Controls

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FlexLink Device Platform Components

The FlexLink Device Platform (FDP):

- is multipurpose,
- has a wide range of communication possibilities,
- can standardize interfaces,
- is a proven, easy-to-use enabler for modularity and connectivity as well as
- an enhanced mechatronics offer to the whole FlexLink portfolio.

The FlexLink Device Platform (FDP) includes such groups of components:

SCDCs - field logic controllers with Embedded Software to support the Distributed Controls concept.

SCMDs - integrated motors (e.g.: Hypergear Wormgear Motor, and Hyperdrive Stepper Motor) to standardized controls layer and due to that supports a wide range of mechatronic functions.

SCPDs - power distribution devices to provide power supply to the FDP components.

SCDC

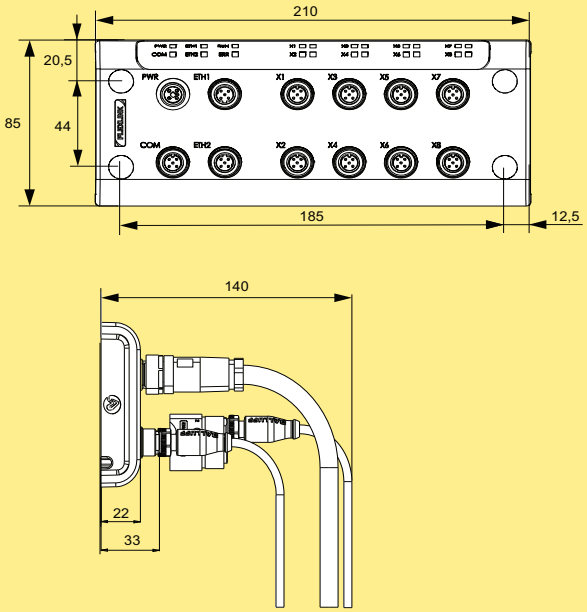
The SCDC is a configurable and robust field logic controller design for decentralized applications. It is available in two hardware versions: CANopen or RS485. The SCDC is delivered with Embedded Software and can be used in various applications. FlexLink is using SCDC for:

- FlexLink generic firmware applications where the SCDC device mirrors and translates PLC controls to the field equipment (e.g., sensors, CAN drives, and many more), and brings a standard interface for PLC controls as well as the standard interface for Digital Services (through MQTT). This approach is used in the conveyor systems provided by FlexLink.
- Dedicated platform-specific implementations where SCDC is used to fulfil required algorithms to control FlexLink standard products.

SCDC provides a wide range of communication possibilities, including PROFINET, EtherNet/IP, and the MQTT, as well as field communication such as IO-Link, CANopen, RS485, and local I/O. This wide range of communication possibilities allows the user to connect with many devices for example PLC, IoT devices and IT servers, HMI, distributed frequency inverters to control conveyors, CANopen drives, barcode readers, RFID readers, IO-Link devices and IO-Link hubs, and sensors or actuators through local I/O.

Due to the wide range of communication possibilities, the SCDC and the whole FlexLink Device Platform are ready and compatible with a wide range of external components from 3rd party suppliers. For detailed information, please refer to the technical documentation.

SCDC Distributed Controllers



FlexLink Device Platform - Field Controller

Distributed Controller, CAN	**SCDC 12I4OCAN**
Distributed Controller, RS485	**SCDC 12I4ORS485**

Communication possibilities

Technical data

	SCDC 12I4OCAN	SCDC 12I4ORS485
M12 connector		
PWR	24 V_{DC}, T-coded	
COM	CAN	RS485
ETH	2 x Ethernet ports	
X1-X4	4 x (IO-Link + DI)	
X5, X6	2 x (DI + DI)	
X7, X8	2 x (DO + DO)	
Diagnose LED	1 x power 1 x Run 2 x LAN activity 1 x error, 1 x CAN activity 8 x IOs	
Dimensions WxHxD [mm]	210x85x35	
Max power loss [W]	4.5	
Weight [g]	900	
EMC	Conforms to IEC 61000-6-2 and IEC 61000-6-4	
IP-rating	IP65 according to IEC 60529	
Temperature [°C]	Operating ambient: -20 to +55 Storage: -20 to +60	
Humidity [%]	Relative 5 to 95 no condensation	
Compliance	CE	
Included in delivery	1 x SCDC 12I4OCAN / 12I4ORS485 4 x M5 x 16 - 8.8 - A2K screw 4 x end plugs M12 T code female power connector 4pin M12 connector dust caps	

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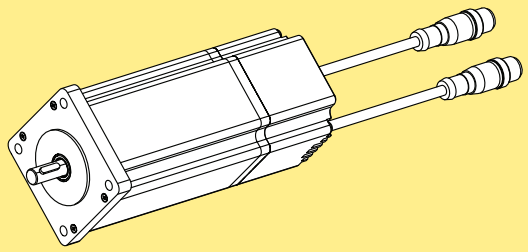
SCMD

The SCMD Integrated Motor is equipped with single-turn encoders and are ready-to-use mechatronic drives that allow FlexLink to build electrical functions with precise positional control of mechanical systems such as stoppers, diverters, mergers, and many more.

Note!

The SCMD Integrated Motor can be used only with the SCDC Distributed Controller.

Direct current motor, gear-less, with encoder & driver

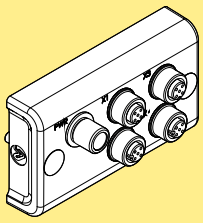


CANopen, T=3.7Nm: **SCMD CAN3.7-003**

SCPD

The SCPD, Power Distributor components provide compact power distribution for $24V_{DC}$ to supply other FlexLink Device Platform components. The M12 connector is used, and power boxes are available in three different sizes/types, depending on outlet numbers, power, and connection coding (A- and T-code).

Power Distributor



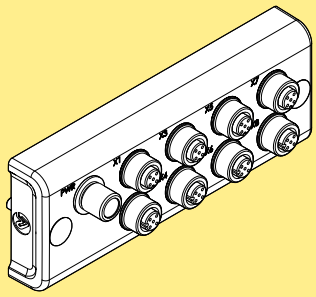
Power Box (4 ports 24V) A-code
M12 A-code
Bracket kit

SCPD 424VDC16A
FLX1000458

Technical data

SCPD 424VDC16A		
Dimensions WxHxD [mm]	97x56x20	
Weight [g]	320	
Max power loss [W]	4.8	
EMC	Conforms to IEC 61000-6-2 and IEC 61000-6-4	
IP-rating	IP65, unused connectors must be plugged	
Temperature [°C]	Operating ambient: -20 to +55 Storage: -20 to +60	
Humidity [%]	Relative 5 to 95, no condensation	
Compliance	CE	
	POWER	**X1 - X4**
Type	M12 T-Power male 4-pin	M12 A-coded female 4-pin
Fuses	No	
Current I_{max} [A]	10	4
Nominal voltage	24 V_{DC} (L+=24V_{DC} L -=0V_{DC})	
Voltage	18 - 30 V_{DC}	

Power Distributor



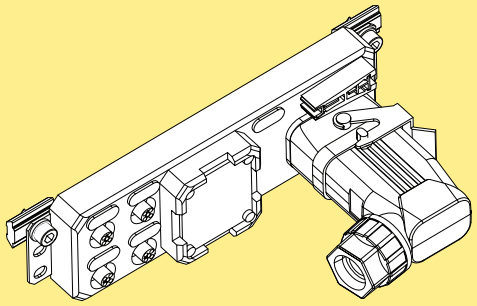
Power Box (8 ports, 24V)
A-code
M12 A-code
Bracket kit

SCPD 824VDC16A
FLX1000396

Technical data

SCPD 824VDC16A		
Dimensions WxHxD [mm]	147x56x20	
Weight [g]	500	
Max power loss [W]	4.8	
EMC	Conforms to IEC 61000-6-2 and IEC 61000-6-4	
IP-rating	IP65, unused connectors must be plugged	
Temperature [°C]	Operating ambient: -20 to +55 Storage: -20 to +60	
Humidity [%]	Relative 5 to 95, no condensation	
Compliance	CE	
	POWER	**X1 - X8**
Type	M12 T-Power male 4-pin	M12 A-coded female 4-pin
Fuses	No	
Current I_{max} [A]	10	4
Nominal voltage	24 V_{DC} (L+=24V_{DC} L -=0V_{DC})	
Voltage	18 - 30 V_{DC}	

Power Distributor



Power Box (4 ports, 24V)
T-code
M12 T-code

SCPD 424VDC16A H

Note: Max 10A per channel, including fuses.

Technical data

SCPD 424VDC16A H	
Dimensions WxHxD [mm]	212x60x64 (Power box without connector)
Weight [g]	700
IP-rating	IP66, IP67
Temperature [°C]	Operating ambient: -25 to 60 Storage ambient: -25 to 80
	X1 - X4
Fuses	Yes
Current I_{max} [A]	10
Nominal voltage	24 V_{DC}
Voltage	Max 30,5 V_{DC}

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Cables

Can Cables

Connection cable:

0.3m	**FLX1005450**
2m	**FLX1005451**
5m	**FLX1005452**

Can Cables

Connection cable kit:

Cable kit	**FLX1005449**

Cable with open end plus connector for self-assembling

Connectors

Can Connectors

T-connector, 5-pin **FLX1005446**

Can Connectors

Fieldbus termination:
CAN, male **FLX1005447**

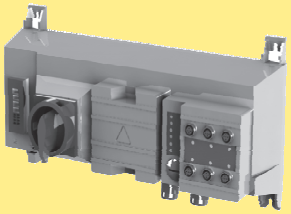
Can Connectors

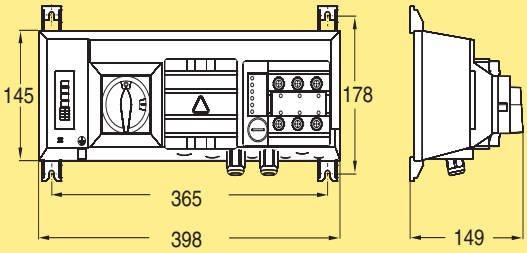
Fieldbus termination:
Connector 5-pin male **FLX1005448**

Communication interfaces for drive units

Profibus, and DeviceNet, Profinet and Ethernet/IP type fieldbus interfaces are available. Type Z6 includes a power switch.

Field bus interfaces



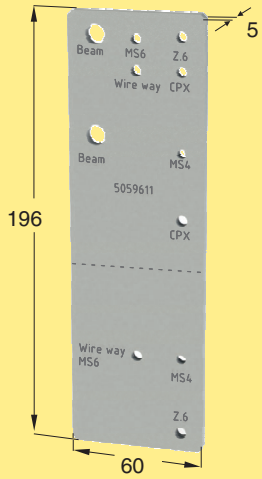


Field bus interfaces

Z.6 Profibus (4 digital inputs and 2 digital outputs included, M12)	**5057737**
Z.6 DeviceNet (4 digital inputs and 2 digital outputs included, M12)	**5057738**
Z.6 Profinet (4 digital inputs and 2 digital outputs included, M12)	**5122718**
Z.6 Ethernet/IP (4 digital inputs and 2 digital outputs included, M12)	**5122719**

Accessories

Bracket kit for Air supply equipment, Field bus interfaces



Bracket kit **5111952**

Including one pair of bracket 5059611.

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