



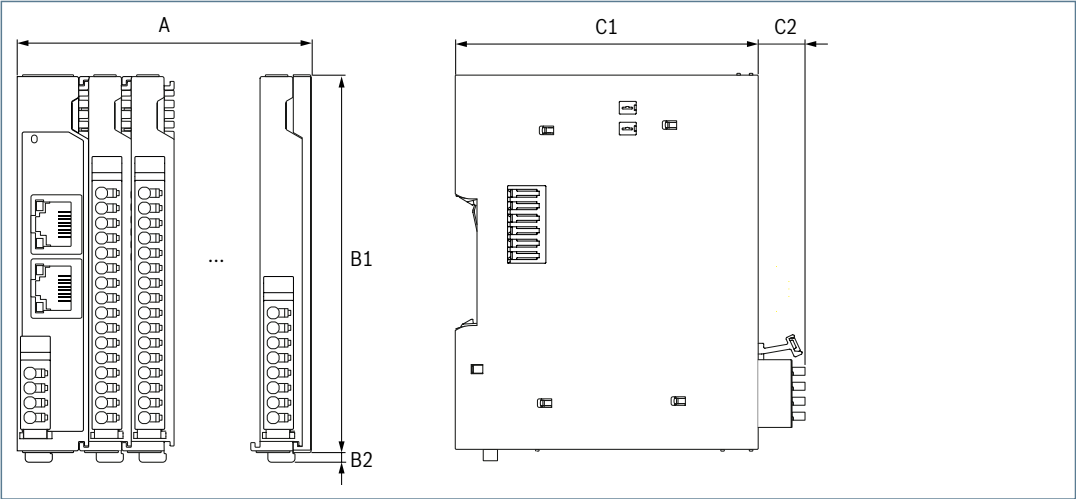
I/O system for connectivity in automation

Connectivity is the foundation for a successful digital factory. Smooth communication between machines, systems and operators via an I/O system enables the full potential of automation to be exploited. Networking is essential for smart processes and new business models. The ctrlX I/O portfolio expands ctrlX AUTOMATION with additional interfaces to the field and control levels. The ctrlX I/O portfolio is based on EtherCAT, interface diversity and safety technology. This means that users are ideally equipped for the future and can benefit from efficiency and flexibility.

You can find more information at: www.ctrlx-automation.com/ctrlx-io

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Dimensions



Bauform	Einheit	Bus modules XB	Digital inputs X11	Digital outputs X12	Analog inputs X13	Analog outputs X14
Width A	mm	XB-EC-12: 23,3 XB-EC-31: 20 XB-ET-31: 20	12	12	12	12
Hight B1/B2	mm	105				
Depth C1	mm	99				



Dimensions

Bauform	Einheit	Communication modules XI5	Technology modules XI6	Drive modules XI7	System modules XI8
Width A	mm	12	12, 20	10, 12	12, 20
Hight B1/B2	mm	105			
Depth C1	mm	99			

Bus modules XB

Type	XB-EC-12	XB-EC-31	XB-ET-31
Part number	R911406090	R911406092	R911419351
Short description	EtherCAT bus coupler	1 port EtherCAT extension	1 port Ethernet switchport
Number of outputs	2	1	1
Connection method	Push-in	RJ45	RJ45
Voltage supply	24 V DC	–	–
Power consumption Up	8 A	–	–
Power consumption UL	3 A	–	–

Digital Inputs XI1

Type	XI110116	XI110204	XI110208	XI112108	XI113208
Part number	R911406097	R911417202	R911406096	R912009441	R911430134
Number of inputs	16 DI	4 DI	8 DI	8 DI / 8 DO	8 DI / PF
Connection technique	1-wire technology	2-wire technology	2-wire technology	1-wire technology	2-wire technology
Nominal voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Input filter	3 ms	3 ms	3 ms	3 ms	3 ms

Digital Inputs XI1

Type	XI120116	XI141202	XI150204	XI180202	XI190202
Part number	R912009221	R911421639	R911421640	R911421643	R911421642
Number of inputs	16 DI / NPN	CNT 2	4 DI / 10 µs	2 DI / TS	2 DI / OVS
Connection technique	1-wire technology	2-wire technology	2-wire technology	2-wire technology	2-wire technology
Nominal voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Input filter	3 ms	10 kHz	10 µs	1 µs	1 µs

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Digital Outputs XI2

Type	XI211116	XI211204	XI211208	XI213204	XI221116
Part number	R911406102	R911417208	R911406101	R911417209	R912009223
Number of outputs	16 DO	4 DO	8 DO	4 DO	16 DO / NPN
Connection technique	1-wire technology	2-wire technology	2-wire technology	2-wire technology	1-wire technology
Nominal voltage	24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
Output current max.	0.5 A	0.5 A	0.5 A	2 A	0.5 A
Total current of the channels	4 A	2 A	4 A	8 A	4 A

Digital Outputs XI2

Type	XI231302	XI232302	XI233204	XI234204	XI241202
Part number	R911406103	R911420202	R911430135	R911430136	R911421644
Number of outputs	2 DOR / CO / 1 A	2 DOR / CO / 2 A	4 DOR / CO / 60 V	4 DOR / SSR / 48 V	2 DO / PWM
Connection technique	3-wire technology	3-wire technology	2-wire technology	2-wire technology	2-wire technology
Nominal voltage	12...250 V AC 12...250 V DC	12...250 V AC 12...300 V DC	12...250 V AC 12...60 V DC	12...250 V AC 12...48 V DC	24 V DC
Output current max.	1 A	1 A	2 A	2 A	0.5 A
Total current of the channels	2 A	2 A	8 A	8 A	1 A

Digital Outputs XI2

Type	XI250204	XI290202
Part number	R911421645	R911421647
Number of outputs	4 DO / HS / DC	2 DO / OVS
Connection technique	2-wire technology	2-wire technology
Nominal voltage	24 V DC	24 V DC
Max. current up per terminal point	0.5 A	0.5 A
Net current module outputs	1 A	1 A

Analog Inputs XI3

Type	XI311104	XI312204	XI321104	XI322204	XI331104
Part number	R911430137	R911406105	R911430138	R911406104	R911430139
Number of inputs	4	4	4	4	4
Input signal	0...10 V	0...10 V	-10...10 V	-10...10 V	0...20 mA
Connection technique	2-wire technology, shielded, twisted in pairs	2-wire technology, shielded, twisted in pairs	2-wire technology, shielded, twisted in pairs	2-wire technology, shielded, twisted in pairs	2-wire technology, shielded, twisted in pairs
Resolution A/D	12 bits incl. sign	16 bits incl. sign	12 bits incl. sign	16 bits incl. sign	12 bits incl. sign
A/D conversion time	100 µs	100 µs	100 µs	100 µs	100 µs

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Analog Inputs XI3

Type	XI332204	XI341104	XI342204	XI351002	XI351004
Part number	R911406106	R911430131	R911406107	R911406109	R911430132
Number of inputs	4	4	4	2	4
Input signal	0...20 mA	4...20 mA	4...20 mA	PT100, PT200, PT500, PT1000 (characteristic curve PT385 for all platinum sensors), NI100, NI120, NI500, NI1000 (characteristic curve TK6180 for all nickel sensors), NI1000 (characteristic curve TK5000), KTY81-110, KTY 81-210, KTY 84, resistance measurement	PT100, PT200, PT500, PT1000, NI100, NI120, NI500, NI1000, NI1000 (TK5000), KTY81-110, KTY81-210, KTY84-130/150, resistor 10...3276 Ω
Connection technique	2-wire technology, shielded, twisted in pairs	2-wire technology, shielded, twisted in pairs	2-wire technology, shielded, twisted in pairs	2-wire technology, shielded, twisted	2-, 3-wire technology, shielded, twisted
Resolution A/D	16 bits incl. sign	12 bits incl. sign	16 bits incl. sign	16 bits incl. sign	16 bits incl. sign
A/D conversion time	100 μs	100 μs	100 μs	160 / 320 ms	–

Analog Inputs XI3

Type	XI361002	XI361004	XI373201	XI382204
Part number	R911406108	R911430133	R911421648	R911430147
Number of inputs	2	4	1	4
Input signal	B, E, J, K, L, N, R, S, T, U	B, E, J, K, L, N, R, S, T, U	–	"0...10 V -10...10 V 0...20 mA 4...20 mA"
Connection technique	2-, 3-wire technology, shielded, twisted	2-, 3-wire technology, shielded, twisted	4-wire or 6-wire, differential	2-wire technology, shielded, twisted in pairs
Resolution A/D	16 bits incl. sign	16 bits incl. sign	24 bits incl. sign	16 bits incl. sign
A/D conversion time	240 / 480 ms	–	–	100 μs

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Analog Outputs XI4

Type	XI411204	XI412202	XI412204	XI421204	XI422202
Part number	R911430140	R911406110	R911406116	R911430141	R911406113
Number of outputs	4	2	4	4	2
Output signal	0...10 V	0...10 V	0...10 V	-10...10 V	-10...10 V
Connection technique	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs
Resolution D/A	12 bits	16 bits	16 bits	12 bits	16 bits
Process data update	250 µs	250 µs	250 µs	250 µs	250 µs

Analog Outputs XI4

Type	XI422204	XI431204	XI432202	XI432204	XI441204
Part number	R911406117	R911430142	R911406111	R911406115	R911430143
Number of outputs	4	4	2	4	4
Output signal	-10...10 V	0...20 mA	0...20 mA	0...20 mA	4...20 mA
Connection technique	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs
Resolution D/A	16 bits	12 bits	16 bits	16 bits	12 bits
Process data update	250 µs	250 µs	250 µs	250 µs	250 µs

Analog Outputs XI4

Type	XI442202	XI442204	XI482204
Part number	R911406112	R911406114	R911430123
Number of outputs	2	4	4
Output signal	4-20 mA	4-20 mA	0...10 V -10...10 V 0...20 mA 4...20 mA
Connection technique	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs	2-wire technology bipolar, shielded, twisted in pairs
Resolution D/A	16 bits	16 bits	16 bits
Process data update	250 µs	250 µs	250 µs

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Communication modules | XI5

Type	XI510004	XI521001	XI522001	XI531001	XI532001
Part number	R911406118	R911421015	R911421016	R911423593	R911430128
Communication protocol	IO-Link	RS232	RS485/RS422	M-Bus	KNX
Number of channels	4	1	1	1	1

Communication modules | XI5

Type	XI533001	XI541101	XI542001
Part number	R911430129	R911430148	R911430149
Communication protocol	DALI-2	CAN	CANopen
Number of channels	1	1	1

Technology modules | XI6

Type	XI612001	XI613101	XI613201	XI614001	XI631003
Part number	R912009861	R912009618	R912009617	R912009619	R911430144
Signal types	Analog encoder, Sin/Cos	Incremental encoder TTL (RS422)	Incremental encoder HTL	Absolute encoder SSI (single-turn, multi-turn)	Power measurement 3 phase
Number digital inputs	4	4	4	4	–
Encoder power supply	5 V	5 V	24 V	24 V	–
Max. frequency	400 kHz	4 MHz	100 kHz	1 MHz	–

Drive modules | XI7

Type	XI723101	XI733101	XID1-W1616G
Part number	R911430145	R911430146	R911427848
Motor type	Stepper	DC motor	PMSM, DC motor, BLDC
Number of motors	1	2	2
Encoder	TTL	–	Encoder Quad (TTL), pulse and direction, Panasonic, BiSS-C, EnDat 2.2, Nikon, SSI, Tamagawa
Encoder power supply	5 V	–	5 V
Number digital inputs	–	4	4
Rated voltage	24 V	24 V	48 V
Rated current	3 A	3 A	8 A

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System modules XI8

Type	XI811101	XI812101	XI813101	XI821116	XI822116
Part number	R911406093	R911406094	R912009610	R911406125	R911406123
Short description	Passive power feeder for periphery circuit (U_p) DC 24 V / 8 A	Active power feeder for periphery circuit (U_p) 24 V DC / 8 A	Active power feeder for periphery circuit (U_p) 24 V DC / 8 A and logic circuit (U_L) 3 A	Potential distribution, 16-fach GND	Potential distribution, 16x 24 VDC
Number of outputs	–	–	–	16	16
Nominal voltage	24 V DC	24 V DC	24 V DC	–	–
Power consumption U_p	8 A	8 A	8 A	–	–
Power consumption U_L	–	–	3 A	–	–
Max. current per channel	–	–	–	1 A	1 A
Max. net current U_p module	–	–	–	4 A	4 A

System modules XI8

Type	XI824116	XI841000	XI842000
Part number	R911406122	R911406126	R911406128
Short description	Potential distribution, 8x 24 VDC, 8x GND	Blank housing 12 mm	Blank housing 20 mm
Number of outputs	16	–	–
Nominal voltage	–	–	–
Power consumption U_p	–	–	–
Power consumption U_L	–	–	–
Max. current per channel	1 A	–	–
Max. net current U_p module	4 A	–	–

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