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PROLINE “NERO” WATER LEAK DETECTION SYSTEM

Industry recognition of the potentially major affect water leaks and moisture ingress can have on todays modern corporate operations and complex electrical/electronic systems, has prompted the design and development of the PROLINE “NERO” moisture detection system – which utilises a small diameter (6.5mm / 1/4inch) moisture sensitive cable as the detection medium.



Description

The “Nero” detection system consists of a 4 conductor moisture detection cable – 2 sensing and 2 data colour coded conductors- an associated electronic interface unit (N1), non moisture sensitive “jointing” cable and cable fixings. With the system designed to operate either as a “stand alone” device, or connected to an existing addressable fire alarm control panel or building management system.

The moisture sensing cable is recoverable once the alarm source has been removed (10-15 minutes under ambient temperature natural drying conditions), with its polypropylene outer braid and core construction preventing conducting objects (ie metal) from generating false alarm signals.

Multiple level sensitivity settings on the interface unit increase the environmental conditions within which the system can reliably operate. Maximum sensitivity setting will detect 1ml of water at any point along the maximum 1000metres / zone sensing cable length.

The N1 single zone interface unit operates from a nominal 24vdc supply (18-25vdc range), with LED visual display of “POWER STATUS”, system ALARM and system FAULT conditions. Output signalling is by way of relay contact outputs rated at 8A @ 30vdc, with latching or non-latching preferences selected by a DIP switch on the unit.

System accuracy allows for ease of “alarm point location” using standard TDR meter which may be purchased from any local electrical wholesaler.

Examples of Applications

- Cable Risers
- Computer Suites
- Engineering/Test laboratories
- Marine Craft – Leisure, Commercial and Military vessels
- Office Floor Areas
- Prisons
- Process Equipment
- Server Rooms
- Sprinkler Systems
- Wash Rooms

Electrical & Mechanical Specifications

Moisture Sensing Cable

Maximum Length per zone: 1000metres

Maximum single reel length: 500metres

Mechanical Construction: 4 conductors – 2 sensor / 2 data

Physical Dimensions: 6.35mm / 1/4inch

Electrical Resistance: Black data conductors: 0.20 +/- 0.02ohms / metre
Red/Blue conductors: 0.12 +/- 0.02ohms/ metre

Impedance: 150 ohms
VoP (velocity of Propagation) - 49%

N1 Interface Unit

Operating voltage: 18-25Vdc

Current Drain: Normal Operation: <10Ma @ 24Vdc
Alarm & Fault relays activated: 50mA@24Vdc

Output Contact Ratings: 8A@30Vdc(N/O,N/C,C)UL/CSA certified.Latching/Non-Latching selected by DIP switch on unit

3 Sensitivity Settings : Equal to detection of 1ml,3ml or 5ml water at any point along the installed sensor cable length.

System Status Indication: 3 x LED indicators-

SUPPLY HEALTHY - **BLUE**
ALARM - **RED**
FAULT - **AMBER/YELLOW**

The information provided on this data sheet is accurate at time of going to print. In the interests of improving quality and design, PROLINE PROTECTION SYSTEMS LIMITED reserve the right to amend specifications without prior notice.

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