

Earth Fault Indicator DF-01(P)

features

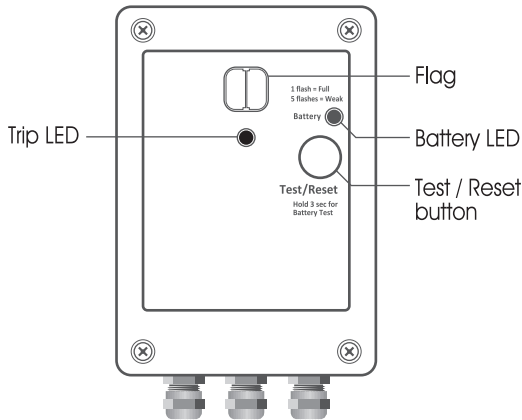


- Designed for installation in up to 33 kV cable line distribution networks
- Monitors and locate earth fault
- Lithium battery operated (easily replaceable AA / 3.6V 2600 mAh)
- Led & Mechanical flag indication for trip
- Permanent Fault Indication (double flashing of trip LED)
- Single front button for manual test / reset and battery check
- Input for automatic reset on power restoration (80-260 Vac input)
- Input for supervisory reset (9-110 Vdc input)
- 5 Selectable trip current level (dip switch)
- 4 Selectable trip delay (dip switch)
- 4 Selectable reset timer (dip switch)
- Split core CT for easy installation
- IP65 for indication unit
- IP67 for current sensor unit
- Device is able to keep attached & withstand short circuit of 24 kA in the cable to which it is attached to

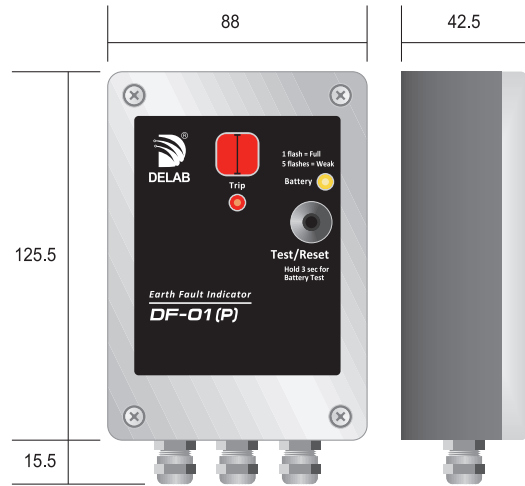
technical data

Earth-fault current (phase to ground)	selectable : 50 / 80 / 120 / 160 / 240 A
Trip delay	selectable : 50 / 100 / 150 / 200 ms
Reset time	selectable : 4 / 8 / 16 / 32 hour
Control unit	wall mounted
Indication of earth-fault trip	trip flashing red LED & Flag indication
Indication of low battery	yellow LED
Reset of the indicator	a) push-button b) potential-free remote reset c) dip switch selectable (4/8/16/32 hr) after trip d) supervisory reset (9~110 Vdc input) e) automatic reset on power recovery (80~260 Vac input)
On site function test	by push-button
a) function and battery test	a) the button has to be pressed for 1 second b) the button has to be pressed for 3 seconds
Remote function test	by closing potential-free remote reset and test (connector 3-4)
a) function and battery test	a) 1 - 5 seconds = external reset 5 - 10 seconds = external test
Dimensions : indication unit	(WxHxD) 88 mm x 125 mm x 42.5 mm
Protection class: indication unit	IP65
Protection class : sensors	IP67
Internal type test	according to IEEE 495-2007
Operation temperature range	-25°C to +70°C
Maximum humidity	95%
Power supply	lithium battery (LiSOCl ₂) type AA / 3.6V / 2600 mAh
SCADA contact	1 x NO and 1 x NC max. 230 V AC / max. 2 A / max. 30 W
Relay operate time	≤ 4.5 ms
Relay release time	≤ 3.5 ms
Earth-fault sensor (CT)	one earth-fault sensor (current transformer for a three-core cable or three single core cables) diameter: 110 mm or 160 mm (comes with 16m cable)

panel description



casing dimension



setting of functional values

The adjustable values are presented on the back inside the display cover. For adjusting the requested trip currents, the cover has to be removed. The requested values can be adjusted by switching the respective DIP switch to "ON" position.

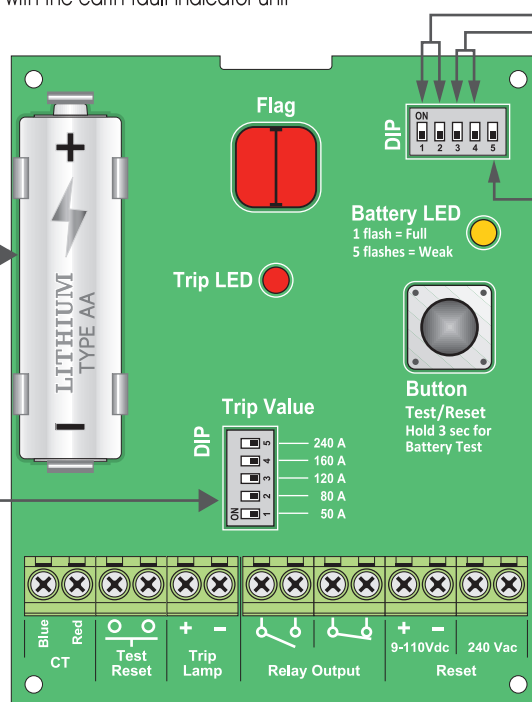
The following functions can be adjusted with the earth-fault indicator unit model DF-01 (P):

- 1) trip current for earth-fault (5 values)
- 2) reset time (4 values)
- 3) trip delay (4 values)
- 4) relay contact type
(permanent or 100 ms wipe contact)
- 5) automatic reset (enabled or disabled)

Self-powered by lithium battery with 10 years lifetime and over 2500 flashing hours.

DIP switch : Trip current		
ON	OFF	Value
DIP 1	DIP 2,3,4,5	50 A
DIP 2	DIP 1,3,4,5	80 A
DIP 3	DIP 1,2,4,5	120 A
DIP 4	DIP 1,2,3,5	160 A
DIP 5	DIP 1,2,3,4	240 A

NOTE : Only 1 DIP switch is to be in ON position at any one time.



DIP switch : Reset time		
DIP 1	DIP 2	Value
OFF	OFF	4 h
OFF	ON	8 h
ON	OFF	16 h
ON	ON	32 h

DIP switch : Trip delay		
DIP 3	DIP 4	Value
OFF	OFF	50 ms
OFF	ON	100 ms
ON	OFF	150 ms
ON	ON	200 ms

DIP switch : Auto reset	
DIP 5	Value
ON	Enable
OFF	Disable

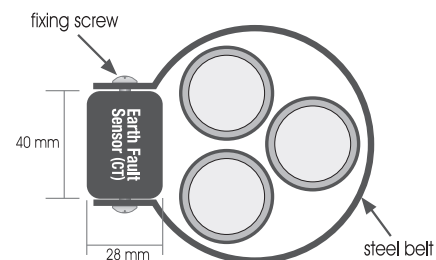
If enabled, auto reset will activate within 2 seconds only if fault is cleared.

earth fault sensor (CT)

The sensors are equipped with a divisible layered steel ring.

For installation, the steel belt has to be unmounted from one side of the housing by loosening the fixing screws. The belt has to be laid around the three-core-cables, or around the the three combined sing-core-cables. After that, the sensor housing has to be connected with the steel belt again. The fixing screws have to be tightened firmly.

The sensor must now be fixed in the right position with the provided plastic cable ties.



ordering information

Model	Description
DF-01(P) -110	C.T. sensor (110 mm diameter)
DF-01(P) -160	C.T. sensor (160 mm diameter)

Note: All measurement in mm.