

TECHNICAL DATA

Smart Buildings

ISP/S 8.1.1.1

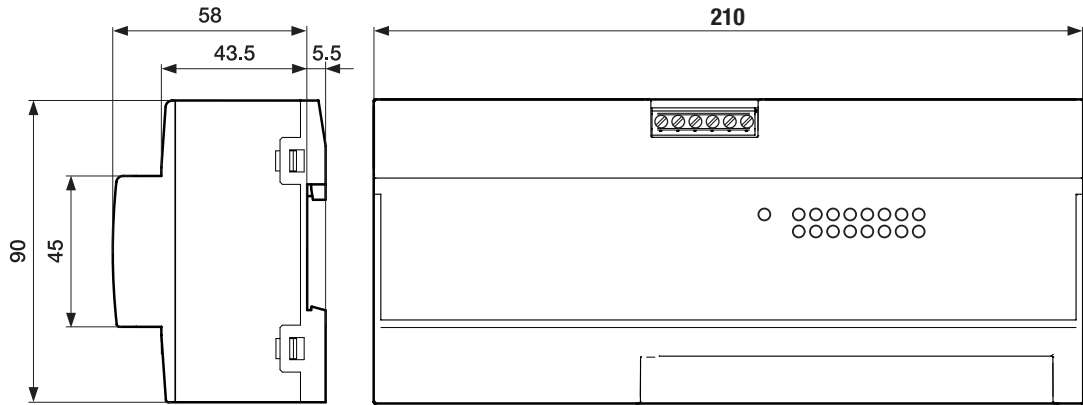
IP Switch-PoE



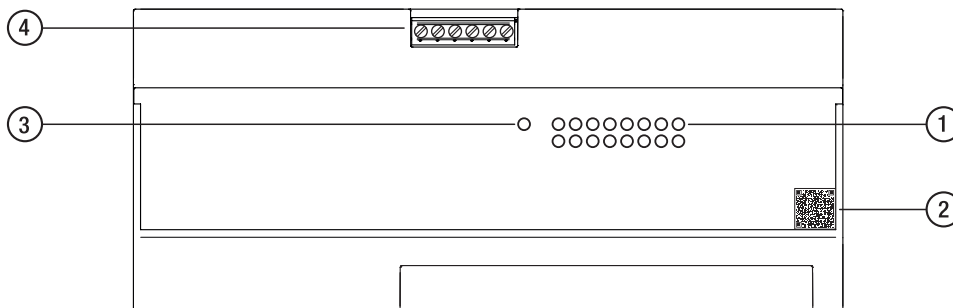
Description of product

The device is designed for the special requirements of building automation. The device is designed for installation in electrical distribution boards and small casings for rapid mounting on a 1.38 in (35 mm) mounting rail in accordance with EN 60715. The device meets the relevant industry standards, provides very high operational reliability, even under extreme conditions, and also longterm reliability and flexibility.

Dimension drawing



Connection - Front view



LEGEND

- 1 LED display elements for port status and PoE status
- 2 Data matrix code
- 3 LED display element for device status
- 4 6-pin terminal block with screw lock

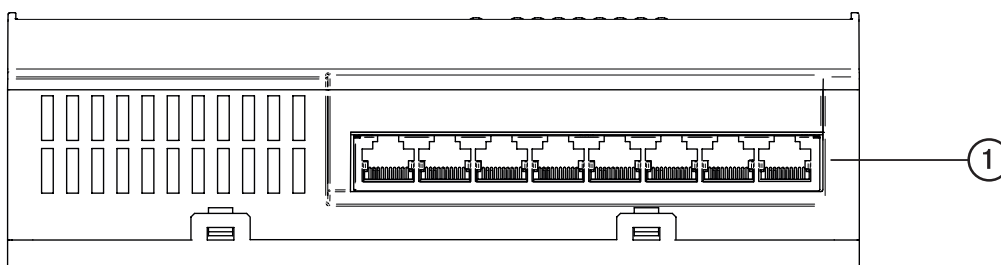
NOTE

The packaging and the front of the device are labeled with matrix codes (QR codes or data matrix codes). These codes are used for unique identification of the device and include the following information:

- Device serial number
- Link to the product page
- Order number

The matrix codes can be read using any mobile device with an appropriate app.

Connection - View from below



LEGENDE

- 1 8 × RJ45 socket for 10/100-Mbit/s Twisted Pair connections

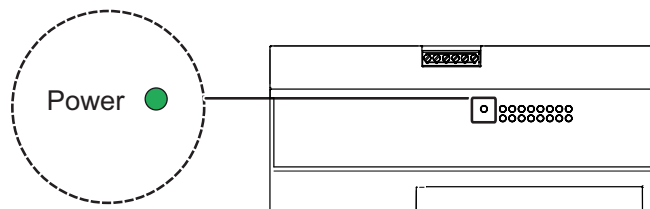
Operating and display elements

Display elements

After the supply voltage is switched on, the device performs a self-test. During this process, various LEDs light up.

Device state

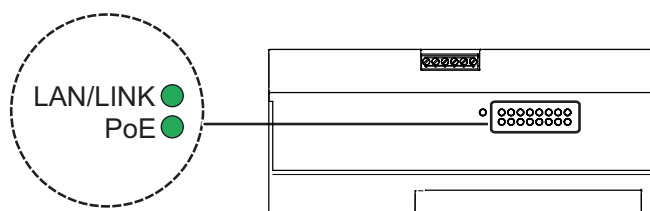
This LED provides information on the status of the power supply.



Color	Activity	Meaning
green	lights up	Supply voltage is on. Device is ready for operation
–	none	Supply voltage is too low. Device is not ready for operation

Port-Status

These LEDs provide port-related information.



LAN/LINK (link status/data)	Color	Activity	Meaning
	green	lights up	Device detects a valid link
		flashing	Device is transmitting and/or receiving data
	–	none	Device detects an invalid or missing link

PoE	Color	Activity	Meaning
	grün	lights up	Powered device is supplied with power
		flashing 1 time a period	No power supply of the Powered Device as the power output required by the Powered Device cannot be provided on this port
	–	none	No powered device connected

Technical data			
Dimensions W × H × D	IP Switch ISP/S 8.1.1.1	See Dimension drawing on page 2	
Modular width		12 MW	
Mounting Position		Any	
Weight		14.46 oz (410 g)	
Supply voltage	1 voltage input		
	Rated voltage range	100 V AC ... 240 V AC, 50 Hz ... 60 Hz	
	Voltage range incl. maximum tolerances	85 V AC ... 264 V AC, 47 Hz ... 63 Hz	
	Power consumption/power output (without PoE load)	max. power consumption	2.5 W
		Power output	8.6 Btu (IT)/h
	Power consumption/power output (with PoE load inc. 55 W PoE)	max. power consumption	11 W
		Power output	37.6 Btu (IT)/h
	Connection type	6-pin terminal block with screw lock	
		Tightening torque	4.4 lb-in ... 5.3 lb-in (0.5 Nm ... 0.6 Nm)
		min. conductor diameter	0.14 mm ² (AWG26)
		max. conductor diameter	1.5 mm ² (AWG16)
	Stripping length	6 mm	
	Power loss buffer	10 ms bei 115 V AC 30 ms bei 230 V AC	
	Peak inrush current	30 A at 115 V AC 50 A at 230 V AC	
	Overvoltage category	III according to EN 60664-1	
Climatic conditions during operation	Ambient air temperature ¹⁾	+23 °F ... +140 °F (-5 °C ... +60 °C) Derating	
	Humidity	20 % ... 90 % (non-condensing)	
	Air pressure	Without derating	
		<ul style="list-style-type: none"> • min. 795 hPa (+6562 ft; +2000 m) • max. 1060 hPa (-1312 ft; -400 m) 	
		With derating	
		<ul style="list-style-type: none"> • min. 700 hPa (+9842 ft; +3000 m) 	
Climatic conditions during storage	Ambient air temperature ¹⁾	-40 °F ... +185 °F up to 3 months (-40 °C ... +85 °C)	
		-40 °F ... +158 °F up to 1 year (-40 °C ... +70 °C)	
		-40 °F ... +122 °F up to 2 years (-40 °C ... +50 °C)	
		+32 °F ... +86 °F up to 10 years (0 °C ... +30 °C)	
	Humidity	10 % ... 95 % (non-condensing)	
	Air pressure	<ul style="list-style-type: none"> • min. 600 hPa (+13123 ft; +4000 m) • max. 1060 hPa (-1312 ft; -400 m) 	
Pollution degree		2 according to EN 60664-1	
Protection classes	Degree of protection	IP20	
Fire classification		Flammability V-0 as per UL 94	

¹⁾ Temperature of the ambient air at a distance of 2 in (5 cm) from the device

Ethernet PoE Ports	
8 x 10/100-Mbit/s twisted pair port	
according to the IEEE 802.3 10BASE-T/100BASE-TX standard	
Port RJ45 socket	
Port supports:	<ul style="list-style-type: none"> • Autonegotiation • Autopolarity • Autocrossing • 100 Mbit/s half-duplex mode, 100 Mbit/s full duplex mode • 10 Mbit/s half-duplex mode, 10 Mbit/s full duplex mode • Power over Ethernet (PoE) 55W

Derating

Note the derating values for PoE device variants.
 The derating values depend on the ambient air temperature of the power supply unit combined with the PoE load and the input voltage.

Ambient air temperature	Permitted PoE load
up to 45 °C (113 °F)	55 W
45 °C ... 50 °C (113 °F ... 122 °F)	45 W
50 °C ... 55 °C (122 °F ... 131 °F)	37 W
55 °C ... 60 °C (131 °F ... 140 °F)	29 W

Input voltage	Derating of PoE load
from 100 V AC	0 W
100 V AC ... 90 V AC	5 W
90 V AC ... 85 V AC	8 W

EMC and immunity		
EMC interference emission		
Radiated emission		
FCC 47 CFR Part 15		Class A
EN 55032		Class A
EN 61000-3-2		Class A
EN 61000-6-4		Fulfilled
Conducted emission		
FCC 47 CFR Part 15		Class A
EN 55032		Class A
EN 61000-3-2		Class A
EN 61000-6-4		Fulfilled
EMC interference immunity		
Electrostatic discharge		
EN 61000-4-2 IEEE C37.90.3	Contact discharge	±4 kV
EN 61000-4-2 IEEE C37.90.3	Air discharge	±8 kV
Electromagnetic field		
EN 61000-4-3	80 MHz ... 1000 MHz 1000 MHz ... 6000 MHz	max. 10 V/m max. 3 V/m
Fast transients (burst)		
EN 61000-4-4	DC supply connection	2 kV
EN 61000-4-4	Data line	2 kV (U/UTP) 4 kV (SF/UTP)
Voltage surges – DC supply connection		
EN 61000-4-5	line/ground	2 kV Supply voltage
EN 61000-4-5	line/line	1 kV Supply voltage
Voltage surges – data line		
EN 61000-4-5	line/ground	1 kV (U/UTP, SF/UTP)
Conducted disturbances		
EN 61000-4-6	150 kHz ... 80 MHz	10 V
Immunity		
IEC 60068-2-6, test Fc	Vibration	5 Hz ... 8.4 Hz with 3.5 mm amplitude 8.4 Hz ... 150 Hz with 1 g
IEC 60068-2-27, test Ea	Shock	15 g at 11 ms

Network range	
10/100-Mbit/s twisted pair port	
Length of a twisted pair segment	max. 328 ft (100 m) (for Cat5e cable)

Underlying technical standards	
Name	
CSA C22.2 No. 142	Canadian National Standard(s) – Process Control Equipment – Industrial Products
EN 55032	Electromagnetic compatibility of multimedia equipment – Emission Requirements
EN 61000-6-2	Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments
EN 61000-6-4	Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emitted interference in industrial environments
EN 61000-3-2	Electromagnetic compatibility (EMC) – part 3-2: Threshold values – threshold values for harmonic currents (device input current \leq 16 A per conductor)
EN 61000-3-3	Electromagnetic compatibility (EMC) – part 3-3: Threshold values – limitation of voltage changes, voltage fluctuations and flickering in public low power supply networks for devices with a rated current \leq 16 A per conductor that are not subject to any special connection condition
EN IEC 61010-2-201	Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-201: Particular requirements for control equipment
EN 61131-2	Programmable controllers – Part 2: Equipment requirements and tests
FCC 47 CFR Part 15	Code of Federal Regulations
UL/IEC 61010-1, UL/IEC 61010-2-201	Safety for Control Equipment

The device has an approval based on a specific standard exclusively if the approval indicator appears on the device casing.

The device generally fulfills the technical standards named in their current versions.

Ordering details					
Device type	Product Name	Order No.	bbn 40 53546 EAN	Weight 1 pcs. [kg]	Packaging [pcs.]
ISP/S 8.1.1.1	IP Switch-PoE	2CDG120083R0011	04552 9	0.41	1

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NOTE

For a detailed description, please refer to the technical documentation for the device. It is available for download on the Internet at www.abb.com.



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