

## Updated ELE series, Providing Type A RCD Protection

In response to BS7671 Amendment 2:2022, which states that “Type AC RCDs should only be used to serve fixed equipment, where it is known that the load current contains no DC components”, our well established ELE series of RCD protection assemblies has been updated and now provides Type A RCD protection. Assemblies remain classified as “DC Immune”, which makes them suitable for installation in Network Rail “Third Rail” locations (see page 2 for further details)

The ELE series of single and three-phase RCD protection assemblies comprise of a Modular Residual Current Device working in conjunction with an MCB with shunt-trip, in overcurrent ratings up to 125A. Assemblies are available with fixed sensitivity 30mA RCD protection or with variable RCD, which have the sensitivity adjustable from 30 mA to 30A and time delay adjustable from 0 to 10 seconds.

### Enclosure

Surface mounting, sheet steel providing protection to IP44, finished in a white powder coat finish. Fitted with a hinged window over the MCB and RCD, which can be adapted to restrict access by ordinary persons.

### RCD Protection

Available with a fixed sensitivity of 30 mA or a variable device with sensitivity adjustable from 30 mA to 30A and time delay adjustable from 0 to 10 seconds. The RCD protection complies with BS EN 60947-2 (annex M), and the protection is classified as Type A. The overall assemblies meet the requirements of BS EN 61439-2.

### Supply voltages

230V SP&N or 400V TP&N (400V models require a supply neutral).

### Overcurrent protection

MCBs comply with BS EN 60947-2, with “C” curve trips fitted as standard. MCBs are available in the following overcurrent ratings, double-pole or 4 pole: 4A, 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50A, 63A, 80A, 100A and 125A.



S050369A

Part No.	Type No.	Description	Dimensions
S050369A	ELE/1/C16/30/A TYPE A RCD	16A, DP, 230V, 30 mA, IP44	261H x 161W x 115D mm
S050483A	ELE/1/C20/30/A TYPE A RCD	20A, DP, 230V, 30 mA, IP44	
S050255A	ELE/1/C32/30/A TYPE A RCD	32A, DP, 230V, 30 mA, IP44	
S050236A	ELE/1/C63/30/A TYPE A RCD	63A, DP, 230V, 30 mA, IP44	
S050256	ELE/1/C100/30/A TYPE A RCD	100A, DP, 230V, 30 mA, IP44	427H x 332W x 132D mm
S050374A	ELE/4P/C16/30/A TYPE A RCD	16A, 4P, 400V, 30 mA, IP44	364Hx 266W x 133D mm
S050284A	ELE/4P/C32/30/A TYPE A RCD	32A, 4P, 400V, 30 mA, IP44	
S050260A	ELE/4P/C63/30/A TYPE A RCD	63A, 4P, 400V, 30 mA, IP44	
S050261	ELE/4P/C100/30/A TYPE A RCD	100A, 4P, 400V, 30 mA, IP44	
S050672	ELE/1/C16/VAR/A TYPE A RCD	16A, DP, 230V, Adjustable RCD, IP44	261H x 211W x 115D mm
S050673	ELE/1/C32/VAR/A TYPE A RCD	32A, DP, 230V, Adjustable RCD, IP44	
S050674	ELE/1/C63/VAR/A TYPE A RCD	63A, DP, 230V, Adjustable RCD, IP44	
S050678	ELE/1/C100/VAR/A TYPE A RCD	100A, DP, 230V, Adjustable RCD, IP44	
S050675	ELE/4P/C16/VAR/A TYPE A RCD	16A, 4P, 400V, Adjustable RCD, IP44	364H x 266W x 133D mm
S050676	ELE/4P/C32/VAR/A TYPE A RCD	32A, 4P, 400V, Adjustable RCD, IP44	
S050677	ELE/4P/C63/VAR/A TYPE A RCD	63A, 4P, 400V, Adjustable RCD, IP44	
S050679	ELE/4P/C100/VAR/A TYPE A RCD	100A, 4P, 400V, Adjustable RCD, IP44	

Please see page 2 for detailed information on MRCD series Modular Residual Current Devices.

## MRCD series of Modular Residual Current Devices

At the heart of our ELE series of Type A RCD protection assemblies are the MRCD-MR and MRCD-R earth leakage sensors, which work in conjunction with an associated MCB and provide protection in accordance with BS EN 60947-2 annex m. The MRCD devices incorporate the following features:

- RCD Operating Characteristic: Type A
- Test and Reset button
- CT monitoring (MRCD trips if associated core balance CT is not connected).

### MRCD-MR only

- Fixed sensitivity ( $I_{\Delta n}$ ): 30 mA
- 'Power On' and 'Tripped' LED indication
- Supply voltage: 230V 50Hz

### MRCD-R only

- Adjustable sensitivity ( $I_{\Delta n}$ ): 0.03, 0.1, 0.3, 0.5, 1, 3, 5, 10, 20 and 30A
- Adjustable time delay ( $\Delta t$ ): 0.06, 0.15, 0.25, 0.5, 0.8, 1, 2.5, 5 & 10 seconds
- 'Power On', 'Tripped' and 'Leakage Current' LED indication
- Supply: 115V or 230V 50/60/400Hz



S201299S



S201300S



S201378S

Blakley MRCD Part Numbers and Operating Range		
Part No.	Type	Sensitivity
S201378S	MRCD-MR 230V modular RCD relay, fixed	30mA
S201299S	MRCD-R 115-230V modular RCD relay, variable	30mA to 30A
S201300S	MRCD-CT35 35mm ID 125A modular RCD CT	

See data sheet PDS053 for further information on the MRCD-R series of variable earth leakage sensors and associated CTs.

## Effects of DC current on the operating / trip current of RCD protection assemblies

On the UK rail network, where traction power is provided by a third rail, the presence of stray DC currents can cause standard 30mA RCDs to desensitise, resulting in a failure to provide personnel with additional basic protection against electric shock. ELE series RCD assemblies are classified DC Immune and have been very widely installed in rail installations that are adjacent to third rail traction supplies. The chart below shows that ELEs fitted with a 30mA MRCD device are unaffected by the presence of DC currents of up to 1A and therefore provide a superior level of protection.

