

Accessories for TD/TS series up to 800A

Susol

Residual Current Devices (RCD)



The Susol circuit breaker can offer protection against earth leakage currents by using an add-on residual current device (RCD). In particular, the TS100, TS160 and TS250 circuit breakers can be combined with the RTU23 of residual current device, the TS400 and TS600 circuit breakers can be combined with the RTU33 of residual current device and the TS800 circuit breaker can be combined with the RTU43 of residual current device. In all cases the RCD unit interfaces directly below the circuit breaker trip unit area without the use of any secondary wiring or connections.

The Susol circuit breaker and an RCD unit combination can be connected like any stand-alone breaker and are available as fixed or plug-in devices. The main connection interface of the RCD is an exact replacement of the breaker connection area, thus allowing the use of all standard breaker terminals.

Overview

Apart from the protection against overloads typical of automatic circuit breakers, the residual current circuit breaker derived from them also guarantee protection of people against earth leakage currents, thereby ensuring protection against direct contacts, indirect contacts and fire hazards.-(ELCB)

The RCD unit has numerous current and time settings and an override blocking the time settings when set to 30mA. The earth leakage test button tests the electrical and mechanical operation of the device. In order to allow for a dielectric test of the breaker and RCD combination without damaging the electronics, the dielectric plug is placed within the setting area. The RCD unit may be equipped with an alarm switch (FAL) to remotely indicate tripping due to an earth leakage current.

Compliance with standards :

- IEC 60947-2 (industrial), Appendix B
- IEC 61009 (residential)
- IEC 60755, class A, immunity to DC components up to 6mA
- VDE664, operation down to -25°C

Remote indications :

RCD unit may be equipped with an alarm contact (FAL-fault alarm switch) to remotely indicate tripping due to an earth leakage current.

Power supply :

RCD unit are self-supplied internally by the distribution-system voltage and therefore do not require any external source. They continue to function even when supplied by only two phases.

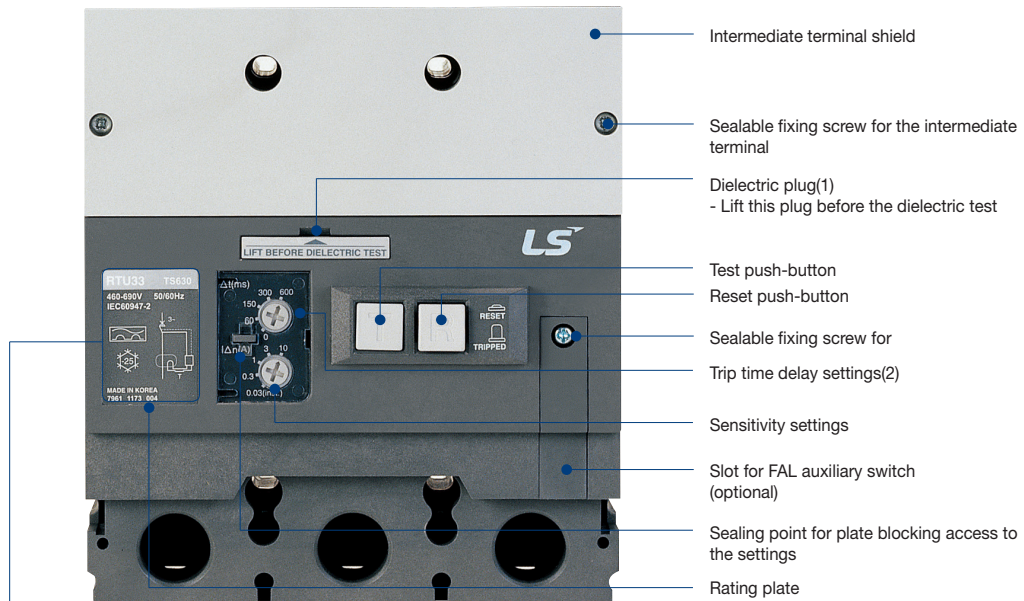


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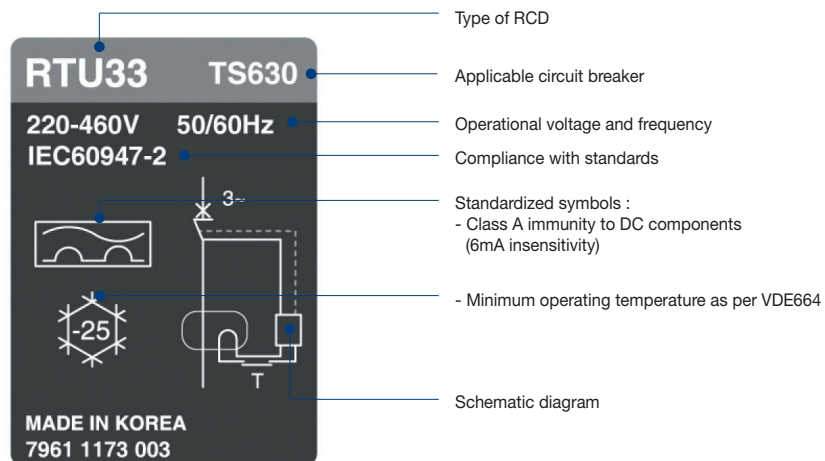
Residual Current Devices (RCD)

Configuration



- If the sensitivity is set to 30 mA, there is no time delay. Whatever the time-delay setting.

Detail of Rating plate

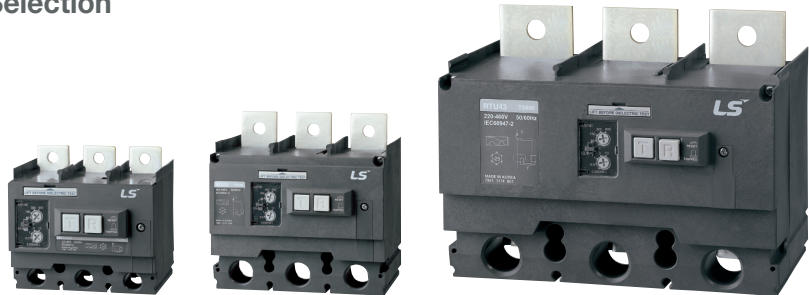


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Residual Current Devices (RCD)

Ratings and Selection



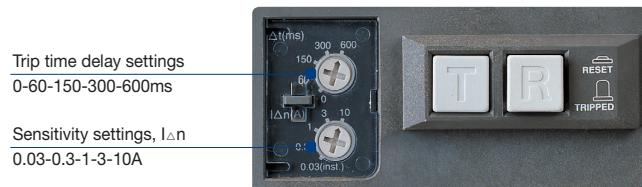
| RCD type | | RTU23 | RTU33 | RTU43 |
|----------------------------|----------------------------|------------------------------------|------------------------------------|------------------------------------|
| Number of poles | | 3* | 3* | 3* |
| Applicable circuit breaker | TS100 | ■ | | |
| | TS160 | ■ | | |
| | TS250 | ■ | | |
| | TS400 | | ■ | |
| | TS630 | | ■ | |
| | TS800 | | | ■ |
| Protection characteristics | | | | |
| Sensitivity | $I_{\Delta n}$ (A) | (adjustable) 0.03-0.3-1-3-10 | (adjustable) 0.03-0.3-1-3-10 | (adjustable) 0.03-0.3-1-3-10 |
| Time delay ** | Intentional time delay(ms) | (adjustable) 0-60-150-300-600 | (adjustable) 0-60-150-300-600 | (adjustable) 0-60-150-300-600 |
| | Max. breaking time(ms) | (adjustable) 40-140-240-450-880 | (adjustable) 40-140-240-450-880 | (adjustable) 40-140-240-450-880 |
| Rated voltage | AC 50/60 Hz | 220-460V / 460-690V | 220-460V / 460-690V | 220-460V / 460-690V |

Note 1) RTU can not be applied to 63A or less MTU Type MCCB.

2) RTU can not be applied to MCCB (Electronic trip unit) + D/E-Handle

* 3P modules may also be used on 2P circuit breakers.

** If the sensitivity is set to 30mA, the time delay setting is reduced to zero.



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Combination

The addition of the RCD unit does not affect circuit breaker characteristics.

- Conformity with standards
- Protection degrees, class II insulation front face
- Suitability for isolation as defined by IEC 60947-2
- Electrical characteristics
- Trip unit characteristics
- Installation and connection methods
- Indication, measurement and control accessories
- Installation and connection accessories

| | | RTU23 | RTU33 | RTU43 |
|-----------|-------------------------|------------|-------------|-------------|
| MCCB | L×H×D(mm) | 105×160×86 | 140×260×110 | 210×320×135 |
| MCCB+RCD | | 105×240×86 | 140×370×110 | 210×450×135 |
| RCD | | 105×80×86 | 140×110×110 | 210×130×135 |
| MCCB+RCD | Weight(kg) | 2.7 | 8.08 | 16.28 |
| RCD | | 0.96 | 2.52 | 4.6 |
| Type | Bottom | | | |
| Accessory | FAL(fault alarm switch) | | | |

