

# Special relay for alternating loads, for applications with pumps, compressors, air conditioning or refrigeration units

## Type 72.42

- Priority change relay
- 2 independent NO output, 12 A
- 4 functions
- 2 independent control signals, insulated from supply
- 110...240 V and 24 V AC/DC supply versions
- Modular housing, 35 mm wide
- 35 mm rail (EN 60715) mount
- Cd-free contact material



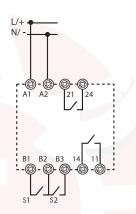
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72.42

• Multi-function (MI, ME, M2, M1)

72.42 Screw terminal





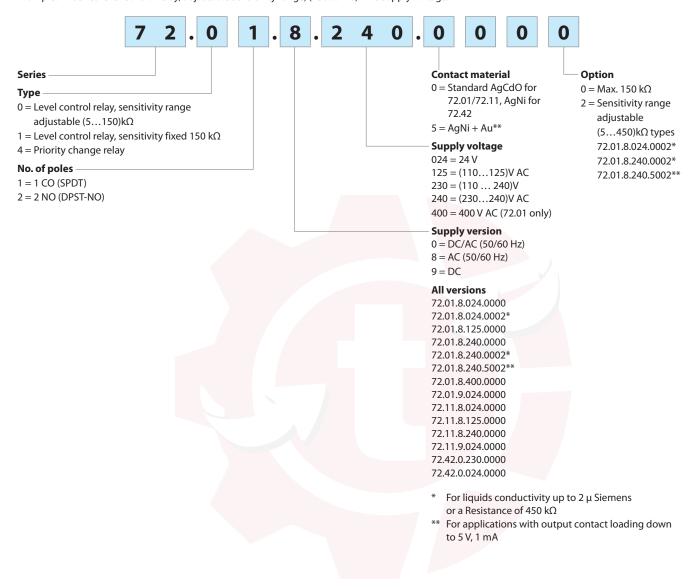
For outline drawing see page 10

For outline drawing see page	C 10					
Contact specification						
Contact configuration			2 NO (2 DPST-NO)			
Rated current/Max. peak cur	rent	А	12/20			
Rated voltage/ Max. switching voltage		V AC	250/400			
Rated load AC1 VA			3000			
Rated load AC15 VA			1000			
Single phase motor rating (2	30 V AC)	kW	0.55			
Breaking capacity DC1: 30/1	10/220 V	А	12/0.3/0.12			
Minimum switching load mW (V/mA)			300 (5/5)			
Standard contact material			AgNi			
Supply specification						
Nominal voltage (U <sub>N</sub> )	V AC (50/60	Hz) / DC	24	110240		
Rated power	in sta	nd-by W	0.12	0.18		
with 2 activ	ctive relays W/VA(50 Hz)		1.1/1.7	1.5/3.9		
Operating range	V AC (50/60 Hz)		16.828.8	90264		
	111	V DC	16.832	90264		
Technical data				AL		
Electrical life at rated load AC1 cycles			100 · 10³			
Output delay time (T on fund	ction diagran	ns) s	0.220			
Power-on activation time		S	≤ 0.7			
Minimum impulse duration ms			50			
Insulation between supply and contacts (1.2/50 µs) kV		kV	6			
Dielectric strength between open contacts V A		V AC	1000			
Ambient temperature °C		°C	-20+50			
Protection category			IP 20			
Approvals (according to type)			C€ YR ENI			



# **Ordering information**

Example: 72 series level control relay, adjustable sensitivity range, (230...240)V AC supply voltage.



# TEINCO



### **Technical data**

Insulation					72.01/72.11	72.42	
Insulation				Dielectric strength	Impulse (1.2/50 μs)		
between supply and co		ontacts		4000 V AC	6 kV	6 kV	
be	etween supply and co	ontrol (for 110240 V version only)		2500 V AC	-	4 kV	
between electrodes, Z1-Z2 and supply*				4000 V AC	6 kV	_	
between contacts and electrodes			4000 V AC	6 kV	_		
between open contacts			1000 V AC	1.5 kV	1.5 kV		
EMC specifications	s						
Type of test				Reference standard	72.01/72.11	72.42	
Electrostatic discharge		contact discharge		EN 61000-4-2	4 kV	4 kV	
		air discharge		EN 61000-4-2	8 kV	8 kV	
Radio-frequency electromagnetic field		(801000 MHz)		EN 61000-4-3	10 V/m	10 V/m	
		(12.8 GHz)		EN 61000-4-3		5 V/m	
Fast transients on supply		on supply terminals		EN 61000-4-4	4 kV	4 kV	
(burst 5/50 ns, 5 and	on control terminals			EN 61000-4-4	- /	4 kV	
Voltage pulses on supply terminals common mode		common mode		EN 61000-4-5	4 kV	4 kV	
(surge 1.2/50 µs) differential mode			EN 61000-4-5	4 kV	4 kV		
Radiofrequency common mode on supply terminals			EN 61000-4-6	10 V	10 V (0.15230 MHz		
voltage (0.15280	MHz)	on control terminals		EN 61000-4-6		10 V	
Voltage dips		70% U <sub>N</sub>		EN 61000-4-11	_	25 cycles	
Short interruptions				EN 61000-4-11	_	1 cycles	
Radiofrequency cor	nducted emissi <mark>ons</mark>	(0.1530 MHz)		CISPR 11	class B	class B	
Radiated emissions		(301000 MHz)		CISPR 11	class B	class B	
Terminals							
⊕ Screw torque N			Nm	0.8			
Wire strip length		mm	9				
Max. wire size		mm²		solid cable	stranded cable		
				1 x 6 / 2 x 4	1 x 4 / 2 x 2.5		
			AWG	1 x 10 / 2 x 12	1 x 12 / 2 x 14		
Other data							
Current absorption on Z1 and Z2 (type 72.11) mA			< 1				
Current absorption on control signal (B1-B2 and B2-B3) - (type 72.42)			5 mA, 5 V				
Power lost to the environment				72.01/72.11	72.42		
		without contact current W		1.5	0.9 (1 relay ON)		
		with rated current	W	3.2	3.0 (2 relays ON)		
Max cable length between electrode and relay (types 72.01/72.11) m			200 (max. capacitance of	0 (max. capacitance of 100 nF/km)			

<sup>\*</sup>There is no electrical isolation between electrodes and supply voltage for the 24 V DC types (72.x1.9.024.0000). Therefore, for SELV applications it would be necessary to use a SELV (non-grounded) power supply. In the case of a PELV (grounded) power supply take care to protect the level control relay against harmful circulating currents by ensuring that no electrodes are grounded.

However, there is no such problem for the 24 V AC types (72.x1.8.024.0000) which, by virtue of an internal isolating transformer, assure reinforced isolation between electrodes and supply.