



KISSLING ELECTRONIC CONTROLLED BI-STABLE POWER RELAY

Series 30-BI-EC — 200A | 300A

- from TE Connectivity (TE)

Function guarded, sealed and electronic controlled bistable High Power Relays for safe usage within an electrical main system in areas of Defence, Aerospace, trucks, railway, construction machinery, ground support and lift trucks.

With the special magnetic circuit comparable parameters to our dual coil system Power Relays with identical ratings can be achieved. In particular high shock and vibration characteristics and low contact voltage drop. The permanent magnetic holding of contact state requires no power, which could result into additional power loss.

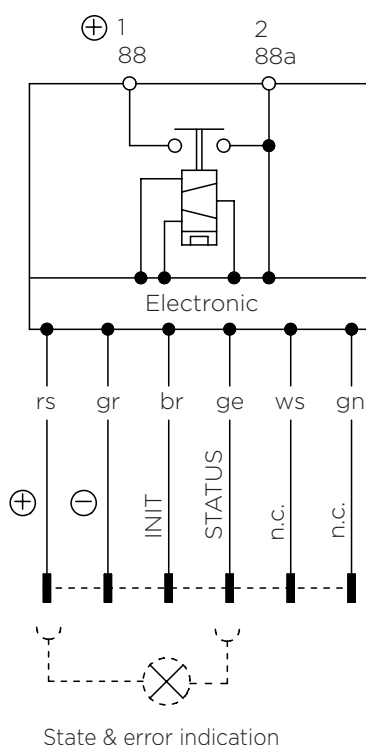
The robust design of our bistable Power Relays ensures a sealing rate of IP67 and IP6K9K (steam pressure cleaning) in accordance with IEC 60529 and DIN 40050-9.

Relays from this series are available in 200 Amps and 300 Amps continuous current ratings.

Features

- Sealed housing conforms to IP6K9K
- Robust design
- Resistance against most oils, fuels, hydraulic fluids, etc.
- Main contact current rated for continuous
- Current and 100% duty cycle
- High shock and vibration characteristics

Circuits



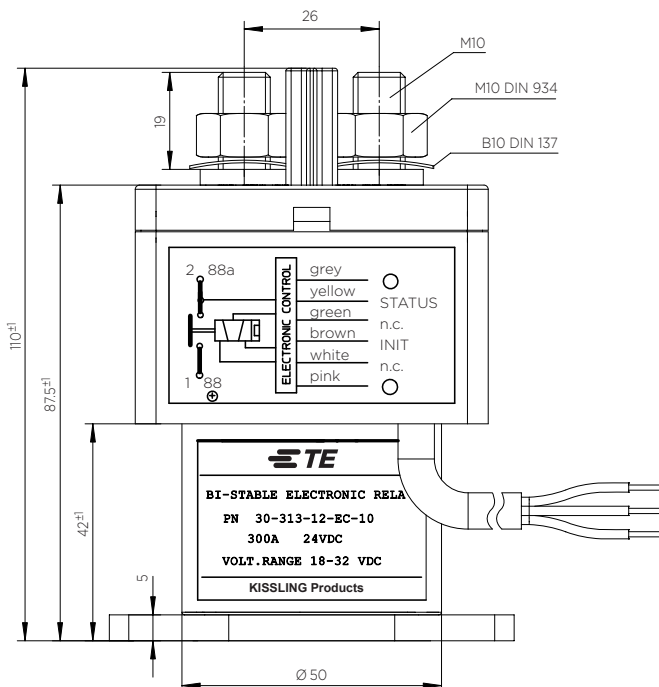
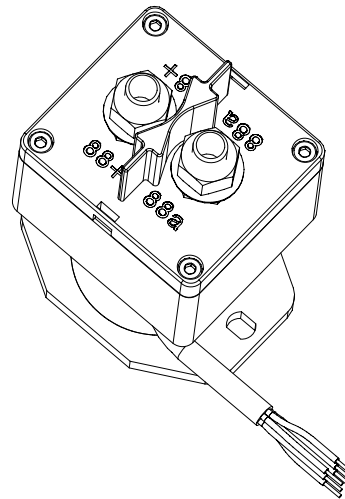
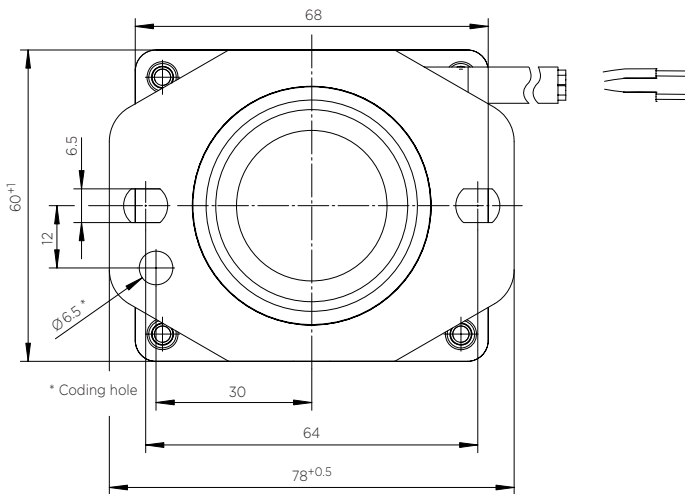
SERIES 30-BI-EC

200A/300A

Electronic Control Characteristics

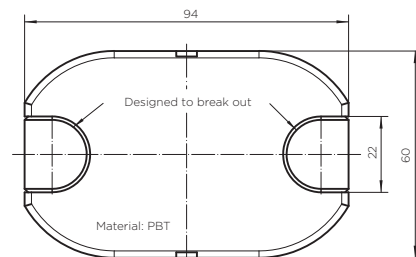
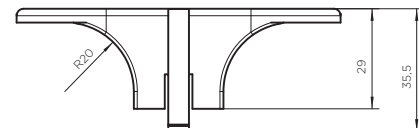
No - signal current	< 2mA
INIT	
Function	LOW → HIGH = ON / HIGH → LOW = OFF
Threshold	LOW < 0.5V / HIGH > 5V
Current consumption	4mA @ 24VDC / 5mA @ 28VDC
STATUS	
Current capability	40mA
Indication	o.k. = continuous / failure = intermittent
Screen time against spikes and bounce	100msec
Short circuit protected, integrated polarity protection	

Technical drawings



Accessories

Cover 30-211-93-004



Operation

A bistable relay that integrates a two coil featuring with permanent magnetic holding is the basis of this device.

The actuation of such relays is generated by impulses only. An impulse to the pull-in coil closes the relay contact, which remains in this position without any current by a permanent magnet. An impulse to the drop-out coil opens the relay contact. This position is supported by the permanent magnet also without current.

Designed for impulse actuation only, coil damage is possible by inappropriate actuation from faulty switches or pre longed impulse durations by manual actuating.

Supplemented with an electronic control, this bistable relay with the benefit of powerless holding has now advanced to a foolproof device.

Actuating and functioning is protected via the electronic control unit. Impulse actuation, pull-in and drop-out is secured against excessive actuating.

The electronic control function is set by signals via the INIT input, for example from an ignition key. Signals provided maybe permanent as the electronic unit reacts on signal level changes and emits controlling impulses to the corresponding coil.

LOW -> HIGH level change indicates an "ON" signal, HIGH -> LOW level change indicates an "OFF" signal. Therefore means it is possible to substitute an existing mono stable relay with "ON - OFF" actuation directly with the electronic controlled bistable relay.

Powerless ignition allows a direct correspondence with an onboard computer.

The main contact is also controlled by the integrated electronic unit. In the "ON" position the contact must have closed and must be opened at the "OFF" position. In the event of a contact malfunction a five cycle operation test is initiated to validate the desired configuration has been established and if not the STATUS indicates failure.

The STATUS function is designed for a 40 mA load carrying capability sufficient for LED use. In the relays "ON" position with main contacts closed the indication display continuously. Intermittent indication denotes a failure signal.

Supply inputs, MINUS and Continuous-Plus together with INIT and STATUS are connected via cable. If required, cable length can be variable and fitted with a customer specified connector.

Additional Functions

Extra functions i.e. time delay on make and/or break, additional processing of onboard information, electronic protected bypass solutions or software modifications in accordance with user's requirements are possible.

In addition current and/or voltage sensing can be realised. The current sensing can fulfil fuse functions. Current direction sensing monitors the state of charging and discharging.

Ordering Information

Description	Part Number
Electronic controlled bi-stable relay 200A	30.213.12.EC.10
Electronic controlled bi-stable relay 300A	30.313.12.EC.10

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