Technical data sheet

Load monitoring · LOCC-Box-FB48

Electronic circuit breaker rated up to DC 48 V to 6 A
Single-channel design, adjustable current range: DC 1 A – 6 A
Adjustable characteristics, fast, medium, slow 1, -2, -3

Identification

Type	LOCC-Box-FB48 7-6406
Part No.	716406

Product version

Hardware revision	2.3
Software version	2.3
Datasheet version	04

Input

Type of function	1-channel 1 pin switching
Rated voltage U_N	DC 48 V
Operation voltage range	DC 39–58 V
Rated current I_N	DC 6 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 48 V acc. to EN 61131
OFF	Pulse with falling edge >100 ms, <800 ms
ON	Pulse with falling edge > 1 s

Output

Switching element	MOSFET

United Kingdom: LÜTZE Ltd.
Unit 3, Sandy Hill Park
Sandy Way, Amington • GB-Tamworth, Staffs B77 4DU
Tel. +44 (0)1827 31333-0
www.lutze.com • sales.gb@lutze.co.uk

Germany: Friedrich Lütze GmbH
Postfach 12 24 (PLZ 71366) • Bruckwiesenstraße 17-19 • D-71384 Weinstadt
Tel. +49 (0)7151 6053-0
www.luetze.de • info@luetze.de

Output current	Max. DC 6 A
Voltage drop	Max. 310 mV (6 A)
Status display output	LED green: operating voltage present, no error LED red: error in load circuit
Switch-on capacity	1000 µF
Current range	1 A – 6 A (adjustable via switch in 1 A steps)
Characteristic	Fast (1), medium (2), slow 1 (3), slow 2 (4), slow 3 (5) see 'characteristic curves'
Current limitation	13.75 A
Power Dissipation	1,86 W

Signal output

Signal level	DC 48 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)
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 mm² – 2.5 mm² AWG 24 – AWG 14
Weight/unit	0.07 kg
PU (units)	1

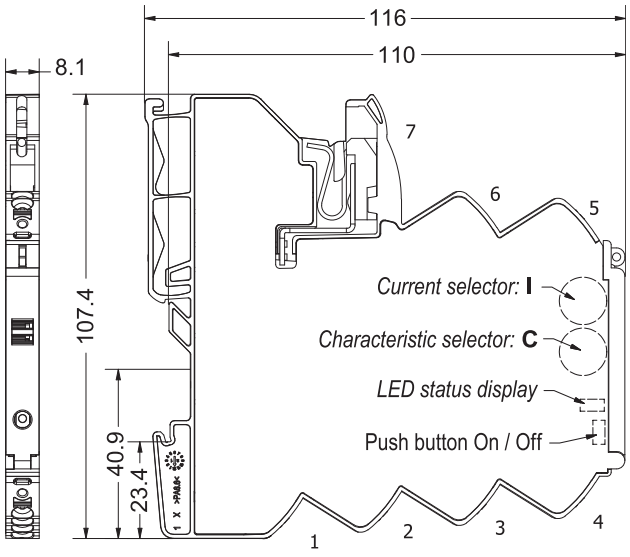
General ambient conditions

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

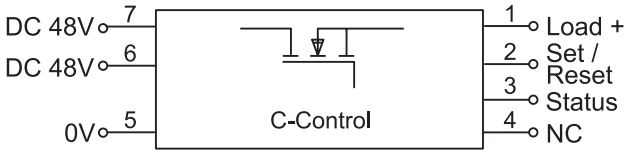
Certifications/Standards

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

Dimensions

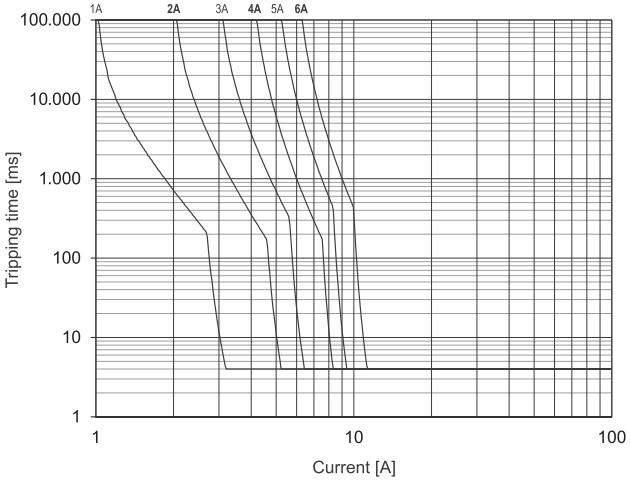


PIN assignment

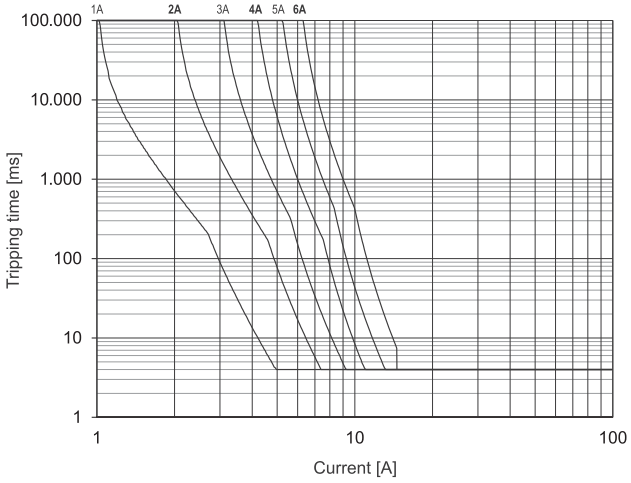


1: + Output
2: Control input (Set/Reset)
3: Status output
4: not used
5: 0V
6: + Supply (alternative)
7: + Supply

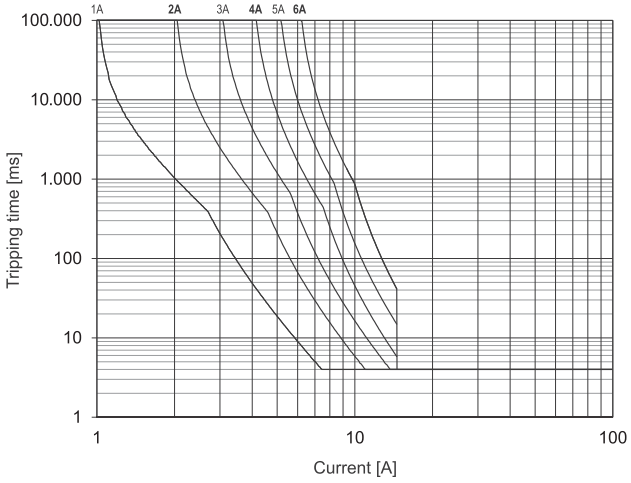
1: Characteristic fast



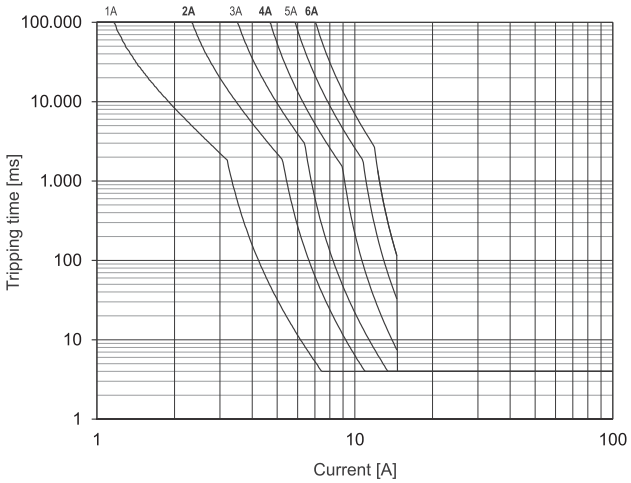
2: Characteristic medium



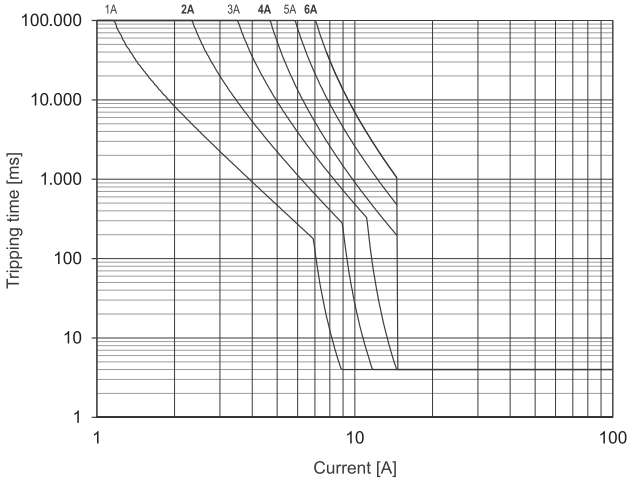
3: Characteristic slow-1



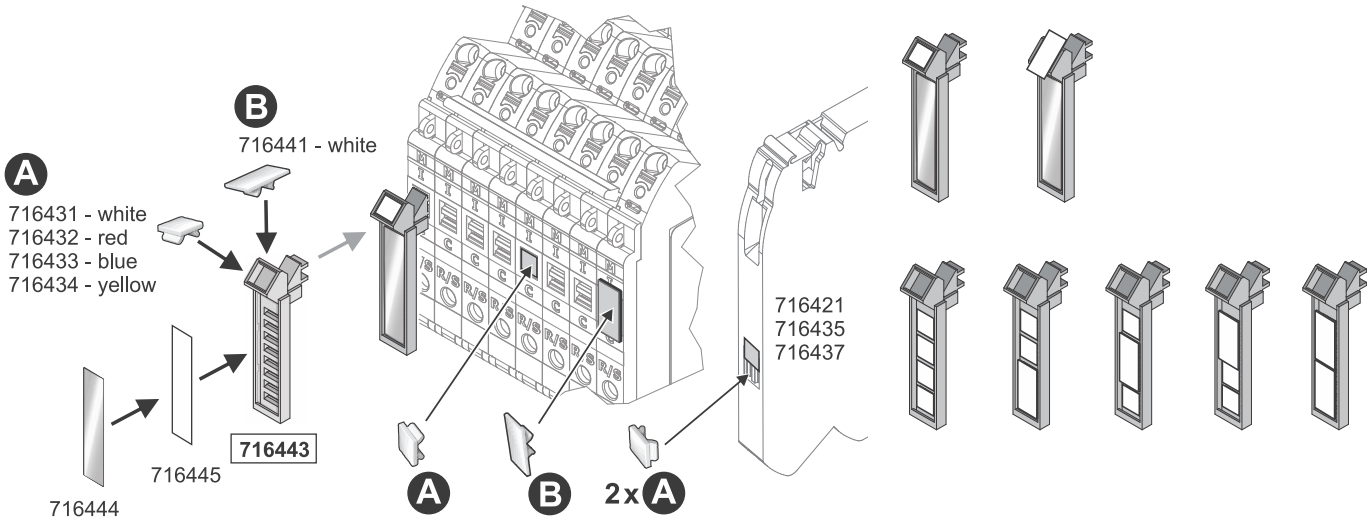
4: Characteristic slow-2



5: Characteristic slow-3



Use



LED status

DE LED Status, Taster, Drehschalter

LED grün	EIN	Funktion in Ordnung*
LED grün, blinkend 1 Hz	Überlast	Belastung über 90 % von I nenn
LED grün, blinkend 5 Hz	Überlast	Belastung über 100 % von I nenn
LED rot	AUS	Modul wurde ausgeschaltet oder quittiert*
LED rot, blinkend 1 Hz	Überlast	Ausgang ist abgeschaltet durch Überlast/Kurzschluss*
LED rot, blinkend 5 Hz	Fehler	Verdrahtungsfehler – Rückspeisung (interner Fehler)
LED rot, aufblitzend	AUS	Ausgang ist abgeschaltet durch Fern Set/Reset
Taster ***	EIN/AUS	Nennbetrieb: EIN/AUS Lastüberwachung hat ausgelöst: 1. tasten: quittieren 2. tasten: EIN
Drehschalter (I) – Schalterstellung**		Nennstrom: Siehe Seite 4
Drehschalter (C) – Schalterstellung**		Charaktertistik: 1: flink 2: mittel 3: träge-1 4: träge-2 5: träge-3

* Bei einer Unterbrechung der Betriebsspannung, wird der letzte Zustand gespeichert (Default)
** Übernahme der Einstellung nach erneutem Einschalten über den Taster, nicht durch Fern Set/Reset
*** Masterfunktion – Ausschalten über Taster, nur über Taster wieder einschaltbar

EN *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*
*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*

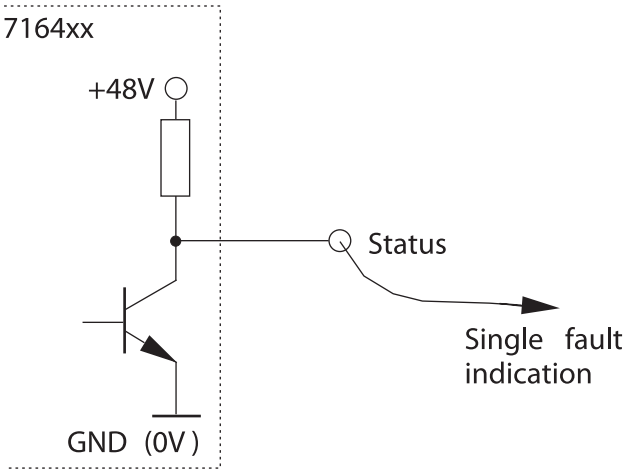
** If the operating voltage is switched off, the last status is saved (Default).*
*** Accept the setting - after switching on again via the button, not by Remote Set/Reset*
**** Master function - switch off via push button, can only be switched on again via push button*

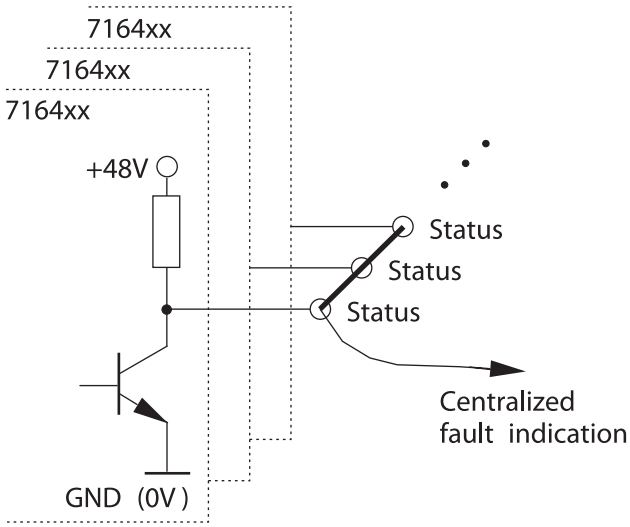
FR *LED état, Bouton, Commutateur rotatif*

LED verte	*Marche*	*Functionnement OK**
LED verte, clignote 1 Hz	*Sur charge*	*Le courant demandé est supérieur à 90% du réglage*
LED verte, clignote 5 Hz	*Sur charge*	*Le courant demandé est supérieur à 100% du réglage*
LED rouge	*Arrêt*	*Le module désactivé ou acquitté**
LED rouge, clignote 1 Hz	*Sur charge*	*La sortie est coupée par sur charge/courts-circuits**
LED rouge, clignote 5 Hz	*Erreur*	*Erreur câblage (alimentation de retour), erreur interne*
LED rouge, clignote courts	*Arrêt*	*Sortie désactivée par remote set/reset*
*Bouton ****	*Marche/Arrêt*	*Opération normale: marche/arrêt* *La surveillance de la charge a déclenché: 1ère pression: validation du défaut* *2ème pression: remise en marche*
*Commutateur rotatif (I) – Position***		*Courant nominal, page 4*
*Commutateur rotatif (C) – Position***		*Courbe: 1: rapide 2: moyenne 3: lente-1* *4: lente-2 5: lente-3*

** Interruption de la tension de fonctionnement, le dernir état est enregistré (par défaut)*
*** La modification du courant ou des courbes sont actives après validation par le bouton poussoir (off/on). Cette fonction n'est pas faisable par l'entrée déportée*
**** La fonction I/O dèportèe est achive que si le bouton poussoir est en position ON.*

Signal output





Mounting diagram

HINWEIS / NOTICE / AVIS