



IMQ only for REDs,
cat. no. 18264, 18265, 18266, 18267,
18268, 18269, 18687 and 18689

Country approval pictogram

EN 50557

The REDs and the REDtest, **RE**sidual current **D**evice recloser, is made up of a residual current device and a recloser.

The **REDs** and **REDtest RESidual current Devices** offer the following functions:

- protection of people against direct and indirect contacts
- protection of installations against insulation faults
- disconnection of on-load electric circuits, already protected against overloads and short-circuits
- automatic restart after insulation monitoring of the downstream circuit.

REDtest provides the following additional functions:

- automatic and periodical test of the device, without breaking downstream circuit (REDtest).

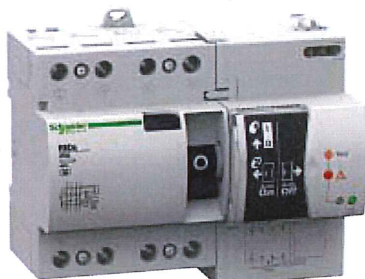
Only used on TT and TN-S earthing grounding systems.

PE10780_SE-40



REDs 2P

PE10400_SE-40



REDs 4P

PE113821-40



REDtest

DB404823



DB404824



■ REDs 2P, 4P:
supply from above or
below

Residual current circuit breakers	2P	4P
Making and breaking capacity, rated residual current ($I_{\Delta m} = I_m$)	630 A	630 A

Catalogue numbers

REDs residual current circuit breakers REDs				
A type				Width in mod. of 9 mm
2P	Sensitivity	30 mA	300 mA	
	Rating	25 A	18687	8
		40 A	18689	
		63 A	18691	
Voltage rating (Ue)		230 V		
Frequency rating		50 Hz		
4P	Sensitivity	30 mA	300 mA	
	Rating	25 A	18264	14
		40 A	18266	
		63 A	18268	
		100 A	18270	
Voltage rating (Ue)		400 V		
Frequency rating		50 Hz		

REDtest residual current circuit breakers			
A type			Width in mod. of 9 mm
2P	Sensitivity	30 mA	
	Rating	25 A	18280
		40 A	18281
Voltage rating (Ue)		230 V	
Frequency rating		50 Hz	

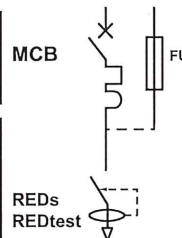
Coordination table, max short-circuit current (kA rms)

Circuit-breakers, fuse / A type REDs, REDtest coordination

Upstream		Circuit-breakers								Fuses					
Downstream Products	Ratings (A)	DPN	DPN N	iC60N / C120N			iC60H, L / C120H, L / NG125N, H, L				gG				
		0.5 to 40	0.5 to 40	0.5 to 40	32 - 40	50 - 63	0.5 to 25	32 - 40	50 - 63	80 - 100	gG 25	gG 40	gG 63	gG 100	
REDs Type A 2P															
	25	6	10	10	-	-	10	-	-	-	10	-	-	-	
	40	6	10	10	10	-	15	10	-	-	15	10	-	-	
	63	-	-	10	10	10	15	15	10	-	25	15	10	-	
REDs Type A 4P															
	25	6	10	10	-	-	10	-	-	-	10	-	-	-	
	40	6	10	10	10	-	15	10	-	-	15	10	-	-	
	63	-	-	10	10	10	15	10	10	-	25	15	10	-	
	100	-	-	10	10	10	15	15	15	10	25	25	15	10	
REDtest Type A 2P															
	25	6	6	6	-	-	6	-	-	-	6	-	-	-	
	40	6	6	10	6	-	10	6	-	-	10	6	-	-	

DB12863

		Circuit-breaker (MCB) or Fuse (FU)			
		≤ 25 A	≤ 40 A	≤ 63 A	≤ 100 A
REDs / REDtest	25 A	■	—	—	—
	40 A	■	■	—	—
REDs	63 A	■	■	■	—
	100 A	■	■	■	■



DB404526

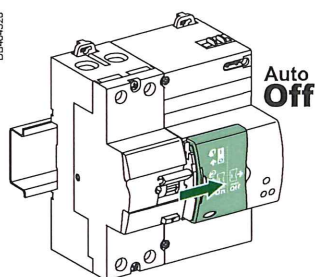


Fig. 1

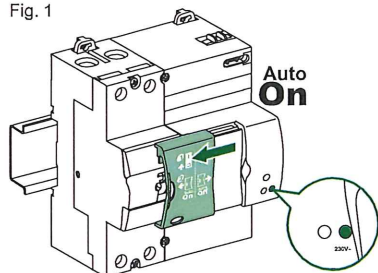


Fig. 2

Operation

REDs

The REDs operates in the residual current device mode, without automatic restart, when the sliding cover is open, i.e. to the right in the Auto Off position (Fig. 1).

The automatic restart mode and the Autotest are activated, when the sliding cover is closed, i.e. to the left in the Auto On position (Fig. 2).

Test

⚠ This is only possible in manual mode, i.e. sliding cover open in the Auto Off position. You can then manually test the device by pressing the Test key. The downstream installation is then temporarily broken. You must then manually reclose the RED by activating the O-I lever to power supply the downstream circuit.

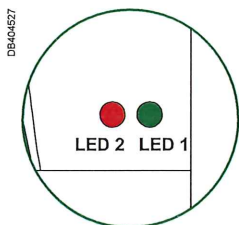
REDtest

■ The REDtest carries out automatic testing of earth leakage protection every months.

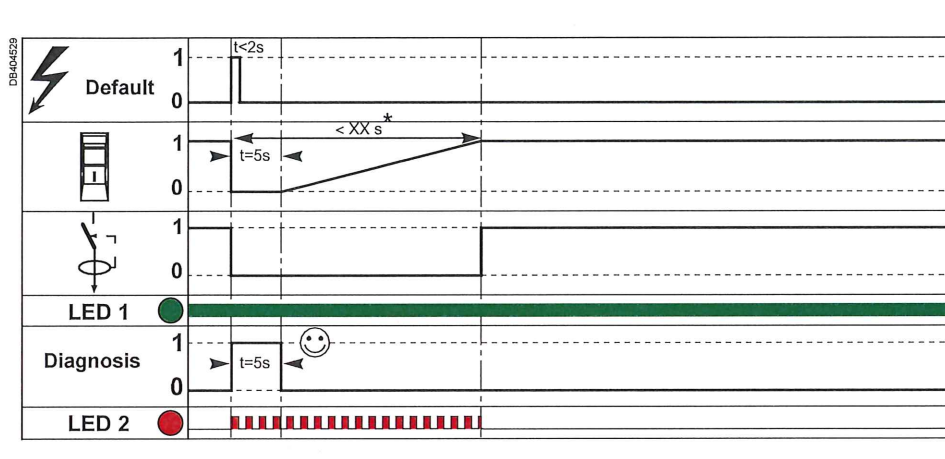
The test consists in opening and reclosing the REDtest, during which time continuity of supply of the downstream installation is guaranteed.

Autotest: after checking installation insulation, the REDtest monitors its residual current device, without breaking the downstream power supply (bypass by bypass contact).

Operation ON mode: temporary network fault REDs, REDtest



(*) Reclosing time:
REDtest 2P: 10 s
REDs 2P: 90 s
REDs 4P: 10 s



The built-in automatic recloser automatically recloses the residual current device after checking insulation of the downstream circuit.

Rd: lower level of insulation resistance, if $R < R_d$ = no reclose
Rdo: higher level of insulation resistance, if $R_d > R_{do}$ = reclose

$I_{\Delta n}$	30 mA	300 mA
Rd	8 k Ω	2.5 k Ω
Rdo	16 k Ω	5 k Ω

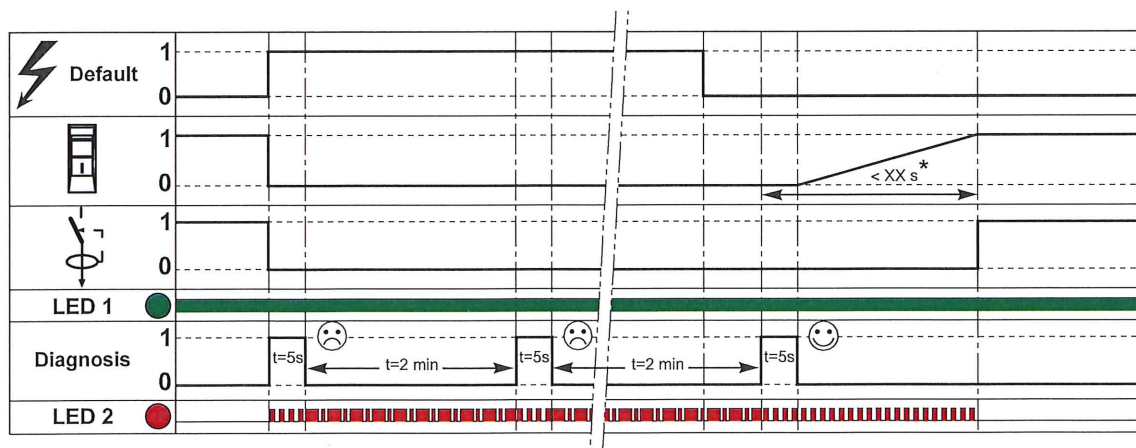
Operation ON mode: long network fault

REDs

If the circuit is faulty, the switch is prohibited from reclosing. After a time delay of 2 minutes, the downstream circuit insulation is rechecked.

There are then two possibilities:

- the installation is still faulty (the resistance to earth is lower than Rd): in this case a new check will be carried out in 2 minutes.
- the fault was temporary and has disappeared (the resistance to earth is higher than Rdo): the recloser automatically recloses the REDs.



(*) Reclosing time:
REDs 2P: 90 s
REDs 4P: 10 s

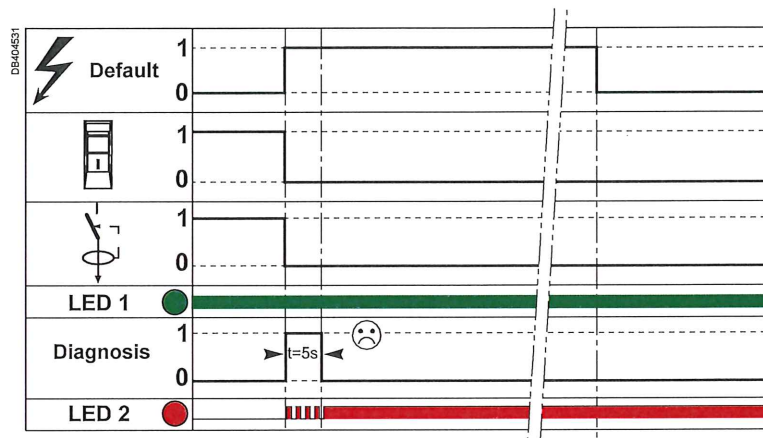
IΔn	30 mA
Rd	20 k Ω
Rdo	70 k Ω

Operation ON mode: long network fault (cont.)

REDtest

If the circuit is faulty for a length of time "greater than 5 seconds", the switch is prohibited from reclosing.

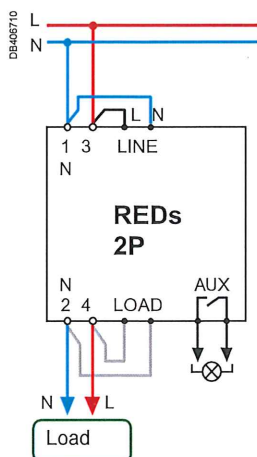
- The installation is faulty: the earth resistance is lower than Rd.



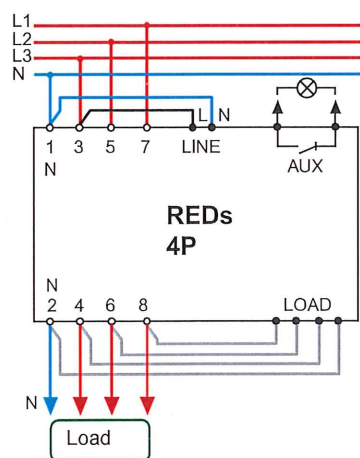
Connection

	Type	Tightening torque	Copper cables	
			Rigid	Flexible or with ferrule
DB123947	N, L	2 N.m	35 mm²	35 mm²
DB406712	AUX REDs	0.4 N.m	2.5 mm ²	2.5 mm ²
DB406711	AUX REDtest	0.4 N.m	2.5 mm ²	2.5 mm ²

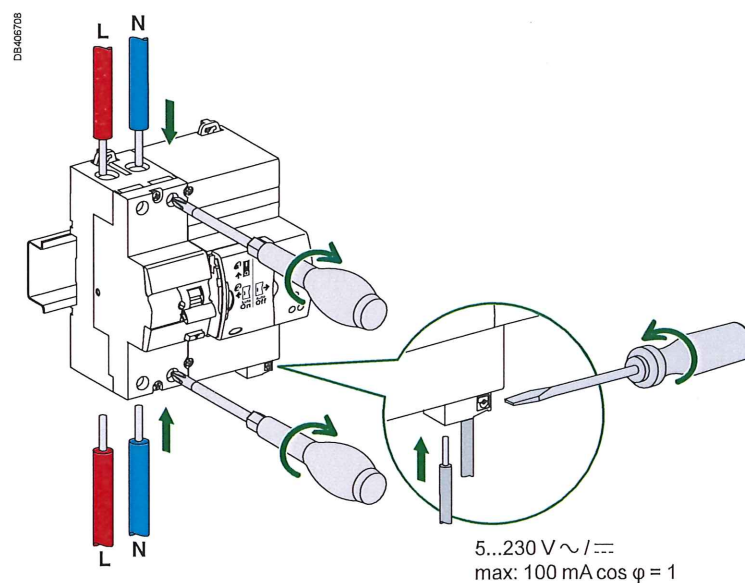
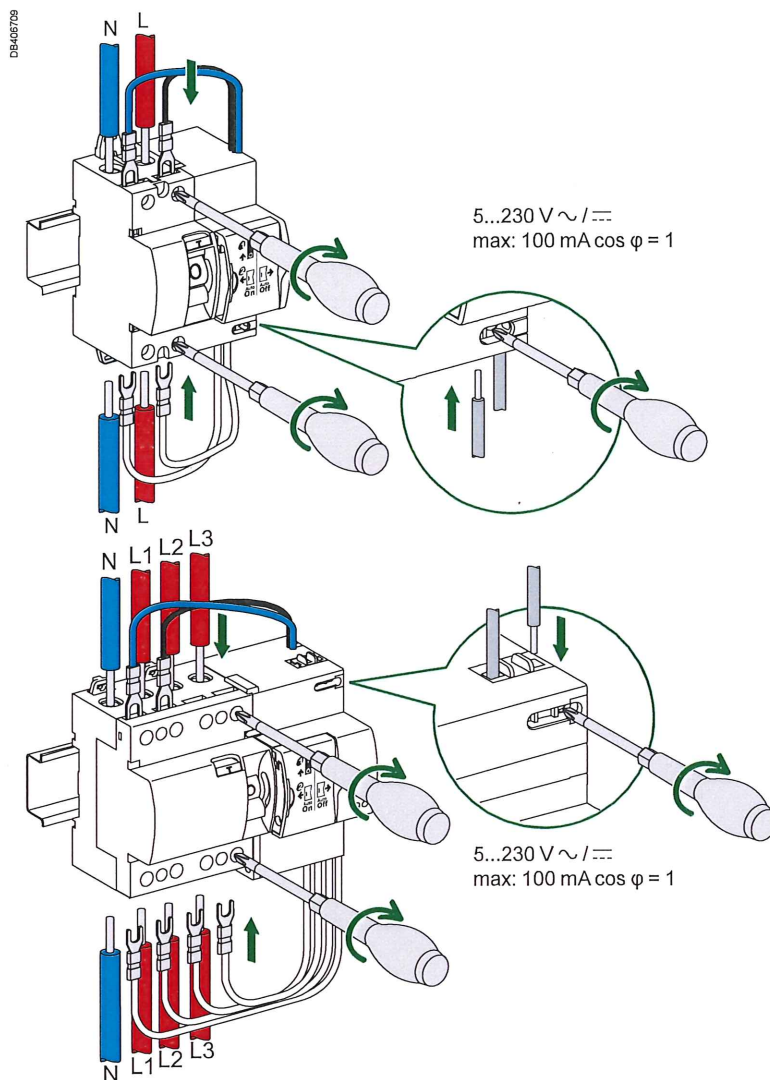
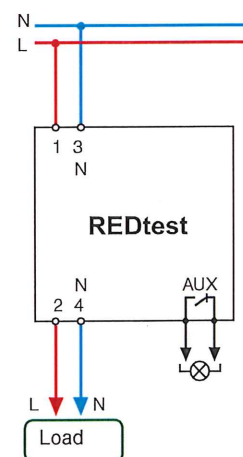
Connection by tunnel terminal with guard

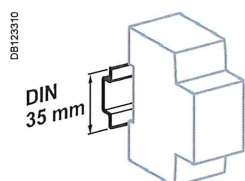


Wiring of non-polarized white wires

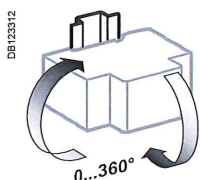


Wiring of non-polarized white wires

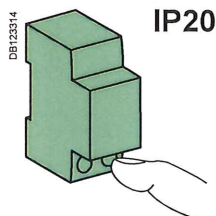




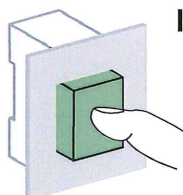
Clip on DIN rail 35 mm.



Indifferent position of installation.



IP20



IP40

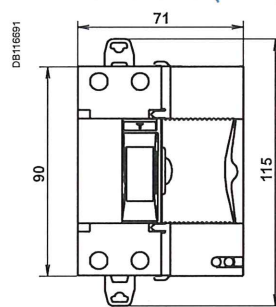
Technical data.

Main characteristics		2P		4P	
Common technical data		REDtest		REDs	
Earthing grounding systems		TT and TN-S only			
Impulse withstand voltage (Uimp)		4 kV			
Insulation voltage (Ui)		500 V			
8/20 μs wave immunity level		250 Å			
Tropicalization		Treatment 2 (relative humidity: 95 % at 55°C)			
Operating temperature		-5°C to +40°C			
Storage temperature		-20°C to +60°C			
Protection class		IP20 at terminals			
Additional characteristics					
Residual current device					
Tripping time		IΔn: ≤ 300 ms			
		5 IΔn: ≤ 40 ms			
Number of cycles (O-C)		1 000		4 000	
Fixed sensitivity releases for all ratings		Instantaneous release			
Test button min operating voltage		195 V		100 V	
				170 V	
Recloser					
Max duration of a restart cycle		< 10 s		< 90 s	
Maximum number of consecutive restart attempts (if no earth fault)		3			
Min interval between 2 closings		180 s		30 s	
Insulation fault presence monitoring		Yes			
Insulation fault diagnosis		If fault: stopping of the restart cycle		If fault: diagnosis every 2 minutes with stopping of the restart cycle	
Stopping restart cycle if insulation fault present		Yes		Yes, during 15 minutes	
Not operating resistance to earth (Rd)		20 kΩ		8 kΩ (30 mA), 2.5 kΩ (300 mA)	
Operating resistance to earth (Rdo)		70 kΩ		16 kΩ (30 mA), 5 kΩ (300 mA)	
Power consumed by the electronics		8 VA		0 VA	
Indication					
Status indication		Mechanical: by O-I (open-closed) 2-position lever			
		■ Electrical: by 2 indicator lights on the front panel: □ left: red/yellow LED □ right: green LED			
		Remote: by 1 built-in auxiliary contact			
Auxiliary contact					
Voltage rating (Ue)		5...230 V AC/DC			
Insulation voltage (Ui)		350 V			
Current rating (In)		Min: 0.6 mA			
		Max: 100 mA, power factor = 1			
Type	Configurable	NO or NC		Intermittent 1 Hz or NO or NC	
Connection by tunnel terminal		Flexible or rigid cable: max 2.5 mm²			

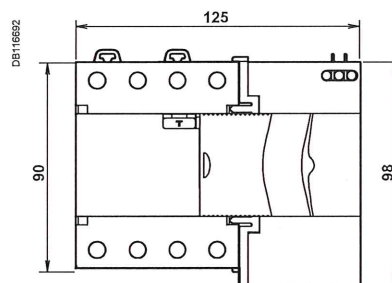
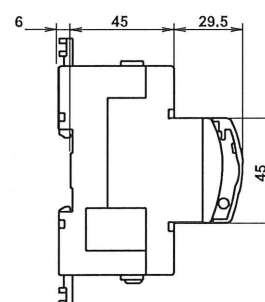
Weight (g)

Reclosers	2P	4P
REDs	360	■ 25/40 A: 670 ■ 63 A: □ 30 mA: 720 □ 300 mA: 680 ■ 100 A: 948
REDtest	370	-

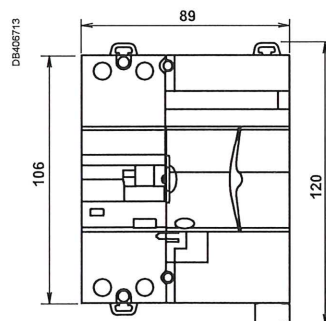
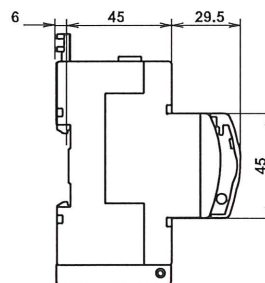
Dimensions (mm)



REDs 2P



REDs 4P



REDtest

