

TECHNICAL SPECIFICATION

Residual current devices JEL1



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 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 Δ n and <0.04s at 2I Δ n
- Surge voltage wear resistance $\geq 2000V$
- Static contact: pure copper T2Y2 type
- Short circuit current wear resistance: 4500A, 6000A
- 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)

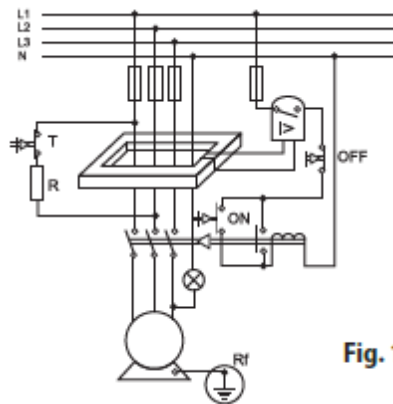
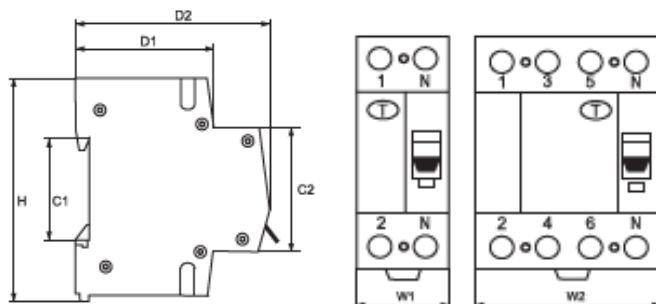


Fig. 1

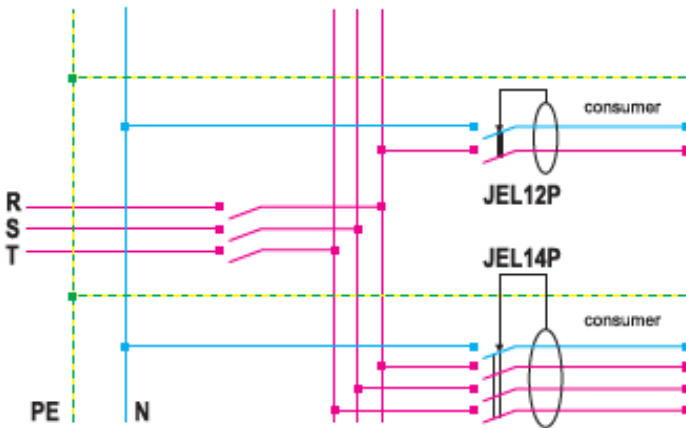
Dimensions:



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	100	300	500
JEL 1	2P	6	10.0	40210	40212	40213	40214
JEL 1	2P	6	16.0	40216	40217	40218	40219
JEL 1	2P	6	20.0	40292	40293	40294	40295
JEL 1	2P	6	25.0	40221	40222	40223	40224
JEL 1	2P	6	32.0	40231	40232	40233	40234
JEL 1	2P	6	40.0	40241	40242	40243	40244
JEL 1	2P	6	63.0	40261	40262	40263	40264
JEL 1	2P	6	80.0	40281	40282	40283	40284
JEL 1	2P	6	100.0	40291	40296	40297	40298

Type	Number of poles	Breaking capacity (kA)	Rated current I _n (A)	Catalogue number Leakage current I _Δ (mA)			
				30	100	300	500
JEL 1	4P	6	10.0	40410	40412	40413	40414
JEL 1	4P	6	16.0	40416	40417	40418	40419
JEL 1	4P	6	20.0	40492	40493	40494	40495
JEL 1	4P	6	25.0	40421	40422	40423	40424
JEL 1	4P	6	32.0	40431	40432	40433	40434
JEL 1	4P	6	40.0	40441	40442	40443	40444
JEL 1	4P	6	63.0	40461	40462	40463	40464
JEL 1	4P	6	80.0	40481	40482	40483	40484
JEL 1	4P	6	100.0	40491	40496	40497	40498

Standarts:

EN 61008-1

EN 61008-2

