General Data
Type Reference: B....439
Description: Contact Block
Approvals: CCC, CE
Protection class: II (protective insulation)
Operation travel: 3 mm
Connection type: Faston terminals 2.8x0.8 mm / PCB-mount terminals
Contact material: AgNi
Max. storage temperature: -50°C ... 85°C
Max. operating temperature: -30°C ... 70°C, without illumination
-30°C ... 55°C, using incandescent lamps
-30°C ... 65°C, using LEDs
Mechanical life: 1 m switching cycles
Contact resistance NO: < 20 mOhm (new state)
Contact resistance NC: < 20 mOhm (new state)
Min. current: 1 mA (under laboratory conditions)
Min. voltage: 5 V
Bouncing time NO: < 10ms
Bouncing time NC: < 20ms

Electrical data acc. to IEC/EN 60947-5-1 (VDE 0660 Sect. 200)
Rated insulation voltage Ui: 60V
Rated operating voltage Ue: 60V
Rated operating current Ie: 3A (inductive)
Continuous thermal current: 6 A

Technical Data - Lamp
Lamp socket: T5,5K / W2x4,6d
Max. lamp voltage: 60V
Max. lamp output: 1.2W
Definition: X1...anode, X2...cathode

Electrical Features
Rated voltage: 20mV ... 42V AC/DC
Rated current: 1mA ... 250mA
Contact resistance (new state): < 50 mOhm

Additional Electrical Data
Overvoltage category: II

Note
BZ....439 with two-piece plunger

Using a flyback diode, the DC lifetime can be considerably increased at inductive load.
The contacts of the “BZ....439” are, as defined in EN 60947-5-1 app. K, not designed as
positive opening contacts. Hence, they are not suitable for emergency-stop applications.
Mounting Instructions

1.

2.

3. Klick 20°
Contact Blocks
Faston terminals 2.8x0.8 mm

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|              | Contact Block, maintained 2NC+2NO | BF.439  
Faston terminals 2.8x0.8 mm  
suitable plug-in socket XAP8  
respectively suitable actuators  
contact material AgNi  
contact material AgNi, gold-plated |
|              | Illuminated Contact Block, maintained 2NC+2NO | BFL.439  
Faston terminals 2.8x0.8 mm  
suitable plug-in socket XAP10  
lamp socket W2x4,6d  
respectively suitable actuators  
contact material AgNi  
contact material AgNi, gold-plated |
|              | Illuminated Contact Block, maintained 2NC+2NO | BFL5.439  
Faston terminals 2.8x0.8 mm  
suitable plug-in socket XAP10  
lamp socket T5,5K  
respectively suitable actuators  
contact material AgNi  
contact material AgNi, gold-plated |
|              | Contact Block, momentary 2NC+2NO | BZ.439  
Faston terminals 2.8x0.8 mm  
suitable plug-in socket XAP8  
respectively suitable actuators  
contact material AgNi  
contact material AgNi, gold-plated |
|              | Illuminated Contact Block, momentary 2NC+2NO | BZL.439  
Faston terminals 2.8x0.8 mm  
suitable plug-in socket XAP10  
lamp socket W2x4,6d  
respectively suitable actuators  
contact material AgNi  
contact material AgNi, gold-plated |
## Contact Blocks

### Faston terminals 2.8x0.8 mm

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| ![Plug-in Socket](image1.png) | **Plug-in Socket**  
PCB-mount terminals with 10 pins | XAP10 |
| ![Plug-in Socket](image2.png) | **Plug-in Socket**  
PCB-mount terminals with 8 pins | XAP8 |
| ![Insulating Case](image3.png) | **Insulating Case**  
for Faston clamp FH2.8, slip on from the front | IH2.8 |
| ![Faston Clamp](image4.png) | **Faston Clamp 2.8 x 0.8 mm with snap-in pin**  
Cross section 0.75 - 1.50 mm², tin-plated brass, with pin to snapfit into the sockets XA, XAL and the insulating case IH2.8 | FH2.8 |
| ![Double Faston](image5.png) | **Double Faston**  
for the connection of 2 Faston clamps FH2.8 | FD2.8 |
| ![Ultra-bright LED](image6.png) | **Ultra-bright LED, W2x4,6d socket, 12V**  
with half-wave rectifier, for 12 V AC/DC (6/12 mA)  
When connecting to DC, the correct polarity must be observed:  
+ ... X1 / - ... X2  
storage temperature:  
-25°C ... +80°C  
ambient temperature:  
-20°C ... +60°C  
voltage tolerance:  
+ 10 %  
colour white | L2X4,6-12UW |
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<tr>
<td><img src="image1" alt="Ultra-bright LED, W2x4,6d socket, 24V" /></td>
<td>Ultra-bright LED, W2x4,6d socket, 24V with half-wave rectifier, for 24 V AC/DC (2/4 mA) When connecting to DC, the correct polarity must be observed: + ... X1/- ... X2 storage temperature: -25°C ... +80°C ambient temperature: -20°C ... +60°C voltage tolerance: + 10% colour white</td>
<td>L2X4,6-24UW</td>
</tr>
<tr>
<td><img src="image2" alt="Ultra-bright LED, T5,5K socket, 12V" /></td>
<td>Ultra-bright LED, T5,5K socket, 12V with integrated series resistor and half-wave rectifier, for 12 V AC/DC (7/14 mA) When connecting to DC, the correct polarity must be observed: + ... X1/- ... X2 storage temperature: -25°C ... +80°C ambient temperature: -20°C ... +60°C voltage tolerance: + 10% colour white</td>
<td>L5,5K12UW</td>
</tr>
<tr>
<td><img src="image3" alt="Ultra-bright LED, T5,5K socket, 24V" /></td>
<td>Ultra-bright LED, T5,5K socket, 24V with integrated series resistor and half-wave rectifier, for 24 V AC/DC (7/14 mA) When connecting to DC, the correct polarity must be observed: + ... X1/- ... X2 storage temperature: -25°C ... +80°C ambient temperature: -20°C ... +60°C voltage tolerance: + 10% colour white</td>
<td>L5,5K24UW</td>
</tr>
<tr>
<td><img src="image4" alt="Two-colour LED, T5,5K socket - 24V" /></td>
<td>Two-colour LED, T5,5K socket - 24V with integrated series resistor colour dependent on polarity Storage temperature: -25°C ... +80°C Ambient temperature: -20°C ... +60°C Voltage tolerance: + 10% Colour: red green Rated current [mA]: 14 13 Brightness [mcd]: 2300 630 Dominant wavelength: [nm] 625 525</td>
<td>L5,5K24RG</td>
</tr>
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## Contact Blocks

**Faston terminals 2.8x0.8 mm**

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| ![Ultra-bright LED](image) | **Ultra-bright LED**
solder pins, grid 2.54 mm
ready-made for CTP_485
3680 mcd white | LED3UW |
| ![LED Adapter](image) | **LED Adapter**
for LEDs of 3 and 5 mm Ø to be used in T5.5K sockets,
an external resistor must be provided.
lamp socket T5.5K | LA5,5 |
| ![Voltage Reducer (for LEDs)](image) | **Voltage Reducer (for LEDs)**
Faston terminals 2.8x0.8 mm
to operate a LED at 230V AC | VE_LED230 |
| ![Cable Set with Faston connections](image) | **Cable Set with Faston connections**
suitable for VE_LED230 | VE.VK2.8 |
| ![Cable Set with wire end ferrules](image) | **Cable Set with wire end ferrules**
suitable for VE_LED230 | VE.VKAE |