

UNOPAL Private Limited
 8, Ubi Road 2, #06-20, Zervex
 Singapore 408538
 Tel: +65-6747 0083
 Fax: +65-6747 6041
 E-mail: unopal@singnet.com.sg
 Website: www.unopal.com.sg



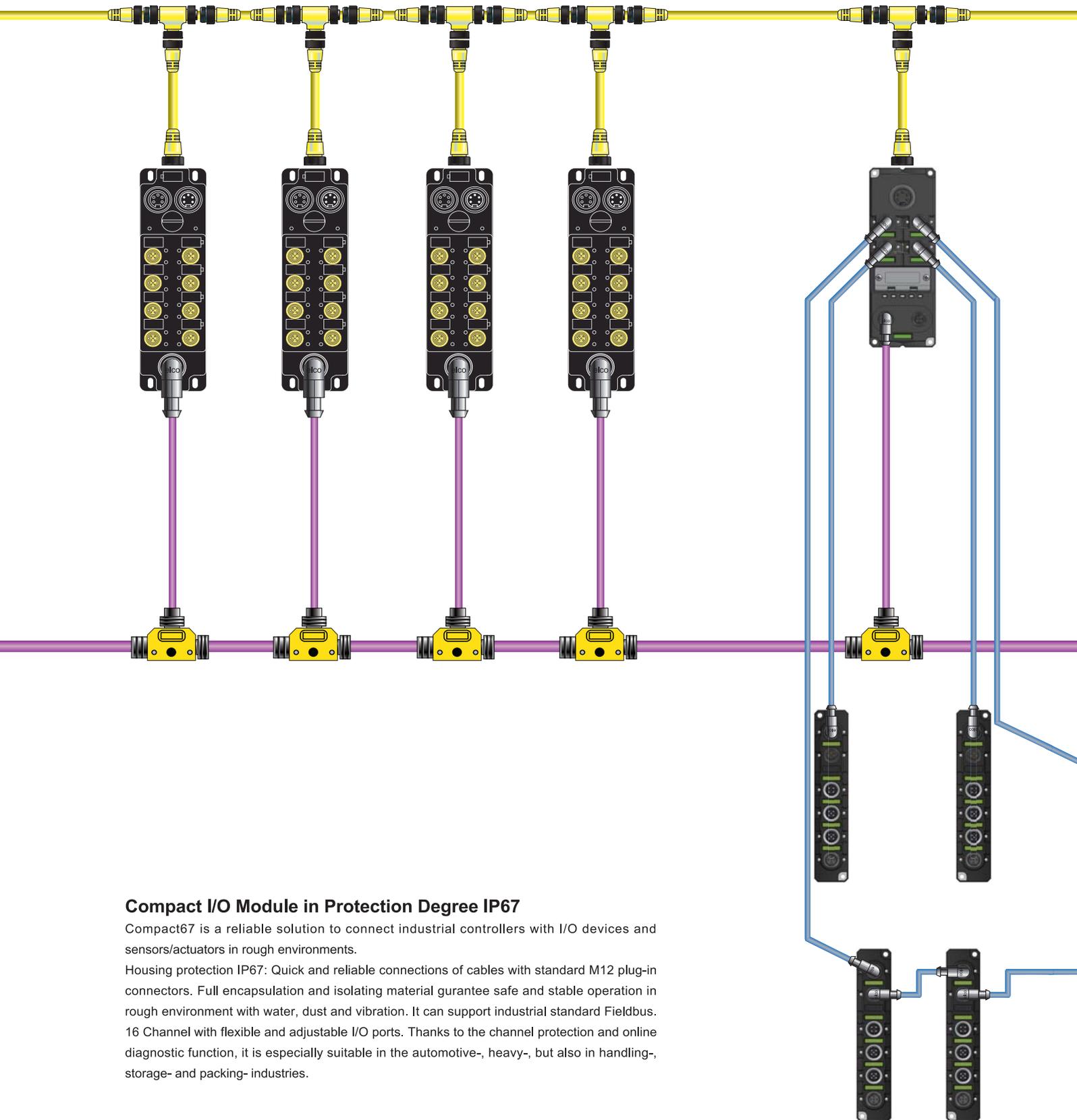
Spider67

IP67 Extensible
 Distributed I/O Modules



SP-1510-002EN

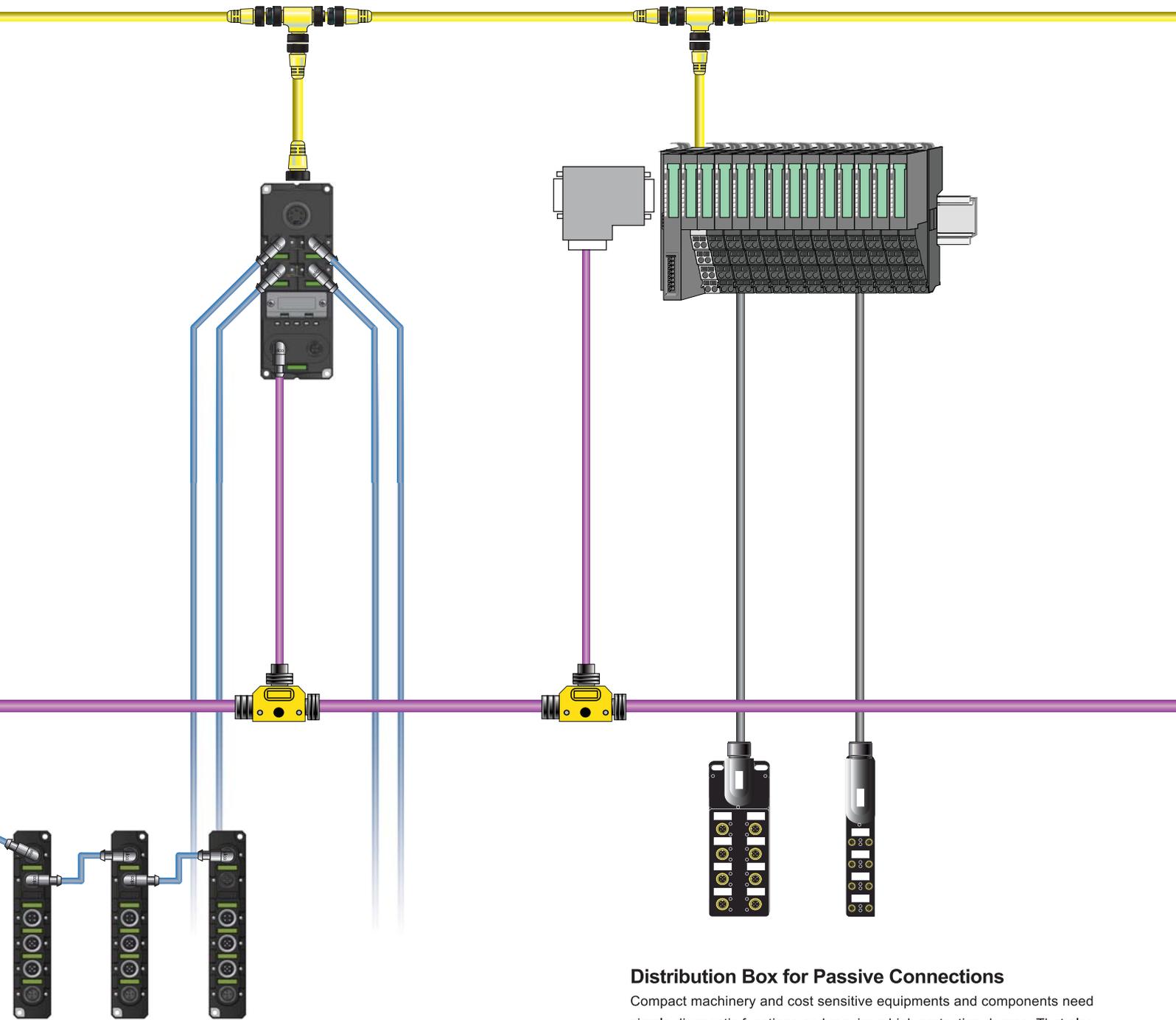
<< IP67 Field I/O Solutions



Compact I/O Module in Protection Degree IP67

Compact67 is a reliable solution to connect industrial controllers with I/O devices and sensors/actuators in rough environments.

Housing protection IP67: Quick and reliable connections of cables with standard M12 plug-in connectors. Full encapsulation and isolating material guarantee safe and stable operation in rough environment with water, dust and vibration. It can support industrial standard Fieldbus. 16 Channel with flexible and adjustable I/O ports. Thanks to the channel protection and online diagnostic function, it is especially suitable in the automotive-, heavy-, but also in handling-, storage- and packing- industries.



The Comprehensive I/O Solution for Field Installation

Spider67 supports standard industrial bus protocols. The system includes extension modules like digital, analogue and other function modules. It is applicable for field applications with multiple I/O points. Spider67 with protection degree IP67 allows flexible field connections and is particularly suitable for movable applications.

Distribution Box for Passive Connections

Compact machinery and cost sensitive equipments and components need simple diagnostic functions and require a high protection degree. That also applies for network independent components. Elco's I/O system Spider67 provides the optimal solution for passive connections in the field. The product line includes distribution boxes with easy plug-in modules. Installation and connection to sensors, limit switches, photoelectric switches, electromagnetic valves and other components is simple, safe and fast. Individual configurations in the control box for I/O's or controllers make this IP67 bus system most suitable for universal applications in a wide range of industries.

<< Spider67



Overview

The wide and increasing employment of FieldBus systems has a big impact on the automation industry. Conventional centralized controls are substituted with discrete intelligent control points in the field. In order to save costs and reduce installation and maintenance time, more and more devices are transferred from the control cabinet into the field. Spider67 from Elco supports these modern installation methods with a new and revolutionary expandable I/O system. The new gateway module supports standard bus protocols like ProfiBus, ProfiNet, CC-Link, CC-Link IE and EtherCat. Various sub-modules (analogue-, digital-, and function modules) are available. The simple and easy installation makes Spider67 especially suitable for applications in rough environments. It can also be installed in control cabinets. Spider67 is particularly suitable for flexible installations on lifting or rotating equipments and therefore provides the most effective I/O solution for application in the field.

Product Overview

- Gateway: supports standard bus and extensible sub-modules
- Connection cables: wiring sub-modules and gateways
- Digital module: input and output of digital signals
- Analogue modules: input and output for current and voltage signals
- Function modules: high speed counting and communication modules

Applications

- Automotive industry
- Heavy industry
- Logistics industry
- Machine tools industry
- Food and beverage processing industry
- Especially suitable in harsh environments requiring a high protection degree

Key Features

- Supports standard industrial ProfiBus protocols etc.
- Compact design minimizes mounting space requirement
- Flexible I/O configuration with a combination of analogue-, digital-, and function- extension modules
- LED status indication, fast function diagnosis
- Online diagnosis function for modules and channels
- Protection degree IP67

Gateway

- Supports standard industrial protocols
- Flexible connection of extension modules
- LED status display, fast function analysis and channel protection circuit
- Protection degree IP67



Type	SPEI-GW-001	SPPN-GW-001	SPEC-GW-001
Description	EtherNet/IP interface module	ProfiNet interface module	EtherCat interface module
Protocol	EtherNet/IP	ProfiNet-IO	EtherCat
Interface			
Bus interface	Male in + Female out, M12 D-code		
Power interface			
Extension interface			
Electrical parameter			
Operating voltage			
Operating current			
Address range	0...254, configurable		
Transmission rate	10/100Mbps		
Number of extension modules	Up to 6 for one way, up to 4x6=24 for overall extension		
Distance between extension modules			
Protection degree			
Operating temperature			
Module size			

Digital module

- Direct connection of sensor and actuator
- Up to 8 I/O signals, configured by user
- Short circuit and overload protection
- Protection degree IP67



【1】



Type	SPDB-0800D-001 【1】	SPDB-0800D-003 【1】	SPDB-0404D-001 【1】
Description	8DI, 4xM12	8DI, 4xM12	4DI+4DO, 4xM12
Type	SPDB-0800D-011 【2】	SPDB-0800D-013 【2】	SPDB-0404D-011 【2】
Description	8DI, 8xM8	8DO, 8xM8	4DI+4DO, 8xM8
Type	SPDB-0800D-M005 【3】		SPDB-0404D-M005 【3】
Description	8DI, 8xM8		4DI+4DO, 8xM8
Interface			
Extended interface			
Power interface			
Signal interface			
Electrical parameter			
Rated voltage			
Input channel	8 x PNP	8 x NPN	4 x PNP
Output channel	—	—	4 x 0.5A
Input signal "0"	Low level: 0...5V		
Input signal "1"	High level: 10...30V		
Input delay	3ms		
Input current	6.4mA		
Input supply current	Holding current 200mA, action current 400mA		
Max. output current	—	—	0.5A (4A) for each channel
Output short circuit current	—	—	20mA for each channel
Max. switching frequency	—	—	100Hz
Protection degree			
Operating temperature			
Module size			



SPCL-GW-001	SPDP-GW-001	SPCL-GW-001
CC-Link IE interface module CC-Link IE	ProfiBus-DP interface module ProfiBus-DP	CC-Link interface module CC-Link
Male in + Female out, M12 X-code 1-Male 7/8", Max.current 8A 4-Female M12 B-code, Max. current 4A	Male in + Female out, M12 B-code	Male in + Female out, M12 A-code
24VDC (18...30V) ≤200mA	1...125, dial switch 9.6K - 12Mbps	1...64, dial switch 156K-10Mbps
Up to 6 for one way, up to 4x6=24 for overall extension Max.100m for one way IP67 -25...+70°C 60mm x 155mm x 30mm		4 for one way, Max.8

【2】		【3】		【4】	
SPDB-0404D-003 【1】	SPDB-08UP-001 【1】	SPDB-0008D-001 【1】	SPDB-0006D-001 【4】		
4DI+4DO, 4xM12	8DI+DO, 4xM12	8DO, 4xM12	6DO, 3xM12		
SPDB-0404D-013 【2】	SPDB-08UP-011 【2】	SPDB-0008D-011 【2】			
4DI+4DO, 8xM8	8DI+DO, 8xM8	8DO, 8xM8			
	SPDB-08UP-M005 【3】	SPDB-0008D-M005 【3】			
	8DI+DO, 8xM8	8DO, 8xM8			
Male in + Female out, M12 B-code Supplied by extended interface 4xM12 or 8xM8 or open cable			1xM12(male) 3xM12		
24VDC (18...30V)					
4 x NPN 4 x 0.5A	Max. 8 x PNP Max. 8 x 0.5A	— 8 x 0.5A	— 6 x 2A		
Holding current 200mA, action current 400mA					
0.5A (4A) for each channel 20mA for each channel 100Hz	0.5A (4A) for each channel 20mA for each channel 100Hz	0.5A (4A) for each channel 20mA for each channel 100Hz	2A for each channel 20mA for each channel 100Hz		
IP67 -25...+70°C 30mm x 155mm x 30mm					

Valve Module



Type	SPDB-0008D-M005	SPDB-0016D-M005	SPDB-0032D-M005
Description	8DO, Open cable	16DO, Open cable	32DO, Open cable
Cable parameter			
Cable cores and cross section	10 × 0.34mm ²	18 × 0.25mm ²	36 × 0.14mm ²
Cable length	0.5m	0.5m	0.5m
Cable material	PVC	PVC	PVC
Interface			
Extended interface	Male in + Female out, M12 B-code		
Power interface	Supplied by extended interface		
Electrical parameter			
Rated voltage	24VDC (18...30V)		
Output channel	8DO module with open cable	16DO module with open cable	32DO module with open cable
Max. output current	0.5A for each channel, Max. 4A for module		
Output short circuit current	20mA for each channel		
Max. switching frequency	100Hz		
Protection degree	IP67		
Operating temperature	-25°C...+70°C		
Module size	30mm x 155mm x 30mm		

* Please contact us for other cable lengths or special modules.

Analog Module

- Direct connection of active and passive current and voltage signal
- Up to 4 signals with flexible configuration
- 14 bits input & output resolution
- Protection degree IP67



Type	SPDB-0300A-001	SPDB-0300A-002	SPDB-0003A-001	SPDB-0003A-002
Description	3AI (-20..20mA)	3AI (-10..10V)	3AO (-20..20mA)	3AO (-10..10V)
Interface				
Extended interface	Male in + Female out, M12 B-code			
Power interface	Supplied by extended interface			
Signal interface	3-Female, M12 A-code connector			
Electrical parameter				
Rated supply voltage	24VDC (18...30V)			
Number of input channel	3	3	—	—
Number of output channel	—	—	3	3
Input signal type	-20...+20mA	-10...+10V	—	—
Output signal type	—	—	-20...+20mA	-10...+10V
Internal impedance	<125Ω	<100kΩ	>450Ω	>1kΩ
Input smoothing frequency	1KHz	1KHz	—	—
Resolution	14Bit			
Switching time	12ms			
Measurement accuracy	± 0.3%			
Sensor power supply	Depending on load power supply, Max.30V			
Protection degree	IP67			
Operating temperature	-25°C...+70°C			
Module size	30mm x 155mm x 30mm			

RTD/TC Module



Type	SPDB-0400A-005	SPDB-0400A-006
Description	4*RTD, 4 channels thermal resistor	4*TC, 4 channels thermocouple
Interface		
Extended interface	Male in + Female out, M12 B-code	
Power interface	Supplied by extended interface	
Signal interface	3-male M12 A-code connector	
Connection Length	Max.30m	
Electrical parameter		
Rated supply voltage	24VDC (18...30V)	
Number of input channel	4	4
Number of output channel	—	—
Input signal type	150/300/600/3000Ω	E, J, K, N
	Ni100/10MΩ	Internal and external temperature compensation
	Ni200/10MΩ	
	Ni500/10MΩ	
	Ni1000/10MΩ	
	Pt100/10MΩ	
	Pt200/10MΩ	
	Pt500/10MΩ	
	Pt1000/10MΩ	
2/3/4 wires		
Measurement principle	Integral	Integral
Input smoothing frequency	1KHz	
Resolution	15Bit + sign	
Switching time	12ms switching time	
Measurement accuracy	± 0.3% at max. temperature range	
Sensor power supply	Depending on load power supply, Max.30V	
Protection degree	IP67	
Operating temperature	-25°C...+70°C	
Module size	30mm x 155mm x 30mm	

Extension Cable

- Pre-wired extension cables
- Customized length
- Supply cables for special application
- Easy installation on site



Type	BB6S30P01M(D)xxx	BB6S30P03M(D)xxx	BB6S30P09M(D)xxx
Description	Standard extended cable	Flexible extended cable	Long distance extended cable
Parameter			
Cable length	D=cm (D020=0.2m) ; M=m (M010=1m)		
Cable diameter	6.5±0.2mm	6.5±0.2mm	8±0.2mm
Cable material	PVC, single strand cable	PUR, multi-strand cable	PUR, multi-strand cable
Connector type	Male+female M12 B-code connector		
Connector material	Nylon+Rubber+Nickel plated brass		
Voltage grade	300V		
Protection degree	IP67		
Operating temperature	-25°C...+70°C		

Terminal Resistor



Type	BB6S06
Description	120Ω. One for each circuit.

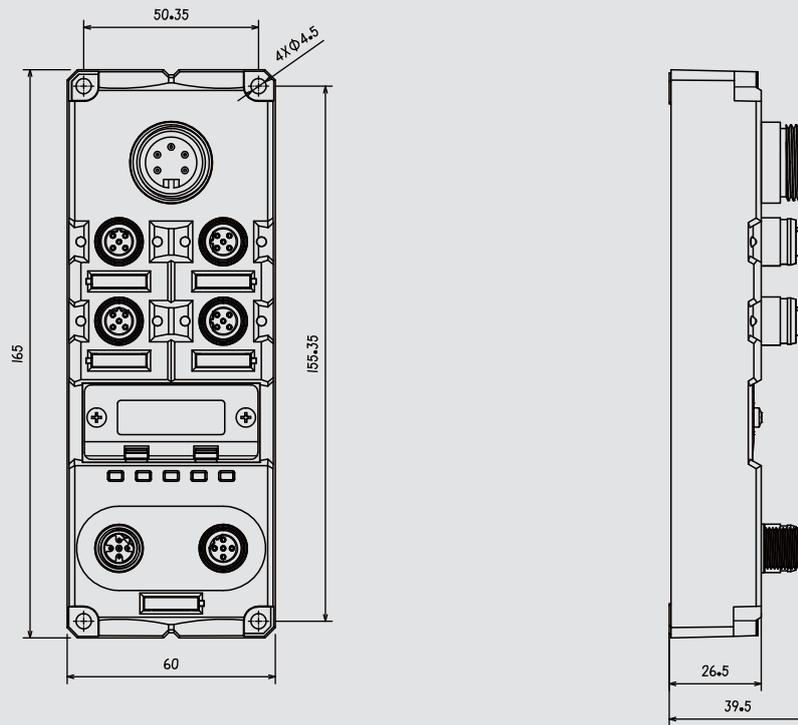
Field Attachable Connector for Extended Module



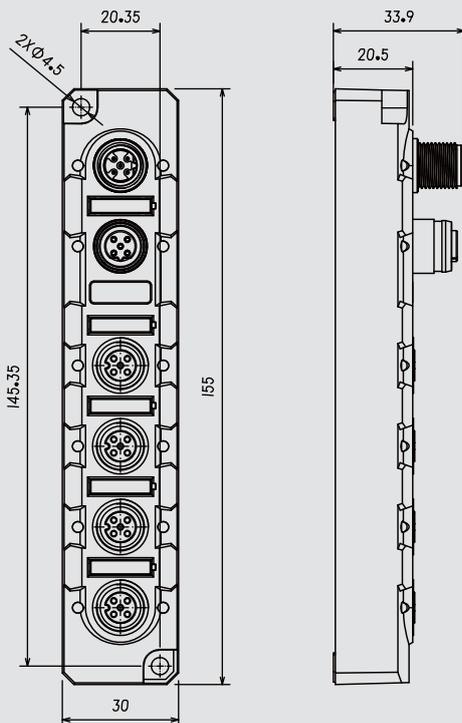
Type	BB6S00-32
Description	B-code, Female, 5 cores
Type	BB6S06-32
Description	B-code, Male, 5 cores

Dimension

Gateway dimension



Extension module dimension



Valve module dimension

