INTELLIGENT ETHERNET SYSTEMS

- Measurement, control and regulation
- For numerous signal types
- Easy handling

Link to the Ethernet systems

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INTELLIGENT ETHERNET SYSTEMS

Measurement, control and regulation in the field

The intelligent systems of the MSX-E series are especially suited for reliable data acquisition and signal output directly at the measurement point. They are robust, easy to handle and can be directly connected to sensors and actuators. The Ethernet interface allows to visualise and to evaluate the measurement results immediately through the company network, in order to initiate prompt process corrections.

| General	▶ Signal types	▶ Installation	▶ Configuration

▶ Signal types

Thanks to the wide range of signal types, nearly all applications can be realised with our systems:

- Digital I/O
- Counter: incremental, sin/cos (1 Vpp, 11 µApp), EnDat2.2
- Analog I/O
- Temperature measurement
- Pressure measurement
- Length measurement with transducers, also simultaneously
- Noise and vibration measurement
- Force-distance measurement
- 4-port serial interfaces, RS232, RS422, RS485, 20 mA CL

▶ Configuration

After entering the IP-address of the MSX-E system into the browser, the web interface of the system opens. The password-protected web interface allows remote access within or from outside the company building.

The web interface is organised in two parts: a static part in which the configuration parameters can be found and a dynamic part with system-specific function parameters. Configuration is realised through one click - without programming.
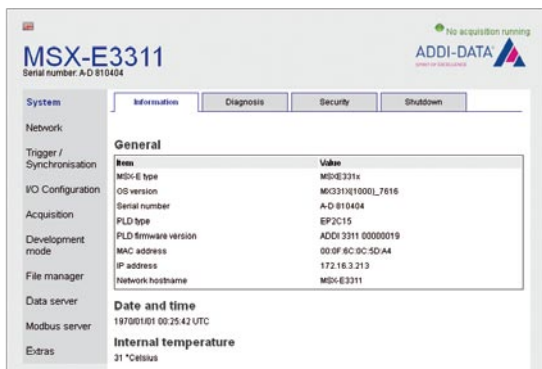
- Current state of the MSX-E system
- Acquisition or control parameters setup
- Trigger characteristics setup
- Save system configuration of the MSX-E system on a PC or another media
- Load configuration on the MSX-E system

▶ Installation

- **Installation without drivers**
- **Easy administration through ConfigTools**
- **Direct administration via PLC is possible**

ConfigTools

ConfigTools is a user-friendly tool with which all MSX-E systems in a network can be scanned and administrated and their status visualised. It is available for 32-bit and 64-bit Windows and Linux operating systems in 4 languages: German, English, French and Chinese.
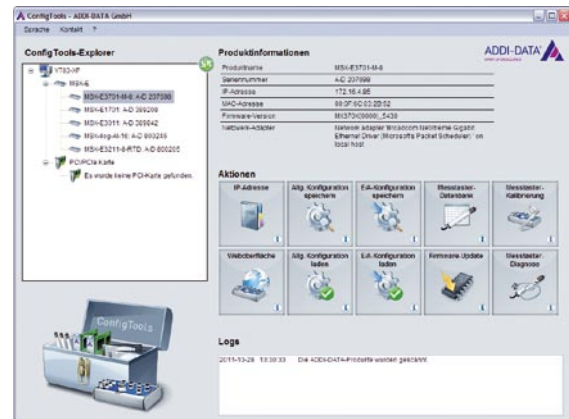
- Automatic scan of all MSX-E systems in a network
- Administration of the MSX-E systems: IP address, firmware version
- System-specific plug-ins: for example sensor calibration and visualisation
- Clickable / selectable plug-ins through buttons: for example upload/save configuration, firmware update
- Possibility of customised plug-ins
- Changes are logged
- A direct access to the website of the MSX-E systems is possible

▶ System combination

Example 1: two identical systems
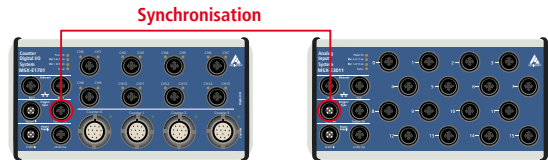
Synchronisation

Example 2: two different systems

Synchronisation

For applications with numerous channels:
Through the synchronisation of the systems, a synchronous data acquisition from several systems is possible.

Allows for example the acquisition of values with position indication - combination of an analog input system and a counter system.

▶ Onboard processor - calculations and stand-alone mode

The processor of the MSX-E Ethernet systems has two main advantages: on the one hand, the system can execute calculations like average value or set-actual comparison, in order to relieve external devices and to accelerate processes.

On the other hand, MSX-E systems can execute tasks autonomously by carrying out applications that are saved on the system.

▶ Protective circuits

To resist the interferences in the field the MSX-E systems are equipped with numerous protective circuits, such as:

- Status LEDs for fast error diagnostics
- Optical isolation
- Input filters
- Overvoltage protection
- Internal temperature monitoring

▶ Housing

The metal housing and the degree of protection IP 65 guarantee an excellent protection of the MSX-E systems electronics and allow a use in harsh conditions. Different mounting options allow an easy mounting of the MSX-E systems outside a switch cabinet.

Laboratory tests, resistant to water with high pressure, dust and vibrations

▶ Development mode

With the Development mode of the MSX-E systems, you can customise your measurement, control and regulation applications to fit your requirements. The programs run directly on the MSX-E systems, which has two advantages: external PCs are relieved and you can process data freely according to your requirements. This helps you improve the efficiency of your processes and to secure your investments.

▶ Customised solutions

Standard Ethernet systems are sufficient for most applications. In case of special demands just ask us: Our development team will be pleased to help you, from minor adaptations to a completely new product development.

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Product overview

Function	Product name	Description	Degree of protection	-40 °C / +85 °C
Digital I/O	MSX-E1516	16 digital I/O, 24 V, parameterisable in pairs as inputs or outputs	IP 65	yes
Multifunction counter	MSX-E1701 MSX-E1711 MSX-E1721	■ Version for incremental encoders: 4 counter inputs ■ Versions for sin/cos encoders: 4 counter inputs 1 V_{pp} or 11 μA_{pp}	IP 65	yes
	MSX-E1731	4 inputs for EnDat2.2, 16 digital I/O, 24 V	IP 65	yes
	MSX-E1741-1VPP	3 sin/cos inputs 1 Vpp, 1 analog input, 24-bit	IP 65	yes
Multifunction	MSX-E3121 MSX-E3122	■ 6 diff. /SE inputs, diff., 16-bit ■ 4 analog outputs ■ 32/64 digital I/O, 24 V	IP 65	yes
Analog input	MSX-E3011 MSX-E3021 MSX-E3027	■ 16 analog inputs, diff., 16-bit, or 4 analog inputs, simulteaneous ■ Current or voltage inputs	IP 65 IP 67	yes
Analog output	MSX-E3511	■ 8 analog outputs, 16-bit, voltage or current ■ Can be used as function generator	IP 65	yes
Force-distance measurement	MSX-E3017	1 counter input, 4 analog inputs, 24-bit, 2 digital I/O, 24 V	IP 65	yes
	MSX-E3317	1 counter input, 4 inputs for strain gauges, 24-bit, 2 digital I/O, 24 V	IP 65	yes
Temperature measurement	MSX-E3211	16/8 differential inputs, 24-bit, for thermocouples or RTDs (acquisition frequency max. 788 kHz/channel)	IP 65	yes
Pressure meassurement	MSX-E3311	8/16 channels for strain gauges, 24-bit, acquisition frequency max. 1 kHz	IP 65	yes
Acquisition of dynamic signals	MSX-E3601	■ 8 SE/diff. inputs, 24-bit ■ 24 V trigger input ■ 8 current sources for ICP sensors	IP 65	yes
Length measurement	MSX-E3711*	Acquisition of 8 Half-Bridge, LVDT or VLDT transducers, simultaneous, 1 temperature and 1 incremental counter input	IP 65	yes
	MSX-E370x* MSX-E3701*	Acquisition of 4, 8 or 16 Half-Bridge, LVDT or VLDT transducers	IP 40 IP 65	yes
	MSX-E3701-DIO*	16 inductive transducers, LVDT, Half-Bridge, 24-bit	IP 65	yes
Communication	MSX-E7xxx	■ Serial interfaces, RS232, RS422, RS485, 20mA CL ■ Onboard data analysis	IP 65	yes

*Precision for Tesa GT21 < 1 μm

Also available as data loggers

Are you looking for a robust data logger that is easy to handle?
Our MSX-E systems are also available as data loggers.

■ Long-term recording of many signal types
■ Visualisation: Live or recorded data
■ Setup of the measurement without programming knowledge
■ Web-based user interface without program installation
■ Can be used as a stand-alone system

MSX-$i$log

Made in Germany

30 years
Expertise in the industry

Customized solutions

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