NEPEAN Power

Medium Voltage Live Line & Loss of Vacuum

AVAILABLE FROM NEPEAN ELECTRONICS

NEPEAN Power is a proven leader in the supply and manufacture of quality engineered solutions, products and technologies. Established in 1994, through the commitment of our dedicated team we have become a supplier of choice.

The X0276 Live Line Indicator (LLI) and Loss of vacuum detector module is a non-contact, 3-phase, voltage sensing unit used in sensing the presence of voltage on a phase. The presence or absence of voltage is indicated via the front LED's and the operation of voltage free aux contact.

The relay has specifically been designed to assist in the detection of faults with medium voltage switchgear, such as a Loss of Vacuum. The non-contact capability makes this added protection an simple and easy economical addition.

Ordering Information

Part Number	Description
X0276	Live Line & Loss of Vacuum detector
X0276-BR	Live Line Indicator & Loss of Vacuum detector with battery removed
X0462-C	Cover 48Q IP56

Technical Specifications

Detection Voltage Range	3300V up to 33000Volts. Higher voltages possible with NEPEAN consultation	
Inputs	6 way terminal for non-contact inputs coupled to each phase	
	DC Power Supply	+9 to +28V DC or optional internal 4.8V Ni-mh rechargeable battery to keep unit operational for 8 hours in case of external DC supply failure
Outputs	Relay 1: COM terminal and a NC and NO contact	Operates when a Phase voltage is detected. Voltage is present on one or more phases
	Relay 2: COM terminal and a NC and NO contact	Operates when less then 3 phases detected. Loss of phase
Size	48Q case: 48mm x 48mm x 82mm	
Phase Connection	Nominnal 0.5mm Shielded cable wrapped to the around non-semiconductor MV insulation. Screen to removed at sensing wrap.	
Ground	Connection to the power system ground/earth is required for correct operation	

For more information please contact:
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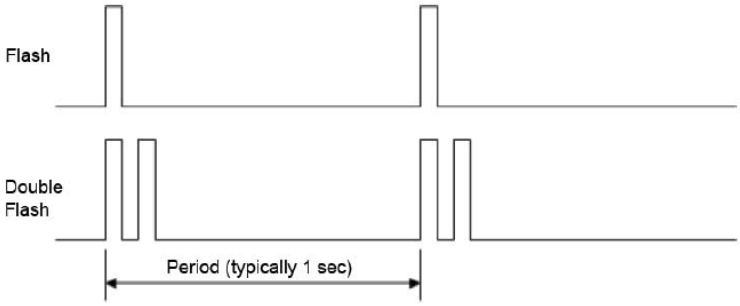
LED Indicators

Phase LED's	Single Flash	Voltage has been sensed on the phase
	Off	No voltage sensed on the phase
Batt-On LED (if fitted)	Off	System is running on DC power, or battery is flat. Battery requires 20 minutes of charge
	Double Flash	Unit is on battery power, unit is operational
DC-On LED	On	Normal operation
	Off	Unit is not running on DC power or the LLI has entered low battery power mode to prevent damage to the battery
Status LED	No Phase	LED Off - Relay 1 De-Energised, Relay 2 Energised
	1 Phase Detected	LED Single Flash - Relay 1 Energised, Relay 2 Energised
	2 Phase Detected	LED Double Flash - Relay 1 Energised, Relay 2 Energised
	3 Phase Detected	LED Solid on - Relay 1 Energised, Relay 2 De-Energised



Adjusting Sensitivity

The LLI uses a non-contact method for detection of an AC field. Depending on the location of the LLI and electrical noise around the pickup coil, the sensitivity may need adjustment. Adjustment of the sensitivity is programmed by the small mode button, located on the rear of the unit.

To adjust-

1. Hold down the mode button (4 seconds) then release. Indicated with all LED's cycling until you release the mode
2. Sensitivity is shown between 1 LED (low sensitivity) and 6 LED's (high sensitivity) being illuminated. Adjust as necessary
3. Exit sensitivity setting by holding the mode button again for more than 5 seconds

Wiring the Sense Coil

1. Wrap 5 to 15 turns of the cable around the non-semiconductor but insulated section of the cable to be monitored and cover with a layer of heat shrink or other insulation material
2. Cover the sense coil with a conductive copper tape then solder the braid of the shielded cable to the copper tape
3. Cover the entire assembly with heat shrink
4. The insulated cable may be up to several metres in length - ensure this cable is not routed along or beside power cables