




Product Catalogue





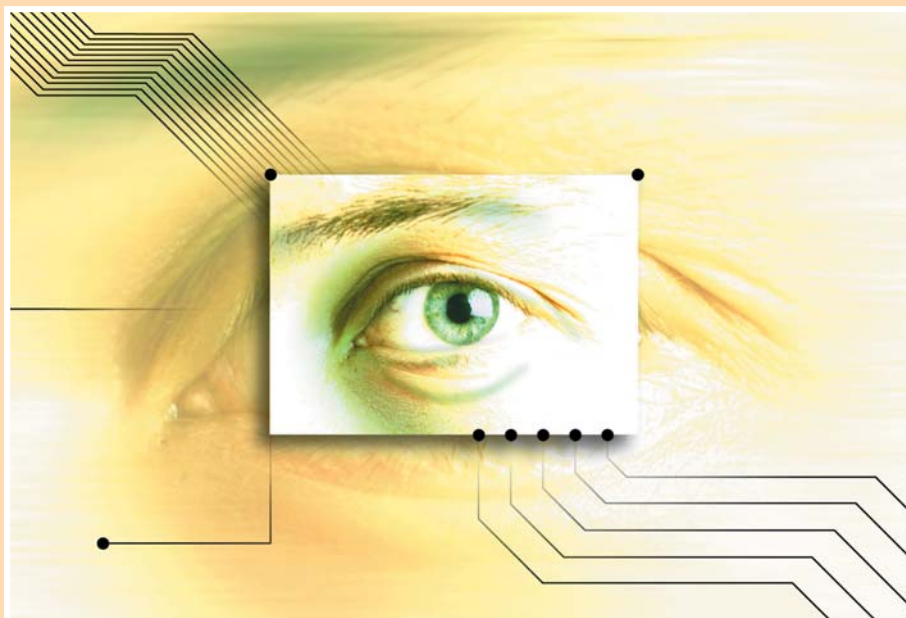
Monitoring Stations

Unified Monitoring System




Item	Description	Order no.
 Monitoring Station RTU	Modular system in 19" housing for universal monitoring tasks with 12 slots for measurement cards (not included) Included standard modules: power supply, CPU card, CAN bus, TCP/IP communication interface 38 .. 72 V DC (DC/DC power supply unit) 100 .. 250 V AC/45 .. 65 Hz (AC/DC power supply unit)	067400.000 067400.008
 Monitoring Station RTU 101-IMS	Compact system in wall housing for insulation and loop resistance monitoring, MOD-bus compatible, Display + control panel, 10 measuring channels, 13 alarm contacts, with pre-assembled ethernet cable Measuring/Supply voltage: 30 V/ 21..72 V DC 90 V/ 21..72 V DC	073187.000 073187.100
 Monitoring Station MUX 101-DW	Economically prized compact system in wall housing for universal monitoring tasks with 16 measuring channels for 127 addressable sensors each, with pre-assembled ethernet cable Supply voltage 38 .. 72 V DC	072681.000

Fiber Optic Monitoring Options for modular Monitoring Station RTU

Item	Description	Order no.										
 OTDR Module	Laser classe: OTDR Type 152, 161 IEC 60825-1:2001 class 1 OTDR Type 150, 257, 357, 163 IEC 60825-1:2001 class 1M others on request each incl. router and connection cable	074522.0YY										
 Optical Switch Module	For 2 to 200 fiber connections incl. interface card for RTU and connection cable Size: 1 HU (44,3 mm) per 16 channels Order no. XXX = number of switch channels Larger switch modules e.g. for PON applications on request	073XXX.0YY										
	Available connectors:	<table><tr><td>FC/APC</td><td>YY = 00</td></tr><tr><td>SC/APC</td><td>YY = 85</td></tr><tr><td>SC/PC</td><td>YY = 87</td></tr><tr><td>E2000</td><td>YY = 88</td></tr><tr><td>FC/PC</td><td>YY = 89</td></tr></table>	FC/APC	YY = 00	SC/APC	YY = 85	SC/PC	YY = 87	E2000	YY = 88	FC/PC	YY = 89
FC/APC	YY = 00											
SC/APC	YY = 85											
SC/PC	YY = 87											
E2000	YY = 88											
FC/PC	YY = 89											




Modem based Systems

Item	Description	Order no.
 Monitoring Station DW 1005E	Modular system in 19" housing for universal monitoring tasks with 12 slots for measurement cards (not included) Included standard modules: power supply, CPU Card, and analogue modem communication interface 36 .. 75 V DC (DC/DC power supply unit) 100 .. 250 V AC /45 .. 65 Hz (AC/DC power supply unit)	 050585.000 050585.008
 Monitoring Station DW 101E	Compact system in wall housing for universal monitoring tasks 16 measuring channels for 127 addressable sensors each Supply voltage 38 .. 72 V DC	 056762.000
 Monitoring Station IMS 101E	Compact system in wall housing for insulation- and loop resistance monitoring Display + control panel, 10 measuring channels, 13 alarm contacts Supply voltage 38 .. 72 V DC Supply voltage 24 V DC	 061101.000 061101.024

Upgrade Kits for modem based Monitoring Stations to UMS RTUs

Item	Description	Order no.
Upgrade Kit DW 1005E to RTU	to convert one existing 19" monitoring station DW 1005E to RTU	072150.000
Upgrade Kit DW 101E to MUX 101-DW	to convert one existing compact monitoring station DW 101E to MUX 101-DW	072781.000
Upgrade Kit DW 101E to RTU 101-IMS	to convert one existing compact monitoring station with Display IMS 101E to RTU 101-IMS without Display	073451.000 073451.100

Measuring Cards for Monitoring Stations RTU and DW 1005E

Item	Description	Order no.
 Measuring Card R10	for insulation and loop resistance, 10 channels Meas. voltage 30 V with cable and terminal strip Meas. voltage 90 V	058493.000 058493.100
Measuring Card QE16	16 channels for 127 addressable sensors (Tx-bus) each	047996.000
Anschlusskabel VK 16	for available lengths see table bottom	029943.0XX
Measuring Card C32	for 32 dry contacts	029920.000
Anschlusskabel VK 32	for available lengths see table bottom	029946.0XX
Measuring Card Out12	for external alarming, 12 dry contact outputs incl. connection cable VK12	058518.000
Measuring Card Ax4 for RTU only	for real-time remote monitoring of contacts at measurement points without power supply with the Ax-Bus	073810.000
Measuring Card SP4 for RTU only	for addressable Sparton and Microsol sensors	070882.000
Measuring Card T36 for RTU only	for 20/40 step sensors for pressure and flow	069397.000
	Available Connection Cable Lengths 2.0 meters 5.0 meters 7.5 meters 10.0 meters	XX = 00 XX = 85 XX = 86 XX = 87





Monitoring Stations

Accessories

For compact Monitoring Stations, Types 101

Item	Description	Order no.
External Power Supply	230 V AC	062025.000
19" 8 HU Adaptor	for mounting in 19" cabinet or rack	061713.000

For modular Monitoring Stations RTU

Item	Description	Order no.
 Wall Mount Cabinet	19"/11 HU for RTU or DW 1005E and connection panel for 15 LSA+ connection strips (excl.)	062526.000
	19"/11 HU including wiring and mounting works for one RTU or DW 1005E and the connection panel for 15 LSA+ connection strips (instruments and wires excluded)	062526.001
Communication Module I-COM for RTU only	adds an internal analogue modem to the RTU	072445.001
	adds an internal ISDN modem to the RTU	072445.002
	adds an internal GPRS/GSM modem to the RTU	072445.003
 LSA+ Connection Strip	for 10 pairs	047939.000
 LSA+ Earth Connection Strip	for reference earth for R10 cards	059034.000
 Connection Panel 19"	for 15 LSA+ connection strips, without connection strips	047937.000



Monitoring Software

Unified Monitoring System UMS

for reading out UMS Monitoring Stations as well as the evaluation and graphical presentation of the measured values and the monitored networks

Item	Description	Order no.
Database	Oracle Database Standard Edition , full use, 5 named users	072215.000
	Upgrades	
	5 additional Clients for Oracle Database 25 additional Clients for Oracle Database	072215.005 072215.025
UMS Server License	up to 5 Clients	072216.000
	Upgrades	
	up to 5 additional Clients for UMS Server up to 25 additional Clients for UMS Server	072216.005 072216.025
UMS Client License	1 Fiber Optic Cable (OTDR) User (limited to use OTDR, FiberTxA and OpTxA measurement)	072239.200
	1 Standard User (everything except OTDR measurement)	072239.100
	1 Full User (standard plus OTDR)	072239.300

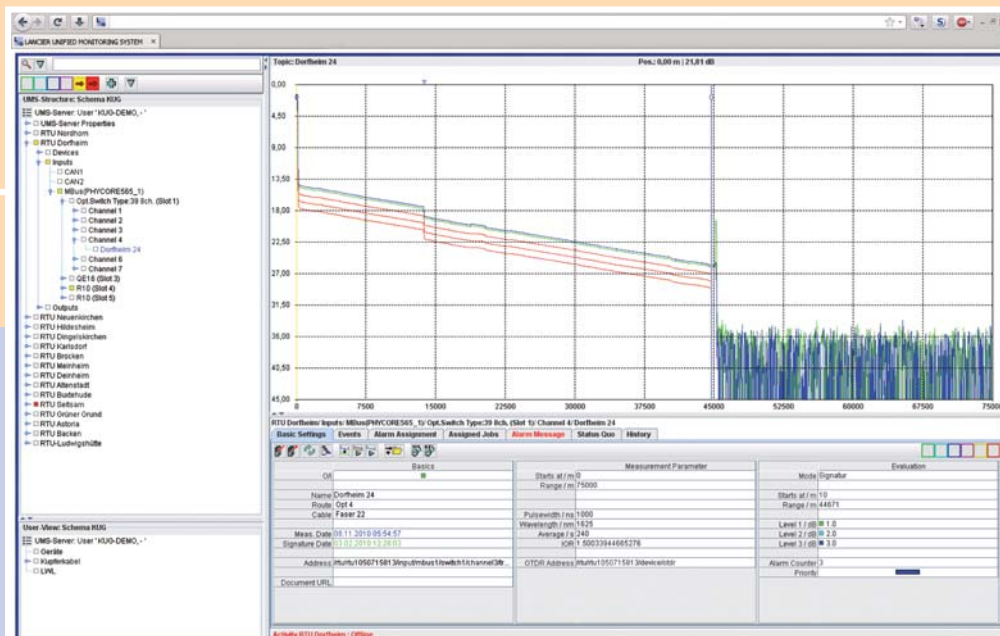
Unified Monitoring System UMS Lean

for reading out UMS Monitoring Stations as well as the evaluation and graphical presentation of the measured values and the monitored networks as single-user application

Item	Description	Order no.
UMS Lean	Single-user application not extendable!	074051.000

UMS Hosting-Service

for the remote hosting of measuring data and their evaluation at computers of LANCIER Monitoring with world wide, password-protected access. No own resources are necessary. Technical requirements and prices on request.



Screenshot UMS client: Backscattering trace of optical fiber

Sensors

Addressable for LANCIER Tx-Bus

Evaluation via LANCIER Tx-Bus by monitoring stations RTU and DW 1005E equipped with QE16 card as well as in MUX 101-DW and DW 101E.

Item	Description	Order no.
PTxA210PM	Addressable Pressure Sensor for joint installation Measuring range 700..2100 hPa (mBar) abs.	054471.000
PTxA210PE	Addressable Pressure Sensor for external installation in multi housing. Measuring range 700..2100 hPa (mBar) abs.	047000.001
Accessories:		
Jumper Cable 0.2 m	for add on mounting	046983.000
Jumper Cable 0.5 m	for add on mounting	059541.000
Connection set	for pressurized sleeves	048653.000
PTxA 210	Addressable Pressure Sensor with adaptor board for placement in multi housing Measuring range 700..2100 hPa (mBar) abs.	072888.000
HPTxA	Addressable High-Pressure Sensor Measuring ranges 0..10 bar Measuring ranges 0..200 bar	048338.000 072013.000
TTxAM	Addressable Temperature Sensor for joint installation Measuring range -20...+70°C other measuring ranges upon request	043772.000
TTxAS	Addressable Temperature Sensor in snap-on housing Measuring range -20...+70°C other measuring ranges upon request	063601.000
HTxA5/95	Addressable Humidity Sensor Measuring range 5..95% r.h.	043771.000
HTxA0/15	Addressable Humidity Sensor Measuring range 0..15% r.h. for compressor monitoring	063007.000
XTxA	Addressable Universal Sensor in snap on housing Current measuring range: 0.. 10 mA DC Current measuring range: 0.. 100 mA DC Current measuring range: 0.. 1 A DC Voltage measuring range: 0.. 1 V DC Voltage measuring range: 0.. 10 V DC Voltage measuring range: 0.. 100 V DC other measuring ranges upon request	050601.010 050601.011 050601.012 050601.020 050601.021 050601.022
MTxA	Addressable Humidity and Temperature Sensor	072759.000
CDtA 4S	Addressable Contact Sensor in snap-on housing	073985.000
CDtA 4L	Addressable Contact Sensor latching in snap on housing latching in multi housing	073778.000 073779.000
LID-TxA-S	Addressable RKA Light Detector for directional short circuit indicators in power cable network	072203.000






Housing options: S: Snap-on housing, 100 x 22.5 x 75 mm, IP 20
M: Joint installation, 95 x 30 x 18 mm, IP 20
E: Multi housing, 165 mm, diam. 50 mm, IP 68

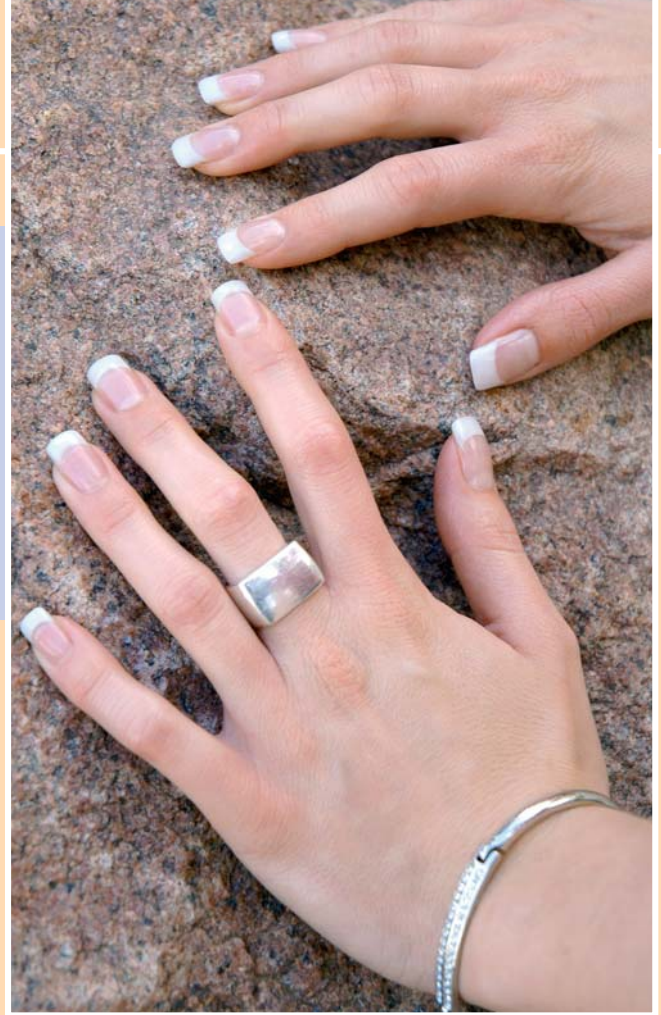
Extention of the Tx-Bus via one voice channel

Item	Description	Order no.
Signal Repeater RxIf	0 dBm	050528.000
	-14 dBm	050528.014
Signal Repeater TxIf	0 dBm	050527.000
	-14 dBm	050527.014
Mounting Box	for DIN rail modules (e.g. RxIf, TxIf)	065076.000
DC/DC Converter	one required for each TxIf	052473.000
Power Supply	230 V AC/60 V DC	071662.000


Mk2 Sensor Series embedded in the monitoring system by CAN- oder Tx-Bus

Item	Description	Order no.
 IsoTx A Mk2	Insulation and Loop Resistance Sensor	071676.000
 FiberTx A Mk2	Optical Attenuation Sensor , 0..50 dB, for dark and active fibers, integrated laser diode and photo diode	071840.0WA
 OpTx A Mk2	Optical Power Sensor , for active fibers, -50..10 dBm, integrated optical coupler, broadband (1000-1600 nm)	071850.0WA
	Wavelengths: 1310 nm multimode (FiberTx A only) 1310 nm singlemode 1625 nm singlemode	W = 7 W = 8 W = 9
	Available connectors: SC/APC FC/APC E2000 FC/PC, others on request	A = 5 A = 6 A = 8 A = 9
Accessories Tx-Bus Interface	Internal plug-in module for connection to monitoring systems DW 1005E or DW 101E (1 per Mk2-Sensor required)	071700.000
CAN Interface	Internal plug-in module for connection to RTU or ethernet via CAN-ethernet adaptor (1 per Mk2-Sensor required)	072050.000
Modbus Interface	Internal plug-in module for connection to telecontrol systems via RS232 interface (1 per Mk2-Sensor required)	073601.000
CAN-Ethernet Adaptor	External module for connection of several sensors to TMN/Lancier UMS via SNMP	072240.000
Drawer 19" 1HU	Module carrier for max. three Mk2 sensors	071863.000
Wall Housing	for max. three Mk2 sensors with power supply unit 48/60 VDC	072723.000
	with power supply unit 115-230 VAC	072723.008

Special Purpose Sensors



Aquasensor for Detection of Humidity in Splicing Boxes of Fiber Optic Cables

Item	Description	Order no.
 Aquasensor	reports humidity and water in sleeves of fiber optic cables	068969.000

Float Switch for fluid level monitoring








Item	Description	Order no.
Float Switch	at multi housing, 5 m connection cable, opening/closing contact equipped with connecting box and casting compound	074764.000 074764.010
Float Switch with contact sensor	at multi housing, 5 m connection cable, opening/closing contact, incl. addressable contact sensor CTxA	074765.000

Ax - Bus real-time remote monitoring of contacts at measurement points without power supply

Item	Description	Order no.
Sensor CAx 4S-PE	Digital Contact Sensor	073809.004

Rail-Module-Bus

*the modular Sensor System
for DIN rail mounting*

Item	Description	Order no.
 RM-Basic	Basic module with Ethernet interface Power supply and display module for the RM-Bus	074001.100
 RM-Iso	Insulation and Loop Resistance Measuring Module with capacitance based fault location	074003.100
 RM-TH	Temperature and humidity measuring module	074004.000
 RM-Tx	Module for reading out Tx-Bus sensors	074005.000
 RM-Ax	Module for reading out Ax-Bus sensors	074006.000
 RM-Loop	Loop resistance measuring module to monitor remote switches	074008.000
 RM-T2	District heating temperature monitoring module for monitoring 2 PT 1000 temperaturr sensors	074700.000
Accessories		
RM-Power	voltage converter 110 .. 230 V AC / 24 V DC, for Basic Module	074009.000
RM-Bus Extender	RM-Bus expansion for an additional DIN-Rail module	074002.000






Pressurisation Systems


Installed Systems

Installed Pressurisations systems RTS

Sound proofed compressor-dryer system with air distribution mounting facility and digital control panel

Item	Description	Order no.
 RTS 1000	Output capacity (sea level) 1000 l/h Mounting space for digital flow meters in front door 10 (flow meters and ACS not included) Wall mount, 230 V, single phases Equipment Lockable glass front door Control panel Minidisplay Maintenance signal 400 hours Compressor with electric plug	073241.172
 RTS 2600	Output capacity (sea level) 260 l/h Mounting space for digital flow meters in front door 25 (flow meters not included) Equipment Control panel Minidisplay Maintenance signal 400 hours Total flow meter Manometer for air dryer Lockable glass front door	049273.172
 RTS 5200	Output capacity (sea level) 5200 l/h Mounting space for digital flow meters in front door 50 (flow meters not included) Equipment Control panel Minidisplay Maintenance signal 400 hours Total flow meter Manometer for air dryer Lockable glass front door	049274.172
Option	Addressable Compressor Sensing Unit ACS with flow module, LC display and control panel (Product description see page 12)	073391.010



Mobile Systems

Item	Description	Order no.
 LAM 2000	Output capacity (sea level) 2000 l/h Dismountable into 2 lightweight Modules, weights approx. 28 + 22 kg	073139.000

We produce tailor made pressurisation systems on demand.



Installed Pressurisations systems RT-UG

Compressor-dryer system

Item	Description	Order no.
 RT-UG	Base frame with air dryer and various pneumatic elements for large output power depending on utilised compressor. Example: output power with compresor type KCT 401S 8500 l/h	072588.000
	Equipment Floor-mounted appliance Lockable side door Control panel	
	Options/Accessories External switch box with STG 71250, motor protective switch, contactor and auxiliary switch	005738.000
	Compressor KCT401S with sound proofed hood	070492.000
 RT-UG 5000 RT-UG 10000	Base frame with air dryer and various pneumatic elements and Jun-Air compressor without sound proofed hood	
	Output power 5000 l/h Output power 10000 l/h	072588.200 072588.100
	Equipment Control panel with ACS Maintenance signal 400 hours Total flow meter Manometer for air dryer Lockable side door	

Modernising of installed pressurisation systems

others than LANCIER Monitoring

Item	Description	Order no.
 Chatlos CSI 3000	Modernisation kit for pressurisation system Chatlos CSI 3000 Output power with 2 compressors type Jun-Air PK 45/2: 3000 l/h	074107.000
	Scope of supply Control panel with ACS Dryer panel with air dryer and various pneumatic elements Switchbox with control unit MFR	
	Options/Accessories Compressor plate with 2 compressors type Jun-Air PK 45/2	074501.000
 Dielectric NVB 4303 01	Modernisation kit for pressurisation system Dielectric NVB 4303 01 Output power with compressor type Jun-Air PK 45/2: 1500 l/h	073973.000
	Scope of supply Control panel with ACS Dryer panel with air dryer and various pneumatic elements Switchbox with control unit MFR	
	Options/Accessories Compressor Jun-Air PK 45/2	074505.000
	Compressor filter	074622.010



for up to ten physical Parameters to assess the Status of Pressurisation Systems

Sensors for ACS

for Pressurisation Systems

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Installation Material

for Digital Flow Meter Blocks

Item	Description	Order no.
Pneumatic Installation Kit	for one FMA 200C (output connector for new RTS equipment, 19" wall-mount cabinets and expansions)	065898.000
Installation Kit for the first Distribution Block	for replacement of flow indicators and expansions	065897.000
Common Input Air Filter KL 15	for installation into PE 10/7 hose when connecting to cable type PWE2Y (one required for each FMA 200)	071011.000
Non-return Valve	Non-return valve for hose diameter 10/7 mm Non-return valve for hose diameter 6/4 mm	057311.000 057311.066
19" Installation Kit	for one distribution block (for installation into 19" wall-mount cabinets and front doors of RTS equipment)	064955.000
Wall Mount Cabinet	Wall mount cabinet for 4 digital flow meter blocks (20 FMA 200C) Other wall mount cabinets on request	069631.000
Micro Air Filter	add-on kit for RTS 2802 (for installation of FMA 200C in RTS 2802)	071012.000
Micro Air Filter	add-on kit for RT 5002 (for installation of FMA 200C in RT 5002)	061687.000
Blindplate 19", 2.5 HU	to cover unused mounting spaces	064498.000

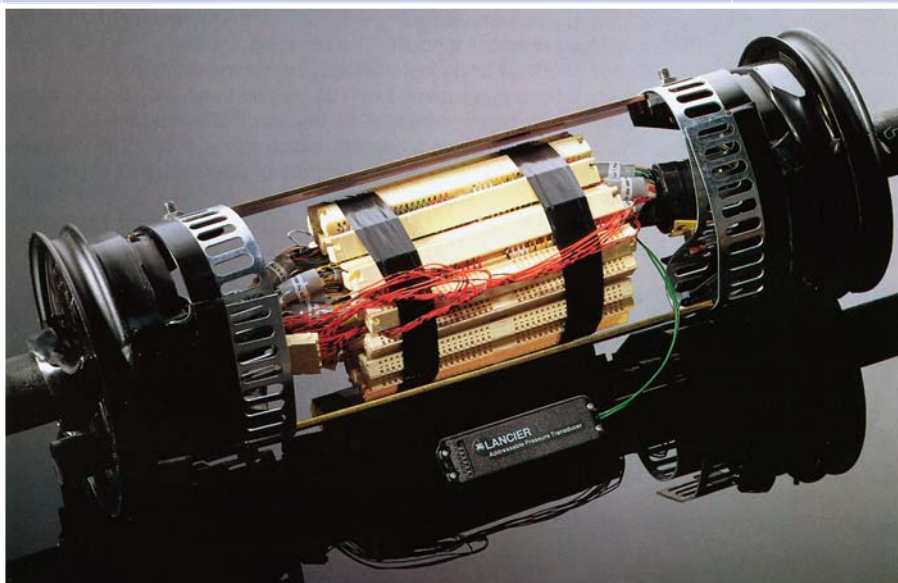
Testing Equipment

for Pressurised Cable Network
and Pressurisation Systems

Item	Description	Order no.
 DFOM	Digital Fault-Locating Manometer with valve connector Vg 8 x 7,5 bent with quick connector	039194.003 039194.006
 DFP	Digital Humidity and Temperature Analyser with quick connector	072773.000
 Hydrotector H₂	Cable Leak Detector incl. charging set 230 V 50-60 Hz, headphones, plunger, 2 NiCd batteries, special case Accessory Tracing Gas Filling Kit for Hydrotector with single stage reducer and 5 m hose	057049.100 057388.000
 Testbox T2	Testing equipment for addressable sensors/LANCIER Tx-Bus incl. earphone, measurement cables and battery charger	050833.100

Material for Pressurised Cables

Item	Description	Order no.
 Material Set for Pressure Test and Feeding Points	for cable diameter of 10 to 30 mm for cable diameter of 30 to 38 mm for cable diameter of 38 to 60 mm for cable diameter of 60 to 90 mm	028771.000 020746.000 020747.000 020748.000
 Connectors	T-Piece Hose Connector with test valve for hoses with inner diameter of 7 to 8 mm Valve Connector Vg 8 x 7,5, straight for hoses with inner diameter of 7 to 8 mm Valve Connector Vg 8 x 7,5, bent 90° for hoses with inner diameter of 7 to 8 mm	002501.000 021190.000 021191.000
 Material Set for Air Blocks	for cable diameter of 10 to 30 mm for cable diameter of 30 to 38 mm for cable diameter of 38 to 60 mm for cable diameter of 60 to 90 mm	028767.000 028768.000 028769.000 028770.000
 Self arming Glass Fiber Tape	12 mm wide, roll of 20 m	020480.000
 Material for Air Blocks in Cables with Plastic Sheath	Tension Clamp for cable diameter of 38 to 48 mm for cable diameter of 48 to 60 mm for cable diameter of 60 to 75 mm for cable diameter of 75 to 90 mm Packing Tape used with tension clamp for cables with smaller diameters	015463.000 015464.000 015465.000 015466.000 015467.000
 Resin for Cables	Two-Component Resin LDC , mixture volume approx. 275 ml Required Quantity in cables with PE or PVC sheath Cable diameter, mm 10..38 38..48 48..60 60..75 75..90 No. of tubes 1 2 3 4 5 Required Quantity in metal sheath cables Diam. of cable core, mm ..20 20..45 45..55 55..60 60..70 70..80 No. of tubes 1 2 4 6 8 9	012590.000
 Spout	to connect resin mixture tube to injection point (needed only, when LANCIER material set is not used)	040437.000



Systems for district heating pipeline monitoring

PipeMonitor

multi-channel measuring system for district heating monitoring equipped with display, control panel and signal output via dry contacts. The system may be extended by RM-Modules (ref. page 9) for further measuring tasks.





Item	Cu*	NiCr**	HDW**
2C fix not modularly extendable		075051.202	
2C short for 1 track (flow + return line) length up to 750 m		075050.102	
2C for 1 track (flow + return line)	075050.002	075050.202	075050.302
4C for 2 track (flow + return line)	075050.004	075050.204	075050.304
6C for 3 track (flow + return line)	075050.006	075050.206	075050.306
8C for 4 track (flow + return line)	075050.008	075050.208	075050.308
10C for 5 track (flow + return line)	075050.010	075050.210	075050.310

*) max. length of measurement track 4.000 m,

**) max. length of measurement track 1.500 m


PipeAlarm

Stationary 2-channel district and local heating pipeline monitoring device

Item	Description	Order no.
 PipeAlarm2	2 Channel District Heating Monitoring Device with pipe connection surveillance, indication panel and alarm output by dry contacts Supply voltage 90 .. 250 V AC	
	PipeAlarm2 short (max. length of measured section NiCr 750 m)	074840.100
	PipeAlarm2 (maximum length of measured section NiCr 1500 m)	074840.200
 PipeAlarm 2 GSM	Battery-powered, 2-channel district and local heating pipeline monitoring device with GSM-based alarm, pipe connection monitoring, display panel and 2 contact ports Supply voltage 90 .. 250 V AC	
	PipeAlarm2 GSM short (max. length of measured section NiCr 750 m)	075162.100
	PipeAlarm2 GSM (max. length of measured section NiCr 1500 m)	075162.200

PipeCheck

Hand-held measuring device for district heating pipe sensors

Item	Description	Order no.
 PipeCheck	Hand-held measuring device for district heating pipe sensors	075163.000



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