> PRIVA BLUE ID S-LINE SN1/SN2/SN3/SN3T

Network module

A Priva Blue ID S-Line SN1/SN2/SN3/SN3t provides the Priva Blue ID system with one or more network ports. The module is available in various designs, for instance, with a port for Power over Ethernet (PoE) or for 2-wire.

A 2-wire port provides an Ethernet connection via 2-wire twisted-pair cables and permits the reuse of existing network cabling. PoE allows you to power an TouchPoint via the Ethernet connection.

The module uses the same base as the controller.

Characteristics

- one or more Ethernet ports
- Power over Ethernet (PoE)
- 2-wire port for transparent Ethernet communication over 2-wire twisted pair cable
- hot swappable
- Ethernet port with auto-MDIX
- 24 V system power supply monitoring
- clear indication per Ethernet port
- Priva Blue ID Lifeline
- LED for status of module

Port for 2-wire

The port for 2-wire combines Ethernet with the reuse of existing 2-wire twisted-pair cables. This allows you to use, for instance, existing and unused telephone or network cabling for the data traffic. This saves both time and money. An additional advantage is that longer distances can be bridged using 2-wire.

The system supports both bus and star network topologies.

Power over Ethernet

An operating unit (TouchPoint) can be connected to the port for PoE, for instance. A major advantage of PoE is that it does not require a separate power supply.

Auto-MDIX

The Ethernet ports provide auto-MDIX so that crossover cables are not required for connecting to other devices.

Shielding

The ports have shielded connectors where the shielding is connected to the "Ethernet shield" terminal on the base. This means that you can choose whether or not to connect the shielding.

Modular design

The module has a unique base. As a result of this, a module cannot be incorrectly positioned in a base. You simply click the base with module onto the DIN rail.

Clear indication

Legend

A	Priva Blue ID Lifeline
B	LED for Ethernet connection with PoE
C	LED for data communication
D	LED for status of Ethernet
E	LED for status of module
F	connection for 2-wire
G	LED for status of 2-wire
H	reset button for 2-wire

Priva Blue ID Lifeline

The modules are equipped with blue LEDs. Together, these LEDs form the Priva Blue ID Lifeline. If the blue line is continuously on, the modules and bases are in the correct place according to the configuration in TC Engineer.

LED for Ethernet connection with PoE

The LED for PoE shows whether a device is being powered via the PoE connection.

LED for data communication

This LED uses a flashing pattern to show the data communication over the corresponding port.

LED for status of Ethernet

The LED for the status of the Ethernet connection shows whether the corresponding port is connected to another device.

LED for status of module

The LED shows the status of the module. The LED is on continuously when the module is working correctly. If not, the LED flashes or the LED is off.

LED for status of 2-wire

The LED for the status of the 2-wire uses a flashing pattern to show the connection status of the data communication via the 2-wire port.

LED details

Details about statuses and indications of modules, input and/or outputs and the related LED colours and flashing patterns, are described in the *LEDs and Priva Blue ID Lifeline* appendix of the *Installing and commissioning* manual.

Connecting Ethernet devices

SN1 module

Port	SN1 module
Ethernet	PC network TouchPoint[1]

[1] The TouchPoint must be powered separately.

Other SN modules (examples)

Port number	Port	SN2 module	SN3 module	SN3t module
1	Power over Ethernet	PC TouchPoint[2]	TouchPoint[2]	TouchPoint[2]
2	Ethernet	network	PC network	PC network
3	Ethernet	-	PC network	PC network
4	2-wire	-	-	2-wire

[2] This is the preferred position, because the TouchPoint supports Power over Ethernet.

SN module specifications

General				
Module article description	Priva Blue ID S-Line SN1 Network module	Priva Blue ID S-Line SN2 Network module	Priva Blue ID S-Line SN3 Network module	Priva Blue ID S-Line SN3t Network module
Module article number	5020001 (V03:01 and higher)	5020002 (V03:01 and higher)	5020003 (V03:01 and higher)	5020004 (V04:01 and higher)
Base article description	Priva Blue ID S-Line S Base			
Base article number	5010101 (V05:00 and higher)			
Number of Ethernet ports with PoE	0	1	1	1
Number of Ethernet ports without PoE	1	1	2	2
Number of ports for 2-wire	0	0	0	1
Indication	• Priva Blue ID Lifeline • green LED for Ethernet connection with PoE • orange LED for data communication • green LED for status of Ethernet • green LED for status of 2-wire • green LED for status of module			
Dimensions (XYZ)[1]	161.5 x 91 x 117.4 mm (6.36 x 3.58 x 4.62 inches)			
Weight	module: 130 grams base: 235 grams	module: 140 grams base: 235 grams	module: 145 grams base: 235 grams	module: 165 grams base: 235 grams
Maximum power consumption (excluding PoE port power consumption)	2.2 W	2.2 W	2.3 W	4.5 W
Maximum power consumption with maximum loading of PoE port	-	20.1 W	20.2 W	22.4 W
Typical power dissipation[2]	1.5 W	1.5 W	1.6 W	4.1 W
MTBF[3]	4,300,000 hours	4,300,000 hours	4,300,000 hours	2,900,000 hours
Construction	removable module on a base			
Mounting of base	clicks onto DIN rail			
Material	mixture of polycarbonate and ABS			
Identification of connections	labelling with an explanatory abbreviation			
QoS (Quality of Service)	tag-based prioritisation 4 priorities fixed configuration standards: • IEEE 802.1p/q CoS • IPv4 TOS • IPv6 TC			

[1] Excluding 1.1 mm room between the modules
[2] Dissipation under the following conditions:
- I/O load of 50%
- Energy saving mode on (LEDs off)
[3] The MTBF is calculated according to the *Telcordia SR-332 standard Issue 2* under the following conditions:
- ambient temperature: 35 ... 50 °C
- supply voltage: 24 VDC
- time in operation per day: 24 hours
- reliability level: 60 %

Ethernet	
Network standard used	IEEE 802.3 (37 ... 57 VDC) 10BASE-T (10 Mbps) 100BASE-TX (100 Mbps) auto negotiation auto-MDIX
Baud rate	10 Mbps and 100 Mbps
Connection of third-party equipment permitted	yes
Cable type required	UTP or STP, minimum category 5
Maximum cable length	100 m
Connector type	RJ45, shielded
Cable diameter (when using Priva Blue ID TouchPoint Flush Back Cover (for panel mounting))	4 - 6.5 mm

2-wire	
Network topology[1]	bus, star, ring or tree network
Baud rate	20 .. 200 Mbps, depending on cable type, cable length, network topology and number of participants
Maximum number of participants on network segment	8
Cable type required	twisted pair (telephone or data cable)
Cross section	0.2 – 2.5 mm² (without ferrule connector) 0.25 – 2.5 mm² (with ferrule connector)
Maximum cable length between each two participants in a network[2]	500 m nominal
Maximum total cable length[2]	1000 m nominal
Connector type	two-pin screw connector (polarity-insensitive connection[1])

[1] In a ring network the wires in the twisted pair must not be crossed.

[2] Specification is based on test results with category 5E twisted pair cable and Alpha Wire 5261C with 2 participants. The maximum cable length may be shorter for other cable types and other numbers of participants

Power over Ethernet	
Network standard used	IEEE 802.3af (37 ... 57 VDC) Powered Device (PD) Class 0

S base specifications

General	
Weight	235 grams
Maximum power consumption	0.6 W
Typical power dissipation[1]	0.6 W
MTBF[2]	8,760,000 hours

[1] Dissipation under the following conditions:
- I/O load of 50%
- Energy saving mode on (LEDs off)

[2] The MTBF is calculated according to the *Telcordia SR-332 standard Issue 2* under the following conditions:
- ambient temperature: 35 ... 50 °C
- supply voltage: 24 VDC
- time in operation per day: 24 hours
- reliability level: 60 %

Electrical	
Input voltage between SP and SG	21.6 VDC ... 26.4 VDC (24 VDC ± 10 %)
Maximum input current	4.3 A (2.5 A for I/O modules and 1.8 A for SC module, SN module and controller)
Minimum switch off voltage	21.1 VDC
Maximum switch off voltage	26.9 VDC
$U_{FE\text{-}SP\ (max)}$, $U_{FE\text{-}SG\ (max)}$, $U_{SP\text{-}SG\ (max)}$	30 VAC and +/- 30 VDC
$C_{FE\text{-}SP}$, $C_{FE\text{-}SG}$	1 nF nominal
$R_{FE\text{-}SG}$	1 MΩ nominal
Glass fuses	3.15 AT
Indication	green LED for system power
Switching voltage alarm output	max. 30 VAC max. 30 VDC
Switching current alarm output	0.1 mA ... 1 A with cosφ = 1

Power supply	Requirements
The system power supply must comply with the following requirements.	• output voltage: 21.6 ... 26.4 VDC • double insulation between input and output • Class 2 power supply for UL508, UL916, CSA C22.2 No. 14 and No. 205

General specifications of controllers, modules and bases

Housing	
IP code	IP30 (IEC 60529)
Flammability class	V-0 (UL 94)
Recycle code	7
Colour	release surfaces of module and DIN rail release: blue (RAL5013) other parts: white (RAL9003)
Device type	open device, for use in a pollution degree 2 environment

Installation and connection	
Installation	in control panel: • accessible to authorized personnel only • can be clicked onto the DIN rail that is positioned horizontally or vertically on the mounting plate Note: The controller, SC module and SN module may only be mounted horizontally. in panel door integration in control panel: • accessible to authorized personnel only • can be clicked onto the DIN rail that is positioned horizontally on the mounting plate
DIN-rail type	35 x 7.5 mm (height x depth), in accordance with IEC 60715
Maximum width of I/O modules, bus extension modules and controller	20 m

Environment	
Permitted temperature inside control cabinet during normal operation with horizontally mounted modules only (without airflow)	0 ... 50 °C
Permitted temperature inside control cabinet during normal operation with vertically mounted modules only (without airflow)	0 ... 35 °C
Permitted temperature during transport and storage	-20 ... 70 °C
Permitted relative ambient humidity	10 % ... 95 % (non-condensing)
Shock and vibration resistance	IEC 61131-2
Installation category	II

Legislation and standards		
Canada / USA		• UL 508:2005 (industrial control equipment) • UL 916:2007 (energy management equipment) • UL 61010-1:2004 (measurement and control equipment) • CSA C22.2 No 14-10: 2011 (industrial control equipment) • CSA C22.2 No 205-12: 2012 (signal equipment) • CSA C22.2 No 61010-1-04 (measurement and control equipment)
	EMC	• complies with 47 CFR Part 15 Subpart B, Class B (FCC Rules) Operation is subject to the following two conditions: 1. This system may not cause harmful interference. 2. This system must accept any interference received, including interference that may cause undesired operation. • ISM-system, complies with Canadian ICES-001
Europe		• Low voltage directive 2006/95/CE: • EN 61010-1:2010 (measurement and control equipment) • EMC directive 2004/108/EC: • EN 61326-1:2006 (measurement and control equipment) • EN 61000-6-2:2005 (generic immunity standard) • EN 61000-6-3:2007 (generic emission standard) • RoHS directive 2011/65/EU
		complies with the WEEE directive 2002/96/EC
International		• The Priva Blue ID S-Line S10 Controller is BTL registered at BACnet International. • The Priva Blue ID S-Line S10 Controller is BACnet certified in accordance with ISO 16484-5/6. • Priva is a member of the BACnet Interest Group Europe.

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