BOSCH

PoE Midspan Injectors

- ▶ Makes PoE cameras easy to install
- ▶ Compact and cost effective solution
- ▶ Allows one-wire connection
- ▶ Detects and protects non-standard Ethernet terminals automatically

Bosch has a full range of PoE or PoH midspans that enable remote power over an IP network connection for various Bosch PoE-enabled devices. The high PoE (PoH) midspans support a variety of high-power IP cameras.

Each midspan is designed to carry data and power over a standard network cable (CAT5e or better), delivered through all 4 pairs.

The midspan models are:

- 15 W indoor model with 1 port
- 15 W indoor model with 4 ports
- 60 W indoor model with 1 port
- 95 W indoor model with 1 port
- 95 W outdoor model with 1 port

The indoor midspans are rated for indoor installation only; they can be installed indoors and wired to a camera installed outdoors.

15 W midspans
The NPD-5001-POE is a single-port power injector that supplies one PoE camera with power.

The NPD-5004-POE four-port power injector can supply four individual PoE cameras with power.

60 W Midspan
The 60 W midspan (NPD-6001B) enables remote High Power over Ethernet (High PoE) for various Bosch IP/HD PTZ cameras. Generating a maximum of 60 W, it complies to both the IEEE 802.3af and the IEEE 802.3at standards, while doubling the available power.

95 W midspan
The 95 W midspan is a high-power PoH (Power Over HDBase T) device that provides data and power between an Ethernet switch and an IP camera.

Bosch sells an indoor model and an outdoor model in 95 W.

System overview

In the table below, an "X" identifies which midspans can supply power to which models of cameras.

Fixed cameras

Camera Product Family	15 W 1-Port	15 W 4-Port
DINION	X	X
FLEXIDOME	X	X

PTZ cameras

CAMERA MODELS	60 W indoor model	95 W indoor model	95 W outdoor model
AUTODOME 7000 - outdoor models (with heater)	X	X	X

CAMERA MODELS	60 W indoor model	95 W indoor model	95 W outdoor model
MIC IP ultra and starlight models without illuminator	X	X	X
MIC IP models *with* illuminator		X	X
MIC IP fusion 9000i models		X	X
AUTODOME IP starlight 5000i and AUTODOME IP starlight 5000i IR models	X	X	X

Certifications and approvals

All models:

Lightning suppression	Meets GR-1089-CORE lightning suppression demands (60 W and 95 W outdoor models only)

Indoor models:

Electro-magnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations, including EN 55032 Class B (emission), EN 55024 (Immunity), and VCCI
Product Safety	Complies with UL/cUL, GS Mark per EN 60950-1
Regulatory Compliance	RoHS Compliant, WEEE Compliant, CE

60 W model:

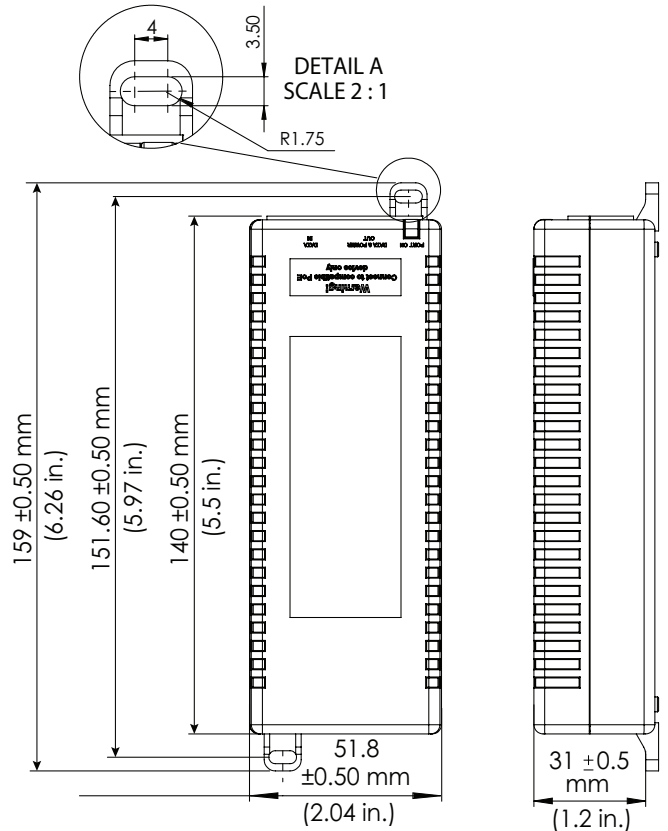| (Additional) Regulatory Compliance	IEEE 802.3af (PoE), IEEE 802.3at (PoE +, including 2-event)
	EN 61000-4-5 (10/700 µsec, 4kv) Surge suppression: IEC 61643-21 ITU-T K.45 International standard

95 W outdoor model:

Electro-magnetic Compatibility (EMC)	Complies with FCC Part 15, and CE regulations, including EN 55032 Class B (emission), EN 55024 (Immunity), and VCCI

Product Safety	Complies with UL/cUL
Regulatory Compliance	RoHS compliant, WEEE compliant, CE

Installation/configuration notes

15 W model, 1-port:

15 W model, 4-port:
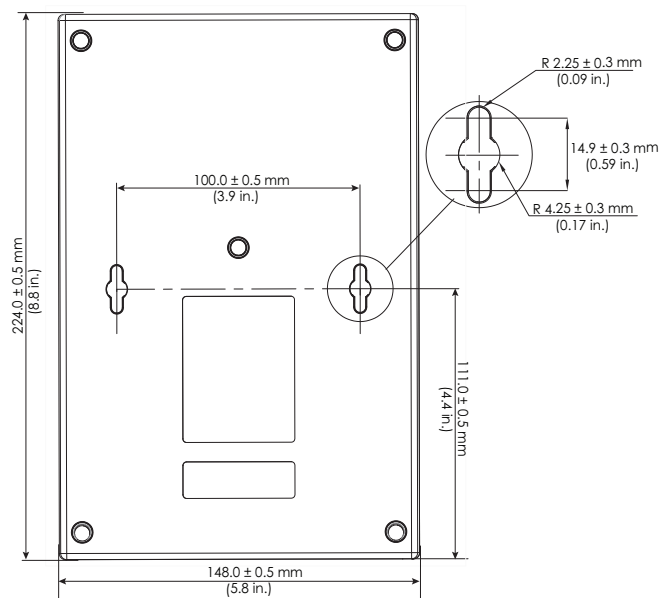
60 W models:

95 W indoor model:

3.8cm
(1-½")

Screw/nail dimensions
5.8-7.0mm
(0.23-0.27")

1.5mm-2.0mm
(0.059-0.08"

1.5mm-2.5mm
(0.059-0.098"

3.0mm
(0.12")

9.17cm
(3-39/64")
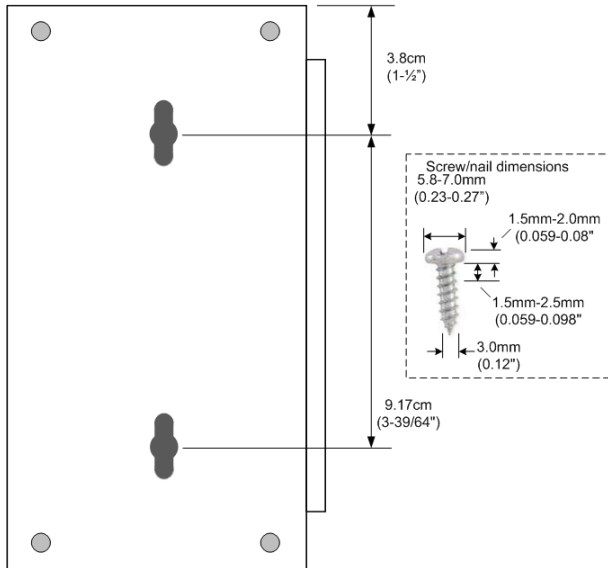
Technical specifications

Connectors	Shielded RJ-45; EIA 568A and 568B (100 Base-TX Ethernet PoE++ for PoH midspans)
Pass through data rates	10/100/1000 Mbps
Maximum cable length recommended	Not to exceed 100 m (333 ft) between network source and terminal

Data

Data transmission	Data provided over pairs 1/2 and 3/6 for 10/100 Ethernet

System indicators, 1 port midspans

	15 W	60 W	95 W indoor	95 W outdoor
Midspan has power (AC power)	Yellow	Yellow	Green	--
Connected camera has power (Channel power)	Green	Green	Green, orange	--
Overload/ short circuit	Flashing green	--	--	--

System indicators, 4 port midspan

Color	Port indicators	Power indicator
Green	Connected camera has power	Midspan has power
Flashing green	Overload/short circuit	Midspan not connected to power/low voltage

Electrical
15 W model, 1-port:

Power	
Input supply voltage	100 to 240 VAC; 50/60 Hz
Maximum input current	0.43 A @ 110 VAC-240 VAC

Power	
Output supply voltage	+ 48 VDC nominal
Output port power	15.4 W max.

15 W model, 4-port:

Power	
Input supply voltage	100 to 240 VAC; 50/60 Hz
Maximum input current	1 A @ 110 VAC; 0.4 A @ 240 VAC
Output supply voltage	+ 48 VDC nominal
Output port power	15.4 W max.

60 W, 95 W indoor models

Input Voltage	100 to 240 VAC, 50/60 Hz
Output Voltage	54-57 VDC (nominal)
Input Current	60 W model: 1.5 A 95 W model: 1.8 A (maximum)
High Power Over Ethernet (High PoE) Output	Pin Assignment and Polarity: 4 Pair power - Pairs 1/2 (-) and 3/6 (+) - Pairs 7/8 (-) and 4/5 (+) User Port Power: 60 W maximum for NPD-6001B 95 W maximum for NPD-9501A
Surge suppression	60 W: Yes 95 W: No

95 W outdoor model:

Input voltage	100 to 240 VAC±10%, 50/60 Hz
Output voltage	54 VDC (nominal)
Input current	2.5 A (@ 100 VAC)
Available output power (maximum)	95 W

High Power Over Ethernet (High PoE) Output	Pin Assignment and Polarity: 4 Pair power - Pairs 1/2 (-) and 3/6 (+) - Pairs 7/8 (-) and 4/5 (+)
Surge suppression	Yes

Environmental
15 W model, 1-port:

Environmental	
Operating Temperature	0°C to +40°C (32°F to 104°F)
Storage Temperature	-20°C to +70°C (-4°F to 158°F)
Operating Humidity	90% RH max. non-condensing
Storage Humidity	95% RH max. non-condensing
Thermal rating	13 BTU/hour

15 W model, 4-port:

Environmental	
Operating Temperature	0°C to +40°C (32°F to 104°F)
Storage Temperature	-20°C to +70°C (-4°F to 158°F)
Operating Humidity	90% RH max. non-condensing
Storage Humidity	95% RH max. non-condensing
Thermal rating	51 BTU/hour

60 W, 95 W indoor models

Operating Temperature	At 95 W: -10 °C to +40 °C (+14 °F to +104 °F) At 60 W: -10 °C to +40 °C (+14 °F to +104 °F) At 30 W: -10 °C to +50 °C (+14 °F to +122 °F)
Storage Temperature	-20 °C to +70 °C (-4 °F to +158 °F) (60 W and 95 W models)

Operating Humidity	60 W model: Maximum 90% relative, non-condensing 95 W model: 10% - 95%, non-condensing
Storage Humidity	60 W model: Maximum 95% relative, non-condensing 95 W model: 5% - 95%, non-condensing

95 W outdoor model:

Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Storage Temperature	-40 °C to +85 °C (-40 °F to +158 °F)
Operating Humidity	Maximum 95%, non-condensing
Storage Humidity	Maximum 95%, non-condensing
Operating Altitude	Up to 2000 m (6,560 ft)

Ingress Protection Rating/ Standard	IP66

Construction
15 W model, 1-port:

Mechanical	
Dimensions (W x H x L)	53 x 33 x 140 mm (2.09 x 1.28 x 5.5 in)
Weight	200 g (0.44 lb)

15 W model, 4-port:

Mechanical	
Dimensions (W x H x L)	148 x 43 x 224 mm (5.82 x 1.69 x 8.82 in)
Weight	620 g (1.4 lb)

60 W models:

| Dimensions (W x H x L)	62 mm x 38 mm x 151 mm (2.44 in. x 1.5 in. x 5.94 in.)
Weight	340 g (0.75 lbs)
Mounting	To wall, shelf, bench or desktop

95 W indoor model:

Dimensions (W x H x L)	87.9 mm x 43 mm x 166 mm (3.46 in. x 1.68 in. x 6.53 in.)
Weight	400 g (0.88 lb)
Mounting	To wall, shelf, bench, desktop, and to other 95 W model units

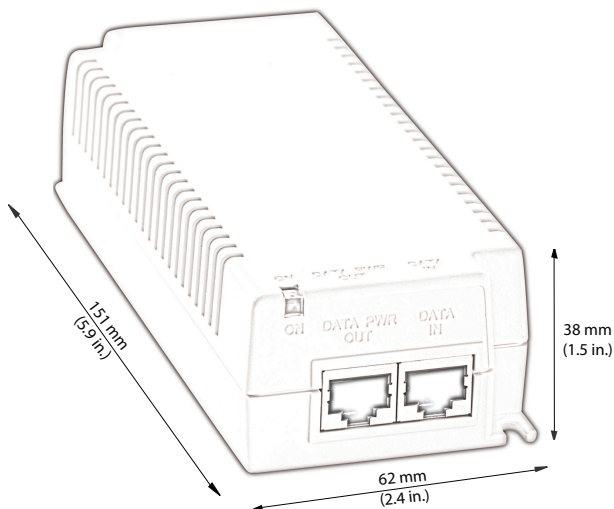**95 W outdoor model:**

Dimensions (L x W x H)	214 mm x 150 mm x 70 mm (8.4 in. x 5.9 in. x 2.7 in.)
Weight	2.2 kg (4.85 lb)
Mounting options	To a wall; to a pole (25 mm - 203 mm) with the Pole mount adapter accessory (sold separately)

Dimensional Drawings

95 W indoor model:
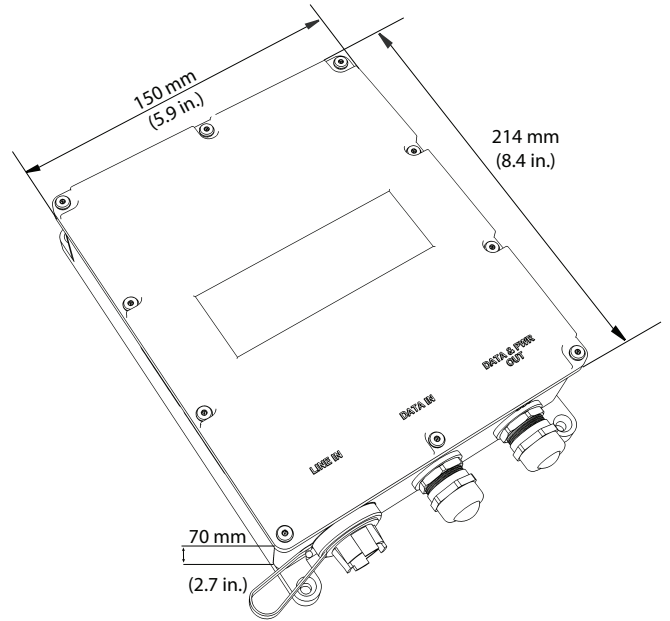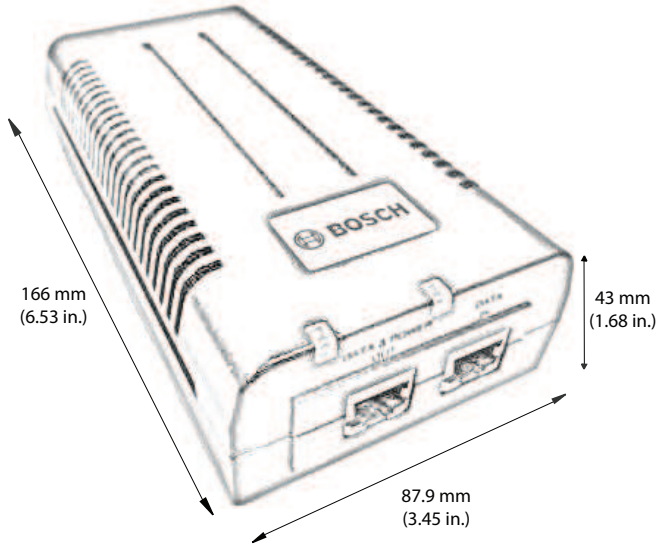
60 W models:

95 W outdoor model:

NPD-5001-POE Midspan, 15W, single port, AC in
Power-over-Ethernet midspan injector for use with PoE enabled cameras; 15.4 W, 1-port
Weight: 200 g (0.44 lb)
Order number **NPD-5001-POE | F.01U.305.288**

NPD-5004-POE Midspan, 4 port x 15W, AC in
Power-over-Ethernet midspan injector for use with PoE enabled cameras; 15.4 W, 4-ports
Weight: 620 g (1.4 lb)
Order number **NPD-5004-POE | F.01U.305.289**

NPD-6001B Midspan, 60W, single port, AC in
60 W indoor midspan for cameras without illuminators
Order number **NPD-6001B | F.01U.392.458**
F.01U.347.358

NPD-9501A Midspan, 95W, single port, AC in
95 W indoor midspan for AUTODOME 7000 and MIC IP cameras with or without illuminators
Order number **NPD-9501A | F.01U.392.336**
F.01U.286.250

NPD-9501-E Midspan 95W 1 port outdoor
95 W outdoor midspan for AUTODOME 7000 and MIC IP cameras with or without illuminators
Order number **NPD-9501-E | F.01U.365.279**

Accessories

NDA-9501-PMA Pole mount adapter for NPD-9501-E
Pole mount adapter for outdoor midspan
Order number **NDA-9501-PMA | F.01U.374.407**