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Contactors

R400 series

High-voltage relays
for test benches

Flyer R400.en



More information
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R400 High-voltage relays for test benches

The new, compact R400 high-voltage relay has been specially developed for use in test systems. Used there, the relays are required for testing electrical safety. The switching devices isolate all non-active components during the high-voltage and insulation test procedure. As part of the protective conductor test, they switch currents up to a maxi-

mum of 25 amps to the test object. Another area of application for the small switching device is its use as a precharging relay. This is because the relay is particularly advantageous in smaller traction applications or applications with traction batteries when only low precharging currents need to be switched.

- **Bi-directional high-voltage relay:** for effortless load disconnection regardless of polarity.
- **Contact bridge with solid contacts:** for uniform contacting, consistently low contact resistance and permanently low power dissipation.
- **Modularity:** 1 and 2 pole versions. Contact system configurable as normally open or changeover contact.

- **Coil drive:** with efficient electronic coil control for low pull-in and holding power.
- **Easy mounting:** DIN rail mounting according to industry standard. Connections for contact system and coil drive with flat tab terminals.

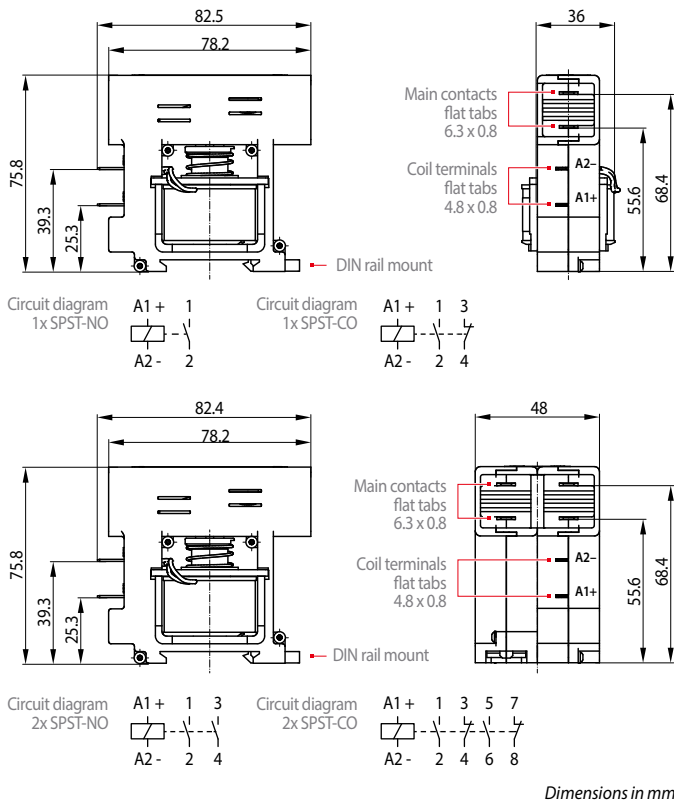
Ordering code

Example: **R411-25-24I**

Series	R400 High-voltage relay	Coil tolerance	-10 ... +10 %, with PWM module*2 -30 ... +25 %, with PWM module*1
Contact configuration	1 Main contacts NO 3 Main contacts CO	Coil voltage	Control voltage 24 V DC
Number of poles	1 1 pole 2 2 pole		
Conv. thermal current I_{th}	25 25 amps		

Note: Only preferred types are shown in this flyer. Minimum order quantities apply for some variants. Please also ask for your customised version.

Dimension diagram, circuit diagram



Specifications

R400 series	1 pole	2 pole
Type of voltage	DC bi-directional	DC bi-directional
Number of poles, configuration	1x SPST-NO/CO	2x SPST-NO/CO
Main contacts		
Nominal voltage	U_n	1,500 V
Rated operating voltage	U_e	1,500 V*4
Rated insulation voltage	U_i	1,500 V
Rated impulse withstand voltage	U_{imp}	10 kV*2
Pollution degree		PD2
Overvoltage category		OV2
Conv. free air thermal current	I_{th}	25 A*3 @ 4 mm ² min.
Rated short-time withstand current	I_{cw}	10,000 A @ t = 20 ms
Magnetic drive	Control voltage U_s	24 V DC @ 0 ... 40° C
Power consumption	Pull-in	<10 W max. @ 0.2 s*2
	Holding	<1 W*2
Tolerance	IEC 60947-4-1	-10 ... +10 % U_s *2
	IEC 60077-2	-30 ... +25 % U_s *1
	Electronic coil controller	PWM module
Vibration / Shock	IEC 61373	Category 1*1 / Class B*1
Mechanical endurance		3,000,000 operating cycles
Mounting position		horizontal, vertical (do not mount upside down)
Temperatures		0 °C ... +40 °C*2
Weight		290 g 350 g

*1 In preparation *2 Preliminary data *3 Higher currents on request
*4 Switching voltage up to 5,000 V on request