

# Technical Datasheet sistema OX-xLO

## 1. Product description



sistema OX-4LO

The sistema OX-LO routers create the infrastructure for connecting LON FT segments to a LON IP channel (IP-852). The routers filter the messages to be transmitted bidirectionally to effectively minimize data traffic or bus load in the respective communication channel. The division into LON-FT segments also makes it possible to increase the number of participants or the communication range.

The routers can be used in networks with free, ring, line or star topology. Use in networks with FTT and LPT devices (also mixed) is possible. A separate connection for shielding is provided. The connection to the LON-FT segment is made via plug-in terminals. The LON-IP channel is connected via Ethernet.

4 different versions are available for the optimal application:

4 x LON-FT, 3 x LON-FT, 2 x LON/FT, 1 x LON/FT. The operating modes "configured router" and "self-learning router" (switch mode) are supported.

The simple integration is done via a web interface. The built-in IP-852 configuration server can be easily activated and configured. Thus the configuration server is always available and there is no need for further software tools.

The sistema OX-LO routers are always equipped with two Ethernet ports. These can be configured either as IP switches or as separate ports for separate IP networks

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## 1.1. Diagnosis

Unique diagnostic options are also available in every router. The sistema OX-LO routers are the only LON routers capable of permanently measuring the line impedance to detect any wiring error or electrical fault. This includes the prevention of connection errors, automatic checking of the line ends, detection of connector problems, and validation of the electrical wiring. 4 LEDs on the front panel of the instrument immediately inform the user of the correct electrical characteristics of the connected segments.

In addition, the built-in analysis tool records extended statistics for the LON IP channel and the LON FT channels. Via the web interface, statistics are displayed as current values and in diagrams: bandwidth usage for each port, CRC error, Neuron ID list, detailed statistics by address, by module, etc.

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## 1.2. Wi-Fi Option

The Wi-Fi option can be used as an access point to connect a PC, tablet or smartphone to the Ethernet network. This option creates excellent and cost-saving working conditions, especially during commissioning and maintenance.

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## 1.3. Scheduler Option

The scheduler option provides 10 independent time programs to control LON network variables using schedules. The configuration of the schedules is done compliant via BACnet/IP objects.

## 2. Mounting

- Installation on DIN rail according to EN50022, width 9 TE



Electrical devices must be assembled and installed by trained personnel only.



Relevant standards, guidelines, regulations and provisions of the respective country must be observed when planning and installing electrical systems.



Device specifications given in this document must be observed.



The system installer must ensure that the wiring corresponds to the intended use of the device.



The modules or controllers may only be connected and disconnected in a de-energized state.

### 3. Technical Data

#### Supply

Power supply	6...24V AC / 8...35V DC
Consumption	typ. 3 W (24 V =)   5 VA (24 V ~)

#### Network

Type of network	IP and TP/FT-10 (78kbps) per FT port and RS485 per Modbus/RTU port
Type of transceiver	FTT, connected LPT devices are supported und RS485

#### Connections

Power supply	3-pole pluggable terminal connection for Ø 0.6 - 1.0mm (sol.)
IP-Network	2 x Ethernet (100Base-T)
FT-Network, Modbus/RTU network (per port)	3-pole pluggable terminal connection for Ø 0.6 - 1.0mm (sol.) including ground connection
USB	Micro USB socket (for console operation)

#### Control elements

Display	Graphic LCD display for information and configuration including 4 navigation keys
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#### Housing

Protection	IP 20 according to EN60529
Metrics	161 x 88,5 x 56 (H x W x D), 9TE
Mounting	Din rail mounting

#### Ambient conditions

Operating temperature	0°C ... +60°C
Transport temperature	-20°C ... +80°C, max. 80%rF, non-condensing

#### Standards

Device safety	acc. EN 55022
Interference immunity	acc. EN 61000-6-2
Certification	CE

## 4. Order information

### 4.1. LON/IP Router 1 port

Order No.	Name	LON	Modbus	Scheduler	Wi-Fi
101 101	sistema OX-1LO	1			
101 102	sistema OX-1LO-WI	1			X
101 103	sistema OX-1LO-SC	1		X	
101 104	sistema OX-1LO-SC-WI	1		X	X

### 4.2. LON/IP Router 1 Port and Modbus/IP Router 1 Port

Order No.	Name	LON	Modbus	Scheduler	Wi-Fi
101 111	sistema OX-1LO-1MO	1	1		
101 112	sistema OX-1LO-1MO-WI	1	1		X
101 113	sistema OX-1LO-1MO-SC	1	1	X	
101 114	sistema OX-1LO-1MO-SC-WI	1	1	X	X

### 4.3. LON/IP Router 1 Port and Modbus/IP Router 2 Port

Order No.	Name	LON	Modbus	Scheduler	Wi-Fi
101 121	sistema OX-1LO-2MO	1	2		
101 122	sistema OX-1LO-2MO-WI	1	2		X
101 123	sistema OX-1LO-2MO-SC	1	2	X	
101 124	sistema OX-1LO-2MO-SC-WI	1	2	X	X

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#### 4.4. LON/IP Router 2 Port

Order No.	Name	LON	Modbus	Scheduler	Wi-Fi
101 201	sistema OX-2LO	2			
101 202	sistema OX-2LO-WI	2			X
101 203	sistema OX-2LO-SC	2		X	
101 204	sistema OX-2LO-SC-WI	2		X	X

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#### 4.5. LON/IP Router 2 Port and Modbus/IP Router 1 Port

Order No.	Name	LON	Modbus	Scheduler	Wi-Fi
101 211	sistema OX-2LO-1MO	2	1		
101 212	sistema OX-2LO-1MO-WI	2	1		X
101 213	sistema OX-2LO-1MO-SC	2	1	X	
101 214	sistema OX-2LO-1MO-SC-WI	2	1	X	X

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#### 4.6. LON/IP Router 2 Port and Modbus/IP Router 2 Port

Order No.	Name	LON	Modbus	Scheduler	Wi-Fi
101 221	sistema OX-2LO-2MO	2	2		
101 222	sistema OX-2LO-2MO-WI	2	2		X
101 223	sistema OX-2LO-2MO-SC	2	2	X	
101 224	sistema OX-2LO-2MO-SC-WI	2	2	X	X

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#### 4.7. LON/IP Router 3 Port

Order No.	Name	LON	Modbus	Scheduler	Wi-Fi
101 301	sistema OX-3LO	3			
101 302	sistema OX-3LO-WI	3			X
101 303	sistema OX-3LO-SC	3		X	
101 304	sistema OX-3LO-SC-WI	3		X	X

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#### 4.8. LON/IP Router 3 Port and Modbus/IP Router 1 Port

Order No.	Name	LON	Modbus	Scheduler	Wi-Fi
101 311	sistema OX-3LO-1MO	3	1		
101 312	sistema OX-3LO-1MO-WI	3	1		X
101 313	sistema OX-3LO-1MO-SC	3	1	X	
101 314	sistema OX-3LO-1MO-SC-WI	3	1	X	X

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#### 4.9. LON/IP Router 4 Port

Order No.	Name	LON	Modbus	Scheduler	Wi-Fi
101 401	sistema OX-4LO	4			
101 402	sistema OX-4LO-WI	4			X
101 403	sistema OX-4LO-SC	4		X	
101 404	sistema OX-4LO-SC-WI	4		X	X

## 5. Support

The information given in this manual was carefully compiled. Should you have any further questions regarding this product, please contact:

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