

## Technical data sheet

### Load monitoring · LOCC-Box

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Electronic load monitoring up to DC 10 A

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

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



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#### Identification

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Type LOCC-Box-FBK 7-6416  
Part No. [716416.001.1](#)

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#### Product version

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Hardware revision 2.0  
Software version 2.6  
Datasheet version 02

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#### Input

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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  
Reverse voltage protection internal electronics

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#### Control input (Set / Reset)

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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

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#### Output

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

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Part No. [716416.001.1](#) • Datasheet version: 02

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SYSTEMATIC TECHNOLOGY

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|                       |                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------|
| Status display output | LED green: operating voltage present, no error<br>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) see 'characteristic curves' |

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#### Signal output

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

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#### General

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|                        |                                                                          |
|------------------------|--------------------------------------------------------------------------|
| 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<br>(EN 60715)                                    |
| Installation position  | Any                                                                      |
| MTBF                   | 690000 h                                                                 |
| Degree of protection   | IP20 (only as complete system with power terminal and end block)         |
| Connection type        | Push-In<br>0.25 mm <sup>2</sup> – 2.5 mm <sup>2</sup><br>AWG 24 – AWG 14 |
| Weight/unit            | 0.07 kg                                                                  |
| PU (units)             | 1                                                                        |

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#### General ambient conditions

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|                             |                                   |
|-----------------------------|-----------------------------------|
| 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           |

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#### Certifications/Standards

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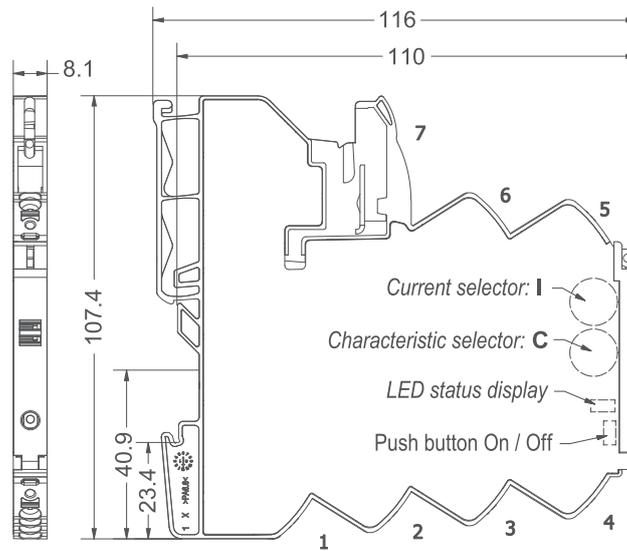
|                |                                                                                                                                                                                                                                                   |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conformity     | CE<br>UKCA                                                                                                                                                                                                                                        |
| Certifications | cULus (E135145)                                                                                                                                                                                                                                   |
| Standards      | EN 61000-6-2<br>EN 61000-6-3<br>UL 60947-5-1<br>DNVGL-CG-0339<br>Temperature Class D – not certified<br>Humidity Class B – not certified<br>Vibration Class B – not certified<br>EMC Class A – not certified<br>Enclosure Class A – not certified |

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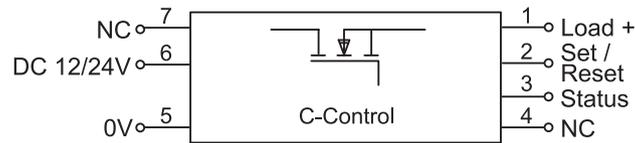
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### Dimensions

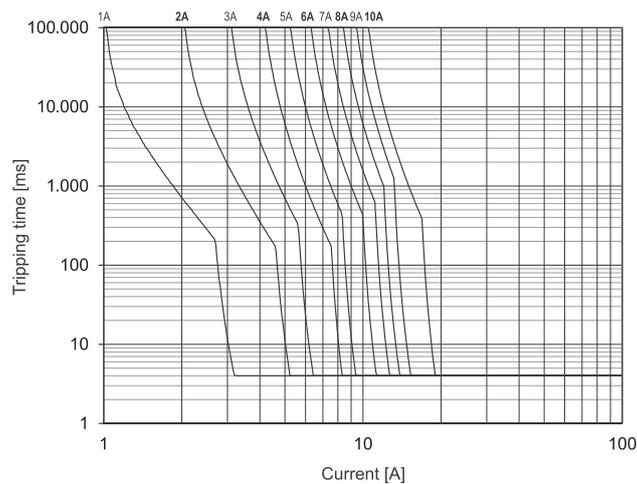


### PIN assignment

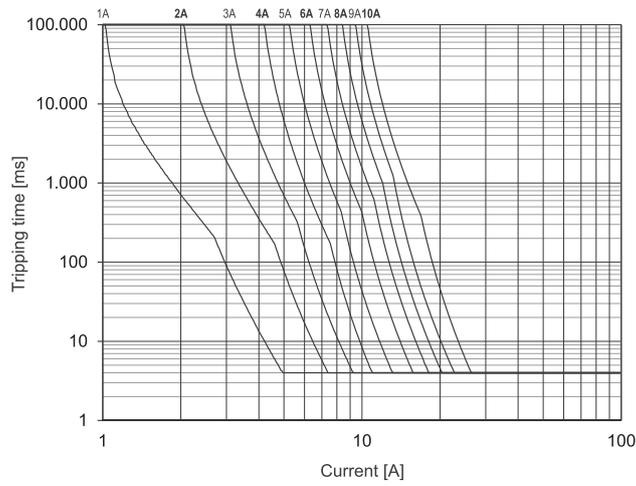


- 1: + Output
- 2: Control input (Set/Reset)
- 3: Status output
- 4: not used
- 5: 0V
- 6: + Supply
- 7: not used

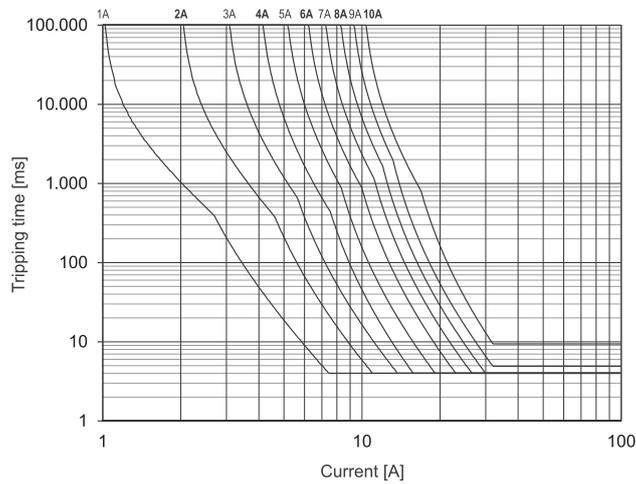
### 1: Characteristic fast



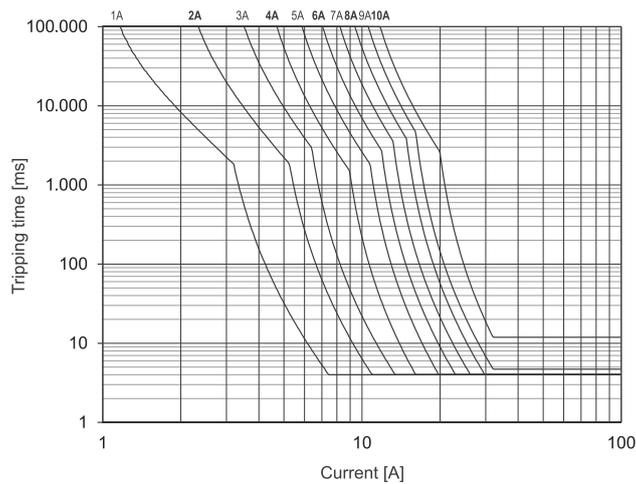
2: Characteristic medium



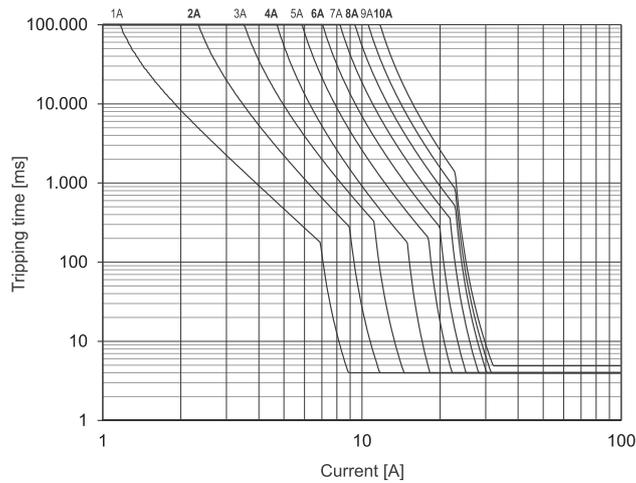
3: Characteristic slow-1



4: Characteristic slow-2



5: Characteristic slow-3



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. <b>NOTICE: Switching off and on via pushbutton required.</b> |
| Button ***                            | ON/OFF   | Nominal operation: ON/OFF<br>Load monitoring tripped: 1st push: acknowledge<br>2nd push: ON                                  |
| Rotary Switch (I) – Switch Position** |          | Rated current, see page 4.                                                                                                   |
| Rotary Switch (C) – Switch Position** |          | Characteristic: 1: fast 2: middle<br>3: slow-1 4: slow-2 5: slow-3                                                           |

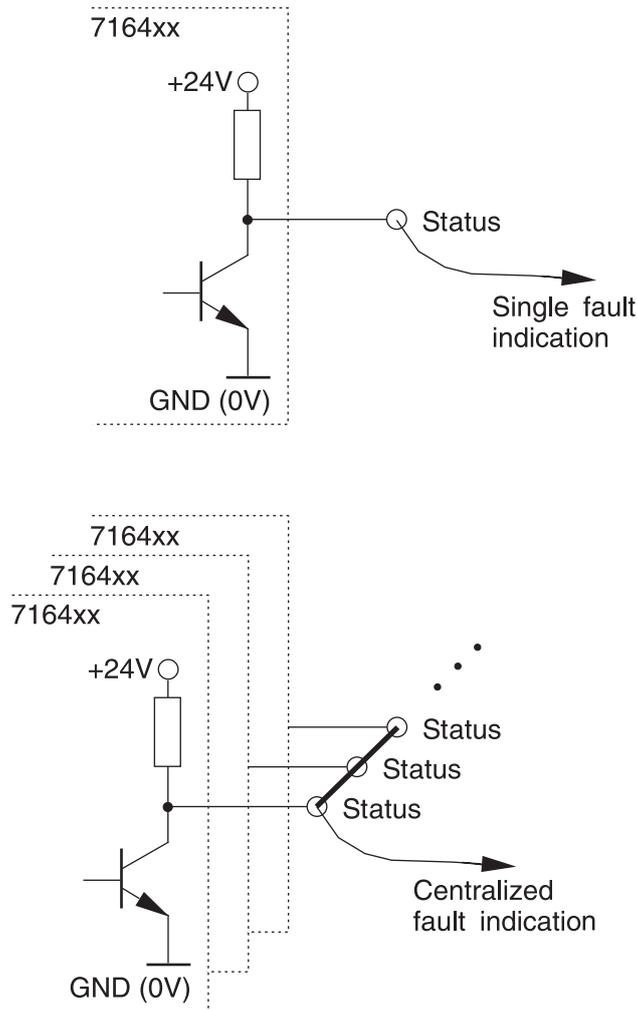
\* If the operating voltage is switched off, the last status is saved (Default).

\*\* 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

**! HINWEIS / NOTICE / AVIS**

