

# DYO-FF V1.0 Wall Mounted Fault Indicator Datasheet



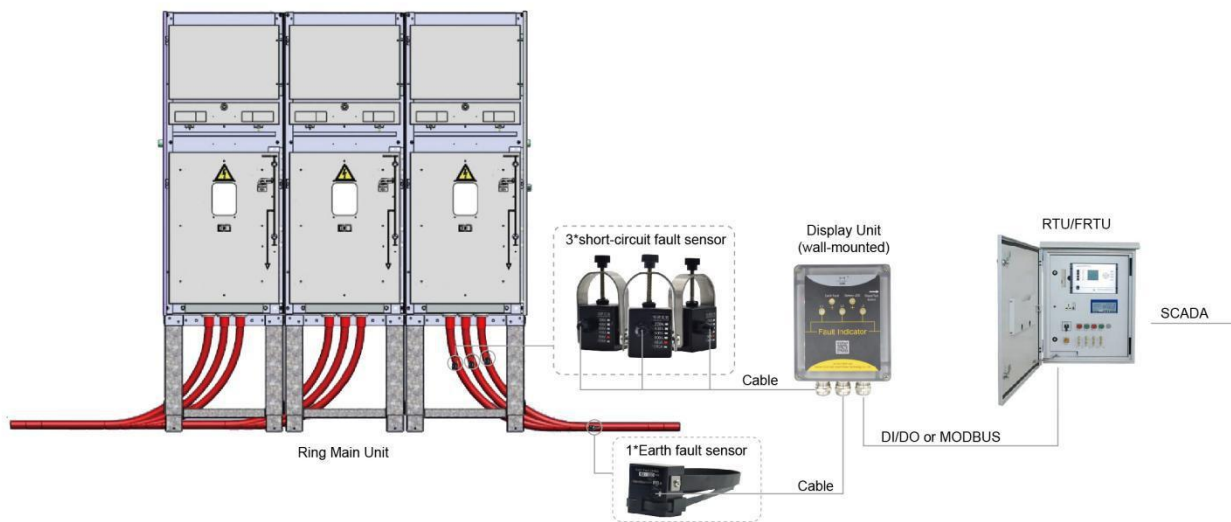
Document Version: V2.0

The earth-fault and short-circuit indicator type DYO-FF is used in 5~38KV cable line (underground) power distribution networks to monitor and locate earth fault and short-circuit. The red LED in display unit will blink when short circuit or earth fault happens. The fault information will also be sent to SCADA system by external connected IP Modem or RTU/FRTU.

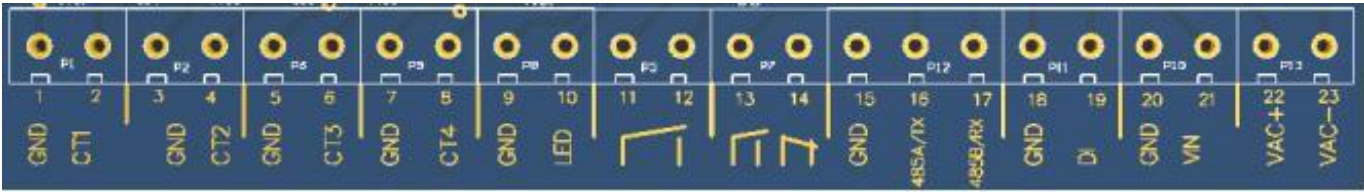
The fault indicator consists of:

- 1 pcs display unit: wall-mounted with LED indication
- 3 pcs sensors: Short-circuit detection, cable connection
- 1 pcs sensor: Earth-fault detection, cable connection

## Typical Application

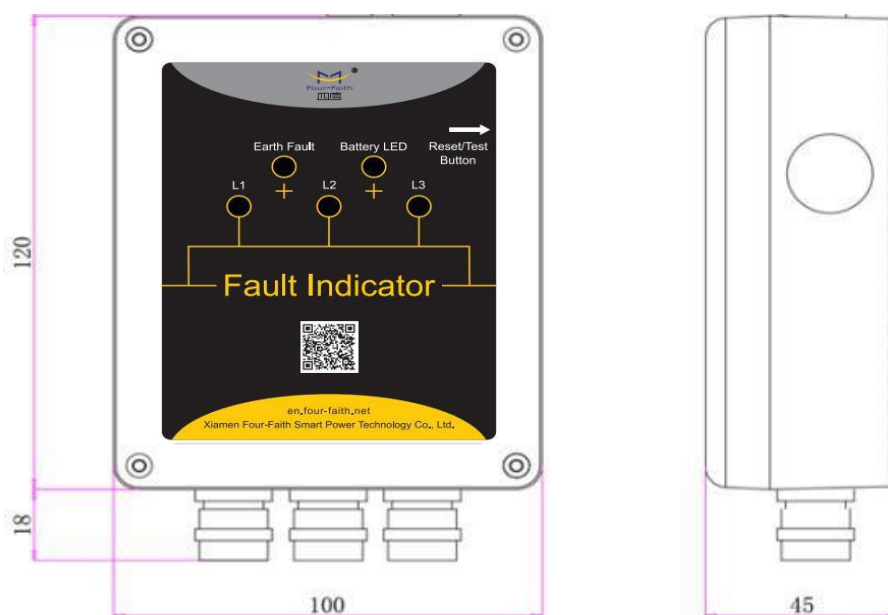


## Specifications

Features	
Item	Content
Earth-fault	Indication of earth-fault by ultra-bright blinking red LED.
Short-circuit	Indication of transient and permanent short-circuit by ultra-bright blinking red LEDs (L1, L2 and L3).
Low Battery Alarm	Indication of Low battery alarm by ultra-bright blinking yellow LED.
Power Supply	The power is provided by an internal 3.6V lithium battery. An external DC power supply is optional.
2 DO	2 relays output, connect to SCADA, one is for short-circuit and earth-fault alarm (NO), the other one is for Low battery alarm (NO or NC is selectable by Jumper inside)
1 DI	1 digital input, for remote reset from SCADA
Communication	A RS485 connector can be connected to IP Modem or RTU/FRTU and transmit information to SCADA
External LED Connector	Can be connected to the external LED lamp
Connectors	
Connector 1-6	Short-circuit sensors L1, L2 and L3
Connector 7-8	Earth-fault sensor
Connector 9-10	External LED lamp
Connector 11-12	DO1, Earth-fault and Short-circuit alarm
Connector 13-14	DO2, Low battery alarm
Connector 15-17	RS485 communication connector, A for RS485+, B for RS485-
Connector 18-19	DI, remote reset signal 9V~38VDC, DI for positive, GND for negative
Connector 20-21	External power supply 5V~36VDC, VIN for positive, GND for negative
Connector 22-23	External reset input 220~240VAC, not need to distinguish positive or negative
	
General Data	
Short-circuit Trip Current (Phase to Phase)	150A/360A/450A/625A, default 150A, adjustable by DIP switch
Short-circuit Response Delay Time	50ms/100ms /150ms /200ms, default 50ms, adjustable by DIP switch
Earth-fault Trip Current (Phase to Ground)	40A/80A/120A/160A, default 40A, adjustable by DIP switch
Earth-fault Response Delay Time	50ms/100ms /150ms /200ms, default 50ms, adjustable by DIP switch
Fault Indication	Earth-fault: 1 Red LED Short-circuit: 3 Red LED

	Low Battery alarm: 1 Yellow LED
<b>Reset of the Indicator</b>	<ol style="list-style-type: none"> <li>1. Manual by push button (transient/permanent short-circuit and earth-fault)</li> <li>2. Timing Reset: 2min(for test), 12h, 24h, 48h, adjustable by DIP switch (transient short-circuit and earth-fault)</li> <li>3. DI reset from SCADA (9-38VDC) (transient and permanent short-circuit、earth-fault)</li> <li>4. Load current recovering reset (at least 15A) (permanent short-circuit)</li> <li>5. 220~240VAC recovering reset (permanent short-circuit)</li> <li>6. Communications by MODBUS (transient and permanent short-circuit、earth-fault)</li> </ol>
<b>Power Supply</b>	Lithium battery type AA 3.6V / 2.7Ah Optional 5~36VDC external power supply
<b>Communication</b>	RS485: Data bits 8/Stop bits 1/Parity none/Baud Rate:9600 Protocol: MODBUS RTU
<b>Installation</b>	Display unit: wall-mounted installation
<b>Dimensions</b>	Indication unit (W x H x D) 100mm x 120mm x 45mm (exclusive cable gland)
<b>Protection Class</b>	Display unit: IP54 Sensors: IP68
<b>Internal Type Test</b>	According to IEEE495-2007
<b>Operation Temperature Range</b>	-40°C~+70°C
<b>Short-circuit Sensor</b>	3 short-circuit sensor for 3 phase cable Diameter: Max.40mm
<b>Earth-fault Sensor</b>	1 earth-fault sensor for a three-core cable Diameter: Max.110mm

## Dimensions





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### Ordering Information

<b>Cable Length</b>	Default: 10 meters;      Optional: Customized
<b>Sensor Diameter</b>	Default: 110millimeters;      Optional: Customized
<b>Accessories</b>	Default: No DC Adapter      Optional: DC Adapter <input type="checkbox"/> (when using communication function, DC Adapter is absolutely necessary)