wenglor
the innovative family

ZAC5xPN0x

Ethernet Switches

Operating instructions

Table of Contents

1. Proper Use

This wenglor product must be used in accordance with the following functional principle:

Switch

A Switch is an active network component which distributes data to the corresponding addressees within a network in a targeted fashion. wenglor switches are fitted optionally with additional Power over Ethernet technology. The power supply is integrated into existing network connection by means of Power over Ethernet. As an addition to Industrial Ethernet, there are several digital inputs and outputs directly on the switch that can be activated or evaluated via the network.

2. Safety Precautions

• This operating instruction is part of the product and must be kept during its entire service life.

• Read this operating instruction carefully before using the product.

• Installation, start-up and maintenance of this product has only to be carried out by trained personnel.

• Tampering with or modifying the product is not permissible.

• Protect the product against contamination during start-up.

• Not a safety component in accordance with the EU Machinery Directive.

3. Approvals and IP Protection

$C\,E$ RoHS

LISTED
IND. CONT. EQ.
E480617
For use in class 2 circuits

4. Technical Data

Order number	ZAC50PN01	ZAC50PN02	ZAC51PN01
Supply voltage	18...32 V DC	18...32 V DC	18...32 V DC
Max. Current Consumption Device *	0.3 A	0.25 A	0.3 A
Max. Current Consumption System **	2.2 A	2 A	0.3 A
max. PoE Capacity	30 W	25 W	–
Temperature range	−25...60 °C	−25...60 °C	−25...60 °C
Voltage drop switching outputs	< 2.5 V	< 2.5 V	< 2.5 V
Max. Switching current switching outputs	0.6 A	0.6 A	0.6 A
Max. total current of the digital I/O ports	1A	1A	1A
Digital I/O ports short-circuit protected	Yes	Yes	Yes
Digital I/O ports overload protected	Yes	Yes	Yes
Digital I/O ports reverse polarity protected	Yes	Yes	Yes
Number of digital I/O ports	2	2	2
Housing material	Aluminum	Aluminum	Aluminum
Protection class	IP67	IP67	IP67
Type of connection power	7/8", 5-pin	7/8", 5-pin	7/8", 5-pin
Type of Connection Industrial Ethernet Ports	M12×1, 4-pin, D-coding	M12×1, 4-pin, D-coding	M12×1, 4-pin, D-coding
Type of Connection PoE Ports	M12×1, 8-pin, type x	M12×1, 8-pin, type x	–
Type of Connection Digital I/O ports	M12×1, 4-pin, A-coding	M12×1, 4-pin, A-coding	M12×1, 4-pin, A-coding
Number of PoE ports	5	2	–
Number of Industrial Ethernet Ports	2	2	7
Number of Digital I/O ports	2	2	2
PoE Standard	IEEE802.3af	IEEE802.3af	–
PoE Classes	Class 0, 1, 2, 3	Class 0, 1, 2, 3	–
Baud Rate	10 Mbit/s / 100 Mbit/s	10 Mbit/s / 100 Mbit/s	10 Mbit/s / 100 Mbit/s
Transmission Mode	Full / Half Duplex	Full / Half Duplex	Full / Half Duplex
Webserver	Yes	Yes	Yes
Switch Mode	Store & Forward	Store & Forward	Store & Forward
Managed Switch	Yes	Yes	Yes
VLAN Prioritization	Yes	Yes	Yes
Default IP	192.168.100.1	192.168.100.1	192.168.100.1
Auto-Crossover	Yes	Yes	Yes
Auto-Negotiating	Yes	Yes	Yes
Auto-Polarity	Yes	Yes	Yes

* Maximum own power consumption of the product without additional loads
** Maximum own power consumption of the product with additional loads
   Full assignment of all PoE ports (if available) without digital I/O ports

4.1. Connection table ZAC50PN0x

52

Socket 1 Suitable Plug: 50

Pin	Function	In/Out
1	TxD (+)	Out
2	TxD (−)	Out
3	RxD (+)	In
4	RxD (−)	In
5	PoE (+)	Out
6	PoE (+)	Out
7	PoE (−)	Out
8	PoE (−)	Out

Socket 2 Suitable Plug: 51

Pin	Function	In/Out
1	TxD (+)	Out
2	RxD (+)	In
3	TxD (−)	Out
4	RxD (−)	In

Socket 3 Suitable Plug: 2

Pin	Function	In/Out
1	+24 V DC	Out
2	I/O	
3	GND	Out
4	I/O	
5		

Socket 4 Suitable Plug: 77 78

Pin	Function
1	0 V DC
2	0 V DC
3	⏚
4	+24 V DC U_{System}
5	+24 V DC $U_{Digital I/O / Sensor}$
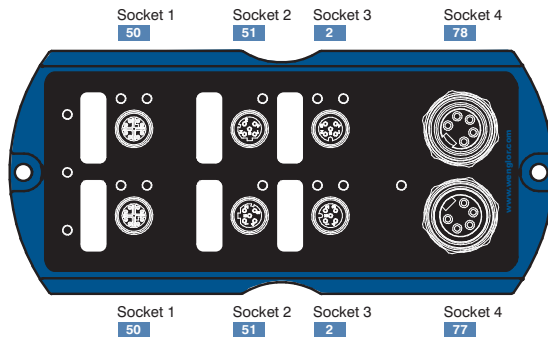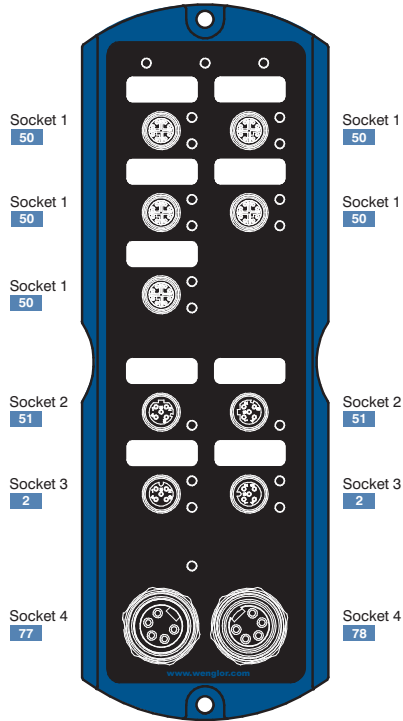
4.2. Connection table ZAC51PN01

Socket 1   Suitable Plug: `2`

Pin	Function
1	+24 V DC
2	I/O
3	GND
4	I/O
5	

Socket 2   Suitable Plug: `51`

Pin	Function	In/Out
1	TxD (+)	Out
2	RxD (+)	In
3	TxD (−)	Out
4	RxD (−)	In

Socket 3   Suitable Plug: `77` `78`

Pin	Function
1	0 V DC
2	0 V DC
3	⏚
4	+24 V DC U_{System}
5	+24 V DC $U_{Digital\ I/O\ /\ Sensor}$

Socket 2 `51`
Socket 2 `51`
Socket 2 `51`
Socket 2 `51`
Socket 2 `51`
Socket 2 `51`
Socket 2 `51`
Socket 1 `2`
Socket 1 `2`
Socket 3 `77`
Socket 3 `78`

www.wenglor.com
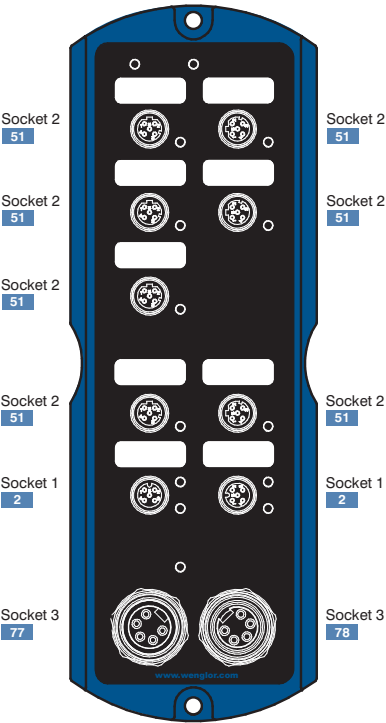
4.3. Housing Dimensions

4.3.1 ZAC5xxN01
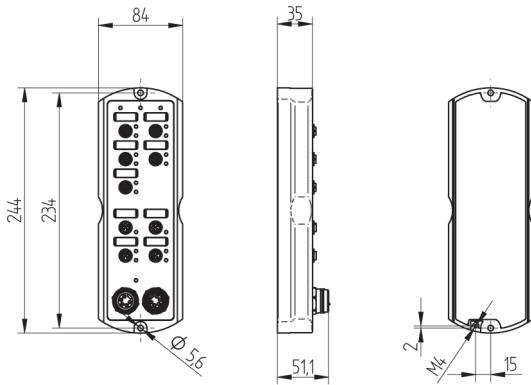
4.3.2 ZAC50xN02

4.4. Complementary Products

Connection plug, 7/8", 5-pin

Order number: ZAT77NN01

S82

Suitable Plug: 77

Connection socket, 7/8", 5-pin
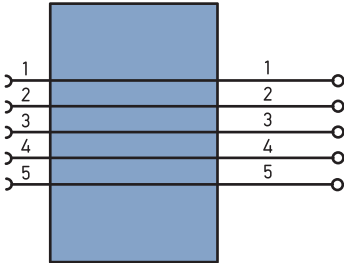
Order number: ZAB78NN01

S87

Suitable Plug: 78

Connecting cable, 7/8", 5-pin
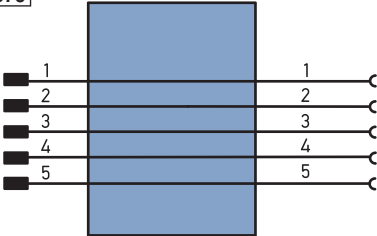
Order number: ZAV78R201, Cable length: 2 m

S76

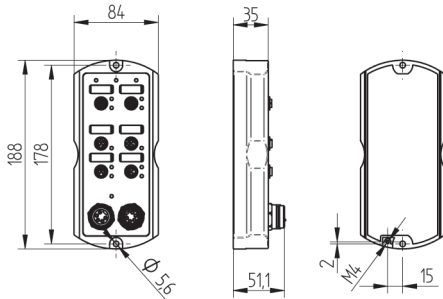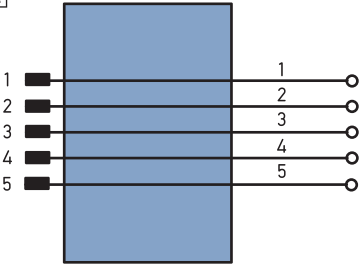Suitable Plug: 78

Connecting line, 7/8", 5-pin

S75

1		BK
2		BU
3		GN YE
4		BN
5		WH

Order number: ZAS78R601, Cable length: 10 m

Suitable Plug: 78

Connector Plug RJ45; 8-pin

S48

1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

Order number: ZAT45NN01

Suitable Plug: 45

Connection plug, M12×1; 8-pin

S48

1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

Order number: ZAT50NN01

Suitable Plug: 50

Connecting cable M12×1; 8-pin

S81

Order number: ZAV50R201, Cable length: 2 m
Order number: ZAV50R501, Cable length: 5 m

Suitable Plug: **50**

S85

Order number: ZAV50R502, Cable length: 5 m

Suitable Plug: **50**

Connecting line M12×1, 8-pin

S85

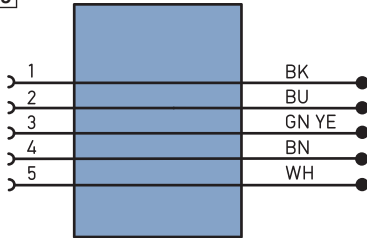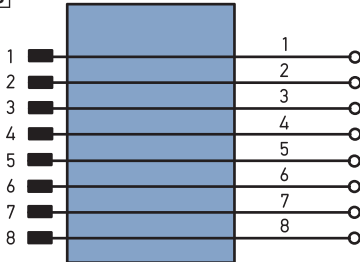Order number: ZAS50R601, Cable length: 10 m
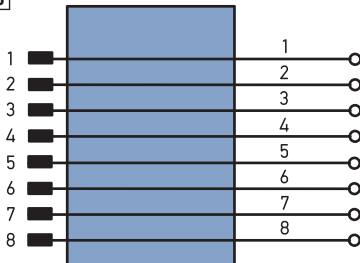
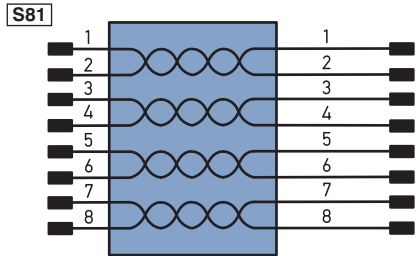Suitable Plug: **50**

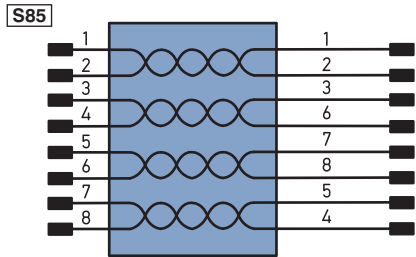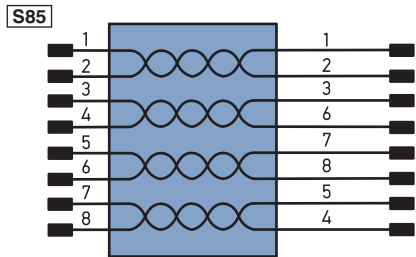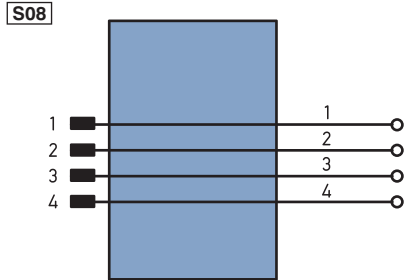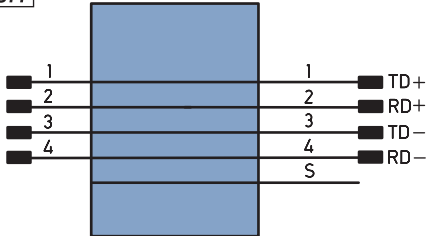Connection plug, M12×1, 4-pin

S08

Order number: ZAT51NN01

Suitable Plug: **51**
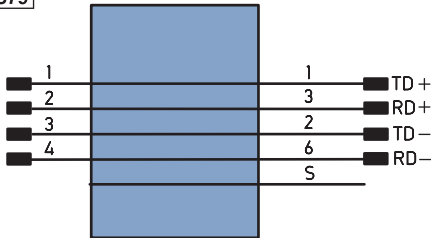
Connecting cable M12×1; 4-pin; D-coding

Order number: ZAV51R201, Cable length: 2 m
Order number: ZAV51R601, Cable length: 10 m

Suitable Plug: **51**

S77

1		1		TD+
2		2		RD+
3		3		TD−
4		4		RD−
		S		

S79

Order number: ZAV51R202, Cable length: 2 m
Order number. ZAV51R602, Cable length: 10 m

Suitable Plug: **51**

1		1		TD+
2		3		RD+
3		2		TD−
4		6		RD−
		S		

2 Connection and power supply cables
M12×1; 4-pin, different lengths are available for connecting the Sensor/actuator.

Legend

+	Supply Voltage +
−	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
$\bar{A}$	Switching Output (NC)
V	Contamination/Error Output (NO)
$\bar{V}$	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
⬙	**IO**-Link
PoE	Power over Ethernet
IN	Safety Input
OSSD	Safety Output
Signal	Signal Output
BI_D+/−	Ethernet Gigabit bidirect. data line (A-D)
EN0RS422	Encoder 0-pulse 0-$\bar{0}$ (TTL)

PT	Platinum measuring resistor
nc	not connected
U	Test Input
$\bar{U}$	Test Input inverted
W	Trigger Input
W−	Ground for the Trigger Input
O	Analog Output
O−	Ground for the Analog Output
BZ	Block Discharge
AMV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
SY−	Ground for the Synchronization
E+	Receiver-Line
S+	Emitter-Line
⏚	Grounding
SnR	Switching Distance Reduction
Rx+/−	Ethernet Receive Path
Tx+/−	Ethernet Send Path
Bus	Interfaces-Bus A(+)/B(−)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
EDM	Contactor Monitoring

ENARS422	Encoder A/$\bar{A}$ (TTL)
ENBRS422	Encoder B/$\bar{B}$ (TTL)
ENA	Encoder A
ENB	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY In	Synchronization In
SY OUT	Synchronization OUT
0LT	Brightness output
M	Maintenance
rsv	reserved

Wire Colors according to IEC 60757

BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green/Yellow

5. Application Notes

The Ethernet ports are fitted with overvoltage discharge protection. Internal varistors limit voltage surges to approx 70 V. The connecting cables of the digital I/O ports must not be longer than 30 m.

6. Mounting Instructions

When mounting and operating the switches, the corresponding electrical and mechanical regulations, standards and safety rules must be observed. The switch must be protected against mechanical influences. The product must be fastened in such a way that the mounting position cannot change. The switch is designed for use in the industrial sector. The industrial environment is characterized in that consumers are not connected directly to the public low-voltage mains network. Additional measures must be taken for use in the residential sector, business and commercial sectors.

The table below defines the tightening torques of the plugs and fastening options for ensuring compliant and faultless operation.

Connection type	Tightening torque in (Nm)
M12	0.4
7/8" plug	1.5
FE ground strap	2.2±0.2
Switch Mounting	4.0±0.2

7. Initial Operation

Project planning, installation, start-up, maintenance and testing of the devices may only be carried out by qualified electrical technicians familiar with the safety standards of automation technology.

Only cables and accessories that meet the standards and requirements for safety, electromagnetic compatibility and, if necessary, telecommunications terminal equipment and the specifications. In case of damage, the product must not be used further on. In the event of improper use, the guarantee and liability claim against the manufacturer shall lapse.

Information concerning which cables and accessories are approved for installation can be found at **www.wenglor.com** or are described in this manual.

7.1. System Structure

7.2. Power Cable

Power In				Power Out	
0 V	Pin 1			0 V	Pin 1
0 V	Pin 2			0 V	Pin 2
$\perp$	Pin 3			$\perp$	Pin 3
24 V max. 9 A	Pin 4	U_{System}		24 V max. 9 A	Pin 4
24 V max. 9 A	Pin 5	$U_{Digital\ I/O\ /\ Sensor}$		24 V max. 9 A	Pin 5

The 7/8" plug is designed for a maximum current of 9 A per pin. This must be taken into account when looping the supply voltage.

The switch must be connected to a power supply of 18 to 32 V DC. The $U_{System/Sensor}$ supplies the connection with voltage and the $U_{Digital\ I/O}$ provides the power supply of the digital I/O ports.

The voltage of the U_{System} must not be switched off during ongoing operation and hence must not be conducted via emergency stop circuits, since otherwise the switch and all connected Ethernet products will not be able to participate in the communication.

Measures must be taken in all cases to ensure that the supply voltage, measured at the remotest partici-pant, does not fall short of the system supply voltage of 18 V DC.

To be complied with in reactive operation:
If the power supply of the digital I/O ports is merged with the voltage supply of the switch, there will then be the risk of a communication disruption in the event of a short-circuit on the I/O devices.

7.3. Functional Earth

The FE connection is on the lower front edge of the switch. To ensure proper functioning in accordance with the EMC regulations specified in the data sheet, we recommend using our ground strap, which is included in the scope of delivery (for tightening torque see "Mounting Instructions" on page 12).

7.4. Industrial Ethernet Cable

wenglor provides a variety of preassembled industrial Ethernet cables.
To ensure cabling as simple and reliable as possible, we recommend using our preassembled Industrial Ethernet cables.

Assignment of the Industrial Ethernet connection:
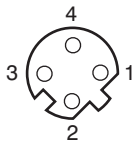
Pin	Function
1	TxD (+)
2	RxD (+)
3	TxD (−)
4	RxD (−)

7.5. Industrial Ethernet Cable with Power over Ethernet

To ensure cabling as simple and reliable as possible, we recommend using our preassembled industrial Ethernet cables. It is also possible to interconnect two switches with PoE via the 8-pin network cable. The PoE supply should then be switched off on at least one of the two PoE ports (see "Industrial Ethernet Ports Settings" on page 29).

Assignment of the Industrial Ethernet connection with PoE:
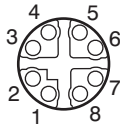
Pin	Function
1	TxD (+)
2	TxD (−)
3	RxD (+)
4	RxD(−)
5	PoE (+)
6	PoE (+)
7	PoE (−)
8	PoE (−)

7.6. Connecting Digital Sensors and Actuators
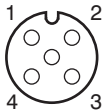
Pin	Function
1	24 V
2	Freely programmable input/output
3	0 V
4	Freely programmable input/output

Sockets that are not used must be provided with caps, which are included in the scope of supply. Otherwise, the protection class IP67 cannot be guaranteed.

7.7. Diagnosis

Assignment example:

ZAC50PN01   ZAC50PN02   ZAC51PN01
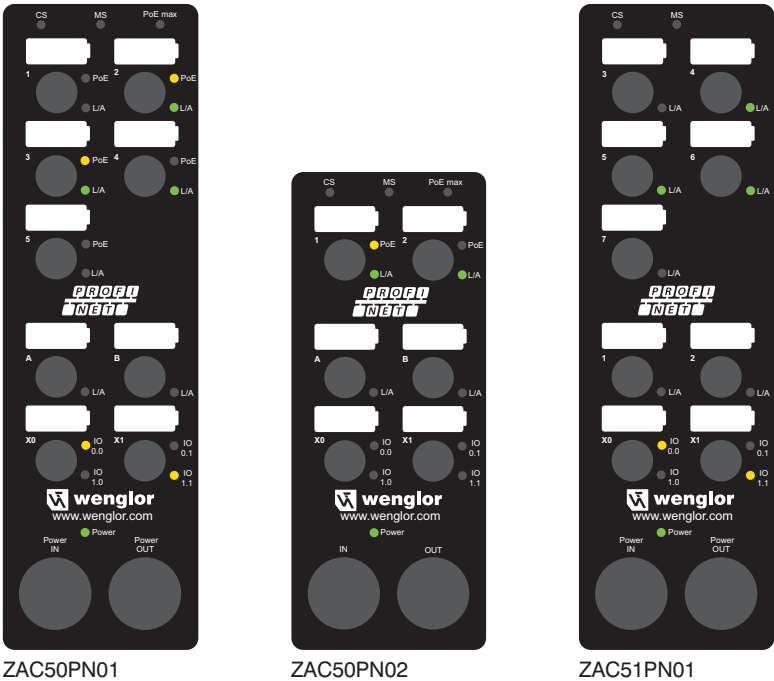
7.7.1 LED Display PROFINET Device (ZAC50PN0x)

The status displays for the communication are marked on the switch with CS and MS.

Designation	Condition	Function
CS (Communication Status)	Off	Connection (AR) with controller established
	Green	Protocol not initialized
	Red	No connection (AR) with controller established
MS (Module Status)	Off	Module Status OK
	Red	Device Error
	Red flashing	Detection function, switched on via Engineering Tool
PoE max	Red	Maximum PoE performance reached
	Red flashing	PoE performance monitoring was switched off

The LED display on the M12 sockets displays the diagnosis for the corresponding socket.
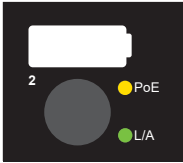
Designation	Condition	Function
PoE	Yellow	PoE in operation
	Yellow flashing	PoE function switched off
L/A	Green	Link exists
	Green flashing	Communication
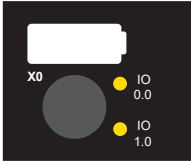
Designation	Condition	Function	
IO 0.0/IO 1.0	Yellow	Input	UB at Pin 2/4
		Output	Switching output at UB Pin 2/4
	Red	Output	Short circuit at Pin 2/4

7.7.2 LED Display PROFINET Device (ZAC51PN01)

The status displays for the communication are marked on the switch with CS and MS.

Designation	Condition	Function
CS (Communication Status)	Off	Connection (AR) with controller established
	Green	Protocol not initialized
	Red	No connection (AR) with controller established
MS (Module Status)	Off	Module Status OK
	Red	Device Error
	Red flashing	Detection function, switched on via Engineering Tool

The LED display on the M12 sockets displays the diagnosis for the corresponding socket.
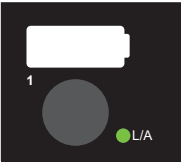
Designation	Condition	Function
L/A	Green	Link exists
	Green flashing	Communication via port

Designation	Condition	Function	
IO 0.0/IO 1.0	Yellow	Input	UB at Pin 2/4
		Output	Switching output at UB Pin 2/4
	Red	Output	Short circuit at Pin 2/4

7.8. Operation on a Controller

If you wish to start up the device on a controller, please carry out the following steps:

- Attach the switch to the supply voltage and connect this to the controller via one of the Ethernet ports. You can find the appropriate connection technology on the wenglor homepage.
- Install the associated device-specific electronic description file (e.g. GSDML file) in the Hardware Manager of the controller. You will find the required file ready for download at **www.wenglor.com → Product world → Product Search (Order Number) → Download → Product Description File** or in the download area at **Download → Product specification files → Product Search → Order Number.**
- The following procedure can be applied by way of example (example based on the Step 7 Engineering Tool of a Simatic-S7 controller from Siemens)
- Insert the device into the PROFINET cable
- Afterwards, call up the object properties of the device
- Assign a name of your choice to the device
- Allocate an Ethernet address to the device
- Assign the product by means of device names/IP address (detection via MAC address)
- Transfer address
- Transfer the configuration to the controller

A detailed description for different controllers and for the installation of the files or for the project planning of the network can be found in the help files of the relevant controller. wenglor offers an example quick guide on starting up a PROFINET device for the Simatic-S7 controller from Siemens and the appropriate software Step 7 Engineering Tool **(www.wenglor.com → Product world → Product Search (Order Number) → Download → General instructions).**

7.8.1 Overview of the modules for PROFINET

Name	Cyclical/input	Parameter slot
4 bit digital input/output	Digital input/output	1 (optional)

The following describes the detailed design of the modules.

7.8.2 Detailed description of the modules for PROFINET devices

DAP 1: ZAC50PN01 V1.0
Module ID: 0x00000303
Submodule: 0x00000000

Parameter:

Name	Data type	Byte offset	Bit offset	Bit length	Default value	Value range	Change-able	Index	Length
Web server Access	BitArea	0	0	1	0: Enabled		Yes	256	1 byte
Overload Protection	BitArea	0	0	1	0: Enabled		Yes	257	1 byte
PoE Functionality Port1	BitArea	0	0	1	1: Enabled		Yes	258	1 byte
PoE Functionality Port2	BitArea	0	1	1	1: Enabled		Yes	258	1 byte
PoE Functionality Port3	BitArea	0	2	1	1: Enabled		Yes	258	1 byte
PoE Functionality Port4	BitArea	0	3	1	1: Enabled		Yes	258	1 byte
PoE Functionality Port5	BitArea	0	4	1	1: Enabled		Yes	258	1 byte

DAP 2: ZAC50PN02 V1.0
Module ID: 0x00000302
Submodule: 0x00000000

Parameter:

Name	Data type	Byte offset	Bit offset	Bit length	Default value	Value range	Change-able	Index	Length
Web server Access	BitArea	0	0	1	0: Enabled		Yes	256	1 byte
Overload Protection	BitArea	0	0	1	0: Enabled		Yes	257	1 byte
PoE Functionality Port1	BitArea	0	0	1	1: Enabled		Yes	258	1 byte
PoE Functionality Port2	BitArea	0	1	1	1: Enabled		Yes	258	1 byte

DAP 4: ZAC51PN01 V1.0

Module ID: 0x00000303
Submodule: 0x00000000

Parameter:

Name	Data type	Byte offset	Bit offset	Bit length	Default value	Value range	Change-able	Index	Length
Web server Access	BitArea	0	0	1	0: Enabled		Yes	256	1 byte

DAP 1/DAP 2/DAP 4 use the module 1

Module 1: 4 bit digital in/out
Module ID: 0x00000001
Submodule: 0x00000001

Format cyclical input and output data
Example: x1P4 ➔ Digital I/O Port 1, Pin 4

ZAC5xPN0x	Input & Output							
	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	-	-	-	-	-	-	x1P2	x0P2
Byte 1	-	-	-	-	-	-	x1P4	x0P4

Parameter:

Name	Data type	Byte offset	Bit offset	Bit length	Default value
IO Configuration Port0, Pin2)	BitArea	0	0	1	0: Input
IO Configuration Port1, Pin2)	BitArea	0	1	1	0: Input
IO Configuration Port0, Pin4)	BitArea	1	0	1	0: Input
IO Configuration Port1, Pin4)	BitArea	1	1	1	0: Input

7.8.3 Diagnostic alarms

The appropriate alarm module should be set up in the controller in the case of an alarm message originating from the switch by short circuit at the ports (hardware interrupt OBs OB40-OB47). If this is not the case, the CPU goes into the STOP mode in the case of an interrupt triggering event. The following alarm messages are output from the switch to the controller:

Diagnostic I/O: Short-circuit after V_{CC} (coming)

Api	0x00000000
Slot	0x0001
Subslot	0x0001
Channel	1: (Port 2, Pin2) 2: (Port2, Pin4) 3: (Port4, Pin2) 4: (Port4, Pin4)
AlarmSpecifier	0x01, Diagnosis appears
ChannelErrorType	0x0100, (manufacturer-specific)

Diagnostic I/O: Short-circuit after V_{CC} (going)

Api	0x00000000
Slot	0x0001
Subslot	0x0001
Channel	1: (Port 2, Pin2) 2: (Port2, Pin4) 3: (Port4, Pin2) 4: (Port4, Pin4)
AlarmSpecifier	0x02, Diagnosis disappears
ChannelErrorType	0x0100, (manufacturer-specific)

Diagnostic I/O: Short-circuit after Gnd (coming)

Api	0x00000000
Slot	0x0001
Subslot	0x0001
Channel	1: (Port 2, Pin2) 2: (Port2, Pin4) 3: (Port4, Pin2) 4: (Port4, Pin4)
AlarmSpecifier	0x01, Diagnosis appears
ChannelErrorType	0x0101, (manufacturer-specific)

Diagnostic I/O: Short-circuit after Gnd (going)

Api	0x00000000
Slot	0x0001
Subslot	0x0001
Channel	1: (Port2, Pin2) 2: (Port2, Pin4) 3: (Port4, Pin2) 4: (Port4, Pin4)
AlarmSpecifier	0x02, Diagnosis disappears
ChannelErrorType	0x0101, (manufacturer-specific)

8. Web-based Configuration

The switch is equipped with a web-based setting interface, which works independently of the operating system. You can easily set parameters for the switch using a standard web browser. The network settings are preset to the IP address 192.168.100.1, subnet mask 255.255.255.0 and standard gateway 192.168.100.254. The preset values are always assumed in the instructions.
The web server allows control-independent monitoring or a test environment to be set up. It is not needed for normal operation on the controller.

Attention:
When using on a controller, settings changed through the website are overwritten by the controller.

8.1. Call up the Administration Interface

Start the web browser. Enter the IP address of the switch into the address line of your browser and press the ENTER key. The IP address of the switch is preset to 192.168.100.1. To ensure that the browser displays the current website settings, the website in question must always be refreshed automatically in case of change. This setting must be changed browser-specific and is demonstrated here by means of Internet Explorer as an example. Under **Extras ➔ Internet Options ➔ Browsing history ➔ Settings** the selection should be set to **Every time I visit the webpage.** Otherwise, any changes to the homepage might be displayed incorrectly.

Internet Options

General | Security | Privacy | Content | Connections | Programs | Advanced

Home page

To create home page tabs, type each address on its own line.

http://www.wenglor.com/

Use current | Use default | Use blank

Browsing history

Delete temporary files, history, cookies, saved passwords, and web form information.

☐ Delete browsing history on exit

Delete... | Settings

Search

Change search defaults.

Settings

Tabs

Change how webpages are displayed in tabs.

Settings

Appearance

Colors | Languages | Fonts

OK | Can...

Temporary Internet Files and History Settings

Temporary Internet Files

Internet Explorer stores copies of webpages, images, and media for faster viewing later.

Check for newer versions of stored pages:

◉ Every time I visit the webpage
○ Every time I start Internet Explorer
○ Automatically
○ Never

Disk space to use (8-1024MB)
(Recommended: 50-250MB)   50

Current location:

C:\Users\wenglor\AppData\Local\Microsoft\Windows\Temporary Internet Files\

Move folder... | View objects | View files

History

Specify how many days Internet Explorer should save the list of websites you have visited.

Days to keep pages in history: 20

OK | Cancel

To now access the webpage of the switch (in the example ZAC50PN01), the IP address must be entered as described in the address line of the browser.

Example: http:\\192.168.100.1 (delivery state)

The overview page **Device General** is not password-protected. If the pages of the device or port settings are accessed, a password prompt appears.
The following user data are preset in the delivery state:

User name: admin
Password: admin

The password can be changed on the page **Device Settings.**

8.2. Overview page
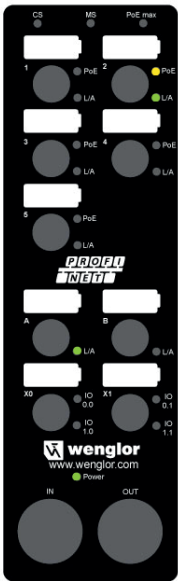

- General device
- Device settings
- Industrial Ethernet ports
- Digital I/O ports

General device

Part number	ZAC50PN01
Product version	V1.1.1
Producer	wenglor sensoric GmbH
Description	Switch PROFINET with PoE
Serial number	700009703
MAC adresse	54-4a-05-06-1a-e1
Real Time Ethernet Status	offline
Unit Identifier	0x0101
Device name	

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After the connection is established, the overview page of the switch is displayed.

Through the language selection, the website can be changed from English (delivery state) to German, Italian, French or Spanish.

8.3. Device settings

Network settings:

When a switch is not operated on a controller, it is possible to change the network settings. The network settings are saved by pressing the "Send" button. To make the changes of the network settings take effect, it is necessary to disconnect the switch briefly from the power supply.

WARNING: Error-free operation of the product can only be guaranteed if the correct network settings are entered in the web user interface. Any incorrect entry of the values could cause the device to be no longer accessible in the network.
It must be ensured that supply power is not interrupted while making changes to network settings. Furthermore, supply power must maintained for at least an additional 5 minutes after the network settings have been saved to memory.

PoE information (ZAC50PN0x):
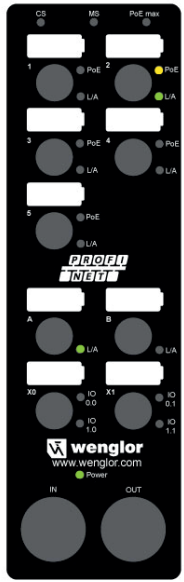
Max. PoE Performance Switch	30W 🟢
PoE Performance currently	4 W
PoE Performance currently indicated	2.438 W
PoE Performance Supervision	ON ▾

The switch monitors the current PoE power consumption constantly. The webpage shows the maximum available PoE performance of the switch as well as the currently reserved and outgoing PoE performance.
Every PoE device registers in a specific PoE performance class when starting. This performance is then reserved in the switch. Mostly, the maximum reserved performance is not demanded, however. It is possible to optimally utilize the maximum PoE performance of the switch by deactivating the PoE performance monitoring.

If the PoE performance monitoring is deactivated, this can cause performance impairments of the device. In this case, the maximum output PoE performance must not be more than the maximum PoE performance of the switch. If the performance monitoring is deactivated, this is displayed on the switch with a red flashing PoE max LED. During operation, the performance monitoring can be changed from inactive to active. Here, all PoE devices are restarted automatically in order to save the reserved performance of the individual ports.

Change password:

Password	Change

An additional window opens, in which the new password can be entered.

Please note: If you forget the password, the switch can only be set to the delivery state via a reset on the controller.

Reset:

Reset	Reset

The following settings can be reset to the delivery state by pressing the "Reset" button.

• Parameter of the digital I/O ports: All digital I/O ports are switched to input
• Parameter PoE: PoE monitoring is switched to one and on all ports
  the PoE power supply is activated
• The password is reset to the delivery state ("admin")

Please note: The network settings are not reset hereby! If you do not know the network settings, the device must be connected to a controller in order to reset the settings.

8.4. Industrial Ethernet Ports Settings

Industrial Ethernet ports

| PoE Port 1 | PoE Port 2 | PoE Port 3 | PoE Port 4 | PoE Port 5 |
| Port A | Port B | | | |

General device
Device settings
Industrial Ethernet ports
Digital I/O ports

The **Port Settings/Industrial Ethernet Ports** page provides an overview of the individual ports of the switch. You can switch between the individual ports using the tab on the uppermost level. The Industrial Ethernet ports contain information on the number of packages received correctly and incorrectly as well as packages sent correctly.

PoE Port 2 settings

PoE Port 1	PoE Port 2	PoE Port 3	PoE Port 4	PoE Port 5
Port A	Port B			
Number of error-free received packets	2670			
Number of defective received packets	0			
Number of error-free sent packets	3589			
PoE in service	ON			
Declared power	4Watt			
Performance currently displayed	2.063W			

In addition to the information on packages, it is possible to activate or deactivate the PoE power supply individually for each PoE port. On the webpage, the amount of PoE performance registered and actual outgoing performance is also documented for each PoE port.

8.5. Digital I/O Ports Settings

The switch has 2 ports available with two digital inputs/outputs each. The digital inputs/outputs are configured on the **Digital I/O Ports** page.

Pin 2 and pin 4 can each be configured as input or output. If the pin is configured as output, the pin can be set manually to 0 V or UB. A red flashing LED indicates a short-circuit on the respective pin.

9. Maintenance Instructions

This wenglor switch is maintenance-free.
Do not use any solvents or cleaning agents that could damage the device when cleaning the switch.
The following gives a brief overview:

- Always use clean water for cleaning by using neutral detergents together with a soft, non-scratch, non-abrasive and non-fibrous cloth – strong pressure or rubbing must be avoided.
- Coarse soiling of greasy, oily or sooty surfaces and the removal of adhesive residues can be cleaned using aromatic-free white spirit or isopropyl alcohol (IPA).
- Use cleaning agent at a maximum of 25 °C.
- Never use steam cleaners.
- Never use solvents with aromatic compounds, alcohol, ketones, ester, glycol ether or halogenated hydro-carbons for cleaning.
- When cleaning with liquids, all open ports must be locked with the protective caps provided.

10. Proper Disposal

wenglor sensoric gmbh does not accept the return of unusable or irreparable products. Respectively valid national waste disposal regulations apply to product disposal.

11. EU Declaration of Conformity

The EU declaration of conformity can be found on our website at www.wenglor.com in download area.

The wenglor sensoric GmbH hereafter called wenglor for short, points out that notes and information in this operating manual may be subject to constant development and technical changes and are therefore only published under reservation.

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