

Remote Underground Fault Indicator

DYX-FF Datasheet

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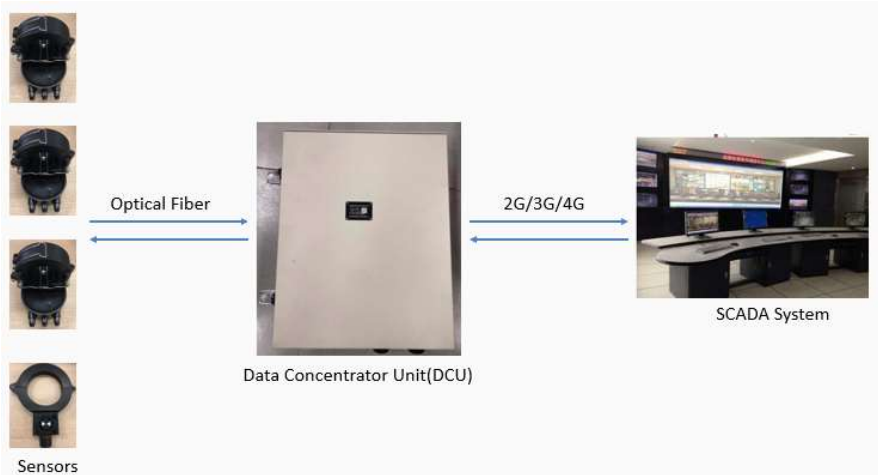
The DYX-FF Remote underground fault indicator is used in 6~35KV cable line distribution networks, it is usually installed in Ring Main Unit, Cable Distribution Box, Switch Cabinet, and so on, enable the maintenance engineers to identify the faulty section of network and restore power supply to customers on healthy sections in the shortest time.

Short-circuit fault and single-phase earth fault can be detected and indicated locally by blinking LED. The fault information and load current value can also be transmitted to the SCADA system. A data concentrator unit (DCU) will be equipped for data transmission from DCU to SCADA system by 2G/3G/4G networks. The connection between the sensors and DCU is done by optical fiber

DCU can support maximum six groups of indicators. Each group includes 1 DCU, 3 short-circuit sensors and 1 earth-fault sensor

- 1) 1 pcs DCU: Transmission fault and load current value to SCADA
- 2) 3 pcs short circuit sensors: short-circuit detection and indication
- 3) 1 pcs earth fault sensor: earth fault detection and indication

Topology



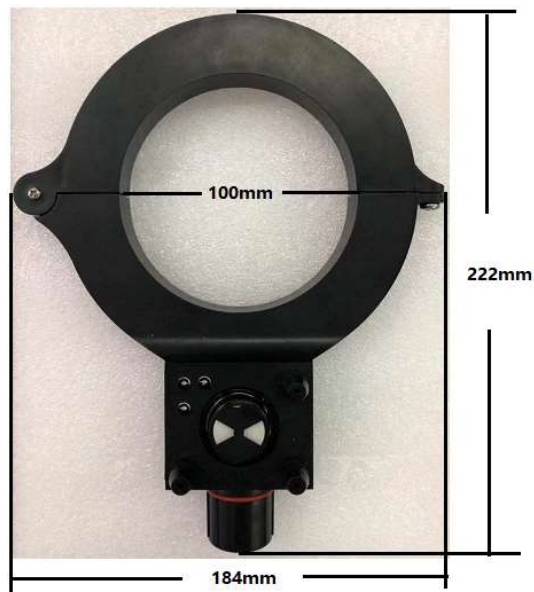
Features

- | | |
|----------------------|--|
| Short Circuit: | Three ultra-bright blinking LEDs. |
| Earth-fault: | Three ultra-bright blinking LEDs. |
| Low Battery Warning: | Indicated by yellow mechanical flag |
| Parameter Adjusted: | The parameters can be read and adjusted by SW tool. |
| Remote Transmission: | DCU can transmit data to SCADA system. |
| Power Supply: | The indicator can take power from overhead lines, with lithium battery as backup.
The DCU is supplied by 12VDC adapter, with lead-acid battery as backup. |
- Note: fault types can't be distinguished locally, but you can get information from SCADA system

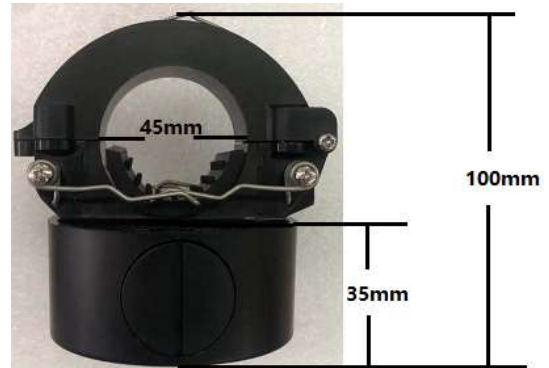
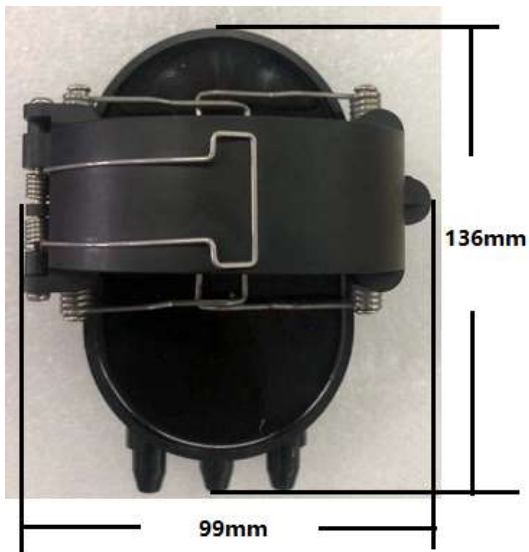
General Data

Parameter	Value
Short-circuit trip current (phase to phase)	adjustable, 1A step, 150A default
Earth-fault trip current (phase to ground)	adjustable: 1A step, 20A default
Earth-fault response delay	adjustable: 1 second step, 30s default
Indication unit reset	1. remote reset by SCADA system 2. time reset: adjustable, 1 second step, 24h default 3. auto delay reset after repower, 1 second step, 30s default, only for permanent fault
Indicator Protection class	IP68
DCU Protection class	IP65
Internal type test	according to IEEE495-2007
Operation temperature range	-40~+70°C
Altitude	<2000m
Relative humidity	5%~95%
Indicator battery	Lithium battery type AA 3.6V / 2700mAh
DCU Power Supply	12VDC
Battery life	approx. 10 years
Indicator Weight	approx. 600g
Power supply from line for indicator	When load current>10A
DCU Weight	< 5Kg
Current Accuracy	0A~300A: ±3A 300A~600A: ±1%
Cable diameter ranges for short circuit sensor	<40mm
Cable diameter ranges for earth fault sensor	<120mm
Blinking frequency	20 per minute, adjustable
Voltage range	5~38KV (if higher than 38KV, customized)
Max. load/fault current	1200A
Current withstand	31.5KA/4s
Communication medium	Indicator to DCU: Optical fiber DCU to SCADA: 2G/3G/4G
Communication Protocol	Indicator to DCU: Private DCU to SCADA: Modbus, IEC101, IEC104, DNP3.0

Earth Fault Sensor:



Short Circuit Sensor:



Order Info

Item	Content
Parameter	Voltage level: KV, Frequency: Hz SIM card quantities: 1 <input type="checkbox"/> /2 <input type="checkbox"/>
Accessories	DCU: Lead-Acid Battery <input type="checkbox"/> Housing <input type="checkbox"/> DC Adapter <input type="checkbox"/>