



## General Data

Type:	MT...
Description:	Modular contact block
Approvals:	CCC, CSA, ENEC05, KEMA, CE, TÜV_Süd, UL
Protection class:	II (protective insulation)
Operation travel:	6 mm
Connection type:	screw connection: min: 1 x 0.5mm <sup>2</sup> , 2 x 0.5mm <sup>2</sup> max: 2 x 2.5mm <sup>2</sup>
Contact material:	AgNi
Max. storage temperature:	-50°C ... 85°C
Max. operating temperature:	-30°C ... 85°C, without illumination -30°C ... 55°C, using incandescent lamps -30°C ... 65°C, using LEDs
Mechanical life:	1 million switching cycles
Electrical life (rated load):	1 million operations at rated load
Contact resistance NO:	< 20 mOhm
Contact resistance NC:	< 20 mOhm
Min. current:	1 mA (under laboratory conditions)
Min. voltage:	5 V
Bouncing time NO:	< 10ms
Bouncing time NC:	< 10ms
Positive opening contact:	acc. to EN60947-5-1, appendix K

## Electrical data acc. to IEC/EN 60947-5-1 (VDE 0660 Sect. 200)

	alternate current	direct current
Utilisation category:	AC15 A600	DC13 Q600
Rated insulation voltage Ui:	600 V	600 V
Rated operating voltage Ue:	240V / 440V	440V / 250V / 125V / 60V / 24V
Rated operating current Ie:	3A / 1.6A	0.12A / 0.2A / 0.4A / 1A / 2A
Breaking capacity:	10Ie	1,1Ie
Continuous thermal current:	16 A	

## Electrical data acc. to IEC/EN 61058-1 (VDE 0630 Sect. 1)

Rated voltage Ue:	250 V~ / 440 V~
Rated current Ie:	16(10) A / 10(6) A

## Technical Data - Lamp

Lamp socket:	BA9s
Max. lamp voltage:	250 V / (CSA max. 150V)
Max. lamp output:	2 W
Definition:	X1...anode, X2...cathode Electrical features - 5µm gold-plating, type addition ...AU
Switching voltage:	20mV ... 42V AC/DC
Switching current:	1mA ... 250mA
Contact resistance (new state):	< 50 mOhm

## General data

Tightening torque (screw terminal):	0.8...1.0 Nm
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Stripping length:	9 mm
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## Note

O = NC contact; I = NO contact; Z = permissive contact; ON = NC contact late break; IV = NO contact early make  
Min. operating temperature when assembled with KRJ...actuators: -40°C ...;  
Data sheet does not apply to the following type: MTOSFE

## Electrical data acc. to UL 508

Ratings:	A600, 600 V AC
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## Electrical data acc. to IEC/EN 60947-5-1 (VDE 0660 Sect. 200)

	AC15 A600	DC13
Utilisation category:	AC15 A600	DC13
Rated operating voltage Ue:	240V / 440V	12V
Rated operating current Ie:	3A / 1.6A	5A
Breaking capacity:	10Ie	1,1Ie

# Contact blocks M...

screw connections

made in germany



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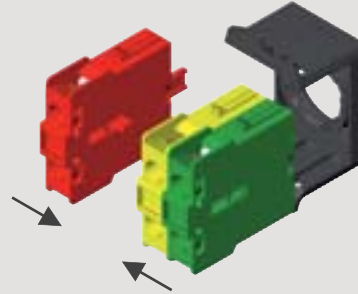
Enclosures

Pedal Switches

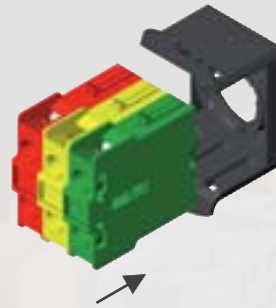
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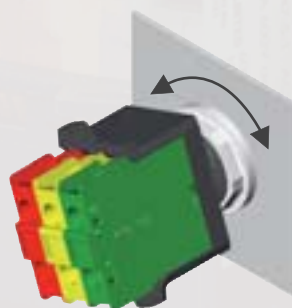
1.



2.



3.



4.

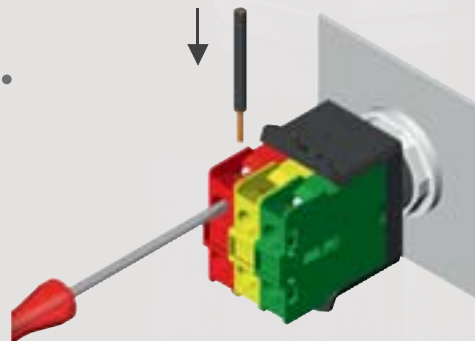
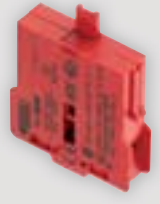
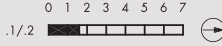
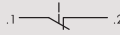


Illustration	Description	Type
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**IP00**

↓ 6 mm












**Modular contact block, momentary 1NC**  
screw connection 2x2.5mm<sup>2</sup>


suitable pushbuttons and switches:

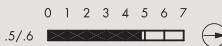











Contact material: AgNi **MT0**



**IP00**

↓ 6 mm












**Modular contact block, momentary 1NC late break**  
screw connection 2x2.5mm<sup>2</sup>


suitable pushbuttons and switches:

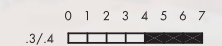
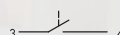










Contact material: AgNi **MT0N**



**IP00**

↓ 6 mm












**Modular contact block, momentary 1NO**  
screw connection 2x2.5mm<sup>2</sup>


suitable pushbuttons and switches:













Contact material: AgNi **MTI**



**IP00**

↓ 6 mm












**Modular contact block, momentary 1NO early make**  
screw connection 2x2.5mm<sup>2</sup>

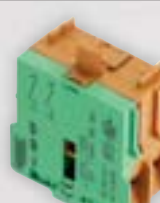
suitable pushbuttons and switches:

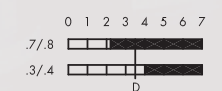
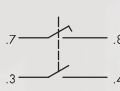










Contact material: AgNi **MTIV**



**IP00**

↓ 6 mm










**Modular contact block, momentary 1NO + 1NO early make**  
screw connection 2x2.5mm<sup>2</sup>  
with action point after the early make contact closes

suitable pushbuttons and switches:

Contact material: AgNi **MT97**

# Contact blocks M...

screw connections

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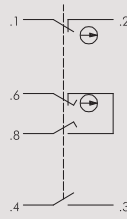
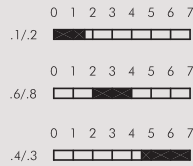
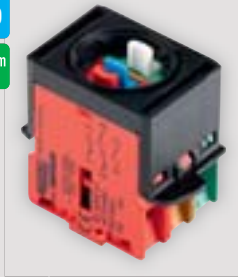
Illustration

Description

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IP00

↓ 6 mm



## Modular contact

### 1NC + 1NO + 1centre contact

screw connection 2x2.5mm<sup>2</sup>

- to be used with 3-position actuators with 1 plunger
- one contact is closed in each position
- no contact overlapping

suitable pushbuttons and switches:

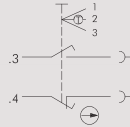
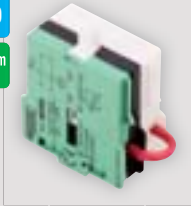


Contact material: AgNi

MHW31

IP00

↓ 6 mm



## Modular contact block, momentary, with enabling function

### 1 permissive contact (1NC + 1NO)

screw connection 2x2.5mm<sup>2</sup>

3-position enabling contact block acc. to EN 60947-5-8

Permissive Contact: yes



suitable pushbuttons and switches:

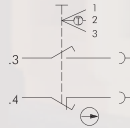
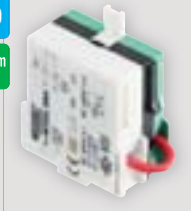


Contact material: AgNi

MTZU

IP00

↓ 6 mm



## Modular contact block with enabling function (usable with module holder MHR\_5 for 2 channels)

### 1 permissive contact (1NC + 1NO)

screw connection 2x2.5mm<sup>2</sup>

3-position enabling contact block acc. to EN 60947-5-8

two MTZU\_564 and one MHR5 are required for 2 channels



suitable pushbuttons and switches:

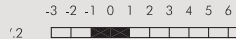


Contact material: AgNi

MTZU\_564

IP00

↓ 6 mm



## Self-monitoring emergency contact block, requires only one place in the module holder

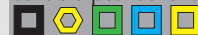
### 1NC (+ 1NO)

screw connection 2x2.5mm<sup>2</sup>

The safety contact permanently monitors the proper connection between the emergency-stop button and the contact element. If, due to a negligent assembly or mechanical damage, the emergency-stop button is separated from the contact element, the safety contact disconnects immediately and the machine is stopped.



suitable pushbuttons and switches:



Contact material: AgNi

MOTOSFE

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**Latch-type module**  
 screw connection 2x2.5mm<sup>2</sup>  
 when used as center element in the module holder it provides a maintained unit with the adjacent momentary-type modules

suitable pushbuttons and switches:




Colour: grey **MF**






**Latch-type lamp module**  
 screw connection 2x2.5mm<sup>2</sup>  
 max. 250V 2W  
 Lamp socket BA9s

suitable pushbuttons and switches:




Colour: yellow/grey **MFL**





**Lamp module**  
 screw connection 2x2.5mm<sup>2</sup>  
 max. 250V 2W  
 Lamp socket BA9s


suitable pushbuttons and switches/pilot light heads:




Colour: yellow **ML**



**Connection module**  
 screw connection 2x2.5mm<sup>2</sup>  
 serves to connect the illuminated emergency-stops via a screw terminal the connection module is snapped into the module holders MHR\_3 or MHR\_5 12-30V, AC/DC, max. 44mA



suitable pushbuttons and switches:



Colour: white **MAL**




**120V LED module**  
 screw connection

min: 1 x 0.5mm<sup>2</sup>, 2 x 0.5mm<sup>2</sup>

max: 2 x 2.5mm<sup>2</sup>  
 with ultra-bright LED, finger-protected screw connections and integrated bridge rectifier.  
 - operating temperature: -25...70 °C  
 - protection degree acc. to IEC/EN 60529: IP20  
 for 12-120V AC/DC, 8-12mA

suitable pushbuttons and switches/pilot light heads:



Colour: white **MLED12-120W**

# Contact blocks M...

screw connections

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Illustration

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IP20



## 24V LED module

screw connection

min: 1 x 0.5mm<sup>2</sup>, 2 x 0.5mm<sup>2</sup>

max: 2 x 2.5mm<sup>2</sup>

with ultra-bright LED, finger-protected screw connections and integrated bridge rectifier.

- operating temperature: -25...70 °C
- protection degree acc. to IEC/EN 60529: IP20
- approvals: cCSAus, CE, GOST-R for 18-30V AC/DC, 8-14mA

suitable pushbuttons and switches/pilot light heads:



Colour: white

**MLED24W**

IP20



## 24V latch-type LED module

screw connection

min: 1 x 0.5mm<sup>2</sup>, 2 x 0.5mm<sup>2</sup>

max: 2 x 2.5mm<sup>2</sup>

similar to MLED24... but with latching function

suitable pushbuttons and switches/pilot light heads:



Colour: white

**MFLED24W**

IP20



## 230V LED module

screw connection

min: 1 x 0.5mm<sup>2</sup>, 2 x 0.5mm<sup>2</sup>

max: 2 x 2.5mm<sup>2</sup>

with ultra-bright LED, finger-protected screw connections and integrated bridge rectifier.

- operating temperature: -25...70 °C
- protection degree acc. to IEC/EN 60529: IP20
- approvals: cCSAus, CE, GOST-R for 230V AC, 16mA (50Hz)

suitable pushbuttons and switches/pilot light heads:



Colour: white

**MLED230W**

IP20



## 230V latch-type LED module

screw connection

min: 1 x 0.5mm<sup>2</sup>, 2 x 0.5mm<sup>2</sup>

max: 2 x 2.5mm<sup>2</sup>

similar to MLED230...but with latching function

suitable pushbuttons and switches/pilot light heads:



Colour: white

**MFLED230W**

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	<p><b>Module holder for 3 elements</b> with bayonet mount, to combine the modular contacts with the actuators</p>	<p><b>MHR_3</b></p>
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	<p><b>Module holder for 5 elements</b> with bayonet mount, to combine the modular contacts with the actuators</p>	<p><b>MHR_5</b></p>
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## Accessories

	<p><b>Ultra-bright LED, BA9s socket</b> with integrated bridge rectifier for 24V AC/DC, 15mA</p> <p>Colour: white</p>	<p><b>LD9-24UW</b></p>
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	<p><b>Mega-bright LED, BA9s</b> with integrated bridge rectifier for 24V .. 28V AC/DC, 15.5mA (typ. 24V)</p> <p>Colour: white</p>	<p><b>LD9-24MW</b></p>
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	<p><b>Ultra-bright LED, BA9s</b> with integrated single-wave rectifier for 230V AC, 3mA</p> <p>Colour: white</p>	<p><b>LD9-230UW</b></p>
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	<p><b>Flashing LED, BA9s</b> for 24V</p> <p>Colour: green</p> <p>          red</p> <p>          yellow</p>	<p><b>LB9-24G</b></p> <p><b>LB9-24R</b></p> <p><b>LB9-24Y</b></p>
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