

Industrial Switch Power Supply Requirements and Recommendations

Overview:

Installers are required to provide a DC power source for the D-Link DIS-100G and DIS-200G series of Industrial Switches. These switches do not ship with power supplies.

Both DIS-100G and DIS-200G families support dual-power input using a terminal block style connector on the top of the switch. The terminal block accepts bare wires from one or two DC power sources.



Figure 1. Terminal Block Connector

Table 1 below contains important information and specifications useful for selecting an appropriate power source.

D-Link Model	POWER INPUT			Suggested Mean Well Power Supply	Notes
	Terminal Block / Dual Input	4-pin / Single Input	Max. Power Consumption		
DIS-200G-12S DIS-200G-12SW	12 to 48 VDC	12 VDC	10.3 W	MDR-40-12 (40W, 12VDC) MDR-40-24 (40W, 24VDC) MDR-40-48 (40W, 48VDC)	
DIS-200G-12PS DIS-200G-12PSW	48 to 58 VDC (for PoE) 54 to 58 VDC (for PoE+)	54 VDC	260 W (PoE on) 10.8 W (PoE off)	NDR-240-48 (240W, 48VDC) SDR-240-48 (240W, 48VDC) SDR-480-48 (480W, 48VDC)	1, 3
DIS-100G-5W	12 to 58 VDC	N/A	3.2 W	DR-30-24 (30W, 24VDC) HDR-30-24 (30W, 24VDC)	
DIS-100G-5SW	12 to 58 VDC	N/A	3.9 W	DR-30-24 (30W, 24VDC) HDR-30-24 (30W, 24VDC)	
DIS-100G-5PSW	48 to 58 VDC (for PoE) 54 to 58 VDC (for PoE+)	N/A	131.6 W (PoE on) 4.5 W (PoE off)	NDR-240-48 (240W, 48VDC) SDR-240-48 (240W, 48VDC)	2, 3

Table 1. Industrial Switch Specifications

Notes:

- DIS-200G-12PS and DIS-200G-12PSW are designed for maximum 240W PoE budget. The actual PoE budget depends on the power output from power source.
- DIS-100G-5PSW is designed for maximum 120W PoE budget. The actual PoE budget depends on the power output from power source.
- Mean Well NDR and SDR series power supplies have adjustable output voltage range. To be in compliance with IEEE 802.3at PoE+ specification, increase output voltage to at least 54 VDC.

When selecting a power supply, ensure its output voltage falls within the range shown in the preceding table. Also be sure the power supply's power rating exceeds the Max. Power Consumption value of the switch.

Tip: always refer to the derating curve for the power supply of choice, and be aware that higher temperatures may affect maximum power ratings.

Industrial DIN-Rail DC power supplies are available from a variety of manufacturers. Table 1 offers suggested DIN-Rail power supply models from Mean Well.



Figure 2. Example DIN-Rail Power Supply



Figure 3. DIS-200G 4-pin Connector

Alternately, for the DIS-200G series, the switch may be powered using an external AC-to-DC power adapter.

The external power adapter connects with the switch using a 4-pin connector on the back of the switch. This method of powering should not be used when the switch is mounted on a wall or DIN-Rail, due to obstruction of the connector. It is more suitable for rack-mount applications, in which the back of the switch is clear.

Note that D-Link's DIS-PWR180AC and DIS-PWR40AC power adapters are rated to 60°C and not typically suited for outdoor applications.

DIS-PWR180AC	External AC/DC Power Adapter, 180 W, 100 ~ 240 VAC input, 54 VDC output power, 60°C operating temperature
DIS-PWR40AC	External AC/DC Power Adapter, 40 W, 100 ~ 240 VAC input, 12 VDC output power, 60°C operating temperature

Table 2. Optional AC/DC Power Adapters for DIS-200G



Figure 4. External AC/DC Power Adapter

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FOR MORE INFORMATION

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