

Short Circuit and Earth Fault Indicator for 3kV-40.5kV Power Distribution Networks---EKL1



Short Circuit and Earth Fault Indicator indicates high voltage power line short circuit fault by detecting the 3 single-phase line-currents and short circuit currents, and the grounding fault by detecting the zero sequence currents. With visual or audible indicators, it help line patrol staff to fast find out the location where there is a short circuit or grounding fault on the 3kV-40.5kV power distribution networks, switchgears or cable branching units etc.

Short circuit fault alarm indication

Short-circuit fault sensors installed on 3 single phase cables, monitoring the current changes of the power supply lines, when the current change value reach or exceed Threshold currents for short circuit alarm (this value can be set as per user requirement), the short circuit fault sensors output alarm signal, through optical fiber the signal will be sent to the indicator host, the corresponding fault indicator light will flash to alarm the short circuit fault.

Earth fault alarm indication

Earth fault sensor installed on the bifurcation unshielded part of three-phase cable, detection the zero sequence current value of the three-phase cable, when its value reach or exceed Threshold currents for grounding fault alarm (this value can be set as per user requirement), the earth fault sensor outputs alarm signal, through optical fiber the signal will be sent to the indicator host, the earth fault indicator light will flash to alarm the earth fault.

Product Features

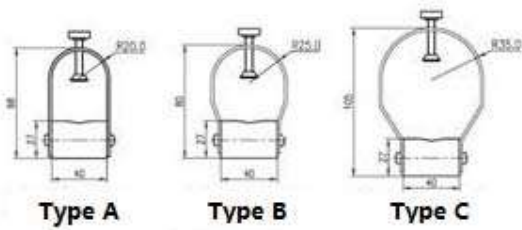
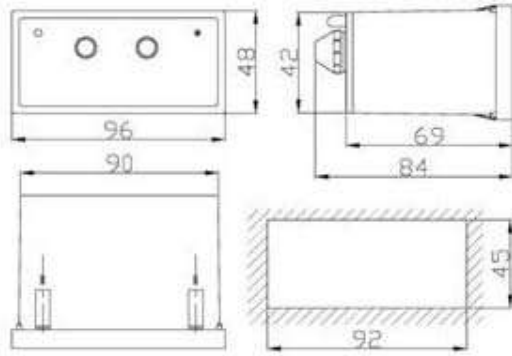
- Short-circuit and earth fault detection with 3 single-phase current sensors, and one grounding current sensor
- Short-circuit indication (3 single phase L1,L2,L3) by one super bright LED
- Earth fault indication by one super bright LED display

- Remote indication via 2 relay contacts
- built-in Li-ion battery with low-power-status indication
- Reset/Test Button
- Remote reset
- Auto-reset: 7s/8/12/24h reset time for options

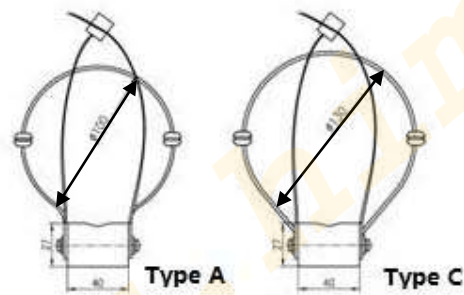
Technical Data

Model number		EKL1	
Voltage level		3kV-40.5kV	
Ambient	temperature	-25°C to +70°C	
	humidity	≤95%	
Threshold currents for short circuit alarm		150A-2000A	
Threshold currents for grounding fault alarm		10A-100A	
alarm current accuracy		±10%	
alarm response time	short circuit fault	40ms	
	grounding fault	40ms	
working current	stand by	≤10uA	
	indication alarm	≤0.5mA	
auto reset time		7s/8H/12H/24H	
auxiliary power supply	built-in battery	Li-ion 3.6v2.25Ah	
capacity of relay contact		2A 30VDC/1A 125VAC	
applicable conductor diameter	short circuit sensor	type A	Φ20mm~Φ40mm
		type B	Φ30mm~Φ50mm
		type C	Φ50mm~Φ70mm
	grounding sensor	type A	Φ60mm~Φ100mm
		type C	Φ80mm~Φ130mm
protection class	indicator	IP40	
	sensor	IP65	
fiber cable length for short circuit sensor		1.5m can be customized	
fiber cable length for grounding sensor		2.5m can be customized	
panel window size (WxH)		92x45mm	
indicator size (WxHxD)		96X48x69mm	
sensor size (WxHxD)		40x44x27mm	

Product Dimensions

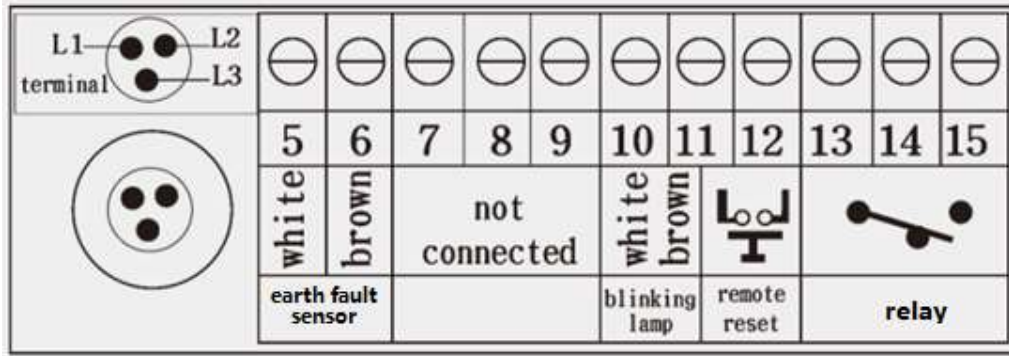


Type A, B, C of short circuit sensors



Type A, C of grounding fault indicator

Terminal Diagram



Terminal Definitions

No.	Marks		Definitions
L1	Terminal		Optic fiber terminal of short circuit sensor for Phase L1
L2			Optic fiber terminal of short circuit sensor for Phase L2
L3			Optic fiber terminal of short circuit sensor for Phase L3
5	White	Earth Fault Sensor	White cable terminal of earth fault sensor
6	Brown		Brown cable terminal of earth fault sensor
7	not connected		not connected
8			
9			
10	White	Blinking Lamp	White cable terminal of external alarm device.
11	Brown		Brown cable terminal of external alarm device.
11	Remote Reset		Remote reset terminal
12			
13	Relay		Common contact of fault signal remote transmission relay

14	Normally-closed contact of fault signal remote transmission relay
15	Normally-open contact of fault signal remote transmission relay

Ordering Information

	EKL1	/800A	/20A	/1.5m	/2.5m	/type A
Model number						
Threshold current for short circuit alarm						
Threshold current for grounding fault alarm						
Fiber cable length for short circuit sensor						
Cable length for grounding sensor						
Type of sensor						

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