

**Drallim's Remote Digital Temperature Transducer forms part of a new product range combining microprocessor techniques with long distance two-wire digital multi-drop protocol. This has been established and proven for many years in the international telecommunications sector.**



View of Sheath Temperature Sensor

#### **RDT Features:**

- ❖ Can be used to monitor expulsion tank or cable sheath temperatures, remotely.
- ❖ Genuine two-wire digital multi-drop signalling, allowing up to 99 individual mixed type RDTs to be addressed sequentially on the same pilot pair.
- ❖ Power and communication signal is superimposed on the same pilot lines.
- ❖ Remote operation offering up to 15 kilometres, (Longer distances achieved with Repeater Unit).
- ❖ Superior temperature measurement accuracy with on-board temperature compensation.
- ❖ Environmental Moisture Protection: IP68 Rating, (2 metres submersion).
- ❖ Integral 15kV induced transient protection for installation on auxiliary pilot cables.
- ❖ Ergonomically designed PVDF enclosure.
- ❖ Resistant to corrosive effects of dielectric fluids.
- ❖ 40 Years processor memory charge storage EEPROM, recalibration schedules available.
- ❖ Electrical 'plug and socket' devices available for easy connection/disconnection.
- ❖ National Grid Type-Test approval for installation on circuits up to and including 400kV.

For the accurate and reliable long-term temperature measurement of dielectric fluids and cable sheath temperatures in transmission and distribution self-contained oil-filled cables, up to and including 400kV.

**REMOTE DIGITAL  
TANK & CABLE SHEATH  
TEMPERATURE  
TRANSDUCER  
3991458/5/QC**

***The Drallim Group***

*Leading innovators in technology and quality*

The range of measurement devices and control equipment has been developed to meet the demanding needs for remote monitoring solutions on EHV power transmission and distribution systems, and in particular, self-contained oil filled cables. All the monitoring equipment has been designed to withstand the harsh electrical and environmental conditions, which prevail in close proximity to power cables. The transducer is of a rugged hermetically sealed construction with environmental protection to IP68, (submersion 2 metres), and is resistant to the corrosive effects of dielectric cable fluids.

The temperature device is supplied complete with suitable bracket attachment fittings for most applications. The sensor is designed to measure the temperature of local or remote power cable dielectric fluid tanks, for the purpose of cable leak detection / location.



**View of Temperature Transducer attached to oil expulsion tank**

### Performance Specification:

Parameter	Description
<b>Primary Sensor Type:</b>	Thermistor.
<b>Operating Temperature:</b>	-25°C - 50°C (Calibrated range). -30°C - 85°C (Working range).
<b>Accuracy:</b>	± 1°C Steady State Accuracy: Reference to FSO over temperature calibration range.
<b>RDT Reply Resolution:</b>	0.1°C.
<b>Thermal Time Constant:</b>	12 minutes.
<b>Stability:</b>	± 0.5% over 1 year.
<b>Power Input:</b>	9 to 75V DC on single pair (polarity reversible unless used in conjunction with Isolation unit).
<b>Current drain:</b>	130µA in idle/quiescent mode (Awaiting polling address), 3mA active mode.
<b>Thermal Stability:</b>	Fully temperature compensated circuitry on board.
<b>Maximum number of mixed devices per pilot pair:</b>	99.
<b>Maximum Operating Range: (Loop resistance &lt; 10k ohms)</b>	15 kilometres (unloaded twisted pair). Multicore (unspecified).
<b>Poll time:</b>	2.5 seconds per RDT (typically).
<b>Environmental Protection:</b>	IP68 (up to 2 metres fully submerged).
<b>Electrical Conformity:</b>	National Grid Company Type Test Approval.
<b>Housing:</b>	PVDF: PolyVinylidene Diflouride.
<b>'Quick-fit' Electrical Connection Plug &amp; Socket(Optional):</b>	Tested to IP68 (2 metres). 15kV Induced Voltage Protection.
<b>RDT: Overall dimension: (Excluding coupling)</b>	280mm x 50mm □
<b>RDT: Overall weight: (Excluding couplings)</b>	0.45kilograms.

In the interests of technical progress the company reserves the right to make design and manufacture changes to the goods described in this brochure. Any details in this brochure must NOT be reproduced or copied in any form without prior permission of Drallim Industries.