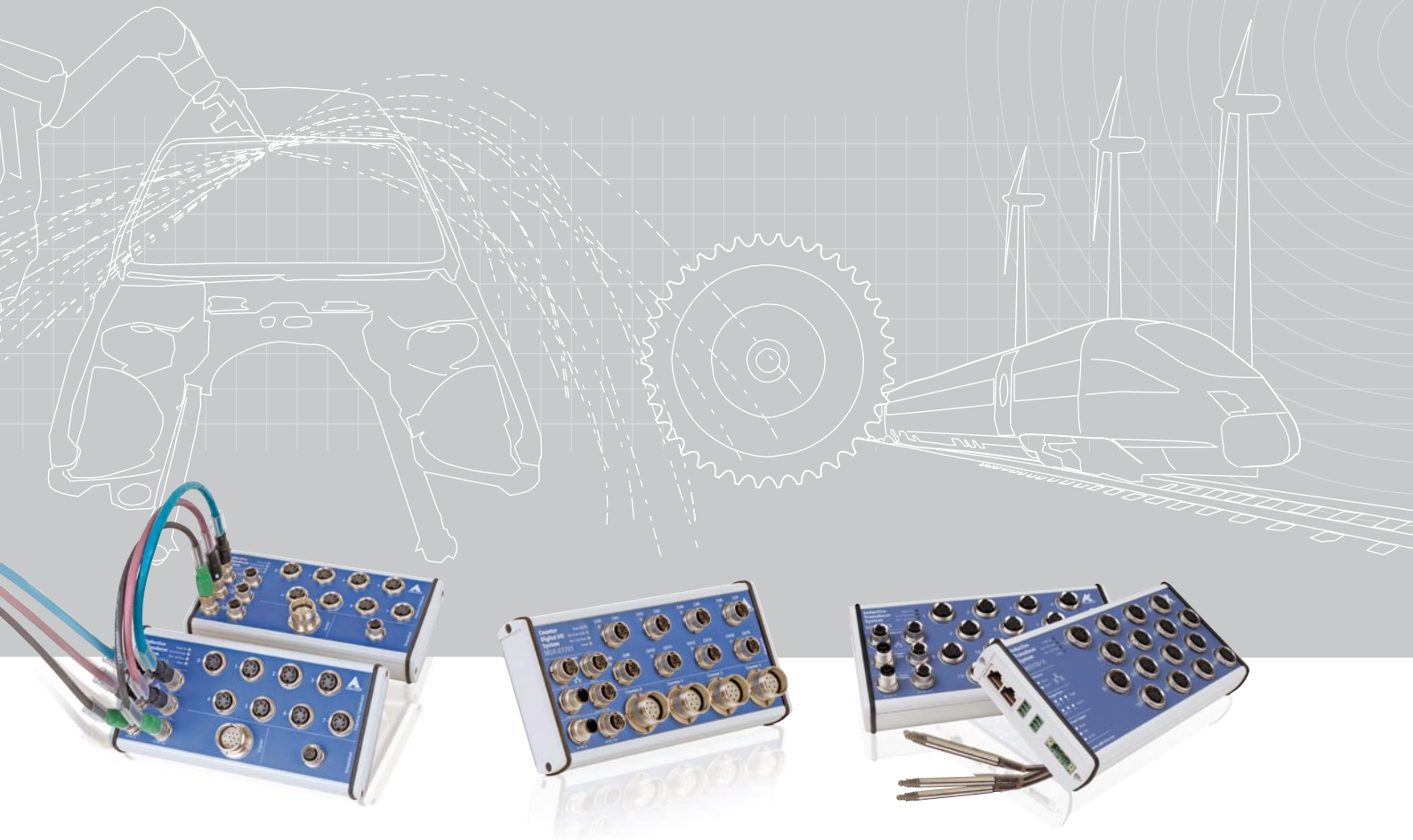


# Solutions for Industrial Measurement and Automation



## ETHERNET TECHNOLOGY

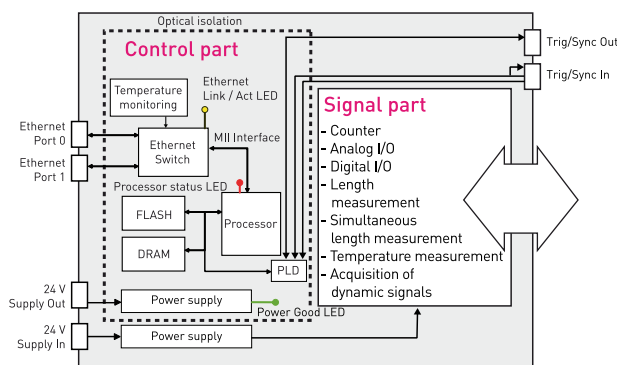
- Intelligent Ethernet systems
- For industrial measurement, control and regulation tasks
- For use close to the measuring point (IP 65/IP 40)

# ETHERNET TECHNOLOGY

## Intelligent Ethernet systems: For use in harsh environments

The intelligent Ethernet systems of the MSX-E series are particularly suited for measurement, control and regulation tasks very close to the measuring point. In order to cope with daily stresses and strains such as current peaks, vibrations, dirt or extreme temperatures, the systems are mounted in robust metal housings and comply with the degree of protection IP 65/IP 40.

They can be used in the extended temperature range of -40 °C / +85 °C and are equipped with numerous protective circuits.



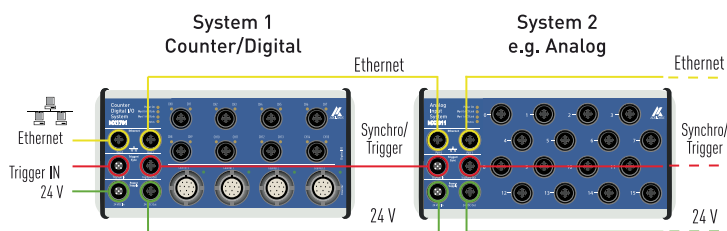
### IN BRIEF

- Degree of protection IP 65 or IP 40
- Optical isolation
- For use close to the measuring point
- LED status display for quick error diagnosis
- All systems can be cascaded and synchronised with one another
- Direct operation with MS Excel, no programming knowledge needed
- Easy to use, e. g. with .NET and LabVIEW™ via web services (WSDL files)

Ethernet, synchronisations and supply signals can be looped from one system to another. This allows distributed I/O signals to be acquired and processed directly at the measuring point. With these features, the MSX-E systems are suited both for simple distributed applications and for complex applications, in which multiple devices with physically widely separated signals have to operate together.

### Assemble your own individual system combination!

Each Ethernet system is equipped with a specific functionality and can be freely combined with other MSX-E system types. The systems can be synchronised and cascaded to enable them to work together quickly and reliably. You too can assemble your own system combination to meet your specific needs!



### Many possible applications



PLC connection



Database connection



Bespoke applications



Measurement and display

## Function overview

Function	Product name	Description	LED status display*	Degree of protection	-40 °C / +85 °C
Digital I/O, 24 V	MSX-E1516	<ul style="list-style-type: none"> <li>16 digital I/O, parameterisable in pairs as inputs or outputs, 24 V</li> <li>2 lines per M12 connector</li> </ul>	yes	IP 65	yes
Multifunction counter	MSX-E1701 MSX-E1711 MSX-E1721	<ul style="list-style-type: none"> <li>Version for incremental encoders: 4 counter inputs, each with A, B, C (index) and D (ref.) signals, TTL/RS422, 24 V</li> <li>16 digital I/O, 24 V</li> <li>Versions for sin/cos encoders: 4 counter inputs 1 V<sub>pp</sub> or 11 μA<sub>pp</sub></li> </ul>	yes	IP 65	yes
Analog input	MSX-E3011	<ul style="list-style-type: none"> <li>16 analog inputs, differential, 16-bit, or 4 analog inputs, simultaneous</li> <li>Max. sampling frequency 100 kHz</li> <li>Current or voltage inputs</li> </ul>	yes	IP 65	yes
Analog output	MSX-E3511	<ul style="list-style-type: none"> <li>8 analog outputs, 16-bit</li> <li>Each output can be configured as a current or voltage output.</li> <li>Can be used as a function generator</li> </ul>	yes	IP 65	yes
Temperature measurement	MSX-E3211	<ul style="list-style-type: none"> <li>16/8 differential inputs, 24-bit</li> <li>For thermocouples or RTDs</li> <li>Max. sampling frequency 1 kHz</li> </ul>	yes	IP 65	yes
Pressure meas.	MSX-E3311**	<ul style="list-style-type: none"> <li>8/16 channels for strain gauges</li> </ul>	yes	IP 65	yes
Acquisition of dynamic signals	MSX-E3601	<ul style="list-style-type: none"> <li>8 SE/diff. inputs, 24-bit</li> <li>24 V trigger input</li> <li>8 current sources for ICP sensors</li> </ul>	yes	IP 65	yes
Length measurement	MSX-E3711	<ul style="list-style-type: none"> <li>Acquisition of 8 inductive transducers, simultaneous, 1 temperature and 1 incremental counter input</li> <li>For half-bridge, LVDT or VLDT</li> <li>Accuracy for Tesa GT21 &lt; 1 μm</li> </ul>	yes	IP 65	yes
	MSX-E3700 MSX-E3701	<ul style="list-style-type: none"> <li>Acquisition of 4, 8 or 16 inductive transducers</li> <li>For half-bridge, LVDT or VLDT</li> <li>Accuracy for Tesa GT21 &lt; 1 μm</li> </ul>	yes	IP 40 IP 65	0 °C to 60 °C ***
Communication	MSX-E7xxx**	<ul style="list-style-type: none"> <li>Serial interfaces, RS232, RS422, RS485, 20mA CL, each mode optically isolated, on-board data analysis</li> </ul>	yes	IP 65	yes

\* for fast error diagnosis on site

\*\* in preparation

\*\*\* -40 °C /+85 °C on request

## INTELLIGENT SYSTEMS

- ARM®9 technology: Intelligent systems
- Linux Embedded: For programming applications
- Website: Easy system configuration and monitoring as well as CSV file export (e.g. to MS Excel)
- SOAP command server (web services, WSDL): For easy use, e.g. with .NET and LabVIEW™
- Data server (TCP/IP or UDP socket): Standard communication modes
- Event server: For transferring events
- NTP client: For setting the system time

**For PLC users:** UDP command server and UDP MODBUS server: For PLC connection

# BESPOKE SOLUTIONS

## Services for special demands



In measurement, control and automation applications, standard components are normally used.

But there are some requirements which cannot be satisfied with standard components.

The question for you is whether product adaptations or new developments can be dealt with in-house. Time pressure or resource planning must be factored into this process. If in-house implementation is impossible, you will need a reliable partner who can offer you the precise solution as part of his service. Just ask us! We will be glad to help you, from the most minor adaptation to new product development.

From the standard product to complete product development:  
We'll find the right solution for you!



### Advice needed?

Then just call us at  
Tel: +49 7229 1847-120  
or send an e-mail to:  
info@addi-data.com

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