

KISSLING BI-STABLE RELAYS WITH INTERNAL CONTROL ELECTRONICS

Series 31 / ENERGY - from TE Connectivity (TE)

Our series 31 bi-stable power relay with internal control electronics is based on the Series 30 industrial relay and has all the same quality mechanical and electrical switching characteristics - but also features additional electronic functions.

This relay is particularly well suited for battery management and power distribution applications on commercial vehicles, buses, construction & agricultural vehicles, aircraft, ground support equipment and lift trucks.

Our robust design of our bi-stable relays provide a sealing rate of IP67 and IP6K9K (steam pressure cleaning) in accordance with IEC 60529 and DIN 40050-9. The series 31 includes power relays in nominal voltages of 12 & 24 V and nominal continuous amperages of 300 Amps. Contact voltages up to 250VDC with magential blowout (>40 VDC).

Features

- Sealed housing conforms to IP6K9K
- Robust design
- Variety of configuration options
- 6G shock and 4G vibration resistant
- “Energy” function for automatic shutoff in case of loss of power improves safety levels and reaction times in critical situations.

Applications

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

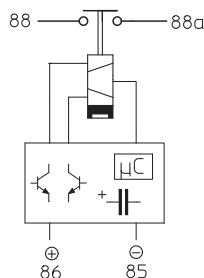
Electronic energy storage-control

The relay has only two control connections which make it possible to replace a standard monostable relay with a bi-stable relay providing the advantage of powerless holding.

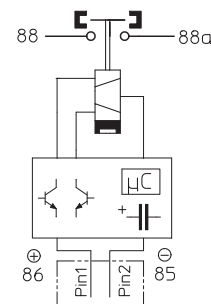
The internal capacitor is charged during the switch-on process. When the power supply is removed, the capacitor discharges the power into the drop out coil, which therefore switches off the relay. The characteristics of a standard bi-stable relay requires resupply of energy to drop out the coil. The electronics are short-circuit protected and feature safety coil selection, reverse polarity protection and coil cancellation.

Circuits

NO-Contact
Standard type



NO-Contact
Plugin connection /
Magnetic blowout



SERIES 31

300A - ENERGY

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 M10 = 15 - 20Nm

Electrical Characteristics

Min. Insulation resistance	100M Ω
After live or environment	50M Ω
Dielectric withstanding voltage	1050VAC / 1min at 50Hz
Max. Contact drop, initial	150mV
Contact drop after life test	175mV
Continuous current	300A
Overload	2400A - 1sec / 600A - 20sec
Quiescent current	approx. 2mA

Rated contact load	12 and 24 / 28VDC
Resistive load	50.000 cycles 300A
Mechanical life	100.000 cycles

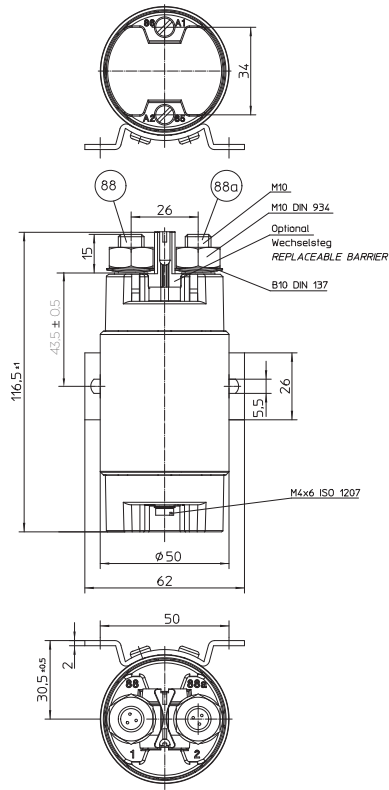
Coil Data	12VDC	24 / 28VDC
Voltage range	9-16VDC	18-32VDC
Nominal voltage	12VDC	28VDC
Pick up coil resistance	2.1 Ω \pm 20%	7.8 Ω \pm 20%
Drop out coil resistance	2.6 Ω \pm 20%	8.4 Ω \pm 20%

Operating times

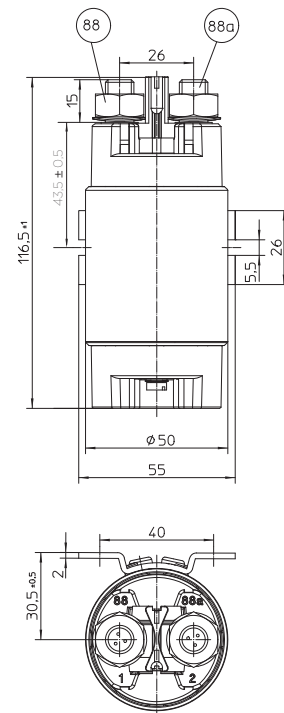
Min. pick up time	approx. 500msec
Bounce time	max. 5msec
Min. drop time	approx. 100msec
Wire Section	min. 95mm ² / 0.147 sq.inch / AWG 4-0
Mounting position	optional

Technical drawings

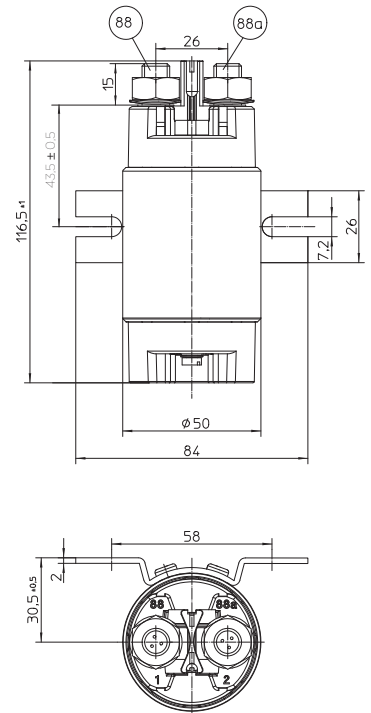
Standard side mounting



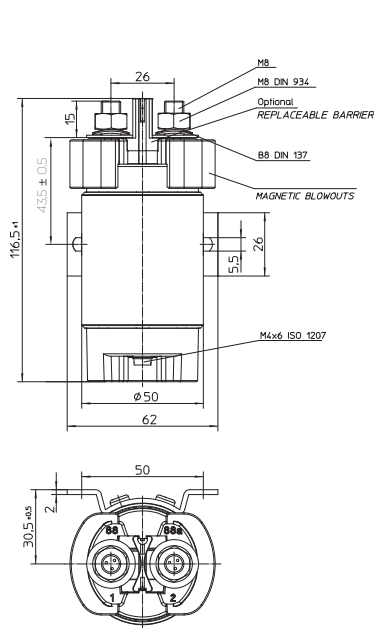
Short form side mounting



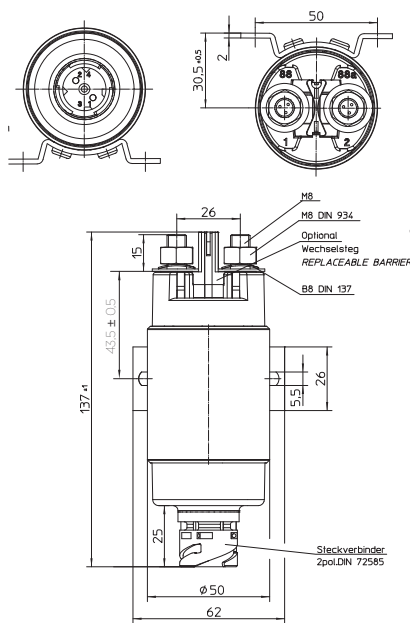
Long form side mounting



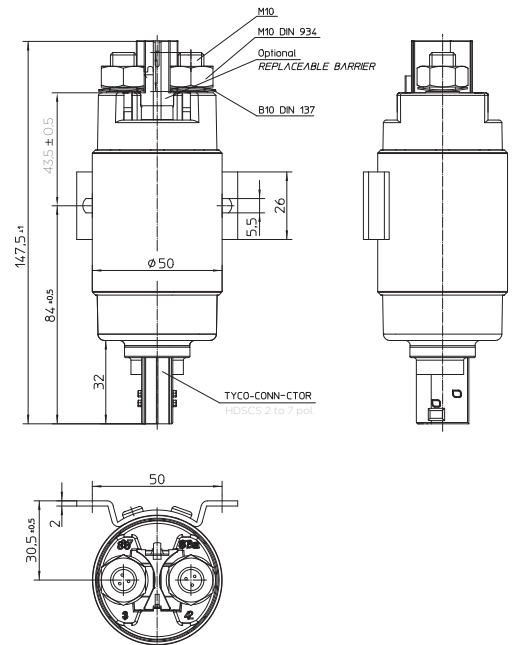
Options:
Magnetic blowouts



Options -9XX:
Bayonet connector DIN 72585



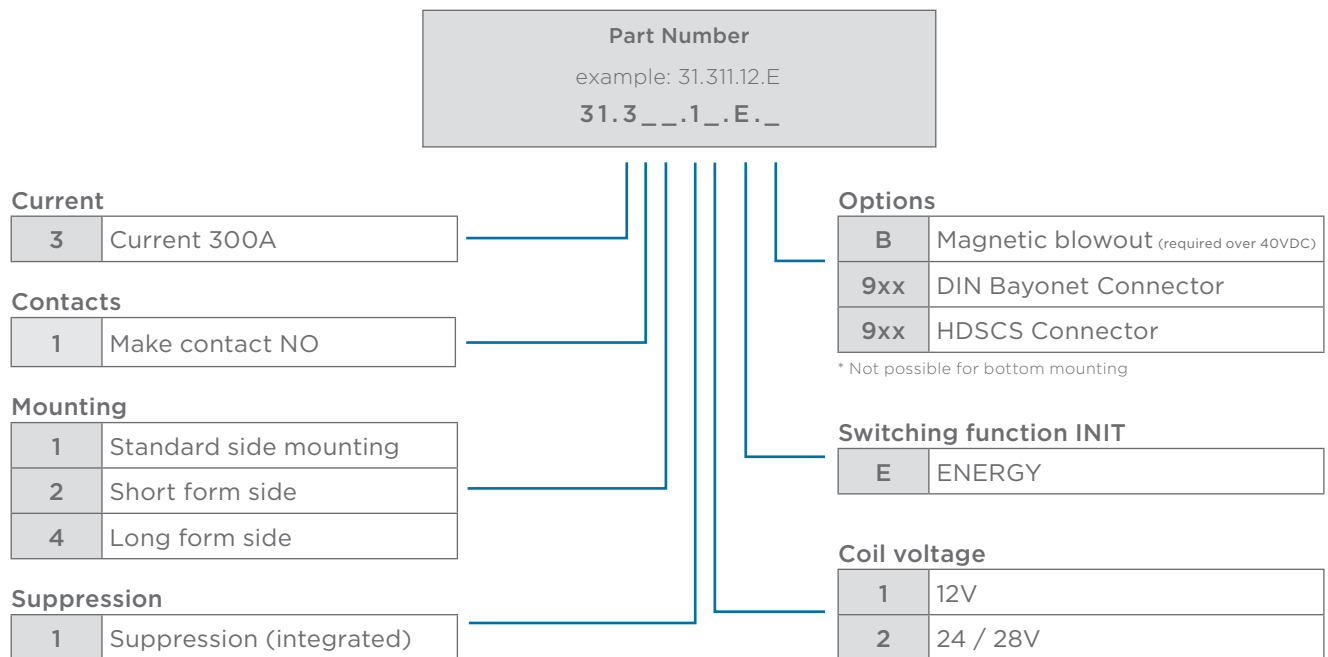
Options -9XX:
HDSCS connector



SERIES 31

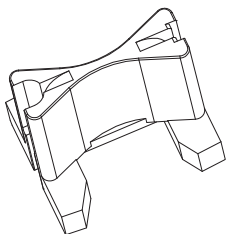
300A - ENERGY

Ordering Information



Accessories

Replaceable barrier
29-200-55



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