

Ethernet data logger for temperature measurement

16/8 channels for thermocouples or RTD, 24-bit



MSX-ilog-RTD / MSX-ilog-TC

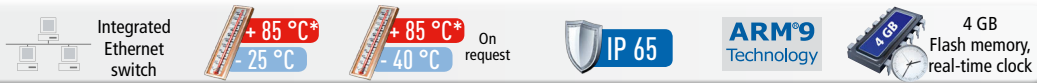
16/8 differential inputs

For thermocouples or RTD (Pt 100, Pt 1000)

Acquisition, visualisation and analysis
in one device

No software installation needed

Automatic storing of measured values
(4 GB build-in Flash memory)



* Operating temperature



The intelligent Ethernet data logger MSX-ilog-RTD/TC has 8 or 16 differential inputs for thermocouples or resistance temperature detectors (RTD, Pt100/Pt1000). The parametering and visualisation of the measured values are carried out via an integrated web site. Thus no additional software installation is needed. The acquisition, visualisation and data storage take place automatically.

Features

- Onboard ARM⁹ 32-bit processor
- 4 GB memory, data remains stored at power loss
- The buffered real-time clock keeps the system time even without supply voltage
- Robust metal housing
- Power Save Mode: Reduced power consumption when no acquisition runs
- 24 V digital trigger input

Analog inputs

- 8-pin M12 female connectors
- 16/8 differential inputs for thermocouples or RTD, 24-bit
- Max. sampling frequency 1 kHz

Acquisition

- Automatic acquisition and recording of measured data
- Conversion into temperature (°C)
- Acquisition of virtual channels

Trigger

- Acquisition triggered via hardware or software
- 24 V hardware trigger
- Threshold trigger (when the defined level of the analog inputs is exceeded)
- Optional pre-trigger (records events which have occurred before the trigger event)

- Triggers from external hardware, e. g. MSX-E systems, are possible

Alarm functions

- Upper and lower limits of channels
- Data storage depending on alarms
- Can be combined with the pre-trigger

Analysis

- Online graphical analysis of measured data
- Data export (xml, csv)

Safety features

- LED status display for fast error diagnostics
- Optical isolation • Input filters
- Overvoltage protection ± 40 V
- Internal temperature monitoring

Applications

- Data logger • Long-term data recording
- Monitoring of infrastructure

Interfaces

- Fast 24 V trigger input
- Ethernet switch with 2 ports
- Trigger In/Out
- 24 V supply and cascading

Communication interfaces

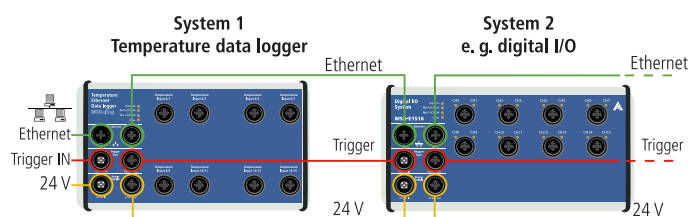
- Web server (configuration and monitoring)
- Data server (TCP/IP or UDP socket) for sending acquisition data



More information at
www.addi-data.com

Combination with external hardware

Ethernet and supply signals can be looped e.g. from the MSX-ilog-RTD/TC to MSX-E systems. These can then react to the values measured by the MSX-ilog-RTD/TC (e.g. via alarm or trigger) and acquire and switch distributed I/O signals. Monitoring or regulation tasks can be realised.



* Preliminary
product information

Specifications*

Analog inputs

Number of inputs:	16 or 8 differential inputs for thermocouples or RTD
Resolution:	24-bit
Optical isolation:	1000 V
Throughput:	max. 1000 Hz

Data storage

RAM:	64 MB
FLASH:	4 MB for system data
Extended FLASH memory:	4 GB (3.7 GB for measured data)
Buffered real-time clock:	approx. 4 weeks at 20 °C

Voltage supply

Nominal voltage :	24 V \equiv
Supply voltage:	18-30 V
Optical isolation:	1000 V
Reverse voltage protection:	1 A max.

Connectors

24 VDC input	1 x 5-pin male M12 connector
24 VDC output	1 x 5-pin female M12 connector

Ethernet

Interface:	Ethernet acc. to IEEE802.3 specification	
Number of ports:	2	
Cable length:	150 m	max. at CAT5E UTP
Bandwidth:	10 Mbps	auto-negotiation
	100 Mbps	auto-negotiation
Protocol:	10Base-T	IEEE802.3 compliant
	100Base-TX	IEEE802.3 compliant
Optical isolation:	1000 V	
MAC address:	00:0F:6C:##:##:##, unique for each device	

Connectors	2 x 4-pin flange-type socket, D-coded M12 for Port 0 and Port1	
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Trigger

Number of inputs:	1 trigger input
Number of outputs:	1 trigger output
Filters/protective circuit:	Low-pass/transorb diode
Optical isolation:	1000 V
Nominal voltage:	24 V external
Input voltage:	0 to 30 V
Input current:	11 mA at 24 VDC, typical
Input frequency (max.):	2 MHz at 24 V

Connectors

Trigger input :	1 x 5-pin flange connector M12
Trigger output:	1 x 5-pin flange-type socket M12

EMC – Electromagnetic compatibility

The product complies with the European EMC directive. The tests were carried out by a certified EMC laboratory in accordance with the norm from the EN 61326 series (IEC 61326). The limit values as set out by the European EMC directive for an industrial environment are complied with. The respective EMC test report is available on request.

System features

Interface:	Ethernet acc. to specification IEEE802.3
Dimensions:	220 x 140 mm x 50 mm
Weight:	620 g
Degree of protection:	IP 65
Current consumption at 24 V:	150 mA \pm 10 % typ. in Idle/Powersave
Operating temperature:	-25 °C to +85 °C (-40 °C to +85 °C on request)

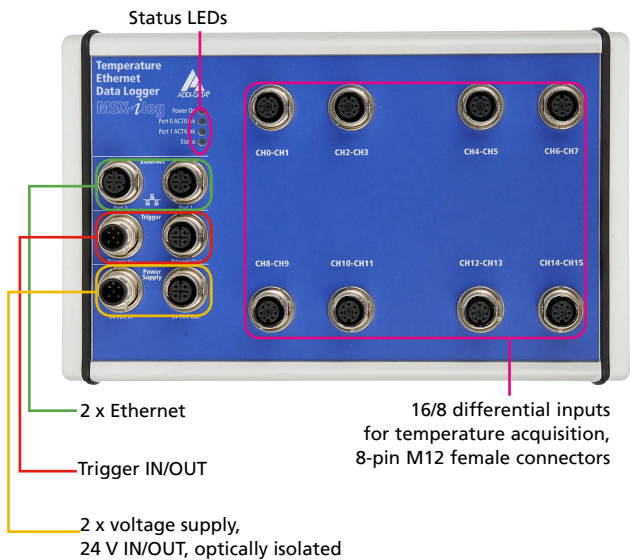
Sensor connectors

Analog inputs:	8 x 8-pin female connectors, M12
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System requirements

Standard browser (Internet Explorer, Firefox) with Java from version 1.6.x

Features



SC-M12-8-TC

M12 8-pin connector for connecting thermocouples with integrated cold junction compensation (CJC) is included in delivery.



Ordering information

MSX-ilog-RTD / MSX-ilog-TC

Ethernet data logger for temperature measurement, 16/8 channels for thermocouples or RTD, 24-bit. Incl. technical description.

Versions

MSX-ilog-RTD-16:	for 16 RTD
MSX-ilog-RTD-8:	for 8 RTD
MSX-ilog-TC-16:	for 16 thermocouples
MSX-ilog-TC-8:	for 8 thermocouples

Connection cables

Voltage supply

CMX-2x:	Shielded cable, M12 5-pin female connector/open end, IP 65
CMX-3x:	For cascading, shielded cable, M12 5-pin female connector/male connector IP 65

Trigger

CMX-4x:	Shielded cable, M12 5-pin female connector/open end, IP 65
CMX-5x:	For cascading, shielded cable, M12 5-pin female connector/male connector IP 65

Ethernet

CMX-6x:	CAT5E cable, M12 D-coded male connector/RJ45 connector
CMX-7x:	For cascading: CAT5E cable, 2 x M12 D-coded male connector

Cold junction compensation

SC-M12-8-TC:	M12 8-pin connector for connecting thermocouples with integrated CJC. (Included in delivery!)
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Options

MSX-E 5V-Trigger: Level change of the trigger inputs and outputs to 5 V
MX-Clip, MX-Rail (Please specify when ordering!), **MX-Screw, PCMX-1x**