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LIVE LINE 3-PHASE DETECTOR

P/N – TVLLDA3

415 OR 1100VAC PH-PH GALVANICALLY ISOLATED DETECTION

DESCRIPTION:

The Ringway Live Line Detector (TVLLDA3) is a voltage detection system that indicates the presence of 3-phase AC Voltage at nominal supply levels of 415 or 1100Vrms (refer to ordering information). A proprietary three-phase transformer provides full galvanic-isolation for the system and allows safe monitoring for the presence of voltage (with the loss of up to two phases) and DC power for the internal diagnostic functions. Additionally series DC blocking has been included to allow for insulation resistance testing up to 1kV with the unit connected.

The transformer connects to the panel mounted indicator. The presence of each phase is indicated by a redundant pair of red LEDs and a green status LED is used to indicate that the diagnostics are healthy. The indicator has been designed with ease of installation and connection in mind, requiring only one hole to be cut and connection via an off-the-shelf cable with RJ45 plugs.

The monitoring transformer (only 190mm x 75mm x 75mm) is provided with integral double insulated cables and internal protection to avoid the requirement for bulky and expensive external fusing. In addition to the status LED on the indicator, a piezo sounder is built into the transformer to provide an audible warning when the diagnostics are not healthy, this provides another means of detection if the indicator is not operational.

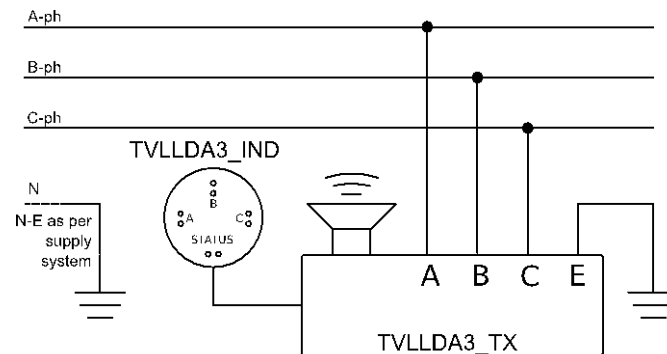
Due to the compact size, ease of installation, and industry-standard detection method, the TVLLDA3 provides an economical live line detection system that is suitable for both new installations and retrofit into existing panels.

FEATURES:

- **Simple, robust and functional.**
- **Class II SELV safety isolating transformer** provides full **galvanic isolation** from monitored lines.
- **Indicates presence** of supply voltage at **415V** or **1100V PH-PH** (see order options)
- Monitoring **transformer** with **built-in power supply** to power detector off any **single phase**
- Series DC blocking allows for **insulation resistance testing to 1kV**
- **No bulky, expensive fusing** required due to **internal fusing** and **double insulated input** design.
- **Redundant LED indication** for each phase (A,B,C) as well as **indication health** status (STATUS).
- Indicator designed to maintain at least **IP55** on the enclosure it is installed.

APPLICATIONS:

The Live Line detector is designed for applications that require visual monitoring of voltage. The transformer will typically be mounted on either side (line or load) of circuit breakers or contactors (e.g. panel supply) to confirm presence of voltage on each phase



OPERATIONAL DESCRIPTION:

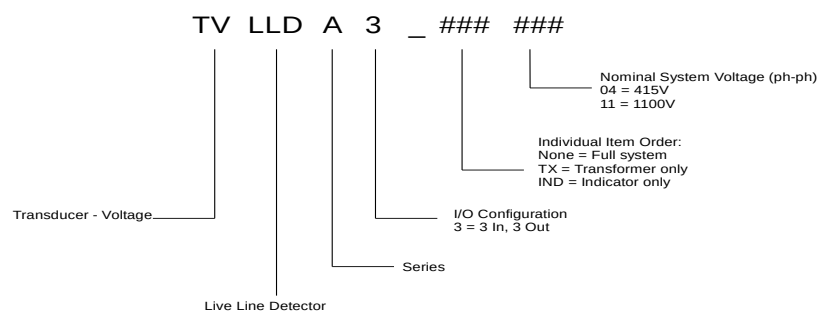
INPUT STATUS (S _Φ)	AT LEAST 1 PHASE PRESENT	PHASE INDICATOR LED FOR INPUT (S _Φ)	STATUS INDICATOR LED	AUDIBLE WARNING
1	YES	ON	ON	OFF
0	YES	OFF	ON	OFF
0	NO	OFF	OFF	OFF
X	YES	U	OFF	ON

Φ = Phase (A/B/C); X = Either state; U = Uncertain; See 'Specifications' for Power supply acceptable range.

SPECIFICATIONS:

Nominal System Voltage:	415V ¹ , 1100V ² ph-ph (refer to ordering info.)
Fault Level (max)	Internally fused to 50kA
Supply Voltage (min):	1 phase at 0.75 Nominal System Voltage.
Supply Current (nom):	45mA (415V) 12mA (1100V) ph-ph
No of Phases:	3
Outputs:	Phase A, B, C – Red LED; Status – Green LED
Operating Temperature:	-5 → +40°C
Dimensions:	Indicator: Ø 45 x 10mm (external); M32 x 1.5 - 14 long (thread) ³ Transformer: 190mm x 75mm x 75mm

ORDERING INFORMATION:



¹ The 415V transformer has a standard operating range of 400-440V (Um=480V).

² The 1100V transformer has a standard range of 1000-1100V (Um=1200V)

³ Requires 32mm panel hole to mount