °C
Storage temperature range	-40 °C ... +85 °C
Relative air humidity	10 – 95 % RH, brief condensation
Vibration resistance	4 g acc. to EN 60068-2-6
Shock resistance	15 g 11 ms acc. to IEC 60068-2-27

Certifications/Standards

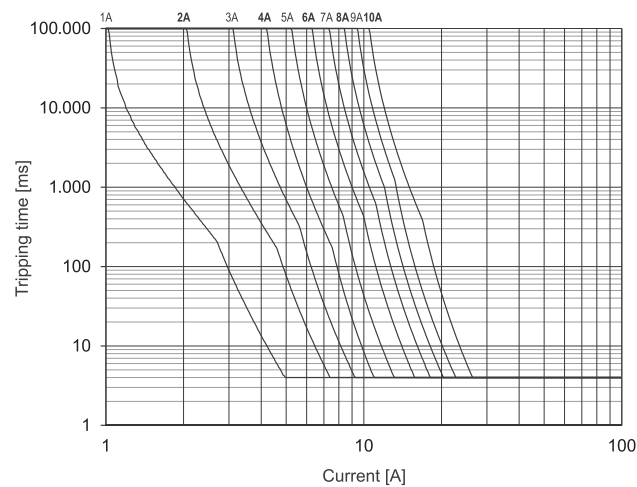
Conformity	CE UKCA
Certifications	cULus (E135145) URus (E490188) DNV (TAA0000162)
Standards	EN 61000-6-2 EN 61000-6-3 UL 60947-5-1 UL 2367 DNV-CG-0339

[illegible]

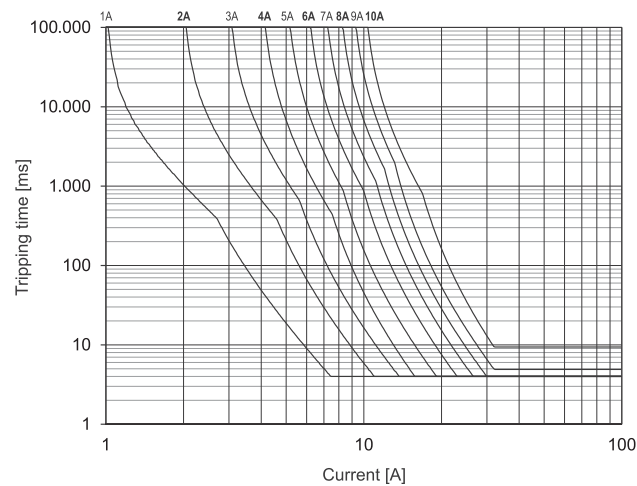
The diagram shows a rectangular module labeled "C-Control". On the left side, there are three pins: Pin 7 is labeled "DC 24V", Pin 6 is labeled "DC 24V", and Pin 5 is labeled "0V". On the right side, there are four pins: Pin 1 is labeled "Load +", Pin 2 is labeled "Set / Reset", Pin 3 is labeled "Status", and Pin 4 is labeled "Com". Inside the module, there is a schematic of a relay with a coil and two contacts. The coil is connected to pins 2 and 3. The contacts are connected to pins 1 and 4.

1: + Output
 2: Control input (Set/Reset)
 3: Status output
 4: 1 Wire bus (Communication)
 5: 0V
 6: + Supply (alternative)
 7: + Supply

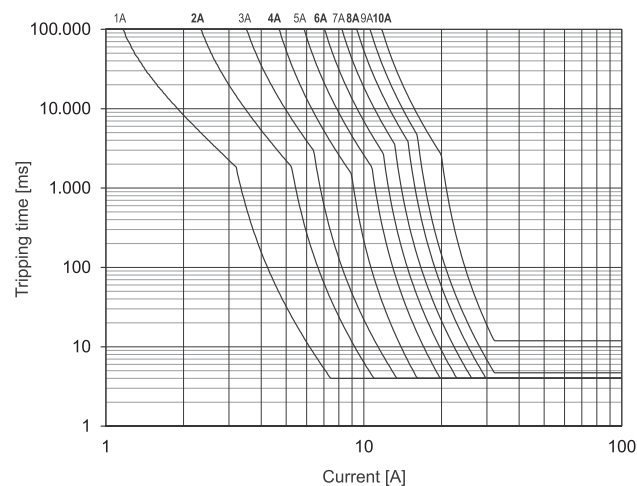
2: Characteristic medium



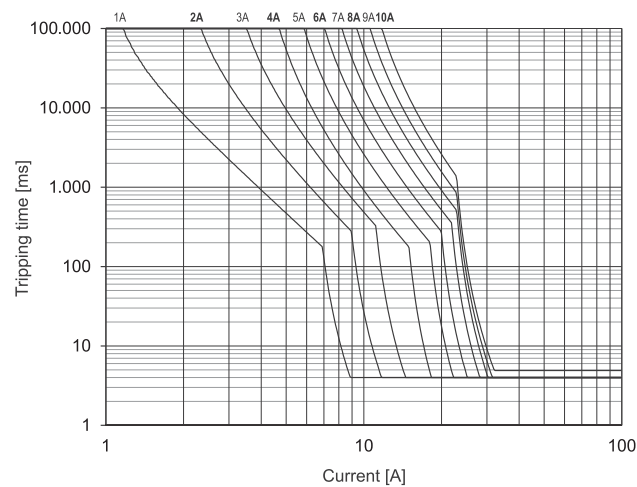
3: Characteristic slow-1



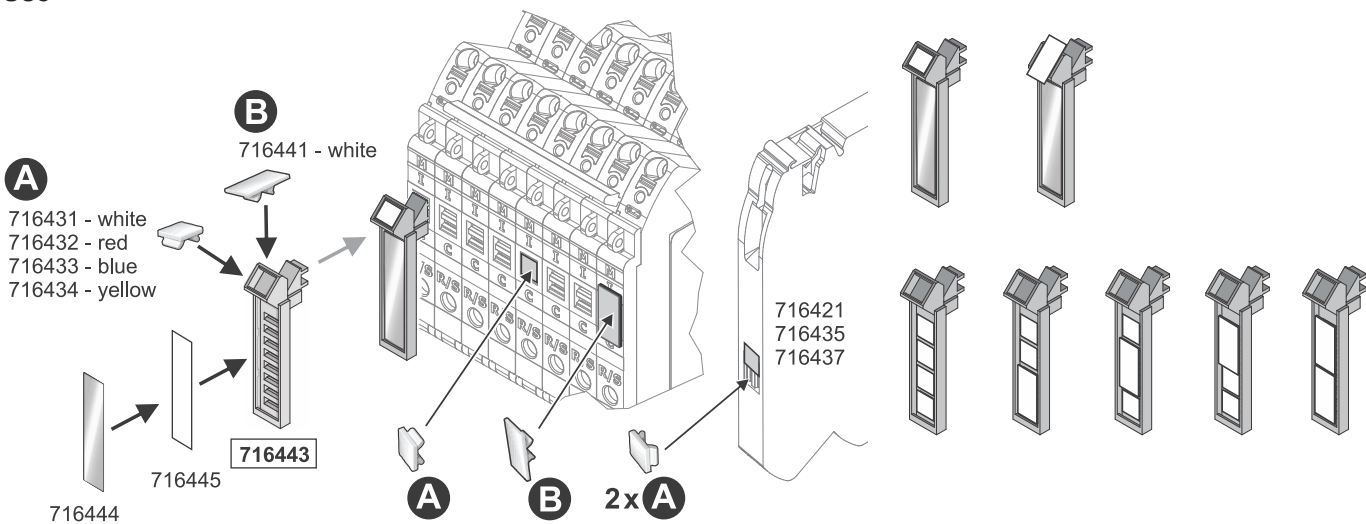
4: Characteristic slow-2



5: Characteristic slow-3



Use



LED status

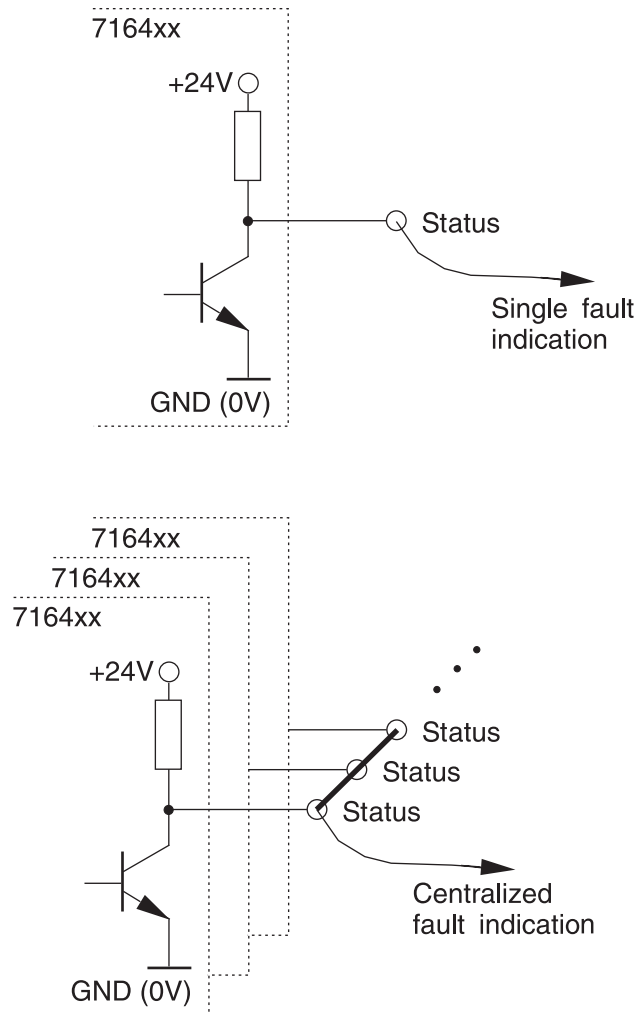
LED Status, Button, Rotary Switch

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
Rotary Switch (I) – Switch Position**	Rated current, see page 4.	
Rotary Switch (C) – Switch Position**	Characteristic: 1: fast 2: middle 3: slow-1 4: slow-2 5: slow-3	

* If the operating voltage is switched off, the last status is saved (Default).
** Accept the setting - after switching on again via the button, not by Remote Set/Reset
*** 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

