DATA SHEET

modular residual current devices

DRP

sensitive to pulsating and alternating currents Type A

Article number 09340110

Function

MRCDs (modular residual current devices) consist of a combination of residual current transformers with an evaluation unit and a separate, external switch-off device, e.g. a circuit-breaker. In this configuration, they allow the implementation of the "Protection via the automatic disconnection of the supply" measure as per DIN VDE 0100-410 and IEC 60364-4-41. They are primarily useful when no RCCBs or CRBs can be used due to high load currents or mains voltages. The MRCD detects the residual current and evaluates it in terms of its level and duration. If the residual response current thresholds and the response time are exceeded, it activates a separate switch-off device that disconnects the system part for which it is responsible from the power supply. Modular residual current circuit-breakers from the DRP series have a high protection class and an increased rated voltage of up to 500 V AC. They can therefore be used in extreme environments, such as in mining. Both the residual response current and the response delay can be adjusted on the device. The devices also have a potential-free changeover contact for controlling the switch-off device. Modular protective devices with residual current characteristic A detect sinusoidal AC currents as well as pulsating DC residual currents. Devices in standard design are intended for monitoring circuits with a rated voltage of 230 V, 400 V or 500 V and a rated frequency of 50 Hz to 60 Hz.

Features

suitable for detecting type A and AC residual currents as well as pulsating DC residual currents, connection for external residual current transformer series DWP, residual response current can be adjusted at five levels, response time smoothly adjustable from 0 s to 1 s (except in the 0.03 A range), monitoring of the total current transformer and its connection line for interruption, test and reset function through external key switches, three control/auxiliary voltages can be selected (230 V - 400 V - 500 V), selector switch and potentiometer covered by top part of housing, compact design, high protection against foreign bodies and humidity, potential-free changeover contact for controlling a disconnector, high immunity against surge currents

Mounting

quick fastening to mounting rail, any installation position

Applications

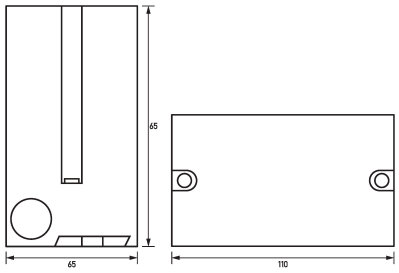
The monitoring device is suitable for use in power supplied to purpose-built buildings and industrial facilities with TN-S, TN-C-S networks and IT networks, such as in server rooms for data centres, laboratories, in the automotive industry and in conjunction with air conditioning systems, printing machines and packaging machines, Not permitted for use in TN-C networks and direct current networks; not permitted for monitoring systems in which electronic equipment may cause DC residual currents or residual currents with frequencies not equal to the rated frequency of the RCCB.

Technical Data

Technical Data	DRP
Series	DRP
Error memory existent	false
Short-time delayed	true
adjustment values delay at IΔn = 30 mA	0 s
adjustment values delay (textual)	adjustable from 30 ms to 150 ms
max. adjustable residual operating current IΔadj AC	0.03 A, 0.1 A, 0.3 A, 0.5 A, 1 A
Frequency range response residual current Type A	50 Hz ... 60 Hz

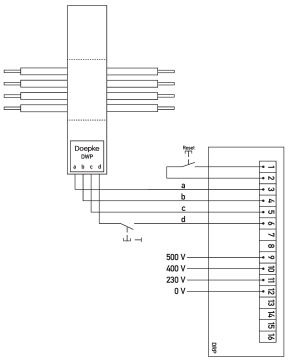
Technical Data	DRP
Frequency range response residual current Type AC	50 Hz
Rated frequency of circuit monitored	50 Hz ... 60 Hz
Rated voltage Uem of circuit monitored AC	0 V ... 500 V
Current transformer external	DWP 35, DWP 70, DWP 105, DWP 140
Operating voltage (AC)	230 V, 400 V, 500 V
Operating frequency	50 Hz, 60 Hz
Rated impulse withstand voltage	4 kV
	main alarm output
Specification	relays
Rated voltage (AC)	500 V
Rated current (AC)	2 A
Rated frequency	50 Hz ... 60 Hz
Back-up fuse type	C2
Overvoltage class	III
	screw-type terminal (load circuit)
Clamping area	max. 2.5 mm²
Tightening torque	max. 0.6 Nm
	screw-type terminal (transformer input)
	General data
Operating position	optional
max. Operating altitude above MSL	2000 m
Storage temperature	-40 °C ... 85 °C
Ambient temperature	-25 °C ... 40 °C
Housing type	distribution board housing, wall-mounted housing
Installation type	Mounting rail (35 mm), Wall mounting
Housing material	polycarbonate (PC)
Protection class	IP53
sealable	true
Width	110 mm
Height	65 mm
Depth	119 mm
Installation depth	119 mm
Module widths	6
Weight	0.575 kg
Design requirements/Standards	EN 60947-2 Annex M
Degree of pollution	2

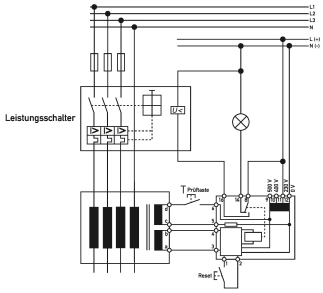
Dimensions



Dimensional drawing Group view

Wiring example





Wiring diagram

Wiring diagram with circuit-breaker