



Industrial communication

# Non-stop transmission of digital sensor signals via fieldbus



Ethernet modules for PROFINET, EtherNet/IP and Modbus TCP



**Digital input modules for PROFINET, EtherNet/IP and Modbus TCP**

**Direct connection of sensors simplifies network structure**

**Integrated counter function for high-frequency counter applications**

**Robust housing suited for use in environments with washdown cleaning requirements**



## **Ethernet modules for field applications**

The decentralised DI modules serve as a gateway between binary sensors and the fieldbus. This means that binary switching signals in the field can be transmitted directly via the fieldbus. No further transmission systems are needed in the fieldbus topology.

## **Robust and permanently tight**

The ifm modules are the perfect choice, even in the most difficult environments: The materials and production methods are identical to the ifm jumper cables of the tried-and-tested EVC and EVF product series.

The ecolink technology guarantees reliable, permanently ingress-resistant M12 connections of the connection cables.



## Products

Type	Description	Order no.	
		Coolant	Food
<b>Ethernet modules 2 x 8 digital inputs</b>			
	StandardLine PROFINET	AL4002	AL4003
	StandardLine EtherNet/IP	AL4022	AL4023
	StandardLine Modbus TCP	AL4042	AL4043
	PerformanceLine PROFINET	AL4102	AL4103
	PerformanceLine EtherNet/IP	AL4122	AL4123
	PerformanceLine Modbus TCP	AL4142	AL4143

## Advantages and customer benefits

- **Expansion of the IO-Link master family with digital input modules**

The Ethernet modules are the perfect addition to ifm's IO-Link master family. They feature the same design, port configuration and standardised M12 connections.

- **Integrated counter function for high-frequency counter applications**

The sensor pulses are counted within the module and are cyclically transmitted to the PLC as a counter packet. This ensures accurate counting that is not affected by the cycle time of the PLC.

- **Powerful voltage supply**

The modules offer an A-coded M12 connector with 1 x 4 A and an L-coded M12 connector with 2 x 16 A including daisy chain functionality for the voltage supply.

## Connection technology

Type	Description	Order no.	
		Coolant	Food
<b>Ethernet cable (fieldbus)</b>		<b>RJ45 - M12</b>	
	0.5 m	EVC924	EVF549
	2 m	EVC926	EVF551
	5 m	EVC927	EVF552
	10 m	EVC928	EVF553
<b>Connection cable, A-coded (power)</b>		<b>M12 - open</b>	
	2 m; 1 mm <sup>2</sup>	EVC706	EVF480
	5 m; 1 mm <sup>2</sup>	EVC707	EVF481
	10 m; 1 mm <sup>2</sup>	EVC708	EVF482
<b>Connection cable, L-coded (power)</b>		<b>M12 - open</b>	
	2 m; 2.5 mm <sup>2</sup>	E12641	EVF611
	5 m; 2.5 mm <sup>2</sup>	E12642	EVF612
	10 m; 2.5 mm <sup>2</sup>	E12643	EVF613
<b>Connection cable (sensor)</b>		<b>M12 - M12</b>	
	1 m; 0.34 mm <sup>2</sup>	EVC012	EVF492
	2 m; 0.34 mm <sup>2</sup>	EVC013	EVF493
	5 m; 0.34 mm <sup>2</sup>	EVC014	EVF494
	10 m; 0.34 mm <sup>2</sup>	EVC108	EVF495

## Accessories

Type	Description	Order no.	
		Coolant	Food
<b>Protective caps</b>			
	Protective caps stainless steel, 4 pieces	-	E12542
	Protective caps PA, 10 pieces	E73004	-

## Further technical data

Ethernet modules (DI)	AL4002 AL4022 AL4042	AL4003 AL4023 AL4043	AL4102 AL4122 AL4142	AL4103 AL4123 AL4143
	StandardLine		PerformanceLine	
Operating voltage [V DC]	20...30			
Current consumption [mA]	200...3900			
Sensor supply (US) [A]	3.6			
Total current rating				
Number of digital inputs	2 x 8; (type 2 to IEC 61131-2)			
Daisy chain voltage supply	No		Yes	
Voltage supply connection	M12 A-coded		M12 L-coded	
Protection rating	IP 65, IP 66, IP 67	IP 65, IP 66, IP 67, IP 69K	IP 65, IP 66, IP 67	IP 65, IP 66, IP 67, IP 69K
Housing material	Polyamide; socket: nickel-plated brass	Polyamide; socket: stainless steel	Polyamide; socket: nickel-plated brass	Polyamide; socket: stainless steel

We reserve the right to make technical alterations without prior notice. · 11.2022

**ifm** - close to you!

For further technical details, please visit: [ifm.com](http://ifm.com)