

Ordering information

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

7 2 . 0 1 . 8 . 2 4 0 . 0 0 0 0

Series

Type

- 0 = Level control relay, sensitivity range adjustable (5...150)kΩ
- 1 = Level control relay, sensitivity fixed 150 kΩ
- 4 = Priority change relay

No. of poles

- 1 = 1 CO (SPDT)
- 2 = 2 NO (DPST-NO)

Contact material

- 0 = Standard AgCdO for 72.01/72.11, AgNi for 72.42
- 5 = AgNi + Au**

Supply voltage

- 024 = 24 V
- 125 = (110...125)V AC
- 230 = (110 ... 240) V
- 240 = (230...240)V AC
- 400 = 400 V AC (72.01 only)

Supply version

- 0 = DC / AC (50/60 Hz)
- 8 = AC (50/60 Hz)
- 9 = DC

Option

- 0 = Max. 150 kΩ
- 2 = Sensitivity range adjustable (5...450) kΩ types 72.01.8.024.0002* 72.01.8.240.0002* 72.01.8.240.5002**

All versions

- 72.01.8.024.0000
- 72.01.8.024.0002*
- 72.01.8.125.0000
- 72.01.8.240.0000
- 72.01.8.240.0002*
- 72.01.8.240.5002**
- 72.01.8.400.0000
- 72.01.9.024.0000
- 72.11.8.024.0000
- 72.11.8.125.0000
- 72.11.8.240.0000
- 72.11.9.024.0000
- 72.42.0.230.0000
- 72.42.0.024.0000

* For liquids conductivity up to 2 µSiemens or a Resistance of 450 kΩ

** For applications with output contact loading down to 5 V 1 mA



Technical data

Insulation			72.01/72.11	72.42		
Insulation		Dielectric strength	Impulse (1.2/50 µs)			
		between supply and contacts	4,000 V AC	6 kV		
		between supply and control (for 110...240 V version only)	2,500 V AC	—		
		between electrodes, Z1-Z2 and supply*	4,000 V AC	6 kV		
		between contacts and electrodes	4,000 V AC	6 kV		
	between open contacts	1,000 V AC	1.5 kV	1.5 kV		
EMC specifications						
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	(80...1,000 MHz)	EN 61000-4-3	10 V/m	10 V/m		
	(1...2.8 GHz)	EN 61000-4-3	—	5 V/m		
Fast transients (burst 5/50 ns, 5 and 100 kHz)	on supply terminals	EN 61000-4-4	4 kV	4 kV		
	on control terminals	EN 61000-4-4	—	4 kV		
Voltage pulses on supply terminals (surge 1.2/50 µs)	common mode	EN 61000-4-5	4 kV	4 kV		
	differential mode	EN 61000-4-5	4 kV	4 kV		
Radiofrequency common mode voltage (0.15...280 MHz)	on supply terminals	EN 61000-4-6	10 V	10 V (0.15...230 MHz)		
	on control terminals	EN 61000-4-6	—	10 V		
Voltage dips	70 % U _N	EN 61000-4-11	—	25 cycles		
Short interruptions		EN 61000-4-11	—	1 cycles		
Radiofrequency conducted emissions	(0.15...30 MHz)	CISPR 11	class B	class B		
Radiated emissions	(30...1,000 MHz)	CISPR 11	class B	class B		
Terminals						
⊕ Screw torque	Nm	0.8				
Wire strip length	mm	9				
Max. wire size	mm ²	AWG	solid cable	stranded cable		
			1x6 / 2x4	1x4 / 2x2.5		
			1x10 / 2x12	1x12 / 2x14		
Other data						
Current absorption on Z1 and Z2 (type 72.11)	mA	< 1				
Current absorption on control signal (B1-B3 and B2-B3)		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 100 nF/km)				

* 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.