ISFG108
v1.0
ISFG108 industrial PoE switch (8xPoE, 2xSFP, 2xRJ45)

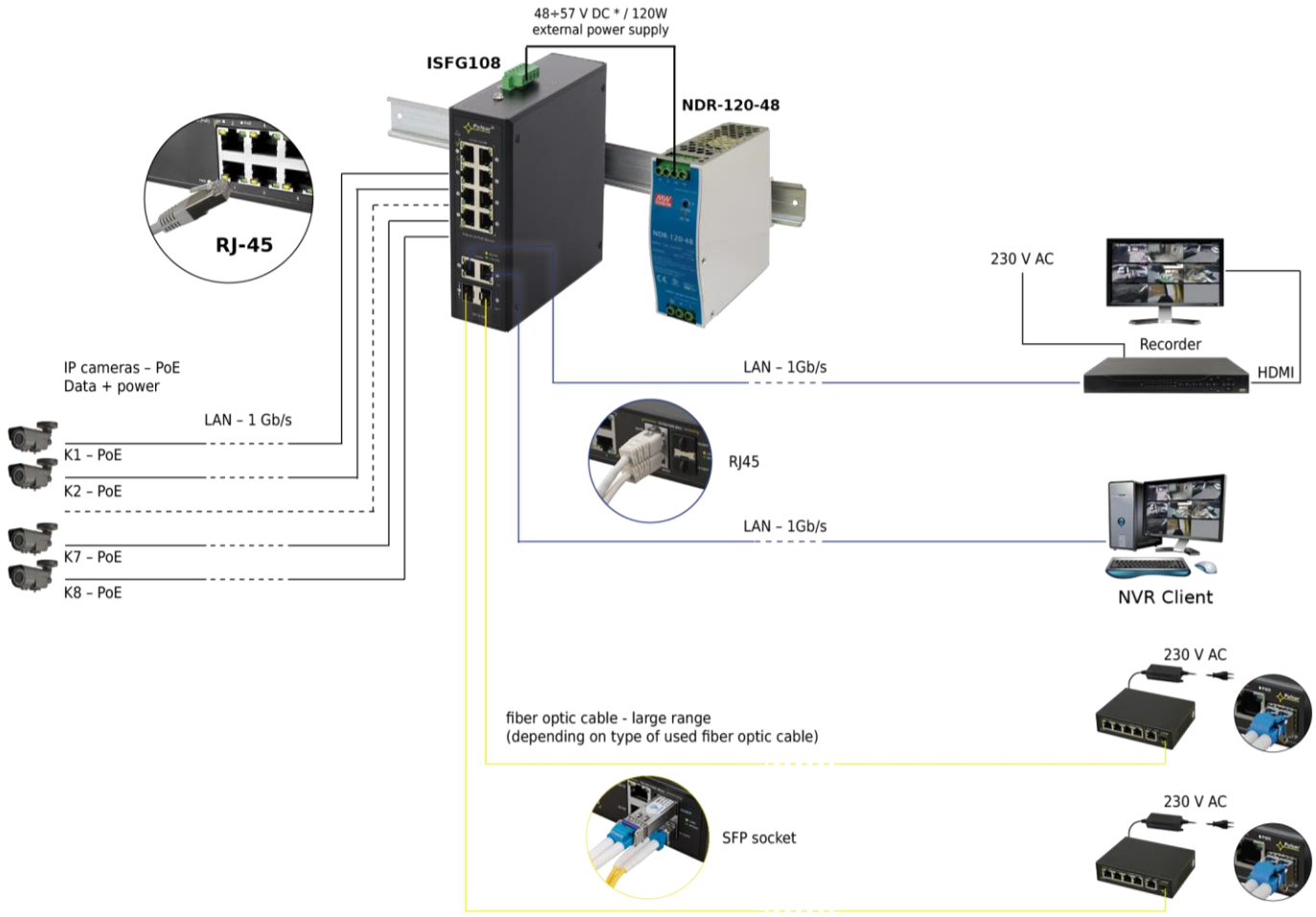
Edition: 2 from 08.07.2024
Supercedes edition: 1 from 16.01.2024

EN

Features:

- Switch 12 ports
  8 PoE ports 10/100/1000 Mb/s, (1÷8 port)
  (data transfer and power supply)
  2 ports 10/100/1000 Mb/s (TP/9, TP/10 ports) (UpLink)
  2 ports 1000 Mb/s SFP (SFP/11, SFP/12 ports) (UpLink)
- 30W for each PoE port, supports devices compliant with IEEE802.3af/at standard
- Supports auto-learning and auto-aging of MAC addresses (8K size)
- **Possibility of redundant power supply**
- Mounting on a DIN rail (TH35).
- Optical indication
- Warranty – 5 year

Example of use.



1. Technical description.

1.1. General description.

ISFG108 is a 12-ports PoE switch designed to supply IP devices operating in IEEE 802.3af/at standard. The switch - at ports 1-8 - automatically detects devices powered in the PoE standard. Ports marked TP/9 and TP/10 allow connecting additional network devices via RJ45 connectors. The switch is also equipped with two SFP sockets (labeled SFP/11 and SFP/12), They allow data transmission via optical fiber using a fiber optic module (SFP GBIC). Device has solutions that allow it to be powered from two sources (emergency power supply, redundant power supply) – in case of a failure of one source, it immediately switches to backup one.

On front panel there is LEDs signaling of the device's status (description in table 3).

The PoE technology provides a network connection and reduces installation costs by eliminating the need to supply a separate power cable to each device. In addition to cameras, other network devices using this technology can be supplied in this way, e.g. IP phone, wireless access point, router.

1.2. Block diagram.

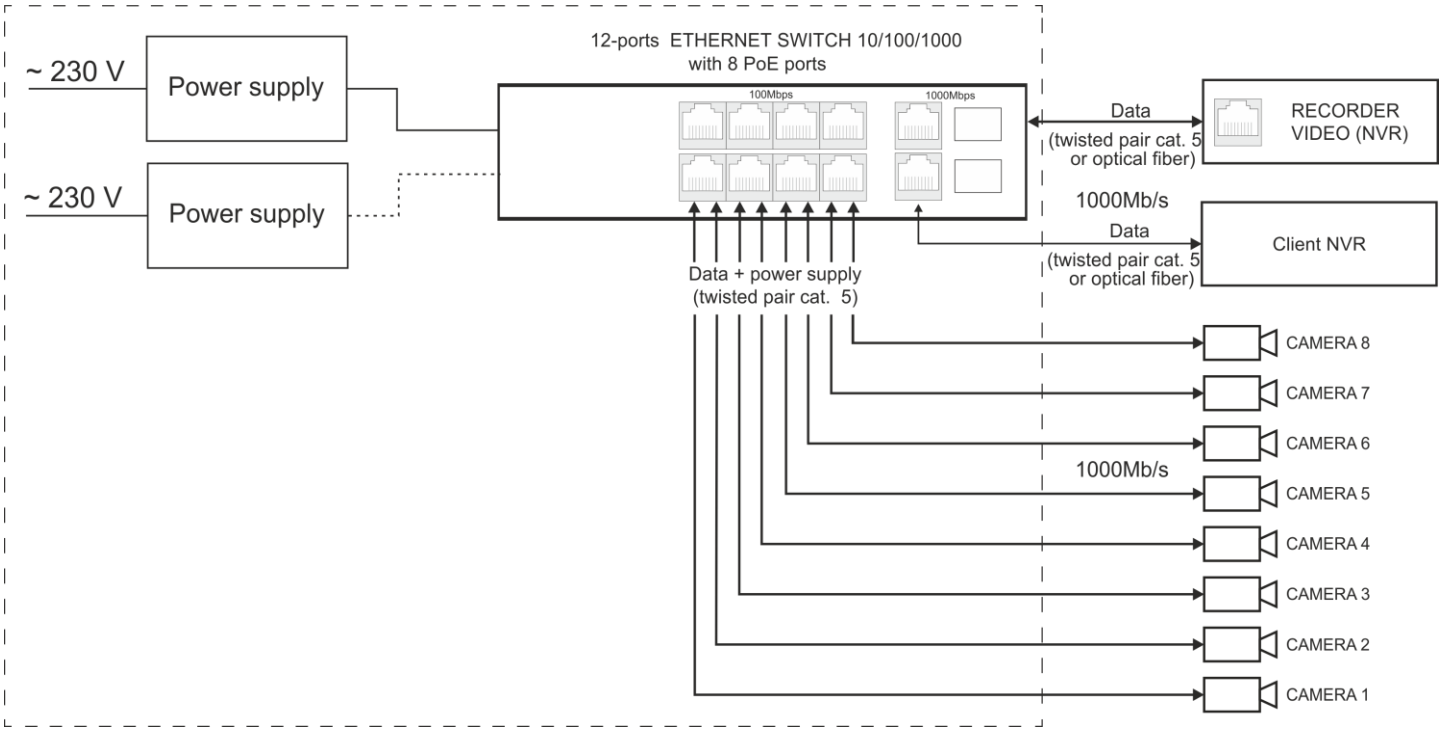


Fig. 1. Block diagram.

1.3. Description of components and connectors

Table 1. (see Fig. 2)

Element no. (Fig. 2)	Description
[1]	8 x PoE port (1÷8)
[2]	2 x UPLINK port (TP/9, TP/10)
[3]	2 x UPLINK port (SFP/11, SFP/12)
[4]	Power socket (V1/V2)
[5]	Holder for DIN rail

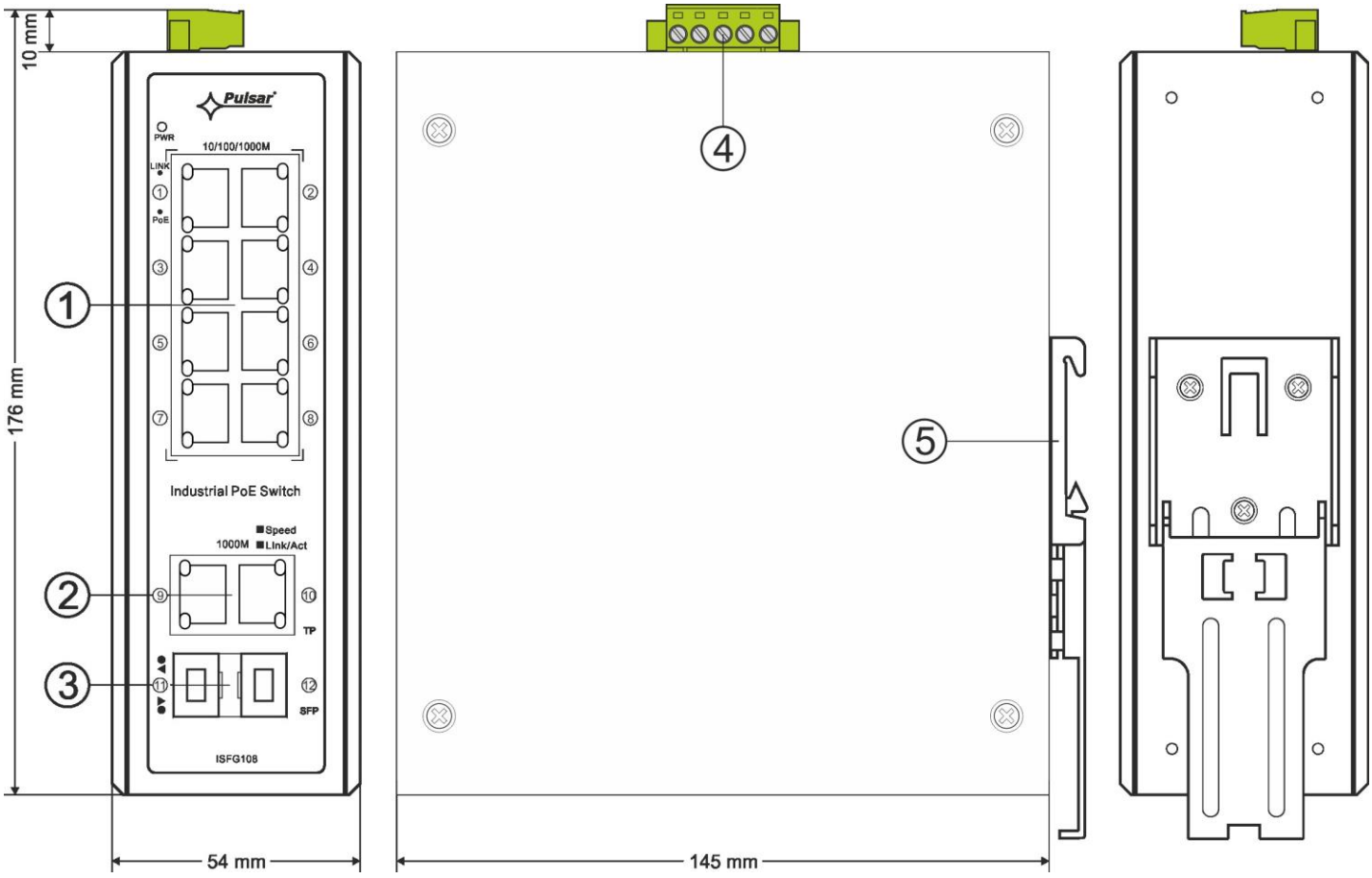


Fig. 2. View of the switch.

1.3. Specifications (Table 2.)

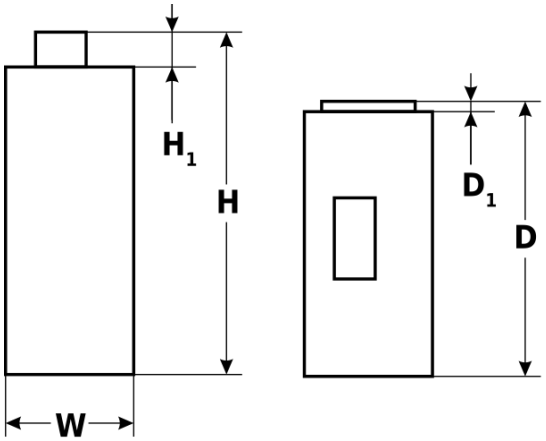


Table 2.

Ports	8 x PoE (10/100/1000 Mb/s) (RJ-45) 2 x UPLINK (10/100/1000 Mb/s) (RJ-45) 2 x UPLINK (1000 Mb/s) (SFP) with auto negotiation of connection speed, auto MDI/MDIX crossover
PoE supply	IEEE 802.3af/at (1÷8 ports), 52 V DC / 30 W at each port *
Protocols, Standards	IEEE802.3, 802.3u, 802.3x, 802.3ab, 802.3z, TCP/IP
Bandwidth	24 Gb/s
Transmission method	Store-and-Forward
Optical indication of operation	Switch supplying Link PoE Status
Power supply	Switch: 12-57 V DC; 2,3 A max. PoE: 48-57 V DC; 2,3 A max.
Self-power consumption	5 W max.
Operating conditions	Temperature: -30°C ÷ +70°C, Relative humidity 5% - 90%, without condensation

Dimensions	W=54, H=176, H_1=10, D=153, D_1=8 [+/- 2 mm]
Net/gross weight	0,9 / 1,1 [kg]
Protection class EN 62368-1	I (first)
Storage temperature	-30°C ÷ +70°C
Declaration	CE

***** The given value of 30 W per port is the maximum value. The total power consumption should not exceed 120 W.

2. Installation

2.1. Requirements

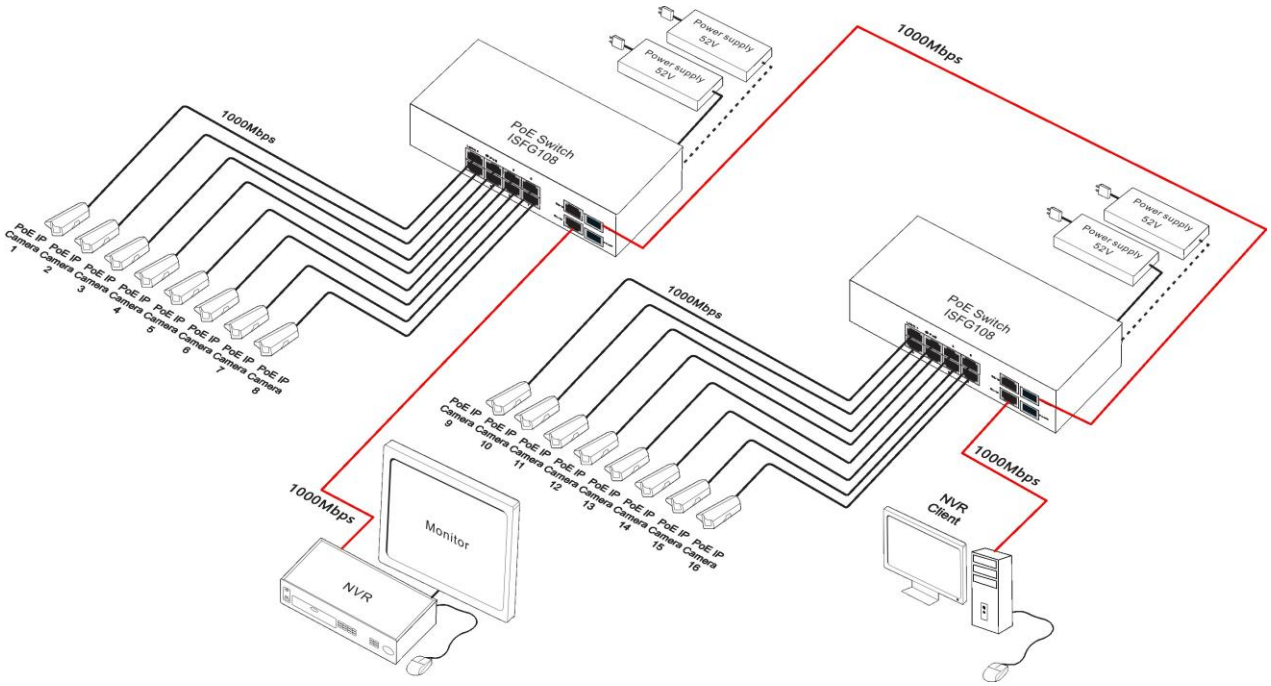
Unit should be mounted in confined spaces with normal relative humidity (RH=90% maximum, without condensing) and temperature from -30°C to +70°C. Ensure the free flow of air around the unit. The device shall work in a vertical position that guarantees sufficient convectional air-flow through ventilating holes of the enclosure.

The load balance should be done before installation Switch. Depending on application, appropriate power supply should be selected, PoE available only at 48-57 V (52 V recommended). The given value of 30 W per port is the maximum value referring to a single output. In case of full occupation of the PoE ports, the overall power intake should not exceed 120 W and depends on the current efficiency of the PSU, taking account of the power intake for the own needs of the device. The increased demand for power is especially visible when cameras are equipped with heaters or infrared illuminators. When these elements are turned on, power consumption increases rapidly, which may result in incorrect operation of the switch. Device is designed for continuous operation, it does not have a power switch. Therefore, the power supply circuit should be provided with appropriate overload protection. The electrical system shall follow valid standards and regulations.

2.2. Installation procedure

1. Connect switch to power supply unit(s), paying attention to polarization and other parameters.
2. Connect the power supply(s) to the 230 V socket.
1. Connect the camera cables to the RJ45 (PoE connectors (RJ45 sockets 1 to 8)).
2. Connect the remaining LAN devices to RJ45 connectors (TP/9 and TP/10) and SFP sockets (SFP/11 and SFP/12).
3. Check the switch operation indicator (see Table 3).

Examples of connection:



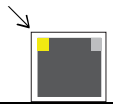
3. Operation indication (see Table 3)

Table 3. Operation indication

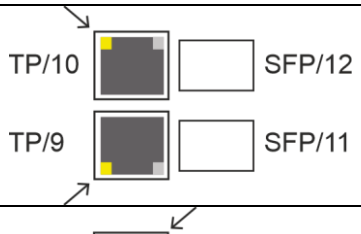
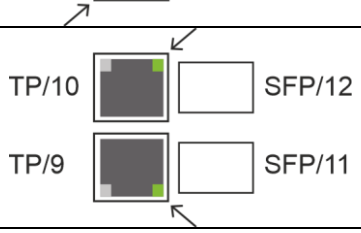
OPTICAL INDICATION OF THE SWITCH's POWER SUPPLY

GREEN LED LIGHT (Power) **Indication of the switch's power supply** 	**OFF** – no power supply of the switch **ON** – power supply on, normal operation

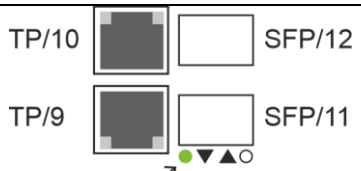
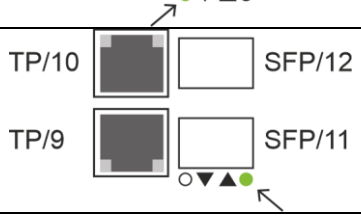
OPTICAL INDICATION AT THE PoE PORTS (1÷8)

GREEN LED LIGHT (Power) **Indication of the PoE power supply at the RJ45 ports** 	**OFF** – no power supply at the RJ45 port (the device is not connected or not compliant with the IEEE802.3af/at standard) **ON** – power supply **Blinking** – failure on PoE port (may be caused by: short circuit, overload, or during switch-only operation)
YELLOW LED LIGHT (LINK) **The connection status of LAN 10/100/1000 Mb/s and data transmission** 	**OFF** – no connection **ON** – the device is connected 10/100/1000 Mb/s **Blinking** – data transmission

OPTICAL INDICATION AT THE UPLINK PORT (TP/9, TP/10)

YELLOW LED LIGHT (SPEED) 	**OFF** – connected 10 Mb/s or 100 Mb/s **ON** – connected 1000 Mb/s
GREEN LED LIGHT (LINK) 	**OFF** – no connection **ON** – the device is connected **Blinking** – data transmission

OPTICAL INDICATION AT THE UPLINK PORT (SFP/11, SFP/12)

GREEN LED LIGHT (SFP/11) 	**OFF** – no connection **ON** – the device is connected **Blinking** – data transmission
GREEN LED LIGHT (SFP/12) 	**OFF** – no connection **ON** – the device is connected **Blinking** – data transmission

WEEE LABEL
Waste electrical and electronic equipment must not be disposed of with normal household waste. According to European Union WEEE Directive, waste electrical and electronic equipment should be disposed of separately from normal household waste.

Pulsar sp. j.
Siedlec 150,
32-744 Łapczyca, Poland
Tel. (+48) 14-610-19-45
e-mail: sales@pulsar.pl
http:// www.pulsar.pl

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