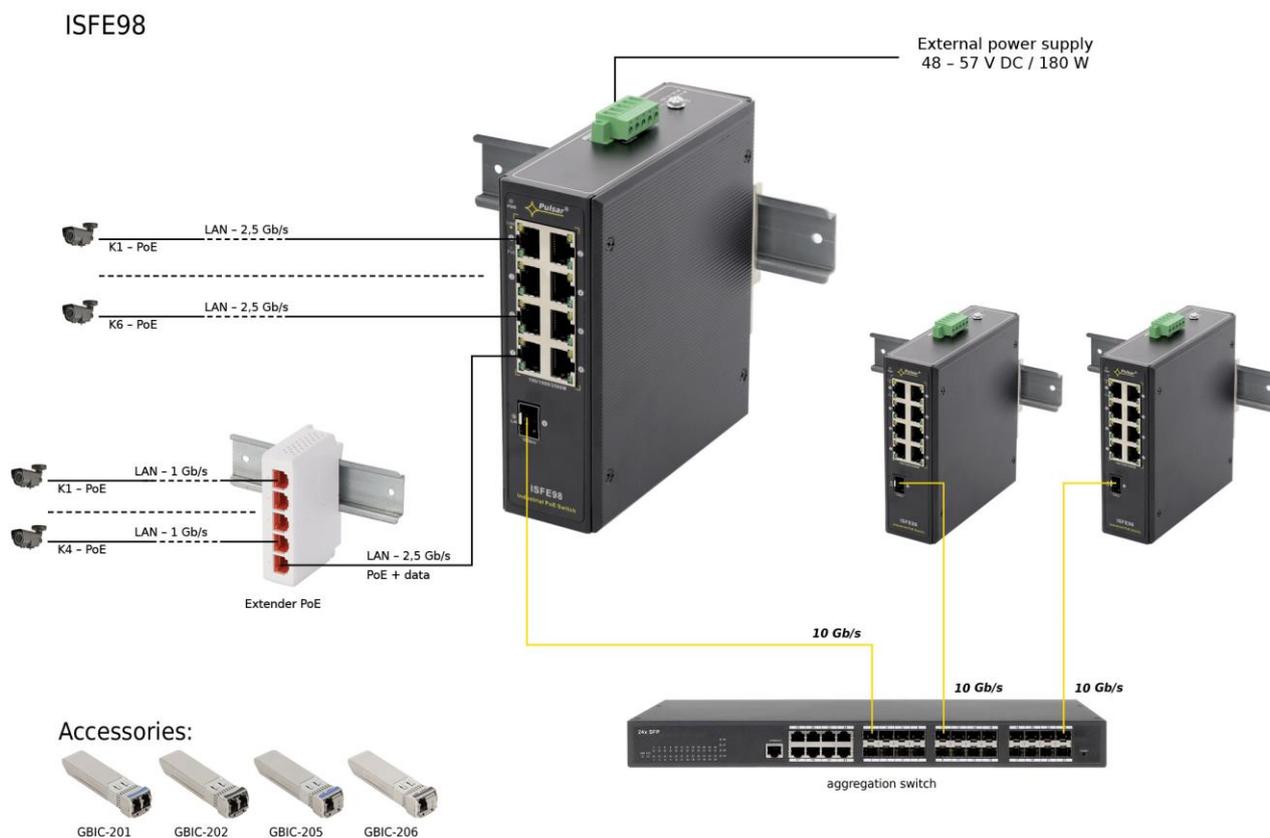


### Features:

- 9 ports switch
- 8 PoE ports 100/1000/2500 Mb/s, (1 – 8 ports) (data and power supply)
- 1 port 1000/2500/10000 Mb/s (SFP+ port) (UpLink)
- 30 W 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)
- LED indication
- warranty – 5 year

### Example of use



## 1. Technical description.

### 1.1. General description.

ISFE98 is a 9-ports PoE switch designed to supply IP cameras operating in IEEE 802.3af/at standard. Automatic detection of any devices powered in the PoE standard is enabled at the 1 – 8 ports of the switch. The switch is also equipped with two SFP+ sockets (labeled 9), 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.

LEDs at the front panel indicate the operation status (description in the 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.

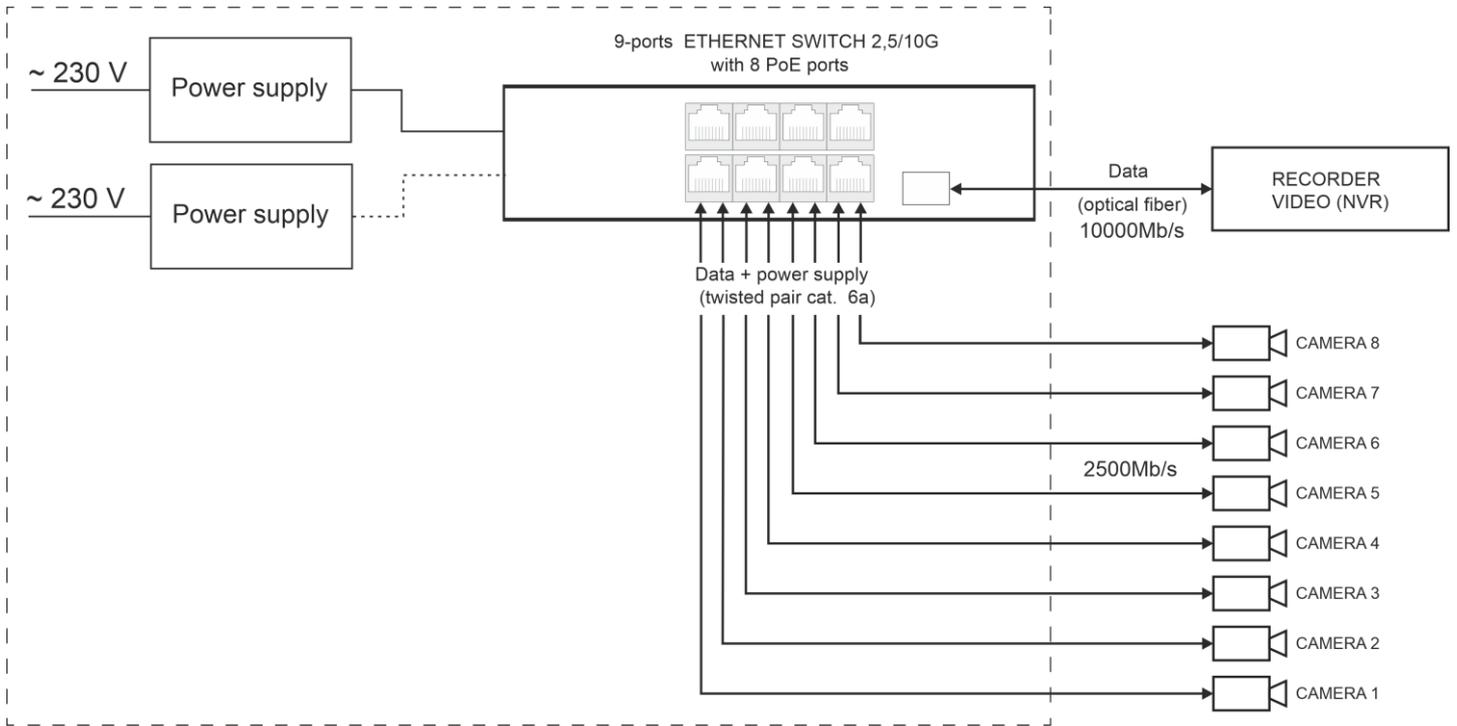


Fig. 1. Block diagram.

## 1.3. Description of components and connectors.

Table 1. (See Fig. 2)

Component No. (Fig. 2)	Description
[1]	8 x PoE ports (1 – 8)
[2]	1 x UPLINK port (9)
[3]	Power Socket (V1/V2)
[4]	DIN rail brackets

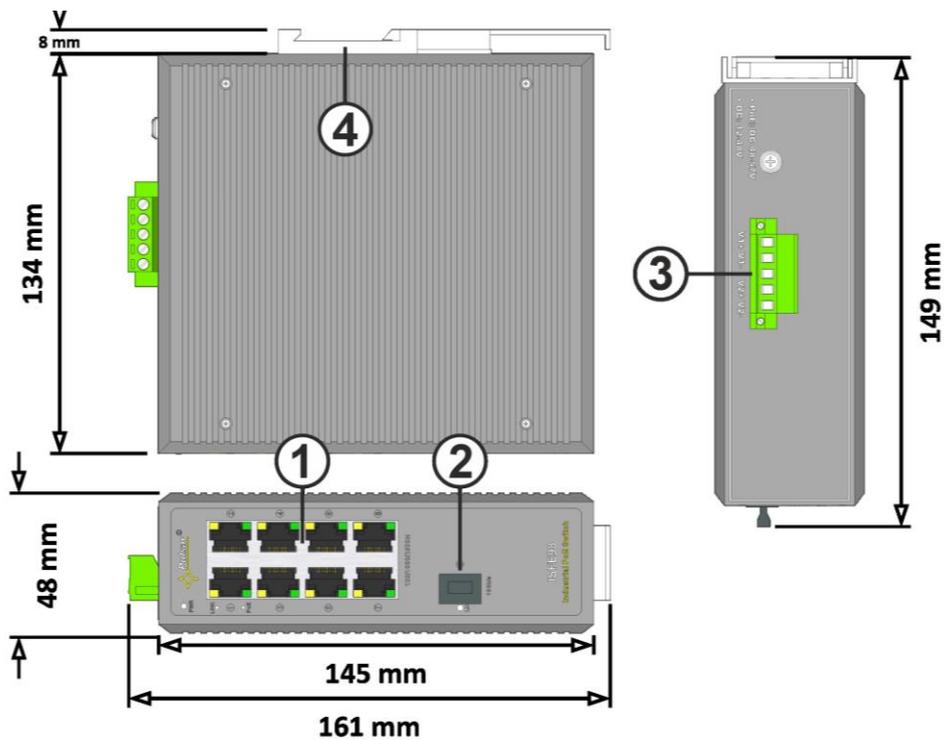


Fig. 2. The view of the switch.

## 1.4. Technical parameters (Table 2.)

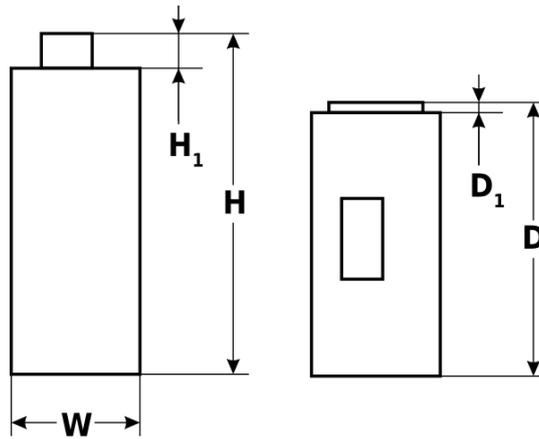


Table 2.

<b>Ports</b>	8 x PoE (100/1000/2500 Mb/s) (RJ-45) 1 x UPLINK (1000/2500/10000 Mb/s) (SFP+) with connection speed auto-negotiation and MDI/MDIX Auto Cross
<b>PoE power supply</b>	IEEE 802.3af/at (1 – 8 ports), 52 V DC / 30 W at each port *
<b>Protocols, Standards</b>	IEEE802.3, 802.3u, 802.3x, 802.3ab, 802.3z, TCP/IP
<b>Bandwidth</b>	60 Gb/s
<b>Transmission method</b>	Store-and-Forward
<b>Optical indication of operation</b>	Switch power supply; Link; PoE Status.
<b>Power supply</b>	Switch: 12 – 57 V DC; 3,5 A max. PoE: 48 – 57 V DC; 3,5 A max.
<b>Self-power consumption</b>	5 W max.
<b>Operating conditions</b>	Temperature -30°C – +70°C, Relative humidity 5% – 90%, no condensation
<b>Dimensions</b>	W=48, H=161, H <sub>1</sub> =16, D=142, D <sub>1</sub> =8 [+/- 2 mm]
<b>Gross/Net weight</b>	0,7 / 0,9 [kg]
<b>Protection class</b>	I (first)
<b>EN 62368-1</b>	
<b>Storage temperature</b>	-30°C – +70°C
<b>Declarations</b>	CE

\* The given value of 30 W per port is the maximum value. The total power consumption should not exceed 180 W (ports: 1 – 4 (90W max.) + 5 – 8 (90W max)).

## 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 PSU shall work in a vertical position that guarantees sufficient convective air-flow through ventilating holes of the enclosure.

The switch load balance should be done before installation. Depending on application, appropriate power supply should be selected, PoE available only at 48 – 57 V (52 V recommended). Podana wartość obciążania 30 W na port jest wartością maksymalną odnoszącą się do pojedynczego wyjścia. The total power consumption should not exceed 180 W and depends on the current efficiency of the PSU.



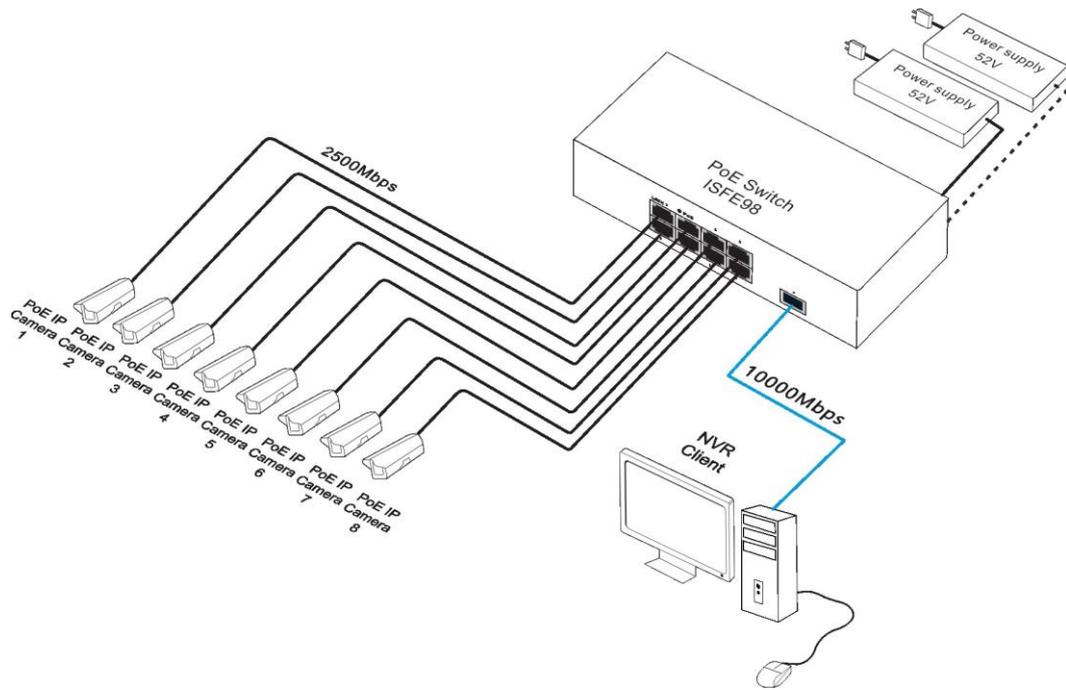
**CAUTION!** The load must be distributed symmetrically between port groups 1 – 4 (maximum 90W) and 5 – 8 (maximum 90W).

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.
3. Connect the camera wires to the RJ45 connectors (sockets PoE (RJ45 sockets 1 to 8).
4. Connect the remaining LAN devices to the SFP port (socket 9).
5. Check the optical indication of switch operation (see Table 3).

Connection schemes:



3. Operation indication (see Table 3).

Table 3. Operation indication

OPTICAL INDICATION OF THE SWITCH'S POWER SUPPLY

<p><b>GREEN LED LIGHT (Power)</b> Indication of the switch's power supply</p>	<p><b>PWR</b> </p>	<p><b>OFF</b> – no power supply of the switch <b>ON</b> – power supply on, normal operation</p>
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OPTICAL INDICATION AT THE PoE PORTS (1 – 8)

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

OPTICAL INDICATION AT THE UP LINK PORTS (9)

<p><b>GREEN LED LIGHT (5)</b> The connection status of LAN devices and data transmission</p>	<p> <b>9</b></p>	<p><b>OFF</b> – no connection device <b>ON</b> – device is connected <b>Blinking</b> – data transmission</p>
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**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.**

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