

TECHNICAL SPECIFICATION

Residual current devices JEL2



Description:

The residual current device works with no extra power supply to the operating mechanism. It compares the magnitude of the current through the neutral and phase conductors. The conductors are coiled on toroid and together with the secondary winding form a measurement transformer. The power conductors are coiled in such a way that the magnetic fields generated at electrical at electrical current flow through them are mutually neutralized. At failure in the insulation of some of the conductors or at presence of a person under voltage, the system is misbalanced and the magnetic fields can't be neutralized. This residual field generates in the secondary current winding, called current leakage. The device breaks when the value of this current exceed the limit value of the residual current breaker.

Functions:

- Switching off heavy-loaded electrical circuits at insulation damage of the conductors to the consumers
- Switching off heavy-loaded electrical circuits at presence of a person under voltage
- Used to protect not only particular consumers(circuits) but also the whole panel
- Remarkable with high reliability of current characteristics
- Control: manual switching on and automatic switching off at exit failure

Technical data:

- Rated operating voltage 230/400V; 50/60Hz
- Rated current: according to the table
- Responsiveness 30; 100; 300;500mA
- Time delay until break: <0.1s at $I \Delta n$ and <0.04s at $2I \Delta n$
- $I \Delta n$ 100mA
- Surge voltage wear resistance $\geq 2000V$
- Static contact: pure copper T2Y2 type
- Short circuit current wear resistance: 4500A
- Joining terminal: flat (tunnel) screw terminal made of 1.5 coldly draw-plated plane Q235A
- Type of the plastic:
 - material: self-extinguishing nylon PA66
 - permittivity strength: >18 MV/m
- Contact head: silver graphite CAg(5)
- Electrical wear resistance (number of cycles): ≥ 5000
- Mechanical wear resistance (number of cycles) ≥ 10000
- IP code: IP>20
- Indication for operating (switched on) position
- Plastic material of the breakers of UV rays and non- flammable
- Ambient temperature: -10°C +65°C
- Installation altitude: up to 2000m

Connecting:

- Power supply busbar (only for bipolar)
- Flexible or rigid conductors with corresponding sections

Mounting:

- On DIN-rail
- Mounting position: vertical

The residual current device is mounted in the distribution box, and after the device the neutral conductor and the earthing conductor must not be connected together. In order to work accurately, the device must have three- or five-conductor grid with separate protective conductor (PE) (e.g. earthing system TN-s or TT with three or five conductors). The corpus of the consumer depending on the grid type must be connected either to the protective conductor or be earthed. (Fig.1)

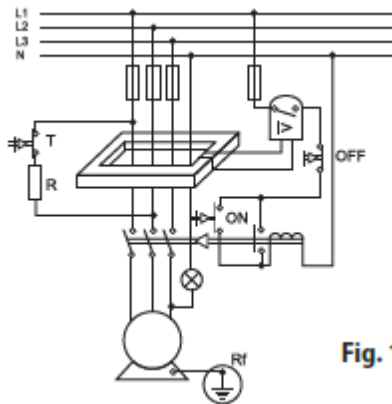
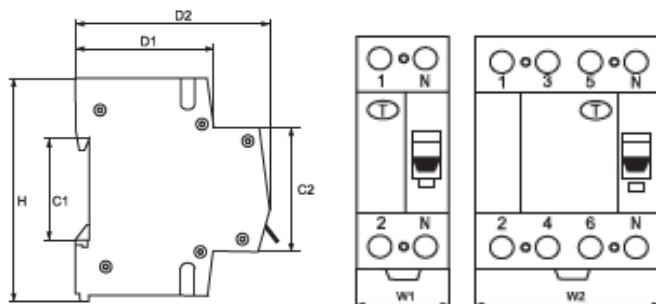


Fig. 1

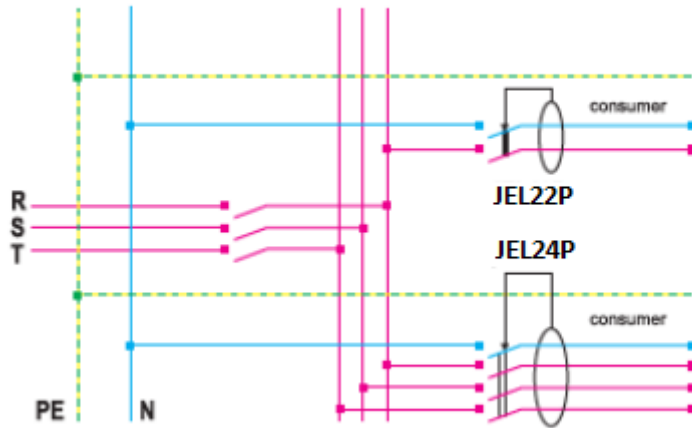
Dimensions:



Dimensions						
W1	W2	H	H1	H2	D1	D2
35	70	81	35	45	50	72

Connecting scheme:

Connecting scheme



Products:

Type	Number of poles	Breaking capacity (kA)	Rated current I _n (A)	Catalogue number Leakage current I _Δ (mA)	
				30	300
JEL 2	2P	4.5	16.0	40716	40718
JEL 2	2P	4.5	20.0	40792	-
JEL 2	2P	4.5	25.0	40721	40723
JEL 2	2P	4.5	32.0	40731	40733
JEL 2	2P	4.5	40.0	40741	40743
JEL 2	2P	4.5	63.0	40761	40763

Type	Number of poles	Breaking capacity (kA)	Rated current I _n (A)	Catalogue number Leakage current I _Δ (mA)			
				30	100	300	500
JEL 2	4P	4.5	10.0	40810	40812	40813	40814
JEL 2	4P	4.5	16.0	40816	40817	40818	40819
JEL 2	4P	4.5	20.0	40892	40893	40894	40895
JEL 2	4P	4.5	25.0	40821	40822	40823	40824
JEL 2	4P	4.5	32.0	40831	40832	40833	40834
JEL 2	4P	4.5	40.0	40841	40842	40843	40844
JEL 2	4P	4.5	63.0	40861	40862	40863	40864

Standarts:

EN 61008-1

EN 61008-2

