

Residual current devices

Documents corresponding to the product:

EN 61008-1
EN 61008-2; EN 60947-1



Type AC for AC current

Residual current devices JEL1

7 YEAR WARRANTY *for industrial usage, 3 years warranty

The residual current device works with no extra power supply to the operating mechanism. It compares the magnitude of the currents 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 not be neutralized. This residual field generates in the secondary current winding, called current leakage. The device breaks when the value of this current exceeds 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; 50/60 Hz
- Rated current: according to the table
- Responsiveness: 30; 100; 300; 500mA
- Time delay until break: <math><0.1\text{s}</math> at - Surge voltage wear resistance: $\geq 2000\text{V}$

- 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: $>18\text{MV/m}$
- Contact head: silver graphite CAg(5)
- Static contact: pure copper T2Y2 type
- 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: $-10^{\circ}\text{C} + 65^{\circ}\text{C}$
- Installation altitude: up to 2000m

Connecting:

- power supply busbar (only for bipolar)
- flexible or rigid conductors with corresponding section

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)

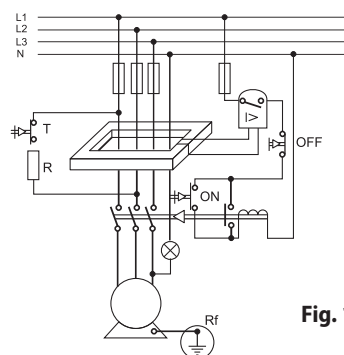
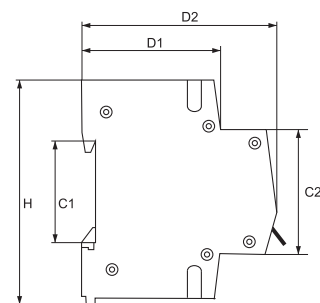
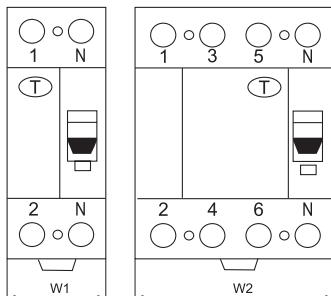
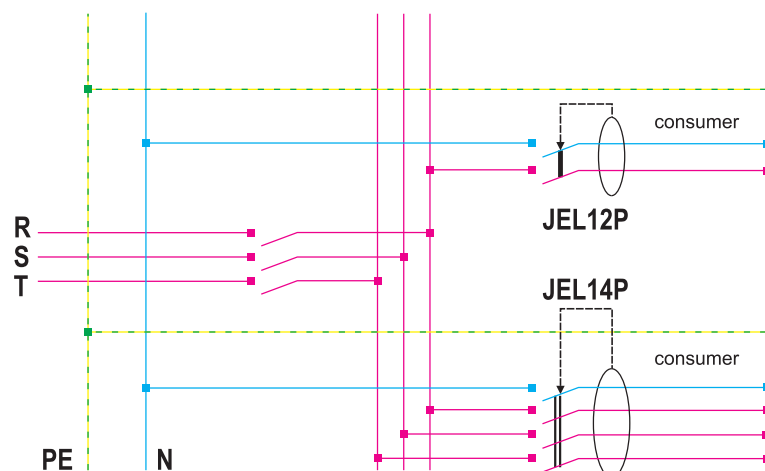


Fig. 1

Dimensions (mm)

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

Connecting scheme





Type AC for AC current



Residual current devices JEL1

7 YEAR WARRANTY *for industrial usage, 3 years warranty

Residual current devices JEL 1, 6kA - Type AC - alternating fault currents sensible. Impulse withstand voltage 2000VAC

Type	Number of poles	Breaking capacity (kA)	Rated current I _n (A)	Packing/Box (pcs)	Catalogue number			
					Leakage current I _{Δn} (mA)			
					30	100	300	500
JEL 1	2P	6	10.0	1 / 60	40210	40212	40213	40214
JEL 1	2P	6	16.0	1 / 60	40216	40217	40218	40219
JEL 1	2P	6	20.0	1 / 60	40292	40293	40294	40295
JEL 1	2P	6	25.0	1 / 60	40221	40222	40223	40224
JEL 1	2P	6	32.0	1 / 60	40231	40232	40233	40234
JEL 1	2P	6	40.0	1 / 60	40241	40242	40243	40244
JEL 1	2P	6	63.0	1 / 60	40261	40262	40263	40264
JEL 1	2P	6	80.0	1 / 60	40281	40282	40283	40284
JEL 1	2P	6	100.0	1 / 60	40291	40296	40297	40298

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