ProReact EN Digital
Linear Heat Detection

Data Sheet

Thermocable ProAcademy
Linear Detection Technology Made Simple

Approved EN54-28 Approved

UL-EU Certificate

Certificate No.	UL-EU-01116-CPR
Date of Issue:	2019-08-23
Revision:	2019-10-30
Certificate Holder:	Thermocable Flexible Elements Ltd Pasture Lane, Clayton, Bradford, BD14 6LU United Kingdom
Manufacturer:	Thermocable Flexible Elements Ltd Pasture Lane, Clayton, Bradford, BD14 6LU United Kingdom
Certified Product Type:	Non-resettable line-type heat detectors
Product Trade Name:	DSCU-EN ProReact Digital Sensor Control Unit EN78 ProReact EN Digital LHD Cable (T078-V10-A045) EN88 ProReact EN Digital LHD Cable (T088-V10-A065) EOLU-EN ProReact Digital End-of-Line Unit
Trademark:	ProReact
Technical Specifications:	EN54-28:2016
Supporting Documentation:	S36157-D01-EuropeanDirective-Original
Expiry date:	2029-08-23

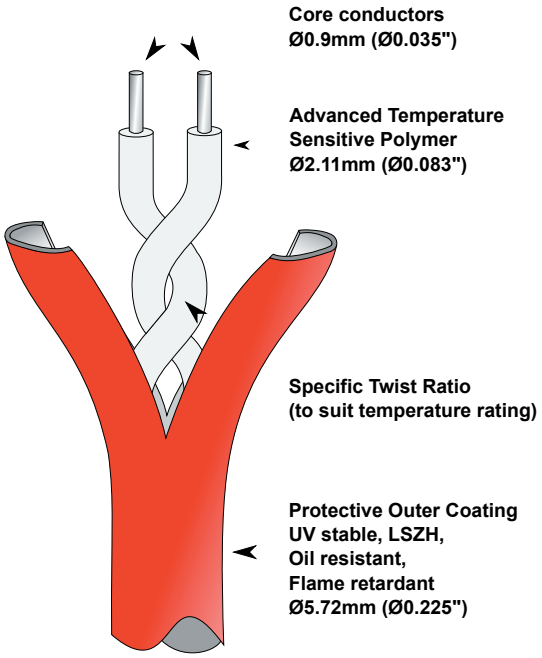
General Overview

ProReact EN Digital Linear Heat Detection Cable

Thermocable's ProReact EN Digital Linear Heat Detection (LHD) cable uses fixed temperature detection technology to provide a straightforward method for sensing changes in temperature. The cable can offer alternative overheat protection in a vast range of applications and environments, from tunnels, cable trays, warehousing to sensing changes in temperature within escalators and other applications where many risks of fire are hidden from view.

ProReact EN Digital LHD cable is a non-resettable line-type heat detector. The two twisted cores and held apart by an advanced temperature sensitive polymer. At a temperature, set by the manufacturing processes of the cable, the temperature sensitive polymer surrounding the two cores softens, allowing the cores to come into contact. This is an irreversible process and once the cable has activated, the section which has triggered must be cut out and replaced (not the whole cable).

Available activation temperatures:	78°C (172 °F) and 88 °C (190 °F)
Maximum zone length:	1,000m (3,280ft) (when used with DSCU-EN)



ProReact EN Digital Linear Heat Detection Cable Construction

ProReact Digital Sensor Control Unit (DSCU-EN)

The ProReact EN Digital LHD cable has been approved to EN54-28:2016 in conjunction with the ProReact Digital Sensor Control Unit (DSCU-EN). The DSCU-EN monitors up-to two zones of Digital LHD cable and has separate fault and alarm outputs for each zone.

It is straightforward to connect the DSCU-EN to a conventional fire alarm panel or to an addressable system using an I/O, zone or switch monitor module. It also has a built-in display which shows the state of each zone, including the distance in metres and feet to the alarm point, if an alarm is triggered.

Furthermore, an RS-485 Modbus RTU/ASCII output is available as standard for integration with a PLC or SCADA system.



ProReact Digital Sensor Control Unit (DSCU-EN)

ProReact Digital End-of-line Unit (EOLU-EN)

The ProReact Digital End-of-Line Unit (EOLU-EN) is designed to effectively terminate up-to two zones of ProReact EN Digital LHD cable in a secure, weatherproof enclosure.

Furthermore, the built-in switches for testing a fault and alarm condition allow the integrity of the whole system to be functionally checked in situ, providing comprehensive testing and maintenance of the system.



ProReact Digital End-of-line Unit (EOLU-EN)

Technical Specifications

ProReact EN Digital Linear Heat Detection Cable

Product	ProReact EN Digital LHD Cable - EN78	ProReact EN Digital LHD Cable - EN88
UL File No	S36157	
UL Model Designation	EN78	EN88
Thermocable Part No	F1180	F1181
Description	ProReact EN Digital LHD Cable – 78 deg C	ProReact EN Digital LHD Cable – 88 deg C
EN54-28 Performance Type	T078-V10-A045	T088-V10-A065
EN54-28 Environmental Group	II	
Nominal Activation Temperature	78 deg C	88 deg C
Maximum Ambient Temperature	45 deg C	65 deg C
Minimum Ambient Temperature	-40 deg C	
Humidity	0% to 98% RH	
Colour	Red	White
Capacitance per m	<100pF	
Inductance per m	<3.2µH	
Resistance per m	Approx 2.5ohms	
Diameter	5.72mm +/- 0.12mm (0.225" +/- 0.005")	
Minimum bend radius	100mm (4")	
Features	Low-Smoke Zero Halogen (LSZH), UV Stable, Oil resistant, Flame retardant	
Chemical Resistance	**These ratings are given as a guide and for constant exposure to the chemicals shown at normal (10 to 30 deg C)temperatures. (* - not recommended, ***** - little or no impact)**	
Ammonia, Liquid / Gas	*****	
Butane	**	
Copper Nitrate	*****	
Fuel Oils	***	
Gasoline	***	
Hydrofluoric Acid	****	
Kerosene	*	
Diesel Fuel	***	
Acetic Acid	****	

Technical drawings of ProReact EN Digital Linear Heat Detection Cable are available upon request.

Technical Specifications

ProReact Digital Sensor Control Unit (DSCU-EN)

Thermocable Part Number:	A1397		
Thermocable Part Description:	ProReact Digital Sensor Control Unit		
UL Model Number:	DSCU-EN		
UL File Number:	S36157		
Revision:	1.9.2-EN		
Approvals:	EN54-28:2016		
Enclosure:			
...Dimensions	H180mm x W120mm x D60.5mm (H7.1in x W4.72in x D2.38in)		
...Rating	NEMA 4, 4X (IP65)		
...Finish	Light Gray with clear lid		
...Display	2 line, 16 character backlit display showing zone status		
Power Requirements:	*All circuits power limited if powered from a power limited supply*		
	Min.	Nominal	Max.
...Operating Voltage	12Vdc —	24Vdc —	36Vdc
Current Consumption:			
...Normal Operation (standby)	<15mA	<7mA	<5mA
...Alarm	<40mA	<23mA	<15mA
Operating Temperature Range:	-20°C – +50°C (-4°F – +122°F)		
Terminal Blocks:			
...Spacing	5mm Rising Clamp		
...Rating	16A		
...Wire Size	0.08mm^2 (28AWG) to 4mm^2 (11AWG)		
Supervised Circuits:	Power, Input Zone 1 & Input Zone 2		
Inputs:	*Up to two Class B zones of Thermocable ProReact EN Digital LHD Cable*		
...Max Zone Length	1000m (3,280ft)		
...Min Zone Length	1m		
...End of line resistor	3.6kohm (included)		
...Short circuit current	0.5mA		
...Max Zone Voltage	5V		
Outputs:			
...Communications	Two wire RS-485 Modbus RTU/ASCII		
...Sounder			
...Alarm	2x Form C volt-free relay contacts (resistive, common)		
	Max V	30Vac or 42.4Vdc	
	Max Current	2A	
	Max Switching Power	60W, 62.5VA	
...Fault	2x Optoisolated phototransistor output (resistive, common)		
	Max V	35Vdc	
	Max Current	80mA	
	Max Power Dissipation	150mW	

Technical Specifications

ProReact Digital End-of-line Unit (EOLU-EN)

Construction:	IP66 rated enclosure supplied with 2 IP67 rated cable glands
Dimensions:	W94mm x L94mm x D57mm (not including cable glands)
Approvals:	EN54-28:2016
Environmental Group:	II
UL Model Designation:	EOLU-EN
UL File No:	S36157
Thermocable Part No:	A1398
Terminal Blocks:	
...end-of-line resistor	2x 5mm Rising lamp
...LHD cable	2x removable header 5mm Rising clamp
Ambient temperature rating:	-35°C to +55°C

ProReact EN Digital Linear Heat Detection Range



ProReact EN Digital LHD

Part No	Description	100m Reel			200m Reel			500m Reel		
		Net Kgs	Gross Kgs	Dimms mm	Net Kgs	Gross Kgs	Dimms mm	Net Kgs	Gross Kgs	Dimms mm
F1180	ProReact EN Digital LHD Cable – 78 deg C	4.10	6.76	Ø430 x 135	8.20	10.86	Ø430 x 135	20.50	23.70	Ø430 x 250
F1181	ProReact EN Digital LHD Cable – 88 deg C	4.10	6.76		8.20	10.86		20.50	23.70	
A1397	ProReact Digital Sensor Control Unit	673g		180 x 120 x 61						
A1343	LHD Junction Box Polycarbonate w/5 DIN Rail mounted terminals & 2 cable glands	240g		155 x 145 x 60						
A1398	ProReact Digital End of Line Unit	280g								

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