

RedDetect™ system X2

Product datasheet

RedDetect X2 is developed to monitor, detect and locate fault on insulated pipelines.

Usage

RedDetect X2 is equipped with the latest technology – all in one unit. The modern construction makes X2 perfectly equipped for the different challenges and needs of the future.

RedDetect X2 has four channels for connection of alarm wires and can locate fault on alarm wires length up to 5000 meters per channel. You can use one or multiple uninsulated (or insulated) wires in each pipe.

Intelligence

RedDetect X2 measure the status of the pipe continuously and has a non-volatile memory that automatically saves the data. You can also use the X2 as a stand alone unit. The insulation resistance values and incoming alarms can be read directly in the LCD display.

Properties

The system is delivered with Ethernet connection as standard, LCD-display with menu system, internal memory. You can update the RedDetect X2 with an internal TDR (pulse echo meter) with an accuracy of 30 cm.

The RedDetect system uses Ethernet and/or GPRS as the primary communication types. Other communication types are 3G, ADSL or fibre optic.

XTool

XTool is the monitoring software that handles the communication and presentation of data.



Technical information

Inputs

RedDetect X2 has four (4) pcs BNC-inputs for measurement of the insulation resistance, loop resistance and battery voltage. Port 1

Digital and analogue inputs

RedDetect X2 has four (4) pcs contacts for measuring of voltage 0-10V or current loop 4-20mA, alternative digital levels. It can for example be used to measure the temperature and humidity on pipes and in chambers. Port 2

Ethernet RJ-45 for local communication.

Outputs

RedDetect X2 unit has a 3-pole, choppy relay contact (NO/NC).

Power supply primary 110/230 VAC.
Secondary 12 volt DC for operating extern devices as modems etc.

Communication

Built-in Ethernet (TCP/IP) modem.
RJ-45, 10/100Mbit Ethernet for communication.

Memory

Internal flash memory.

LCD-display

2x16 character large-font LCD-display with background lighting for presentation of measure values and menus. The measuring values for the insulation resistance and loop resistance can directly be read from the display. Even alarm limits can be shown.

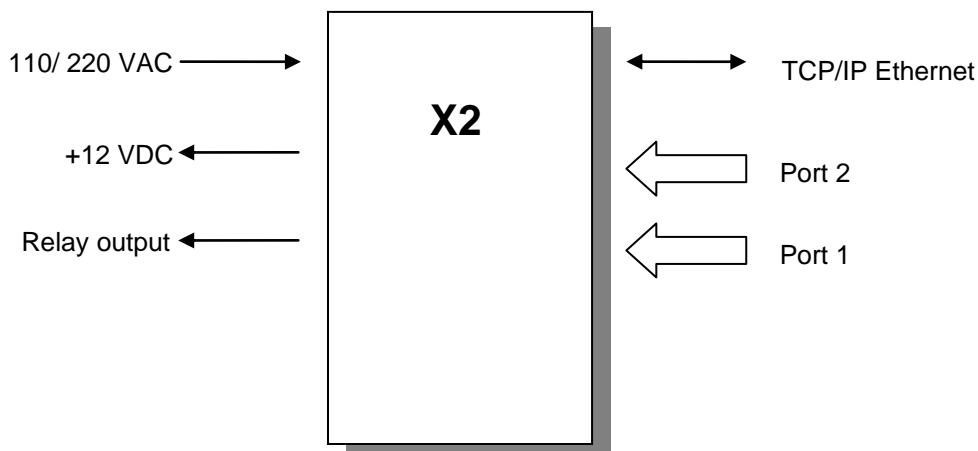
Front panel

5-keys keyboard for manoeuvre of menu system. The front panel has 2 pcs of lighting diodes for showing alarm and operating status.

Functions

Common

- Built-in transformer
- Stand alone function
- Clock and battery backup



RedDetect™ system X2

Technical data

General

Working temperature	-5 / +50 degrees C.
Power supply	110/230 VAC
Power consumption (idle)	15W
Case	IP53 (IP67, optional steel case)

Communication protocol	TCP/IP
Communication types	Broadband, GPRS, fibre optic
Channels	4 channels with BNC contacts
Alarm wires	5000 m alarm wire / channel (Looped)

TDR	No (upgradeable to X4)
Connctions	Ethernet RJ-45

Measurement

Insulation resistance	1 kohm – 50 Mohm
Loop resistance	0 – 200 ohm
Battery voltage	-0.5 volt.....+ 0.5 volt
TDR curve	-

Outputs

Relay output	NO/NC
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Ingångar

Analouge (digital)	0-10 V / 4-20mA
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Size

Length	260 mm
Height	150 mm (excl. contacts)
Depth	90 mm
Weight	2 kg



Alarm wire inputs

Analogue / Relay
inputs

Ethernet

RS232

USB

Power supply

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Technical specification

Unit	X1	X2	X4	X4e
XTool monitoring software	-	√	√	√
Stand alone function	√	√		
Water leak detection	√	√	√	√
Steam leak detection	√	√	√	√
Oil leak detection	√	-	-	√
TDR (pulse echo meter)	-	-	√	√
	-			
Measuring channels	4	4	4	4
Max. alarm wire / channel	5000	5000	5000	5000
Communication				
Broadband	√	√	√	√
GPRS	√	√	√	√
Fibre optic	√	√	√	√
Size (LxDxH) mm	260x150x90	260x150x90	260x150x90	260x150x90
Casing material	Polycarbonat	Aluminium	Aluminium	Aluminium
EMC protection	√	√	√	√
Power supply				
Primary	12V DC	110/230 VAC	110/230 VAC	110/230 VAC
Secondary	Batteripack	12V DC	12V DC	12V DC
Internal transformer	√	√	√	√
Power consumption (idle)	15 W	15W	15W	15W
Protection class	IP65	IP53	IP53	IP53
External steel case (optional)	IP67	IP67	IP67	IP67
Potentialfree relay output NO/NC	√	√	√	√
Measurement				
Insulation resistance	1kohm- 1Mohm	1kohm- 50Mohm	1kohm- 50Mohm	1kohm- 50Mohm
Alarm limit activating	Manually or through software	through software	through software	through software
Adjustable alarm limits	√	√	√	√
Measurement				
Loop resistance	0-200 ohm	0-200 ohm	0-200 ohm	0-200 ohm
Adjustable alarm limit	√	√	√	√
Pulse echo meter (TDR)				
TDR measurement	-	-	√	√
TDR resolution	-	-	1 ns	1 ns
Accuracy	-	30 cm	30 cm	30 cm
Battery voltage	-0.5 volt.....+ 0.5 volt	-0.5 volt.....+ 0.5 volt	-0.5 volt.....+ 0.5 volt	-0.5 volt.....+ 0.5 volt