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Hirschmann SPIDER III Family

Unmanaged Industrial Ethernet Switches

Install Hirschmann SPIDER III Unmanaged Industrial Ethernet Switches easily with plug-and-play and transmit high volumes of data in the harshest industrial environments.

Key Features

Your Benefits

Applications

Markets

Technical Information

Hirschmann's SPIDER III unmanaged switches are ideal for industries that need cost-effective solutions to transmit large data volumes at high speed.



SPIDER III Standard Line (SL)

- **Entry-level unmanaged switches** have a plug-and-play design, allowing immediate traffic forwarding with no additional software or configuration.
- **Future-proof devices** thanks to Fast Ethernet and 1 Gigabit Ethernet options that guarantee transmission of large data volumes.
- **Energy-efficient**, low power consumption allows for the reduction of overall lifecycle costs and leads to a sustainable, eco-friendly solution.



SPIDER III Power Over Ethernet (PoE)

- **Increased performance and reduced costs** with PoE+ for greater power to more devices without needing an external power supply.
- **Flexible network expansion** with configurable fiber and copper port options to meet specific industrial needs.
- **Network resiliency in harsh environments** with metal enclosure, IP30 protection rating, and shock, vibration and interference resistance.



SPIDER III Premium Line (PL)

- **Advanced capabilities plus easy installation** through configuration via a USB port on the device and the free, stand-alone Switch Programming Tool.
- **Ruggedized metal case and a wide temperature range of -40°C to +70°C** for protection to withstand extreme conditions.
- **High-value certifications**, like ATEX or DNV, ensure technologically trend-setting solutions for varied sectors, including process automation and marine applications.

Key Features

- **Plug-and-play technology** for streamlined installation.
- **Unmanaged switches**, ideal for smaller networks.
- **Extended operating temperature range** of -40°C to +70°C.
- **Energy-efficient Ethernet** based on IEEE 802.3az standard.



The Hirschmann SPIDER III Unmanaged Switch Family is divided into 3 subfamilies:

SPIDER III Standard Line (SL)

- High data throughput achieved by Gigabit data speeds.
- Port options – up to eight Fast Ethernet or Gigabit ports with up to two additional fiber optic ports or SFP slots.
- Very compact with a cost-effective IP30 plastic enclosure.

SPIDER III Power Over Ethernet (PoE)

- Up to eight PoE+ ports with capacity of 30 W per port, for a total power budget of 120 W.
- Fast and full Gigabit Ethernet variants with jumbo frame support for high throughput requirements.
- DIN rail mounting and fast startup via plug-and-play features.

SPIDER III Premium Line (PL)

- Flexible customization from two up to 26 ports in a robust metal housing with IP40 protection.
- USB port configuration interfaces for greater customization of functions, including support for jumbo frames and quality of service (QoS).
- PROFINET Conformance Class A requirements to set up PROFINET networks.

Compare Features

Which SPIDER switch best meets your needs?

		Standard Line	Premium Line
Ports	Max. Port Count	10	26
	Fast Ethernet Ports TX/FX	Up to 8/2	Up to 24/3
	Gigabit Ethernet Ports TX/FX	Up to 8/2	Up to 8/2
PoE	PoE+ Ports	√ (PoE line)	–
Power Supply	Redundant Power Input	√* (PoE line)	√
	Standard Voltage Power Supply	12/24 V DC	12/24 V DC
Enclosure	Dimensions (W x H x D – w/o Terminal Block)	26/38 x 102 x 79 mm, 45 x 110 x 88 mm	39/49/56/60.5 x 135/164 x 117/121.5 mm
	Protection Class, Material	IP30 plastic or metal (PoE line)	IP40, metal
Temperature Range	Standard	0 °C to +60 °C ***	–
	Extended	–40 °C to +70 °C *	–40 °C to +70 °C
Interfaces	Plug-in Terminal Block (Screw Clamps Standard, Spring Clamps are Optional)	√	√
	Fault Relay (Power, Port Break)	–	√
	USB Port for Configuration	–	√
Features	Jumbo Frames (up to 9014 Bytes)	√ (PoE line)	√
	Quality of Service (QoS)	–	√
	Energy Efficient Ethernet (IEEE 802.3az)	–	√
	Disable Unused Ports	–	√
	Broadcast/Multicast Storm Protection	–	√
	PROFINET CC-A Compliant	–	√
Approvals	Safety	cUL61010-1/-2-201 (pending)	cUL61010-1/-2-201 (pending)
	Ship	–	DNV (pending)
	Hazardous Locations	–	ISA12.12.01 C1D2, ATEX Zone 2 (pending)
	Transportation	–	EN 50121-4, E1
	Substation	–	IEC 61850-3, IEEE 1613 **

* Applies only for SPIDER-SL-20-05T1999999, SPIDER-SL-20-08T1999999, SPIDER-SL-20-04T1M29999, SPIDER-SL-20-04T1M49999 and SPIDER SL PoE line

** Applies only for media converters

*** SSR40-6TX/2SFP (942335015) 0°C to +50°C

Your Benefits

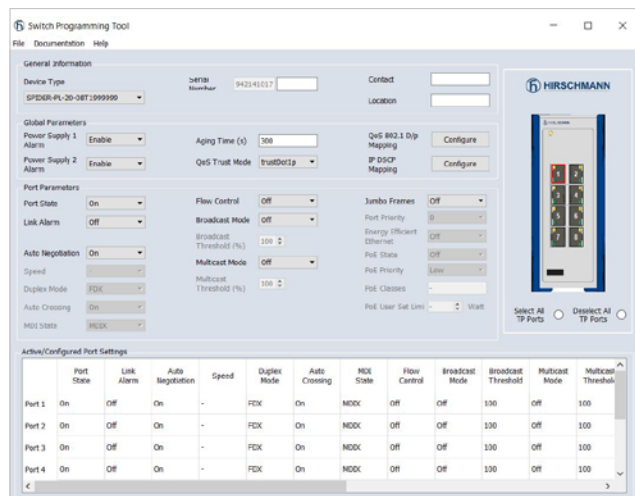
Cost-optimized unmanaged SPIDER III switches offer fast data transmission rates and quick, easy configuration.

SPIDER III Standard Line switches feature future-proof Gigabit speed, ensuring seamless and uninterrupted communication, while also offering fiber options for long-term scalability. The device provides Ethernet connectivity with an attractive price-performance ratio.

SPIDER III Power over Ethernet switches support network devices without requiring an external power device, saving space in tight operating areas and streamlining installation. This enables rapid transmission of large data volumes, ensuring reliable network communications at a lower cost.

SPIDER III Premium Line switches provide the flexibility and ruggedness to support any industrial environment, offering up to 26 available ports, Fast Ethernet, Gigabit Ethernet, as well as fiber optic ports or SFP slots. These switches also offer a USB interface for quick customization of individual port parameters. Users can configure SPIDER III Premium Line switches in four straightforward steps:

- Use the [Switch Programming Tool](#) to configure all switch and port parameters
- Save the configuration file to a USB drive
- Connect the USB drive to the switch
- Power-cycle the switch to transfer and apply the new configuration



The stand-alone **SPIDER Switch Programming Tool** runs without installation (even from a USB drive), allowing for the customization of each individual port to the application's needs.

Overview of Configurable Parameters

	Parameter	Values
Global	Power Supply Unit 1/2 Alarm	Enable/Disable
	Aging Time	0s ... 1048575s
	QoS 802.1D/p Mapping	VLAN Priority 0 ... 7, Traffic Class 0 ... 3
	QoS DSCP Mapping	DSCP value 0 ... 63, Traffic Class 0 ... 3
Per Port	Port State	On/Off
	Flow Control	On/Off
	Link Alarm	On/Off
	Broadcast Mode	On/Off
	Broadcast Threshold	0 % ... 100 %
	Multicast Mode	On/Off
	Multicast Threshold	0 % ... 100 %
	Jumbo Frames	On/Off
	QoS Trust Mode	Untrusted, TrustDot1p, Trust1pDscp
Per TX Port	Port Priority	0 ... 7
	Auto-Negotiation	On/Off
	Speed	10 Mbit/s, 100 Mbit/s
	Duplex Mode	FDX/HDX
	Auto-Crossing	On/Off
	MDI State	MDI, MDI-X
Per FX Port	Energy Efficient Ethernet	On/Off
	Duplex Mode	FDX/HDX



Application

The Hirschmann SPIDER III switch family simplifies field connectivity, providing basic Ethernet switch functions at an advantageous price point. They are ideal for applications without critical security and network availability requirements.

SPIDER III Standard Line switches offer cost-effective Ethernet connectivity and the ability to withstand extreme environmental conditions in smaller infrastructures and field-level industrial networks. The affordability of these entry-level switches benefits small business networks and single end-users.

SPIDER III Power over Ethernet switches comply with all relevant industry standards and are ideal for use across a variety of sectors and applications, especially automation environments that require reduced cabling. These switches easily integrate IP telephones or IP cameras into networks via plug and play.

SPIDER III Premium Line switches meet many required industry-specific standards and are optimal for use in harsh environments, particularly with temperature extremes, and industries that require adherence to specific standards, certifications and approvals.



Markets

The Hirschmann SPIDER III unmanaged switch family supports a broad range of industries and use cases.

SPIDER III Standard Line switches are made for discrete manufacturing, including machine building, logistic automation, automotive and renewables. They are most often seen in small, uncomplicated networks without critical requirements for security and availability.

SPIDER III Power over Ethernet switches are ideal for use in machine building, manufacturing and automation industries - particularly in factories, processing plants, traffic control, video surveillance and building technology systems. Additional sectors include automotive manufacturing and mechanical and plant engineering environments.

SPIDER III Premium Line switches support varied industries, including process automation, transportation, marine, manufacturing, machine building, water and wastewater, automotive, solar power, and traffic control systems.

Technical Information – SPIDER III Standard und Premium Line Switches

Type	SPIDER III Standard Line Switches	SPIDER III Premium Line Switches
Description	Unmanaged, Industrial Ethernet Rail Switch, fanless design, store and forward switching mode, electrical and optical Fast-Ethernet (10/100 Mbit/s) and Gigabit-Ethernet (10/100/1000 Mbit/s), IP30 plastic housing/metal housing	Unmanaged, configurable Industrial Ethernet Rail Switch, fanless design, store and forward switching mode, electrical and optical Fast- Ethernet (10/100 Mbit/s) and Gigabit-Ethernet (10/100/1000 Mbit/s), USB port for configuration, IP40 metal housing
Port Type and Quantity	Up to 10 FE or GE ports, thereof max. 2 FE or GE FX ports	Up to 26 FE or 8 GE ports, thereof max. 3 FE or 2 GE FX ports
Interfaces		
Power Supply/Signaling Contact	1 x plug-in terminal block, 3-pin, with spring clamps	1 x plug-in terminal block, 6-pin, with spring clamps
USB Interface	n/a	1 x USB for configuration
Power Requirements		
Operating Voltage	12/24 V DC (9.6 to 32 V DC)	12/24 V DC (9.6 to 32 V DC), redundant
Current Consumption at 24 V DC (without PoE)	Max. 250 mA depending on the variant	Max. 360 mA depending on the variant
Power Consumption (without PoE)	1.3 to 6.8 W depending on the variant	2.4 to 9.0 W depending on the variant
Service		
Diagnostics	LEDs (power, link status, data, speed*)	LEDs (power, link status, data, speed*), Fault Relay
Configurable Parameters	n/a	Global settings: power supply unit alarm, aging time, QoS 802.1p mapping, QoS DSCP mapping Port settings: flow control, port state, broadcast mode/threshold, multicast mode/threshold, QoS Trust Mode, port 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	0 °C to +60 °C **, -40 °C to +70 °C (depending on the variant)	-40 °C to +70 °C
Storage/Transport Temperature	-40 °C to +85 °C (up to 3 month); -40 °C to +70°C (up to 1 year); -40 °C to +50°C (up to 2 years)	
Relative Humidity (non-condensing)	1% to 95%	
Protective Paint on PCB	n/a	Conformal Coating depending on the variant
Mechanical Construction		
Dimensions (W x H x D)	26/38 x 102 x 79 mm, 45 x 110 x 88 mm (w/o terminal block) depending on the variant	39/49/56/60.5 x 135/164 x 117/121.5 mm (w/o terminal block) depending on the variant
Mounting	DIN Rail, Wall Mounting (requires a Mounting Plate)	
Weight	100 g to 250 g depending on the variant	400 g to 1140 g depending on the variant
Protection Class	IP30 (plastic and metal housing)	IP40 (metal housing)
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. 1 g, 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	n/a	ISA12.12.01 Class 1 Div. 2, ATEX Class 2 (pending)
Ship	n/a	DNV (pending)
Railway	n/a	EN 50121-4
Road Vehicles	n/a	E1 (pending)
Substation	n/a	EN 61850-3, IEEE 1613

* except 8TX variants

** SSR40-6TX/2SFP (942335015) 0°C to +50°C

NOTE: These are the prominent technical specifications. For complete technical specifications visit: www.belden.com



Commonly ordered Hirschmann SPIDER III Unmanaged Switches

Order Code	Product Code	Description
942132001	SPIDER-SL-20-05T1999999SY9HHHH	5 x 10/100Base-TX
942132016	SPIDER-SL-20-05T1999999TY9HHHH	5 x 10/100Base-TX*
942132002	SPIDER-SL-20-08T1999999SY9HHHH	8 x 10/100Base-TX
942132017	SPIDER-SL-20-08T1999999TY9HHHH	8 x 10/100Base-TX*
942335003	SSR40-5TX	5 x 10/100/1000Base-T
942335004	SSR40-8TX	8 x 10/100/1000Base-T
942132005	SPIDER-SL-20-01T1M29999SY9HHHH	1 x 10/100Base-TX, 1 x 100Base-FX, MM-SC
942132006	SPIDER-SL-20-01T1S29999SY9HHHH	1 x 10/100Base-TX, 1 x 100Base-FX, SM-SC
942132007	SPIDER-SL-20-04T1M29999SY9HHHH	4 x 10/100Base-TX, 1 x 100Base-FX, MM-SC
942132018	SPIDER-SL-20-04T1M29999TY9HHHH	4 x 10/100Base-TX, 1 x 100Base-FX, MM-SC*
942132008	SPIDER-SL-20-04T1M49999SY9HHHH	4 x 10/100Base-TX, 1 x 100Base-FX, MM-ST
942132019	SPIDER-SL-20-04T1M49999TY9HHHH	4 x 10/100Base-TX, 1 x 100Base-FX, MM-ST*
942132009	SPIDER-SL-20-04T1S29999SY9HHHH	4 x 10/100Base-TX, 1 x 100Base-FX, SM-SC
942132010	SPIDER-SL-20-06T1M29999SY9HHHH	6 x 10/100Base-TX, 1 x 100Base-FX, MM-SC
942132011	SPIDER-SL-20-06T1S29999SY9HHHH	6 x 10/100Base-TX, 1 x 100Base-FX, SM-SC
942132012	SPIDER-SL-20-06T1M2M299SY9HHHH	6 x 10/100Base-TX, 2 x 100Base-FX, MM-SC
942132013	SPIDER-SL-20-06T1S2S299SY9HHHH	6 x 10/100Base-TX, 2 x 100Base-FX, SM-SC
942335015	SSR40-6TX/2SFP	6 x 10/100/1000Base-T, 2 x FE/GE SFP Slot
942335017	SPR20-8TX-EEC	8 x 10/100Base-TX
942335020	SPR40-8TX-EEC	8 x 10/100/1000Base-T
942335028	SPR20-8TX/1FM-EEC	8 x 10/100Base-TX, 1 x 100Base-FX, MM-SC
942335030	SPR20-7TX/2FM-EEC	7 x 10/100Base-TX, 2 x 100Base-FX, MM-SC
942335031	SPR20-7TX/2FS-EEC	7 x 10/100Base-TX, 2 x 100Base-FX, SM-SC
942335033	SPR40-1TX/1SFP-EEC	1 x 10/100/1000Base-T, 1 x FE/GE SFP Slot
942141036	SPIDER-PL-20-16T1999999TY9HHHV	16 x 10/100BASE-TX
942141037	SPIDER-PL-20-24T1Z6Z699TY9HHHV	24 x 10/100BASE-TX, 2 x FE SFP Slot
942274007	SPIDER-SL-24-04T1S29999TY9HHHH	4 x 10/100BASE-TX, 1 x 100BASE-FX, SM-SC, PoE
942274005	SPIDER-SL-24-04T1M29999TY9HHHH	4 x 10/100BASE-TX, 1 x 100BASE-FX, MM-SC, PoE
942274009	SPIDER-SL-24-05T1999999TY9HHHH	5 x 10/100BASE-TX, PoE
943374002	SPIDER-SL-44-05T1999999TY9HHHH	5 x 10/100/1000BASE-T, PoE
943374001	SPIDER-SL-44-05T1O69999TY9HHHH	5 x 10/100/1000BASE-T, 1 x FE/GE SFP Slot, PoE

* = Extended temperature range





About Belden

Belden Inc. delivers the infrastructure that makes the digital journey simpler, smarter and secure. We're moving beyond connectivity, from what we make to what we make possible through a performance-driven portfolio, forward-thinking expertise and purpose-built solutions. With a legacy of quality and reliability spanning 120-plus years, we have a strong foundation to continue building the future. We are headquartered in St. Louis and have manufacturing capabilities in North America, Europe, Asia, and Africa.

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