

## KISSLING SINGLE POLE BI-STABLE RELAYS

### Series 30 / 200A - from TE Connectivity (TE)

The series 30 bi-stable relay meets even the most difficult operating requirements and is suited for various applications in severe conditions on commercial vehicles, buses, construction & agricultural vehicles, ground support equipment and fork lifts.

These relays are available with a wide variety of configuration options including different contact configurations and coil voltages to have the right product for your needs.

Other important advantages are low heat generation in the contact area based on low contact voltage drop, a compact design, silver alloy contact material and the use of mechanical and high thermal stability insulating compounds. Both the terminals and the housing are protected against corrosion. Furthermore, our relays are characterized by high shock and vibration characteristics and a low voltage drop.

By equipping the relays with blow-out magnets, contact voltages up to 250VDC are possible. The use of blow-out magnets is recommended for contact voltages over 40VDC and blow-out magnets are also recommended for inductive load applications to maintain long contact life at all voltages.

#### Features

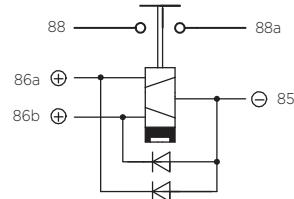
- Sealed housing conforms to IP6K9K
- Robust design
- Variety of configuration options
- 6G shock and 4G vibration resistant
- Main contact current rated for continuous current and 100% duty cycle

#### Applications

- Commercial vehicles
- Bus
- Lift truck
- Ground support equipment
- Construction and agricultural vehicles

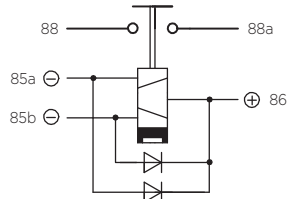
#### Circuits

##### NO-Contact Standard type



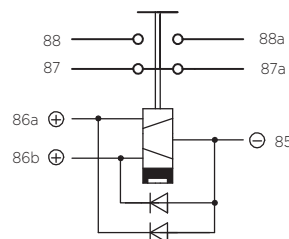
Suppression diode  
30-200-50

##### NO-Contact Special type reversed polarity



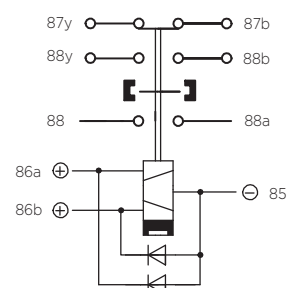
Suppression diode  
30-200-59

##### NO/NC-Contact



Suppression diode  
30-200-50

##### NO-Contact Auxiliary contact / Magnetic blowout



Suppression diode  
30-200-50

## Specification

### Technical Data

Temperature range	-40°C to +85°C
Protection	IEC 60529 / DIN 40050-9 / IP67 (0,2bar; 1min) and IP6K9K
Shock	6g / 11msec
Vibration	4g / 50 - 2000Hz
Thread sizes / Torque	M4 = 2.0 - 2.2Nm   M8 = 12 - 13Nm

### Electrical Characteristics

Min. Insulation resistance	100MΩ
After live or environment	50MΩ
Dielectric withstanding voltage	1050VAC / 1min at 50Hz
Max. Contact drop, initial	150mV
Contact drop after life test	175mV
Continuous current	200A
Overload	1600A - 1sec / 400A - 20sec

### Rated contact load 12 and 24 / 28VDC

Resistive load	50.000 cycles 200A
Mechanical life	100.000 cycles

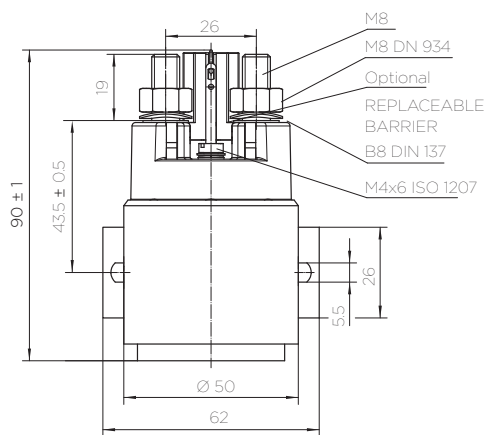
Coil Data	12VDC	24 / 28VDC	24VDC NO/NC	36VDC
Voltage range	9-16VDC	18-32VDC	18-32VDC	27-48VDC
Nominal voltage	12VDC	28VDC	24VDC	36VDC
Pick up voltage	≥ 9VDC	≥ 13VDC	≥ 13VDC	≥ 20VDC
Drop out voltage min.	≥ 7VDC	≥ 10VDC	≥ 10VDC	≥ 15VDC
Pull in coil resistance	1.8Ω ± 20%	7.8Ω ± 20%	4.1Ω ± 20%	18Ω ± 20%
Pull in current approx.	6.6A	3.0A	5.8A	approx. 1.9A
Drop out coil resistance	2.0Ω ± 20%	8.4Ω ± 20%	6.4Ω ± 20%	21.8Ω ± 20%
Drop out current approx.	6.0A	2.8A	3.7A	approx. 1.6A
Pick up impulse time approx.*	50ms	50ms	50ms	50ms
Drop out impulse time approx.*	50ms	50ms	50ms	50ms

\* (continuous impulse max.1 min)

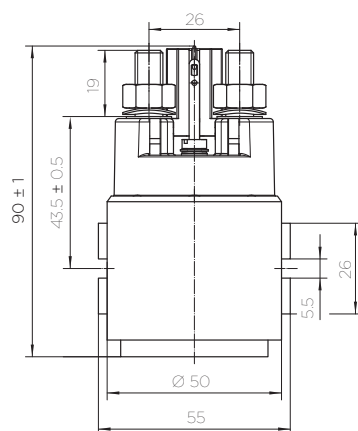
Operating times	NO-Contact	Changeover NO-Contact	Changeover NC-Contact
Operate	max. 15msec	max. 25msec	max. 30msec
Bounce	max. 5msec	max. 5msec	max. 8msec
Release	max. 10msec	max. 20msec	max. 35msec
Wire Section	min. 70mm <sup>2</sup> / 0.109 sq.inch / AWG 2-0		
Mounting position	optional		

## Technical drawings

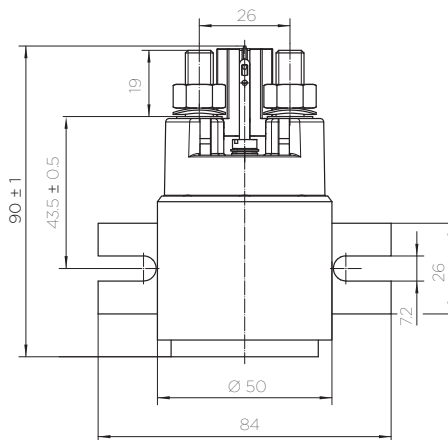
**Standard side mounting**



**Short form side mounting**

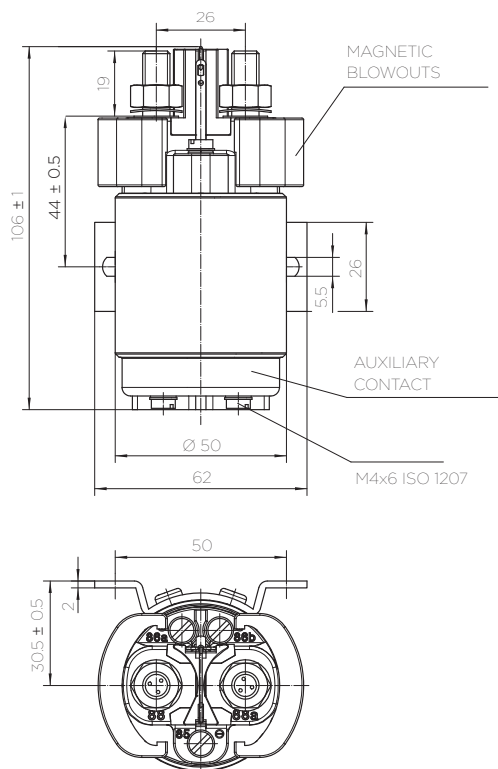


**Long form side mounting**

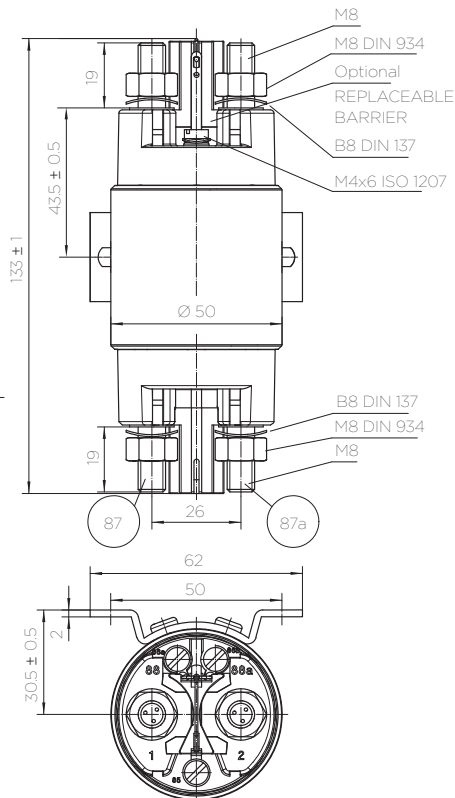


### Options:

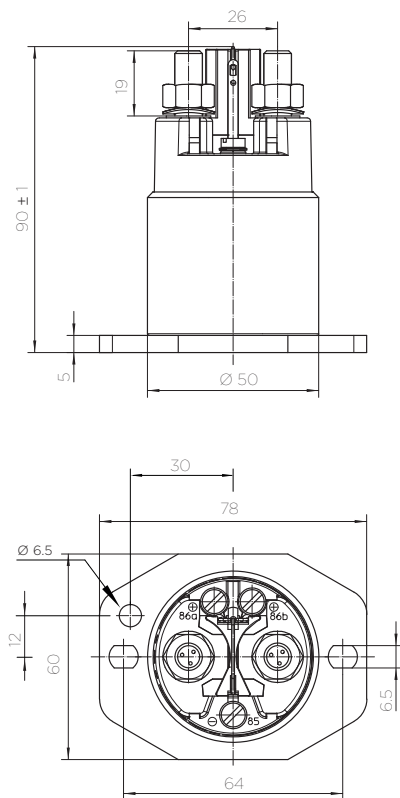
Auxiliary contacts, magnetic blowouts



### Change-over NO/NC



### Bottom mounting



Ordering Information

Part Number

example: 30.211.02

30.2\_\_.\_.\_.\_

Current

2	Current 200A
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Contacts

1	Make contact NO
2	Change over NO/NC*

\* Only mounting type 1 possible

Mounting

1	Standard side mounting
2	Short form side
3	Bottom mounting
4	Long form side

Options

A	Auxiliary contacts* Make and Break = 2A Continuous current = 2AMP
B	Magnetic blowout (required over 40VDC)

\* Not possible for bottom mounting

Coil voltage

1	12V
2	24 / 28V

Suppression

0	Without suppression
1	With suppression

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