



INTRODUCTION FLYER

Power Relay F7 A Latching

TE Connectivity presents its first bistable automotive plug-in relay in the maxi class. The power relay F7 A latching is a bistable single-coil version realized with a permanent magnet. It expands the TE bistable relay portfolio with a plug-in version in the maxi class.

Bistable relays only need a short pulse of energy applied to the coil to change the switching state. It is not necessary for power to remain applied in order to maintain the switched state. Power consumption is very significantly reduced, especially for applications that must remain switched on over a long period of time. Power relay F7 A latching and other bistable relays offer several advantages over monostable (non-latching) variants. The decreased coil power requirement in bistable relays translates to reduced temperature rise. This means at the same ambient temperature a bistable relay can conduct higher continuous current than a monostable relay. If a bistable relay and a monostable relay are carrying equal continuous currents, the bistable relay may be used at higher ambient temperature. Additionally, the vehicle's energy consumption and thus the CO₂ emissions are considerably reduced.

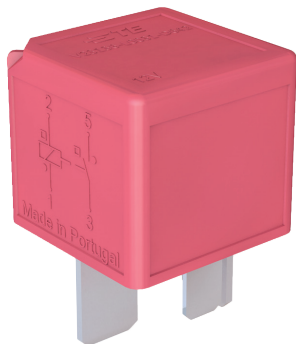
Given that relays consume up to 10% of a vehicle's electric power, the power relay F7 A latching offers considerable energy saving potential within the vehicle.



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 **TE** RELAY
connectivity PRODUCTS

Power Relay F7 A Latching



KEY FEATURES

- Magnetically latched, ISO plug-in relay
- One coil with set and reset function
- Pin assignment similar to ISO 7588 part 1
- 60A continuous current at 85°C
- Customized versions available (color, parallel or serial components etc.)
- Mini version (40A with 6.3mm terminals) available on request

MORE INFORMATION

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Data Sheet Link

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Tyco Electronics AMP GmbH certified acc. ISO 14001 and ISO/TS 16949:2002

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1308002-1 EVE 1 Issued 08-2012

APPLICATIONS

- Cross carline, e.g.
 - Power outlet switch off
 - Start-stop
 - Energy management

CONTACT DATA

- Contact arrangement: 1 form A (NO) contact
- Rated voltage: 12VDC
- Limiting continuous current: 80A at 23°C, 60A at 85°C, 35A at 125°C
- Limiting making/breaking current: 300/70A
- Limiting short-time current overload current, ISO 8820-3: 1.35 x 50A, 1800s; 2.00 x 50A, 5s; 3.50 x 50A, 0.5s; 6.00 x 50A, 0.1s
- Contact material: silver based
- Set/reset time: 2/1ms
- Mechanical endurance: >1x10⁷ operations

COIL DATA

- Magnetic system: bistable, single coil system
- Rated coil voltage/power: 12VDC
- Max. coil temperature: 155°C
- Polarity for set/reset energization: - pin 2, + pin 1/- pin 1, + pin 2

INSULATION DATA

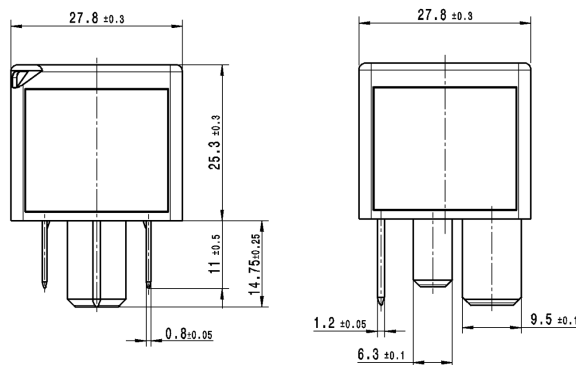
- Initial dielectric strength
 - between open contacts / contact and coil / adjacent contacts: 500Vrms

OTHER DATA

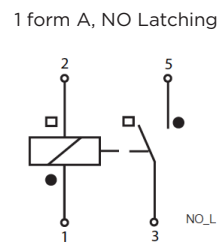
- Category of environmental protection, IEC 61810: RT1 – dustproof
- Degree of protection, IEC 60529: IP54 – dustproof
- Terminal type: Plug-in, quick connect

DIMENSIONS AND TERMINAL ASSIGNMENT

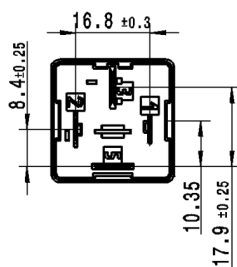
Dimensions



Terminal assignment



View of the terminals (bottom view)



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