



# HIRSCHMANN

A Belden BRAND

## Product Bulletin

PB00055AG

### SPIDER III Premium Line Switches

Customize these full-featured, unmanaged switches to meet your specific application's needs through an easy-to-use USB interface.



**Hirschmann's SPIDER III Premium Line switches are powerful, robust and flexible. With many advanced features, these switches can reliably transmit data across long distances, while still remaining cost-effective. They also meet many required industry-specific standards to enable their use across many industries.**

- **Easy to customize** – configure some switching parameters via a USB port by utilizing an easy-to-use, free software tool.
- **Highly ruggedized** – built to withstand extreme industrial environments, including a wide range of temperatures, through an IP40 metal case and an optional protective coating.
- **Meets required standards** – approved for use in a variety of industrial markets, including the process automation, transportation and marine sectors.

The SPIDER III Premium Line is designed to offer cost-effective, unmanaged switches with a robust set of customizable features to meet individual network needs across a variety of industries. Network administrators can easily install and configure these switches without receiving any special training. The SPIDER III Premium Line switches allow for quick startup without any tools through plug-in terminal blocks. Furthermore, the simple software lets you enable many features that improve network uptime and security.

### Applications

The Premium Line of SPIDER III switches meets a wide range of market-specific certifications, standards and approvals, making it ideal for use in a variety of industrial settings. Specific approvals include use in the process industry (ISA12.12.01, ATEX Class 2), transportation applications (EN 50121-4 and E1 standards for road vehicles) and marine applications (Navy GL and DNV).

### Your Benefits

The Hirschmann SPIDER III Premium Line allows you to quickly and easily configure basic switching parameters through the device's USB interface and the Switch Programming Tool software – available for both Windows and Linux operating systems. As an unmanaged switch, the SPIDER III Premium's plug-and-play nature makes installation easy and gets your networks up and running faster. For networks with unique needs, the switch can also be customized for any use case. Through the USB interface, you can also turn off unused ports to better secure the network and enable or disable the transmission of large data packets (jumbo frames) to increase network efficiency.

**A new product to  
serve your needs.  
Be certain.**



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## SPIDER III Premium Line Switches



The SPIDER III Premium Line switches utilize a USB interface that allows you to customize the switching parameters for your application.

SPIDER III Premium Line switches not only offer the cost benefits that come with an unmanaged switch, but they also have the flexibility and ruggedness to support any industrial environment.

With up to nine available ports, you can select the port types that meet your application needs, including Fast Ethernet, Gigabit Ethernet and fiber optic ports. The ruggedized IP40 metal enclosure also protects the switches against harsh environments.

In addition to meeting many industry standards, the switches are designed to regulate energy depending on network traffic through the Energy Efficient Ethernet standard. This low-power feature uses less energy when there is no data moving through the network, which ultimately saves you money.

### Benefits at a Glance

- Customizable port quantity (up to nine), media type (copper or fiber) and socket type (RJ45, DSC connector, ST connector, SFP)
- Protection against harsh industrial environments
  - Extended operating temperature range of -40 °C to +70 °C
  - Protective coating and IP40 metal enclosure
- Easy to install and configure
  - Quick installation via a plug-in terminal block – no tools needed
  - USB port configuration interface for greater customization of functions, including support of jumbo frames to manage the transmission of large data packets and support of Quality of Service (QoS) to prioritize network traffic
- Suitable for use at the field level or in smaller networks, where switch management is not needed
- Redundant power supply to increase network uptime (12/24/48 Volt DC and 24 Volt AC)
- Enhanced network security by disabling unused ports
- Conserves energy/power according to IEEE's Energy Efficient Ethernet standard (802.3az)
- Fulfills PROFINET Conformance Class A requirements to set up PROFINET networks
- Certified for multiple industry standards and approvals
  - Hazardous Locations: ISA-12.12.-01 and ATEX Class 2
  - Marine: Navy GL and DNV
  - Transportation: EN 50121-4
  - Road Vehicles: E1





## Technical Information

Product Description	
Type	SPIDER III Premium Line Switches
Description	Unmanaged, Industrial ETHERNET Rail Switch, fanless design, store and forward switching mode
Port Type and Quantity	Up to 8 x FE or GE TX ports, 3 FE FX ports, 1 GE FX port
Interfaces	
Power Supply/Signaling Contact	1 x plug-in terminal block, 6-pin
USB Interface	1 x USB for configuration
Power Requirements	
Operating Voltage	12/24/48 V DC (9.6 to 32 V DC), 24 V AC, redundant
Current Consumption at 24 V DC	Max. 350 mA depending on the variant
Power Consumption	2.4 to 9.0 W depending on the variant
Service	
Diagnostics	LEDs (power, link status, data), alarm contact
Configurable Parameters	Global settings: power supply unit alarm, aging time, QoS 802.1p mapping, QoS DSCP mapping Port settings: flow control, port admin state, broadcast storm protection/threshold, multicast storm protection/threshold, QoS Trust Mode, port based priority, link alarm TX port settings: auto-negotiation, speed, duplex mode, auto-crossing, MDI state, energy efficient ethernet FX port settings: duplex mode
Ambient Conditions	
Operation Temperature	-40 °C to +70 °C
Storage/Transport Temperature	-40 °C to +85 °C
Relative Humidity (non-condensing)	10% to 95%
Protective Paint on PCB	Conformal coating
Mechanical Construction	
Dimensions (W x H x D)	39/49/56 x 135 x 117 mm (w/o terminal block) depending on the variant
Mounting	DIN Rail
Weight	400 g to 510 g depending on the variant
Protection Class	IP40
Mechanical Stability	
IEC 60068-2-27 Shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 Vibration	3.5 mm, 5 Hz to 8.4 Hz, 10 cycles, 1 octave/min. 1g, 8.4 Hz to 150 Hz, 10 cycles, 1 octave/min.
EMC Interference Immunity	
EN 61000-4-2 Electrostatic Discharge (ESD)	4 kV contact discharge, 8 kV air discharge
EN 61000-4-3 Electromagnetic Field	10 V/m (80 to 1000 MHz)
EN 61000-4-4 Fast Transients (Burst)	2 kV power line, 4 kV data line
EN 61000-4-5 Surge Voltage	Power line: 2 kV (line/earth), 1 kV (line/line), 1 kV data line
EN 61000-4-6 Conducted Immunity	10 V (150 kHz to 80 MHz)
EMC Emitted Immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of Industrial Control Equipment	cUL 61010-1/61010-2-201 (pending)
Hazardous Locations	ISA 12.12.01 Class 1 Div. 2, ATEX Class 2 (pending)
Ship	Germanischer Lloyd, DNV (pending)
Railway	EN50121-4 (pending)
Road Vehicles	E1 (pending)

NOTE: These are the prominent technical specifications. For complete technical specifications visit: [www.hirschmann.com](http://www.hirschmann.com)



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## SPIDER III Premium Line Switch Configurations

S P I D E R - P L - 2 0 - 0 8 T 1 9 9 9 9 T Z 9 H H H H

### Design

**SPIDER PL-20** = Premium Line Fast Ethernet Ports  
SPIDER PL-40 = Premium Line Gigabit Ethernet Ports

### Number of Copper Ports

01T1 = 1 x Twisted-Pair, RJ45  
04T1 = 4 x Twisted-Pair, RJ45  
05T1 = 5 x Twisted-Pair, RJ45  
06T1 = 6 x Twisted-Pair, RJ45  
07T1 = 7 x Twisted-Pair, RJ45  
**08T1** = 8 x Twisted-Pair, RJ45

### Type 1 Fiber Port

06 = SFP Slot (100/1000 Mbit/s)  
Z6 = SFP Slot (100 Mbit/s)  
S2 = Singlemode, SC (100 Mbit/s)  
M2 = Multimode, SC (100 Mbit/s)  
M4 = Multimode, ST (100 Mbit/s)  
**99** = Empty

### Type 2 Fiber Port

06 = SFP Slot (100/1000 Mbit/s)  
Z6 = SFP Slot (100 Mbit/s)  
S2 = Singlemode, SC (100 Mbit/s)  
M2 = Multimode, SC (100 Mbit/s)  
**99** = Empty

### Type 3 Fiber Port

Z6 = SFP Slot (100 Mbit/s)  
**99** = Empty

### Temperature Range

**T** = -40 °C to +70 °C  
**E** = -40 °C to +70 °C inclusive Conformal Coating

### Approvals

**Z9** = CE, FCC, EN 61131, EN 60950  
Y9 = CE, FCC, EN 61131, EN 60950, cUL61010  
WV = CE, FCC, EN 61131, EN 60950, cUL61010, ISA1212, ATEX, GL, EN 50121-4, E1  
WW = CE, FCC, EN 61131, EN 60950, cUL61010, ISA1212, ATEX, GL, EN 50121-4, E1, IEC 61850, IEEE 1613

### Customization

HK = Plug-in Terminal Block  
**HH** = Standard

### Configuration

HV = Extended Voltage Range: 12/24/48 V DC, 24 V AC  
**HH** = Standard Voltage Range: 12/24 V DC

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