

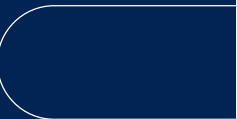


# Industrial Connectivity Solutions

**SENSOR / ACTUATOR**

**IO MODULES**

**PORTFOLIO**



# Sensor/Actuator Portfolio

M8 / M12



Molded Connectors



Connection Cordsets



Adapters and T-splitters



Field Attachable Connectors



Receptacle Connectors



Cable

# Sensor/Actuator Portfolio

## M8 Series

- ✓ Comprehensive portfolio including molded, field attachable and receptacle versions, with or without LED, straight or angled, single or doubled ended cordsets
- ✓ Internationally standardized M8 connector technology to ensure global usability
- ✓ 3-, 4-, 5- and 8-pole versions
- ✓ Robust and space-saving design according IEC 61076-2-104
- ✓ Quick and easy installation



# Sensor/Actuator Portfolio

## M12 Series

- ✓ Comprehensive portfolio including molded, field attachables and receptacle versions, with or without LED, shielded or unshielded, straight or angled, single or double ended cordsets
- ✓ Internationally standardized M12 connector technology, A-, B- D- U- and X-coding to ensure global usability
- ✓ 3-, 4-, 5-, 6-, 8- and 12-pole versions
- ✓ Numerous connection possibilities – screwed clamp terminals, solder connection and spring-type terminals



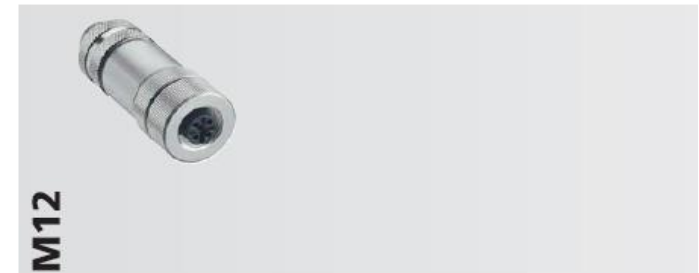
# Sensor/Actuator Portfolio

## Receptacles

M8							
	RSMHL.../S 5,5	RKMHL.../S 5,5	RSMF.../0,5 M	RSEM	RSMEDG	RSMEK	RSMEJ
M12							
	RSHL.../S 5,5	0976 PMC 152	RSFM	PRSFM	RKHL.../S 5,5	EF12L	RSFM.../0,5 M
M12							
	RSFM.../20/0,5 M	PRSFM.../0,5 M	RSE	RSEL	ELST 412 LED	ELST 412	ELST 400 RD/12

# Sensor/Actuator Portfolio

Molded Versions & Field Attachables



# Washdown Series

M8/M12

- ✓ International applicability with global compliance industry standards (UL and ECOLAB certification at operating temperatures of -40 to +105 °C)
- ✓ IP 68 and IP69K protection
- ✓ High resistance to aggressive chemicals ensure high reliability
- ✓ Fast and easy commissioning



# Sensor/Actuator Portfolio

## Applications



### Machine Building

Force sensors, robotic  
arms movements



### Food & Beverage

Temperature sensors,  
flow switches



### Material Handling

Small drives, light  
barriers



### Automotive

Proximity sensors, reflex  
light sensors



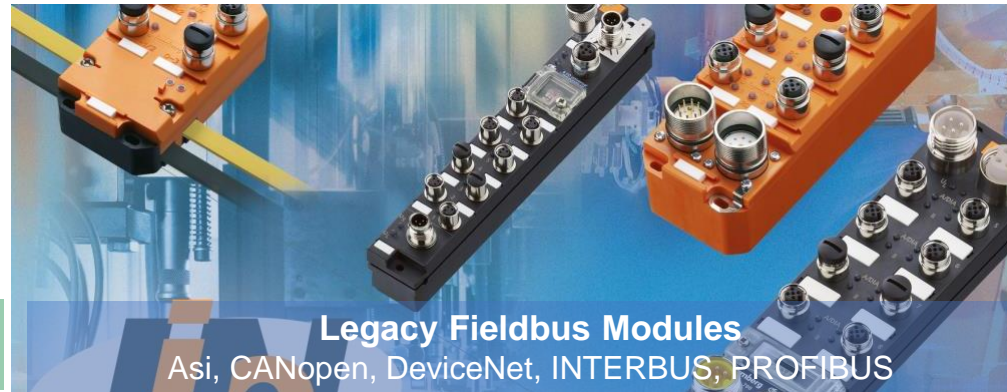


# I/O Systems

Active I/O Modules, Passive Distribution Boxes, Accessories



**Passive Distribution Boxes**  
Plastic, Metal, Stainless-Steel



**Legacy Fieldbus Modules**  
Asi, CANopen, DeviceNet, INTERBUS, PROFIBUS



**Modular I/O Systems**  
LiON-Link



**Multiprotocol I/O Modules**  
EtherCAT, EtherNet/IP, PROFINET



**IO-Link Masters & Devices**  
EtherNet/IP, PROFINET



**Distributed Control Units (DCU)**  
Ladder Logic

# ASB-Series: Passive Distribution Boxes

The growing level of automation in all production areas has made it necessary to apply increasingly more complicated wiring and cabling techniques. To reduce wiring complications and high installation costs, **Actuator/Sensor distribution Boxes (ASB)** have been adopted. In 1989, engineers from Lumberg Automation developed such a system, ASB series, that would revolutionize wiring simplicity.

Distribution boxes bundle the signals from sensors and actuators, while establishing a connection to the control system over a home run cable. This enables straightforward, decentral wiring of peripherals.

## + MODULE VARIANTS

- Pluggable or with molded cable
- 4-, 6-, 8-, 10- or 12-port design
- M8 or M12 connections
- Single or duplex channel model
- With/without LED
- Plastic (PBT, TPU), metall (die-cast zinc) or stainless steel housing options

## + TECHNICAL DETAILS

- Ambient temperature: -25 bis +80 °C
- Special types for outdoor applications from 40 to +80 °C
- Protection degree: IP65, IP67, IP69K\*
- Nominal voltage: 10 to 30 V DC
- Nominal current at +40 °C: 1.5 A to 4 A per port and up to 12 A per module

\* depending on the module type



# LioN-Classic: Legacy Fieldbus Modules

The orange LioN-Classic product line is our most proven and known active I/O system with a high degree of reliability in rough environmental conditions – **in use for over 20 years!** As early as 1993, Lumberg Automation launched the markets first field level IP67 I/O module for INTERBUS.

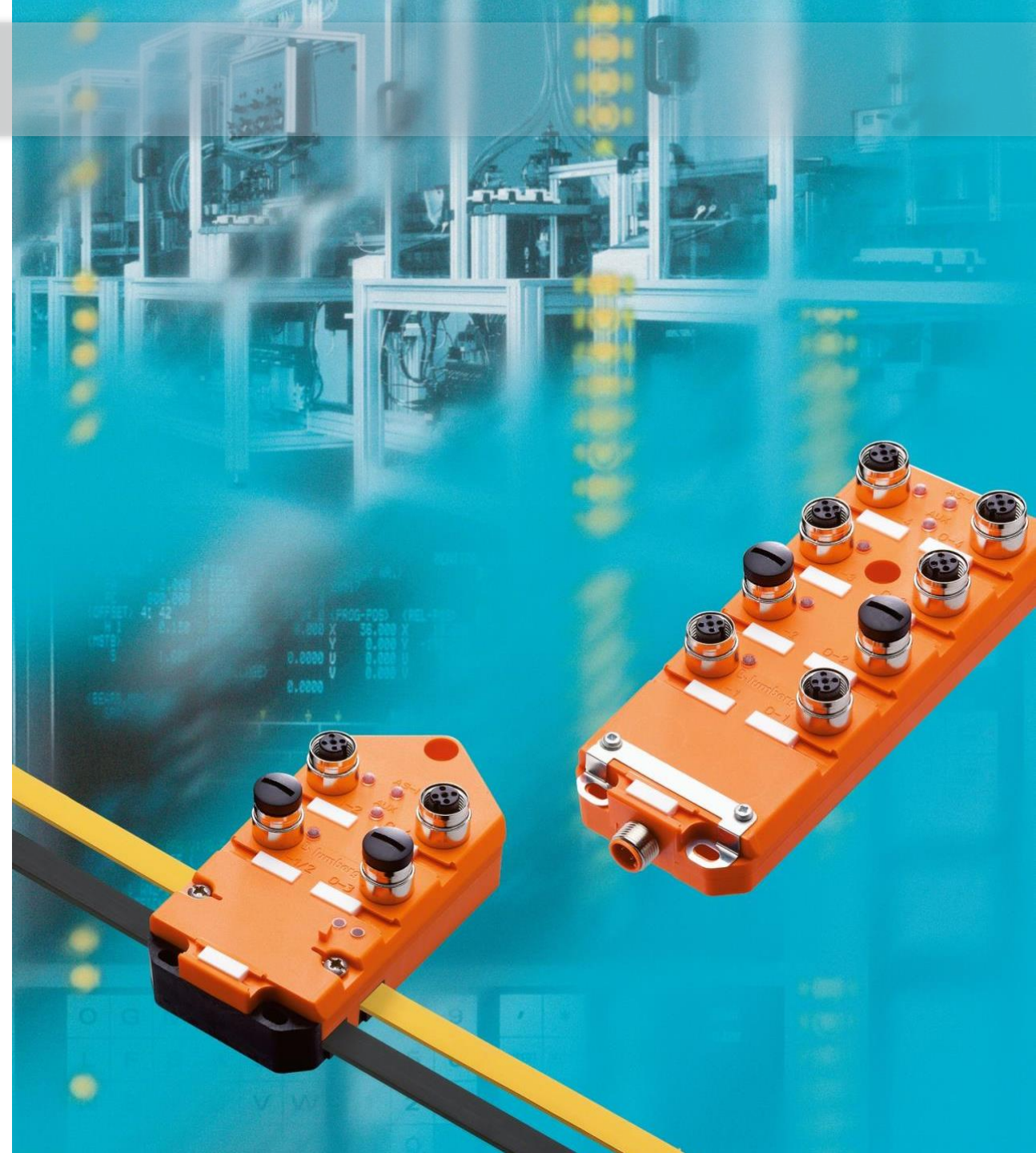
Shortly after this line was extended with compatible modules for ASI, CANopen, DeviceNet and PROFIBUS. All our orange modules are fully encapsulated and offer M12 I/O connections.

## + MODUL VARIANTS

- Single Protocol
- Asi, CANopen, DeviceNet, Interbus & PROFIBUS
- 4-, 8- and 16-way I/O modules
- DI, DO, DI DO
- M12 I/O connections
- Single or duplex channel model
- Plastic housing

## + TECHNICAL DETAILS

- Amb. temperature: 0 to +60 °C
- Special types for outdoor applications : -25 to +80 °C
- Protection degree: IP 67
- Plastic housing (potted)
- Nominal voltage: 24 V DC
- Type 2 inputs according to IEC 61131-2
- 0,5 A to 2 A per output channel and up to 15 A per module





## LioN-S: Slim Fieldbus Modules

Because of compact construction, the LioN-S modules with M8 connections are ideally suited for systems where space is limited. In addition, the modules provide two types of mounting mechanisms – making it easy for front or side mount on the machines profile rails.

LioN-S introduced the markets first universal DIO module without any configuration needed. This means a very high degree of flexibility in planning for alterations during start-up and for later retrofit.

### + MODUL VARIANTS

- Single Protocol
- CANopen, DeviceNet & PROFIBUS
- 8DI and 8DIO
- M8 I/O connections
- Duplex channel model
- Extra M12 A power supply for universal modules

### + TECHNICAL DETAILS

- Ambient temperature: -10 to +60 °C
- Protection degree: IP67
- Slim (30 mm) plastic housing with metal threads for I/O connection
- Nominal voltage: 24 V DC
- Type 3 inputs according to IEC 61131-2
- Max. 0.5 A per output channel and up to 4 A per module

# LioN-M: Comfortabel & Economical

Die LioN-M product range offers comfortable but economical I/O modules in M12 connection technology: For both Fieldbus protocols like DeviceNet & PROFIBUS and Ethernet protocols like PROFINET & EtherNet/IP.

LioN-M modules are also available in 16 DIO universal options without any configuration needed. Offering utmost efficiency and flexibility for almost any application.

## + MODULE VARIANTS

- Single Protocol
- DeviceNet, PROFIBUS, PROFINET & EtherNet/IP
- 16DI and 16DO
- M12 I/O connections
- Duplex channel model
- 7/8" power supply

## + TECHNICAL DETAILS

- Ambient temperature: -10 bis +60 °C
- Protection degree: IP67
- Plastic housing with metal threads for I/O connection
- Nominal voltage: 24 V DC
- Vibration resistance: 15 g
- Shock resistance: 50 g
- Type 3 inputs according to IEC 61131-2
- Max. 1.6 A per output channel and up to 9 A per module





## LioN-R: Heavy Duty

The ruggedized I/O modules from the LioN-R family provide secure data communication in harsh industrial environments and have an extremely robust I/O technology. The embedded I/O ports with metal threads ensure optimal mechanical stability while operating under extreme environmental conditions.

And thanks to the generous housing design, installation of connectors is very easy and comfortable, even with T-distributors.

### + MODUL VARIANTS

- Single Protocol
- PROFIBUS, PROFINET & EtherNet/IP
- 16DI, 16DO and 8DI 8DO
- Galvanic isolation between sensors and actuators and the bus system
- M12 I/O connections
- Duplex channel model
- Mit und ohne LED-Anzeige
- 7/8" power supply

### + TECHNICAL DETAILS

- Ambient temperature: -10 to +60 °C
- Protection degree: IP67
- Metal housing with embedded I/O ports with metal threads
- Vibration resistance: 15 g
- Nominal voltage: 24 V DC
- Type 3 inputs according IEC 61131-2
- Max. 1.6 A per output channel and up to 9 A per module

# LioN-Link: The Modular I/O System

LioN-Link is a modular, decentralized IP67 I/O system for field level applications and is used in situations where machines or plants have distributed I/O concentrations in limited space conditions. LioN-Link consists of bus couplers and I/O modules. The bus couplers are used for linking the I/O modules to the Fieldbuses. Starting from the bus coupler, the I/O modules divide up decentrally in the field via two strands. This ensures same system structure for different Fieldbuses.

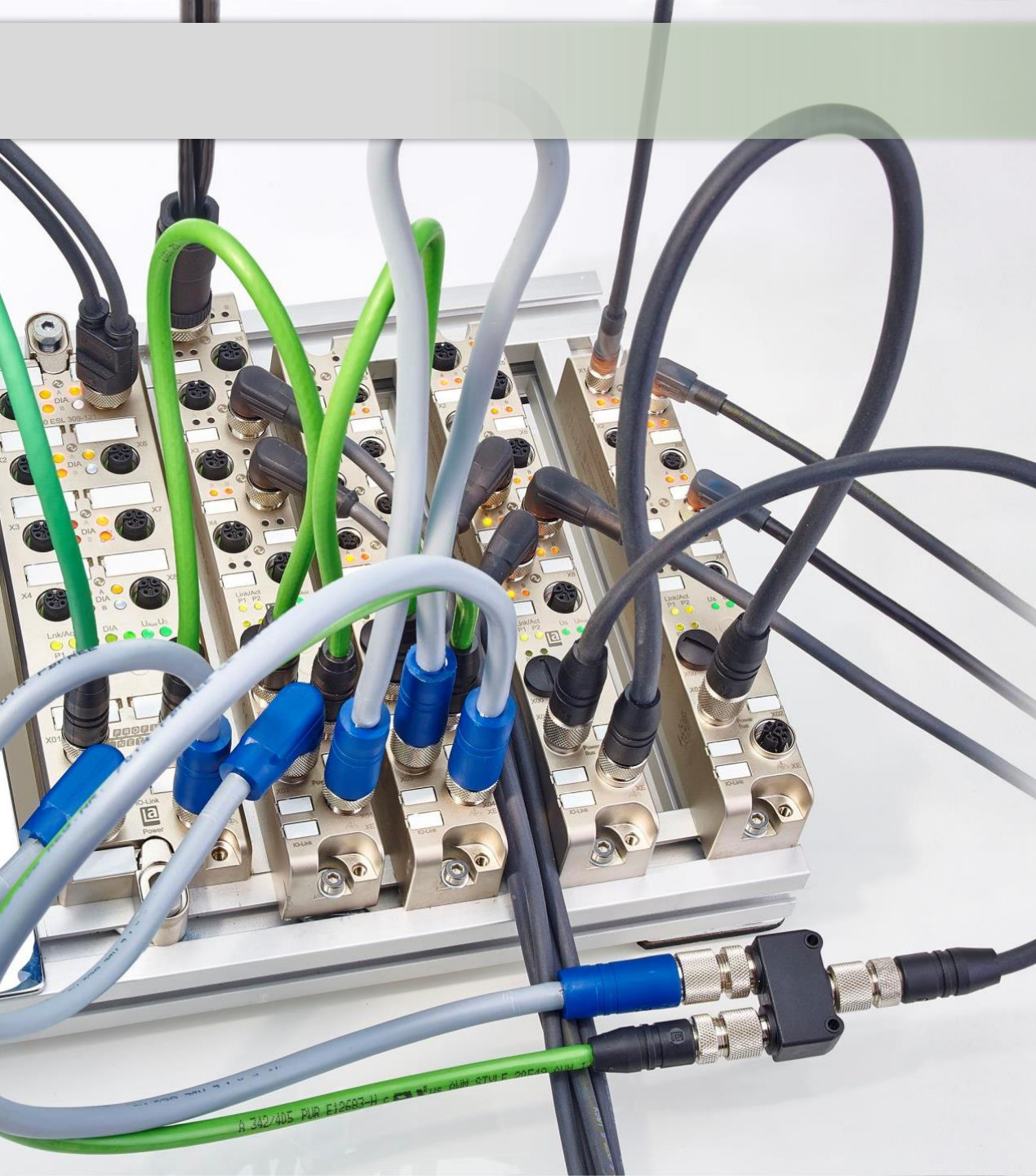
## + MODULE VARIANTS

- Bus couplers for CANopen, DeviceNet, Interbus, Profibus, Profinet & EtherNet/IP
- Digital and analog modules: DI, DO, DIDO, DIO, AI I, AI U
- Input modules are supplied using the LioN-Link connection
- 4-, 8- and 16-way I/O design
- Single or duplex channel models
- M8 or M12 connections
- No terminating resistor needed

## + TECHNICAL DETAILS

- Ambient temperature: -10 to +60 °C
- Protection degree: IP67
- Plastic (PBT) housings
- Two lines per bus coupler
- Up to 15 device pro Linie
  - max. 480 I/Os per coupler
- Each line with 100 m extensions
- Unlimited distance between two devices up to maximum extension
- Cycle time approx. 2 ms





## Lion-P: Powerful I/O

Lion-Power is the das erste **Multiprotokoll-E/A-Modul** auf dem Markt, das PROFINET, EtherNet/IP und EtherCAT unterstützt. Verfügbar mit dem höchst möglichen Schutzzumfang (IP) IP69K, sechs verschiedenen Gehäuseoptionen, IO-Link Master Funktionalität. Ausgestattet mit dem leistungsstärksten M12-Steckverbinder der Welt - M12-Power, L-kodiert, mit bis zu unschlagbaren 2 x 16 Ampere pro Modul. Sowie M12 Hybrid Module.

Mit den **brandneuen** verteilten Steuerungseinheiten für die Feldebene (**DCUs**) beinhaltet unser Portfolio ebenfalls E/A-Module **mit integrierter SPS-Funktionalität für One-Device Automation**, um Anlageneffizienz auf die nächste Stufe zu bringen.

### + MODULE VARIANTS

- Multiprotocol
- PROFINET, EtherNet/IP & EtherCAT
- 16DI, 16DO, 16DIO, 8DI 8DO, 8IOL and DCU
- M8 and M12 I/O connections
- Duplex channel model
- 7/8", M12 Power & M12 Hybrid power supply options

\* IO-Link modules offer Type 1

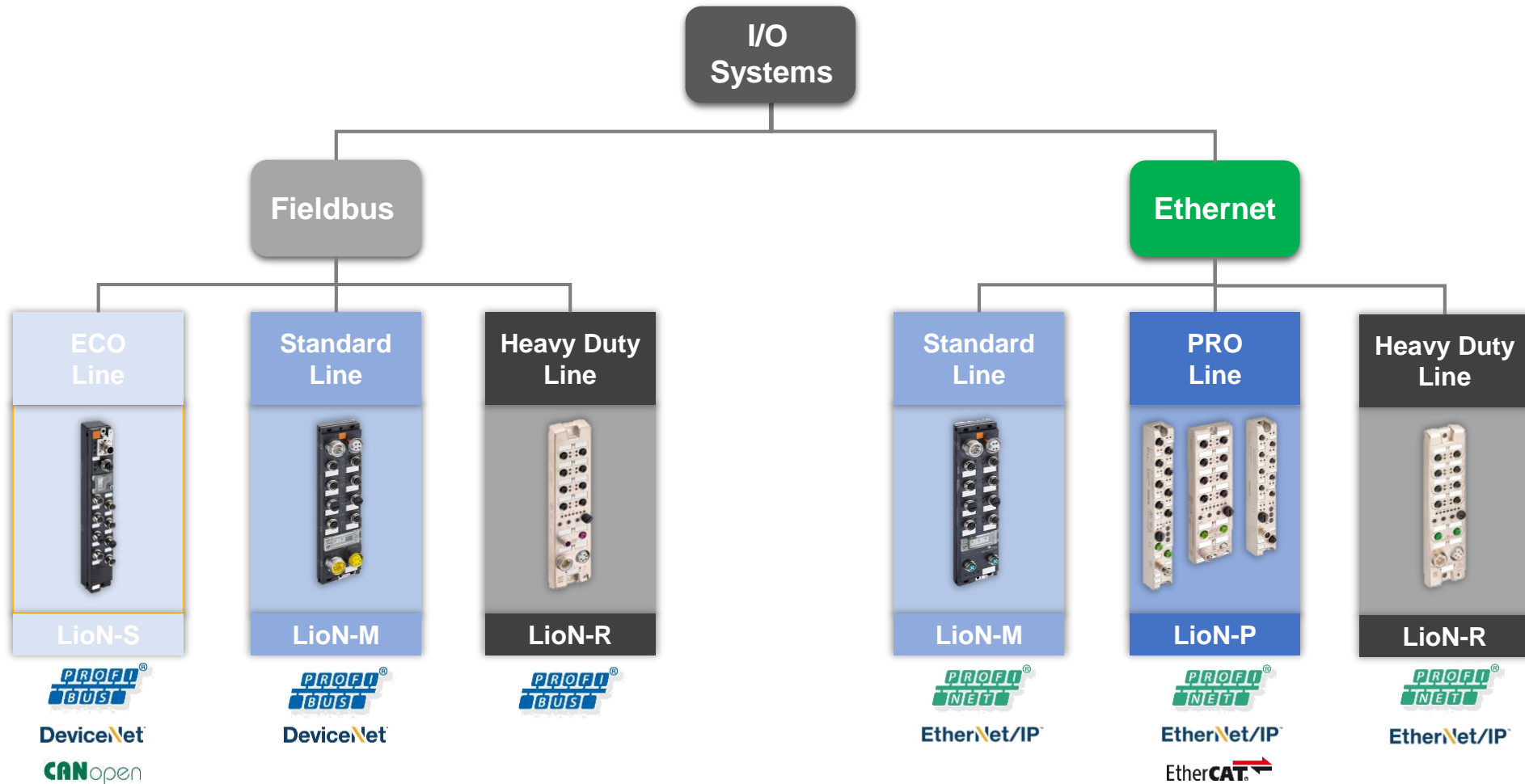
### + TECHNICAL DETAILS

- Ambient temperature: -25 to +60 °C
- Protection degree: IP69K
- Metal housing with embedded I/O ports with metal threads
- Vibration resistance: 15 g
- Shock resistance: 50 g
- Nominal voltage: 24V DC
- Type 3\* inputs acc. to IEC 61131-2
- Max. 2 A per output channel and up to 16 A per module



# Stand Alone I/O Portfolio

## Product Line Positioning



# I/O Systems

## Applications



### Machine Building

Machine tools, machine visualization, machine control, measurement and identification



### Logistics

Conveyor belt automation, packaging and wrapping, automated warehouses, identification



### Material Handling

Robotic pick and place automation, conveyor belt automation, identification



### Automotive

Vehicle stamping, vehicle body welding, powertrain machining, vehicle final mount

# INDUSTRIAL CONNECTIVITY SOLUTIONS

Experience the power of Industry 4.0 with the industries most popular connectivity solutions.

Connectivity solutions from Hirschmann and Lumberg Automation are available in space-saving designs for various applications and offer technical expertise for each environment.



Data



I/O



Power



Sensor/  
Actuator



Valve

