

DJX-FF-C

Cable Line Fault Indicator

For MV Power Distribution Network

Datasheet

Version 1.0



1. Description

The DJX-FF-C Cable Line fault indicator is used in 6~35KV Cable line power distribution networks, usually installed in Ring Main Unit, Cable Distribution Box, Switch Cabinet, enable the electricity distribution network engineers to quickly identify the faulty section of network and restore power supplies to customers on healthy sections in the shortest time possible.

2. Main technical parameters

- Short Circuit Warning Current: 200-2000A Selectable (accuracy:±10%); Delay 20-300ms; Customer could select before production; Default Settings: 800A/20ms
- Earth Fault Warning Current: 10-150A Selectable (accuracy:±10%); Delay 20-300ms; Customer could select before production; Default Settings: 20A/20ms
- Short circuit sensor mounted cable diameter: outside diameter $\leq\Phi$ 40mm (other specifications shall be customized)
- Earth fault sensor mounted cable diameter: outside diameter $\leq\Phi$ 120mm (other specifications shall be customized)
- Working Ambient Temperature: -40°C-75°C
- Relative Humidity: \leq 95%RH
- Working Power Supply: The sensors are powered by the CT when the flowing current above 10A, when the current under 10 A, will powered by the backup Lithium battery; The display unit is powered by the Lithium Battery
- Remote Signal Communication Reset Method: Manual reset / Auto reset
- Automatic Reset Time: 1-48H Selectable (accuracy:±1%); Customer could select before production; Default Settings: 12H
- Suitable for medium voltage below 35KV rating system.

3. System Composition

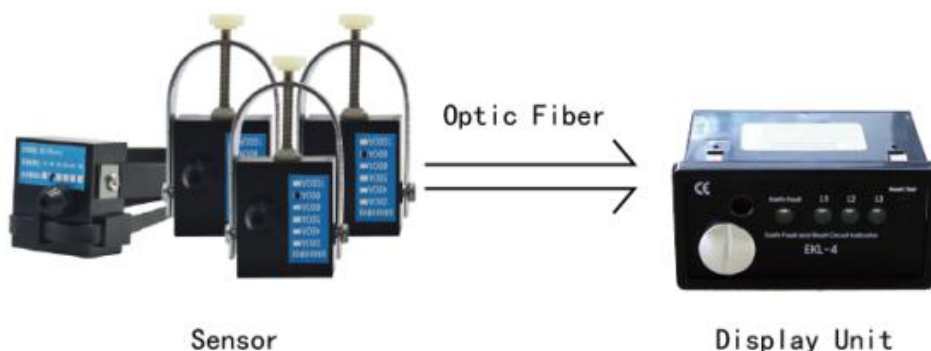
The system is composed of 3 pcs short circuit sensor, 1 pcs earth fault sensor, and 1 pcs Display Unit.

3.1 sensor

4pcs/SET, include 3 pcs short circuit sensors and 1 pcs earth fault sensor. 3 pcs short circuit sensors respectively installed in A,B,C three phase Cable Line, 1 pcs earth fault sensor installed on the bifurcation unshielded part of three-phase cable.

3.2 Display Unit

Receive fault signal from sensors and display immediately as light flashing. The sensors and the display unit is connected by the fiber optic.



4. Operation worked example

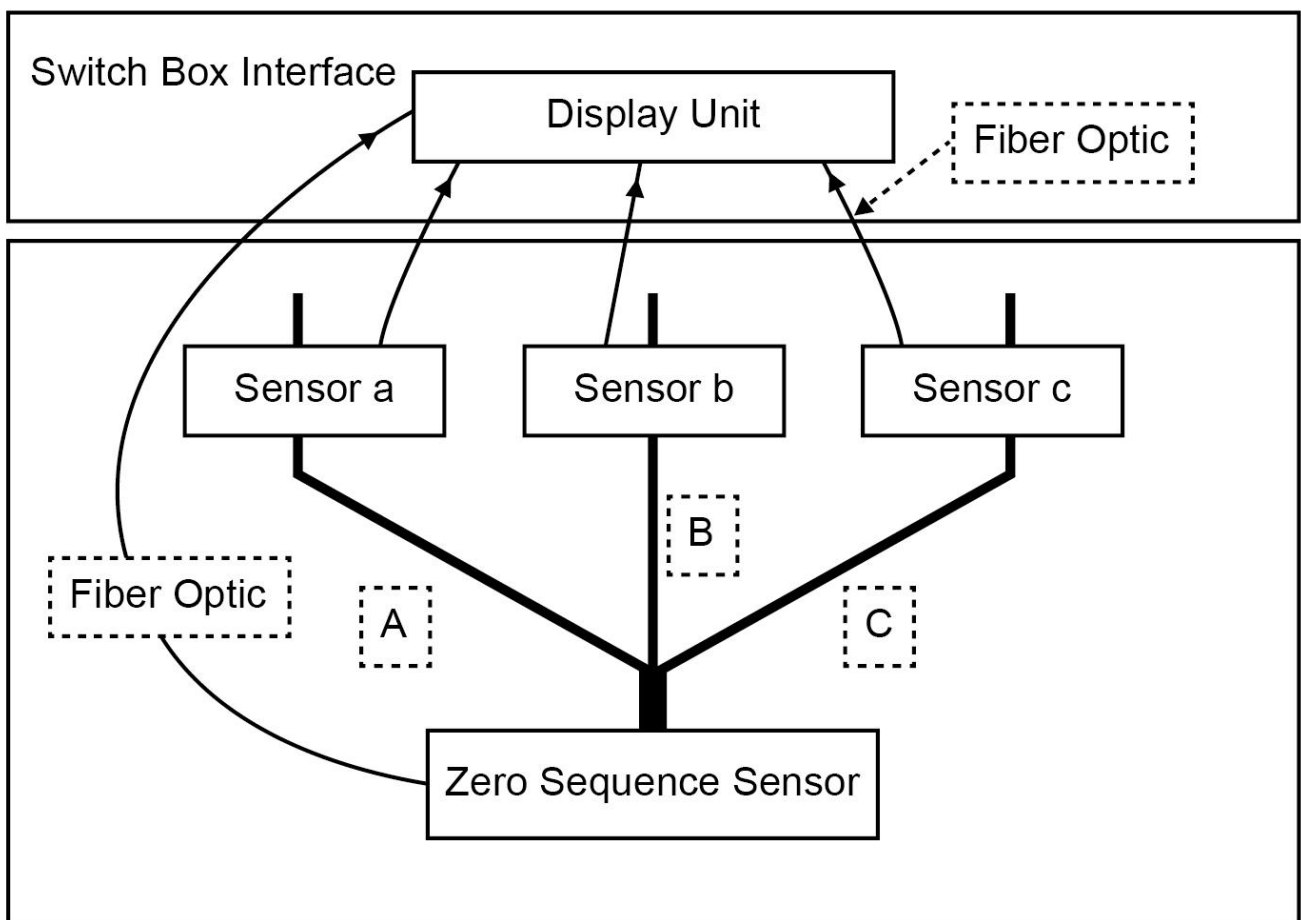
4.1 Short circuit indication:

On detection of flowing current value exceed the fault sensitivity threshold, the Short circuit sensor will send fault signal through fiber optic to the Display Unit. The Display Unit will respond by light flashing in the short circuit indicator.

4.2 Earth fault indication:

On detection of the zero sequence current value exceed fault sensitivity threshold, the earth fault sensor will send fault signal through fiber optic to the Display Unit. The Display Unit will respond by light flashing in the earth fault indicator.

5. Installation



6. Specification

6.1 General

Applicable voltage range	6~35KV (should confirm before production)
Applicable current range	0~630A (should confirm before production)
Applicable power frequency range	45~60Hz (should confirm before production)
MTBF	more than 70000H
Impulse current withstand	31.5kA for 2s
Degree of protection	IP67

Weight	less than 500g
Outline dimension	Φ75mm * 115mm

6.2 EMC

Electrostatic discharge	Can withstand the GB/T 17626.2 of the IV level of electrostatic discharge interference test Communication discharge: + 8KV Air discharge: + 15KV
EFT/B immunity test	Can withstand the GB/T 17626.12 of the IV class fast pulse group interference test Voltage peak value: 2KV Frequency: 5KHz & 100KHz
Radiated susceptibility	Can withstand the GB/T 17626.3 of the IV level RF electromagnetic field immunity Field strength: 30V/m
Surge immunity	Can withstand the GB/T 17626.5 of the IV level surge (impact) interference test Common mode voltage: 4KV ± 10% Differential mode voltage: 2KV ± 10%
Power frequency magnetic field immunity	Can withstand the GB/T 17626.8 of the V level power frequency magnetic field immunity interference test Magnetic field intensity: 100A/m
Damped oscillatory magnetic field immunity	Can withstand the GB/T 17626.10 of the V level damping oscillation magnetic field immunity test Damped oscillatory magnetic field intensity peak value: 100A/m

6.3 Environmental

Environment temperature	Operation temperature : -35℃~80℃(-31~+176°F) Storage temperature : -40℃~85℃(-40~+185°F)
Relative humidity	5~95%(No condensing)
Altitude	≤4000m