



BDF200-FB-NHK-WS20-LTBU-LTBU-G24

- integrated FB interface for connection to the Safety-Field-Box SFB
- Pos 1: E-STOP with protective collar
- Pos 2: Selector switch, 2 positions
- Pos 3: BLUE illuminated pushbutton
- Pos 4: BLUE illuminated pushbutton
- Indicator lamp G24 on top
- slender shock-proof thermoplastic enclosure
- to be installed at an ergonomic favourable position
- to be fitted to commercial-off-the-shelf aluminium profiles
- E-STOP with electronic OSSDs

Data

Ordering data

Product type description	BDF200-FB-NHK-WS20-LTBU-LTBU-G24
Article number (order number)	103025654
EAN (European Article Number)	4030661513881
eCl@ss number, version 12.0	27-37-12-16
eCl@ss number, version 11.0	27-37-12-16
eCl@ss number, version 9.0	27-37-12-16
ETIM number, version 7.0	EC000225
ETIM number, version 6.0	EC000225
Note (Ordering data)	Notice: see ordering code

Approvals - Standards

Certificates

TÜV
cULus

General data

Standards	EN ISO 13849-1 EN ISO 13850 EN IEC 60947-5-1 EN IEC 60947-5-5 EN IEC 61508
Climatic stress	DIN EN 60068
Housing material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Reaction time, maximum	50 ms
Duration of risk, maximum	100 ms
Positions used, position 1	Emergency stop, with protective collar
Positions used, position 2	Selector switch 2 positions
Positions used, position 3	Illuminated pushbutton, blue
Positions used, position 4	Illuminated pushbutton, blue
Gross weight	280 g

General data - Features

Serial diagnostics	No
Field box interface	1
Indicator lamp	Yes
Safety functions	Yes
Number of fail-safe digital outputs	2

Safety classification

Standards	EN ISO 13849-1 EN IEC 61508
Performance Level, up to	e
Category	4
PFH value	2.89×10^{-10} /h
Note (PFH-value)	up to max. 5,000 switching cycles/year
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)

Mechanical data

Mechanical life, Emergency-Stop button	100,000 Operations
Mechanical life, Command devices	1,000,000 Operations
Mounting	interior mounting holes
Type of the fixing screws	2x M5

Mechanical data - Connection technique

Terminal (mechanical)	Connector plug M12, 8-pole, A-coded
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Mechanical data - Dimensions

Width	40 mm
Height	69 mm
Depth	220 mm
Length x Width x Height	Depth: 233.5 - 252.5 mm (without and with indicator lamp)

Ambient conditions

Degree of protection	IP65
Ambient temperature	-25 ... +65 °C
Storage and transport temperature	-25 ... +85 °C
Resistance to vibrations	10 ... 150 Hz, amplitude 0.35 mm / 5 g
Resistance to shock	30 g / 11 ms
Protection class	III
Permissible installation altitude above sea level, maximum	2,000 m

Ambient conditions - Insulation values

Rated insulation voltage U_i	32 VDC
Rated impulse withstand voltage U_{imp}	0.8 kV

Overvoltage category	III
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Degree of pollution	3
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Electrical data

Operating voltage	24 VDC -15 % / +10 % (stabilised PELV power supply)
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No-load supply current I_0 , typical	35 mA
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Rated operating voltage	24 VDC
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Operating current	600 mA
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Required rated short-circuit current	100 A
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Time to readiness, maximum	2,000 ms
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Switching frequency, maximum	1 Hz
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Electrical data - Safety digital inputs

Designation, Safety inputs	X1 and X2
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Switching thresholds	–3 V ... 5 V (Low) 15 V ... 30 V (High)
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Current consumption at 24 V	5 mA
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Test pulse duration, maximum	1 ms
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Test pulse interval, minimum	100 ms
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Classification ZVEI CB24I, Sink	C1
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Classification ZVEI CB24I, Source	C1 C2 C3
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Electrical data - Safety digital outputs

Designation, Safety outputs	Y1 and Y2
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Design of control elements	short-circuit proof, p-type
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Voltage drop U_d , maximum	1 V
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Leakage current I_r , maximum	0.5 mA
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Voltage, Utilisation category DC-12	24 VDC
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Current, Utilisation category DC-12	0.25 A
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Voltage, Utilisation category DC-13	24 VDC
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Current, Utilisation category DC-13	0.25 A
Test pulse interval, typical	1000 ms
Test pulse duration, maximum	1 ms
Classification ZVEI CB24I, Source	C1
Classification ZVEI CB24I, Sink	C1

Electrical data - Serial diagnostic SD

Designation, Serial diagnostic SD	OUT
Operation current	10 mA
Design of control elements	short-circuit proof, p-type
Wiring capacitance	50 nF

Pin assignment

PIN 1	A1 Supply voltage UB
PIN 2	X1 Safety input 1
PIN 3	A2 GND
PIN 4	Y1 Safety output 1
PIN 5	OUT serial diagnostic output
PIN 6	X2 Safety input 2
PIN 7	Y2 Safety output 2
PIN 8	n.c.

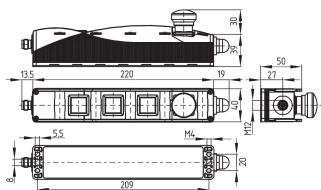
Pictures

Product picture (catalogue individual photo)



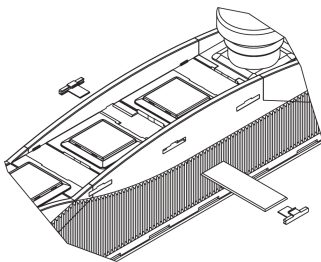
ID: kbdf2f03
| 1.5 MB | .jpg | 352.778 x 802.217 mm - 1000 x 2274 px - 72 dpi
| 26.1 kB | .png | 22.013 x 50.038 mm - 260 x 591 px - 300 dpi
| 125.1 kB | .png | 74.083 x 168.275 mm - 210 x 477 px - 72 dpi
| 49.5 kB | .jpg | 54.328 x 123.472 mm - 154 x 350 px - 72 dpi

Dimensional drawing basic component



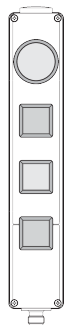
ID: 1bdf2g03
| 358.0 kB | .cdr |
| 14.8 kB | .png | 74.083 x 51.506 mm - 210 x 146 px - 72 dpi
| 164.7 kB | .jpg | 352.778 x 245.181 mm - 1000 x 695 px - 72 dpi

Operating principle



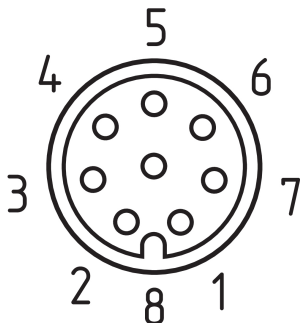
ID: kbdf-a08
| 284.5 kB | .jpg | 352.778 x 281.517 mm - 1000 x 798 px - 72 dpi
| 5.0 kB | .png | 74.083 x 59.267 mm - 210 x 168 px - 72 dpi

Clipart



ID: kbdf-c03
| 64.1 kB | .cdr |
| 7.7 kB | .png | 74.083 x 404.989 mm - 210 x 1148 px - 72 dpi

Contact arrangement



ID: km23-k8a
| 18.0 kB | .cdr |
| 5.5 kB | .png | 73.731 x 79.728 mm - 209 x 226 px - 72 dpi
| 155.6 kB | .jpg | 352.778 x 380.647 mm - 1000 x 1079 px - 72 dpi