

NP 1041LE

**Lumberg Automation™
LioN-M modules for
ProfiNet I/O**

Cost-effective solution for ProfiNet I/O networks thanks to integrated dual-port switch and easy diagnostic concept




The New LioN-M Modules, Which Support Both Real Time (RT) and Isochronous Real Time [IRT (via the integrated switch)], can be Used to Implement Line Topologies Without any Additional Switches.

- Universal I/O functionality offers maximum flexibility when planning the network and commissioning the modules
- Short-circuit proof I/Os and a long product life ensure a high level of functional reliability
- The optimum arrangement of I/O slots, together with the clear labeling of the network ports make for simple handling

The new LioN-M modules from Lumberg Automation™ act as the interface for communication between field level and control level. In other words, sensor signals are collected in the modules and forwarded in real time via ProfiNet I/O to the higher-level controllers and from these to the actuators in the field. This is compliant with both the RT and the IRT standard. For this purpose the modules have 16 digital channels that can be used either as inputs or – in the Universal version – as inputs or outputs in any combination. In addition, thanks to their robust design, they are able to withstand even rugged environmental conditions and extreme temperatures – and yet the LioN-M modules are among the lightest of their kind on the market.

Applications

The Lumberg Automation™ LioN-M modules for ProfiNet I/O were especially designed for complex installations with high signal density and high real-time requirements.

These include machinery used in auto body shops, gearbox manufacture and paint shops. The modules can, however, equally be used in filling equipment, high-bay warehouses or conveyor belts. They are also ideally suited for printing, paper, textile and wood processing machinery. LioN-M modules thus primarily enable planning and design staff to create high-availability solutions in the field of machinery and plant construction, but project buyers, system integrators and maintenance specialists for machinery and plant can also benefit from these powerful modules.









Benefits

LioN-M modules offer a high level of economy, since their universal I/O functionality enables them to be used to flexibly connect sensors and actuators via ProfiNet I/O. As is usual for fieldbus systems, the integrated dual-port switch, which supports both RT and IRT real-time standards, permits a number of modules to be connected in a line topology. This means that there is usually no need to install cost-intensive star cabling and additional switches. You can also continue to use existing cable routes, ducts and energy chains without changing their physical layout. The optimum arrangement of I/O slots and the clear labeling of the network ports make these LioN-M modules easy to handle. And last but not least, their short-circuit proof I/O facilities allow the modules to offer a high level of operational reliability and a long product life.

**A new product to
serve your needs.
Be certain.**



Technical Information

Product Description		
Type	0980 ESL 700	0980 ESL 701
	   	   
Description	ProfiNet device with 16 digital I/O channels, channels can be used universally as inputs or outputs, M12 socket, M12 LAN-Ports, D-coded, 7/8" power supply	ProfiNet device with 16 digital input channels, M12 socket, M12 LAN-Ports, D-coded, 7/8" power supply
Order-No	0980 ESL 700	0980 ESL 701
Technical Data		
Protection Class	IP67	IP67
Operating Temperature	-10°C to +60°C	-10°C to +60°C
Weight	380 g	380 g
Housing Material	PBT	PBT
Bus System ProfiNet I/O		
Transmission Rate	10/100 Mbs	10/100 Mbs
System/Sensors Power Supply		
Nominal Voltage	24 V DC	24 V DC
Voltage Range	11 – 30 V DC	11 – 30 V DC
Power Consumption	typ. 90 mA	typ. 90 mA
Reverse Polarity Protection	yes	yes
Input Power Supply Us		
Voltage Range	19 – 30 V DC	19 – 30 V DC
Sensor Current	200 mA (at T _{amb} 30°C)	200 mA (at T _{amb} 30°C)
Short-circuit Proof	yes	yes
Indication	LED green	LED green
Inputs, Type 3, IEC 61131-3		
Rated Input Voltage	24 V DC	24 V DC
Channel Type N.O.	p-switching	p-switching
Number of Digital Channels	max. 16	max. 16
Channel Status Indicator	LED yellow per channel	LED yellow per channel
Diagnostic Indication	LED red per socket	LED red per socket
Output Power Supply UL		
Nominal Voltage	24 V DC	–
Voltage Range	19 – 30 V DC	–
Reverse Polarity Protection	yes/antiparallel diode	–
Indication	LED green	–
Outputs		
Rated Output Current	1,6 A per channel	–
Short-circuit Proof	yes	–
Max. Output Current	9 A (12 A*) per module	–
Overload-proof	yes	–
Number of Digital Channels	max. 16	–
Channel Type N.O.	p-switching	–
Channel Status Indicator	LED yellow per channel	–
Diagnostic Indication	LED red per socket	–
Included in Delivery		
Dust Covers M12	4 pieces	4 pieces
Attachable Labels	10 pieces	10 pieces




The use of these products in aggressive media should be verified in each case.
 Technical modifications reserved.

Technical Data

Bit Assignment

Bit	7	6	5	4	3	2	1	0
M12 Input								
Byte 0	4B	4A	3B	3A	2B	2A	1B	1A
Byte 1	8B	8A	7B	7A	6B	6A	5B	5A
M12 Output								
Byte 0	4B	4A	3B	3A	2B	2A	1B	1A
Byte 1	8B	8A	7B	7A	6B	6A	5B	5A

Pin Assignment

LAN Connection M12, D-coded	Power Supply 7/8"	Input/Output M12
 <ul style="list-style-type: none"> 1 = TD+ 2 = RD+ 3 = TD- 4 = RD- <p>Housing = shielding</p>	 <ul style="list-style-type: none"> 1 = GND (0 V) 2 = GND (0 V) 3 = PE/Earth 4 = 24 V 5 = 24 V 	 <ul style="list-style-type: none"> 1 = +24 V 2 = IN/OUT B 3 = GND (0 V) 4 = IN/OUT A 5 = earth <p>Housing = FE</p>

Always Stay Ahead with Belden

In a highly competitive environment, it is crucial to have reliable partners who are able to add value to your business. When it comes to signal transmissions, Belden is the number one solutions provider. We understand your business and want to know your specific challenges and targets to see how effective signal transmission solutions can push you ahead of the competition. By combining the strengths of our three leading brands, Belden®; Hirschmann™; and Lumberg Automation™, we are able to offer the solution you need. Today it may be a single cable, a switch or a connector, thus solving a specific issue; tomorrow it can be a complex range of integrated applications, systems and solutions.

We guarantee the superior performance of your mission-critical systems, even in the most demanding circumstances. If signal transmission is vital to your business, get in touch with the partner that delivers. Be certain. Belden.