# 20kV line isolation unit (hv-foliu)

High voltage protection and secure tamper-proof fibre optic lines.





The **20kV** *high voltage fibre optic line isoation unit* is a sophisticated transmission device used to send and receive data via optical cable. It was designed for applications where there exists a possibility of a high potential difference between the customer premises and the Public Switched Telephone Network (PSTN).

Valuable telecommunication assets such as telephones, data modems, fax machines and computers are safe from damage due to high voltage surges on the line caused by lightning strikes. Fibre optic cable is tamper-proof so it provides a very high level of protection from bugging such as tapping in on the line.

### features:

- ➤ full duplex voice or data transmission
- ➤ 20kV isolation using fibre optic technology
- ▶ PLL synthesis for data compatibility
- ▶ flat frequency response 200Hz 3400kHz
- operates from various input voltages
- ▶ two separate modules for safe installation
- ▶ true sine wave ring generator
- ➤ power on, line loop & power failure indicators
- ▶ easy installation
- ▶ battery charging circuit

### description:

High Potential Differences between customer premises and the PSTN can be due to:

- ➤ earth potential rises (EPR)
- ➤ power transmission failures
- ➤ lightning strikes, etc.

The 20kV HVFOLIU's extremely high voltage isolation makes the unit suitable for;

- ➤ power substations
- switching yards
   switching yards
- ➤ power generating plants
- ▶ radio transmission towers
- ▶ broadcast stations
- ➤ high lightning areas, etc.

The 20kV HVFOLIU provides isolation substantially in the excess of 20kV (subject to installation method) using fibre optic cable. The larger the separation between the local module and the PSTN (*line*) module, the greater the isolation.

The 20kV HVFOLIU provides a transparent path between the customer equipment and the PSTN. The operator of the telephone on the customer premises notices no change to the operation of the telephone.

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## specifications:

**PSTN line module:** exchange line power 24V - 50V @ 15mA - 100mA

local telephone module: supply voltage supply current @ 50V stand-by <25mA loop / ring <120mA

supply current @ 24V stand-by < 20mA loop / ring <100mA

line feed output supply voltage less 2V @ 40mA max.

battery 24Vdc

stand-by time >48 hours (using a 1.3Ah battery)

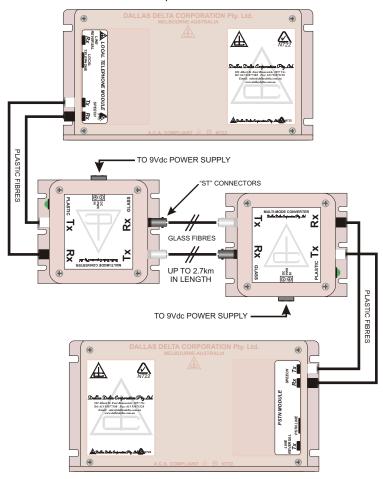
physical: dimensions 83.0mm x 97.0mm x 35.0mm

weight 110 grams material moulded plastic

#### installation:

The Lightpipe is an excellent companion for Dallas Delta's Fibre Optic Line Isolation Unit (LIU). It will extend the distance between the PSTN line and the local user network up to 2.7km. Safety and security are essential features taken on board when designing the Lightpipe. Whether you require a voice call or data transfer to be transmitted securely over a great distance, the Lightpipe will meet your needs.

For further information on the Fibre Optic Line Isolation Units (LIU) refer to the FOLIU brochure.



Fibre Optic LIU - LOCAL

Fibre Optic LIU - PSTN

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ACA All relevant Australian Communications Authority Standards
EN60950 European Safety Standard
AS/NZS3548 EMI Australia/NewZealand Standard
EN55022 EMI European Standard (CISPR22)

