ELCO LogicX Series of PLC

Unsere Steuerungen bieten eine platzsparende und leistungsstarke Lösung für industrielle Steuerungsaufgaben. Sie ermöglichen eine präzise und zuverlässige Steuerung von Maschinen und Anlagen, selbst in begrenzten Raumverhältnissen. Dank ihrer robusten Bauweise sind sie für anspruchsvolle industrielle Umgebungen ausgelegt und gewährleisten einen kontinuierlichen und effizienten Betrieb. Die Steuerungen steigern, ohne Kompromisse bei der Leistung einzugehen.

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09.04.2024 V1.0

Erweitertes Steuerungsangebot

Die LogicX-Serie umfasst drei Steuerungssysteme, die auf verschiedene Anwendungsfälle ausgerichtet und modular erweiterbar sind:

– Die kostengünstige Einstiegssteuerung LogicX0 ist gut für Anwendungen ohne Servoachsen geeignet. Sie kann mit festen I/Os oder modular mit FX20-Submodulen erweitert werden und unterstützt Ethercat-Kommunikation. Damit bietet sie eine flexible und wirtschaftliche Lösung für einfache Steuerungsanforderungen.

– Als leistungsstarke, modulare Kompaktsteuerung kann das Modell LogicX1 bis zu 16 Servoachsen steuern. Sie ist mit bis zu 16 FX20-Submodulen erweiterbar und unterstützt ebenfalls Ethercat. Das macht sie besonders flexibel und anpassungsfähig für komplexere Automatisierungsaufgaben.

– Das Highend-SPS-System LogicX3 bietet ausreichend Leistung für sehr anspruchsvolle Anwendungen und kann bis zu 32 Servoachsen steuern. Auch diese Steuerung ist modular mit FX20-Submodulen erweiterbar und kommuniziert via Ethercat.

Alle Steuerungssysteme der LogicX-Serie lassen sich mit Codesys programmieren, was eine einfache Integration und Anpassung ermöglicht.

Modulares I/O-System

Die FX20-Serie ist ein modulares I/O-System im IP20-Standard, das eine breite Palette an Baugruppen bietet, darunter digitale und analoge I/O-Module, IO-Link-Master oder serielle Schnittstellen und SSI-Zählermodule. Hervorzuheben sind Erweiterungen, wie das RS232/485-Schnittstellenmodul sowie das schnelle Zählermodul zur Anbindung von Drehgebern. Das neue IO-Link-Master-Modul mit vier Kanälen ermöglicht die direkte Kommunikation mit IO-Link-Hubs sowie mit Sensoren und Aktoren.

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ARTICLE PROPERTIES

PROGRAMMING ENVIRONMENT	CODESYS platform, support IEC 61131-3(ST/LD/FBD/SFC/CFC/IL)
HARDWARE ENVIRONMENT	High precision real-time operating system
MEMORY	2 MB for program, 512 KB for data, 128 KB for power-off persistence retain
LOCAL INPUT	8 points PNP/NPN digital inputs, 18-30 V, typical current 4 mA
LOCAL OUTPUT	8 points NPN or PNP digital output, max. current 0.5 A, resistive load output frequence: NPN type - 100 kHz, PNP type - 20 kHz

MECHANICAL DATA

MOUNTING (mounting nuts included in delivery)	35 mm rail-tray

ELECTRICAL DATA

OPERATING VOLTAGE	21.6 ... 26.4 V DC
RATED OPERATING CURRENT	1 A
FUNCTION INDICATOR	green/red LED
USE ENVIRONMENT	no corrosive, combustible gas, conductive dust (dust) is not serious occasions
ALTITUDE	up to 2000 m (80 kPa)
POLLUTION LEVEL	level 2
ANTI-INTERFERENCE DEGREE	IEC 61000-6-2
EMC ANTI-INTERFERENCE LEVEL	IEC 61131-2
OVERCURRENT PROTECTION DEVICE	2.5 A fuse
HYSTERESIS	3 ... 15 %
TEMPERATURE DRIFT	±10 %
SHORT-CIRCUIT PROTECTION	yes
OVERLOAD RESISTANCE	yes
REVERSE POLARITY PROTECTION	yes

ENVIRONMENTAL CONDITIONS

PROTECTION CLASS	IP20
STORAGE TEMPERATURE	-20 ... +70 °C
TRANSPORT TEMPERATURE	-40 ... +70 °C
OPERATING TEMPERATURE	-20 ... +55 °C
RELATIVE HUMIDITY	< 90 %RH, no condensation
VIBRATION RESISTANCE (EN 60068-2-27)	55 Hz, 1 mm
SHOCK RESISTANCE (EN 60068-2-6)	30*g*/11 ms

LOGICX0 SERIES

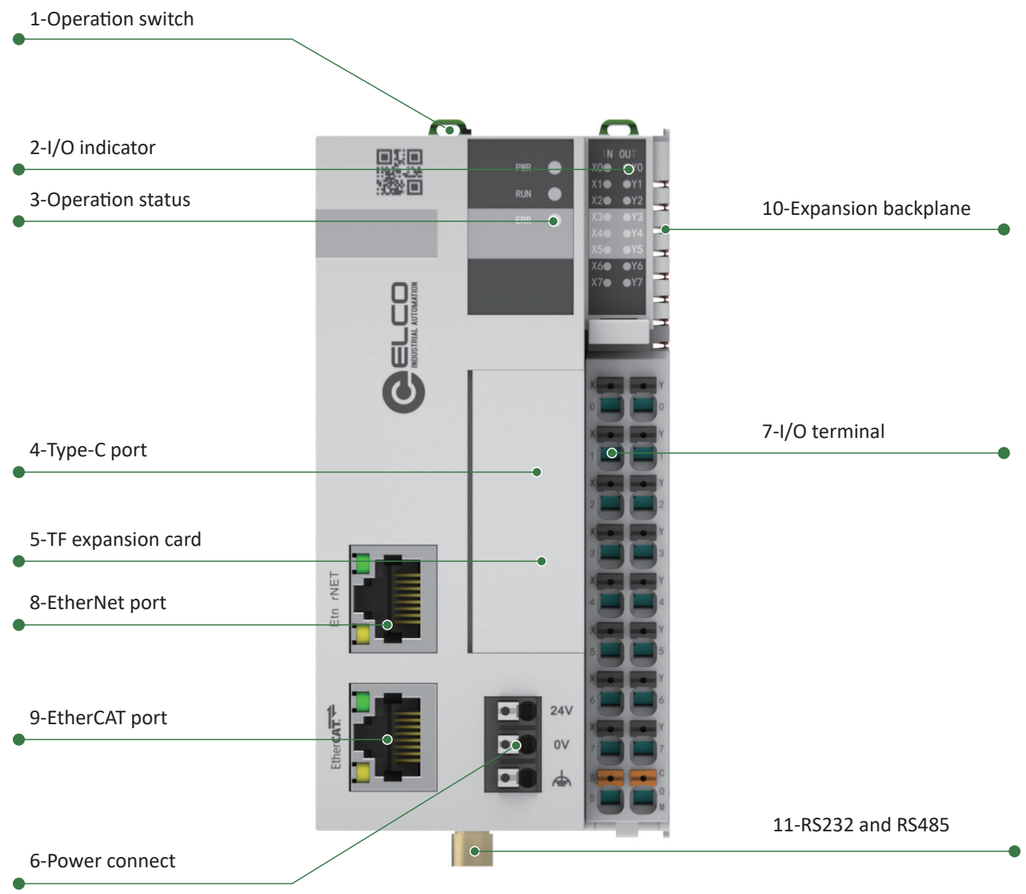
STANDARDS AND DIRECTIVES

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR	EN 61131-2:2007 Clause 8, 9 EN 55011:2016+A2:2021

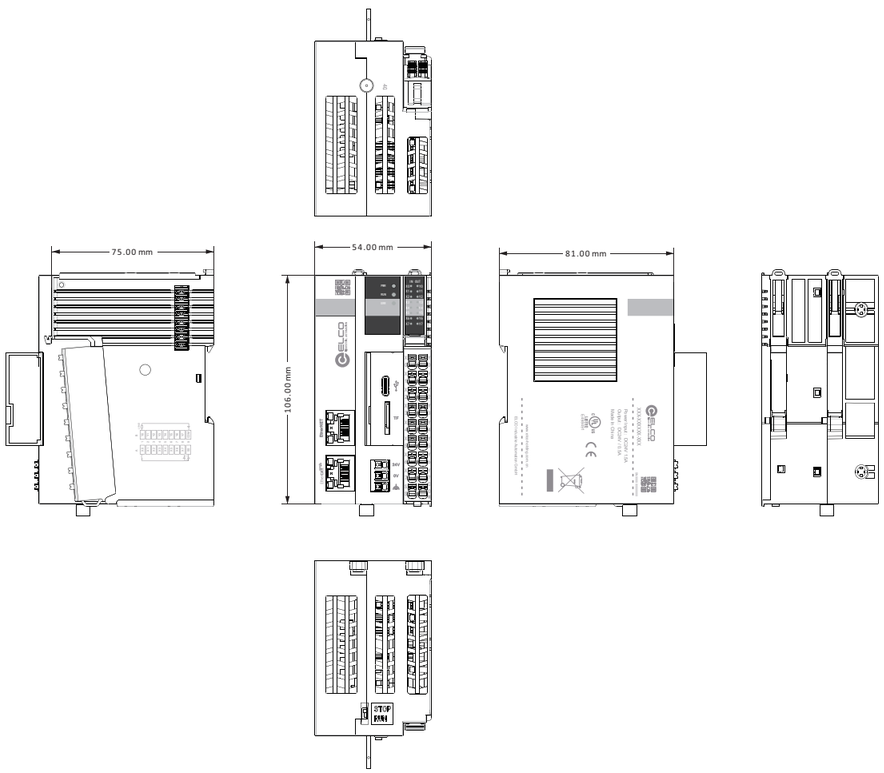
APPROVALS

CE RoHS

PRODUCT STRUCTURE



DIMENSIONS



TYPE CODE

Logic	X0	-	0	A	N	E
	Type code X0: series X0				***Tpye of digital output : NPN/PNP*** N: NPN type DO output P: PNP type DO output	
				BODY I/O Function code A: 8DI + 8D0 B: 12D1 + 4D0 C: 8DI + 4D0 + 2HDO (NPN) D: 6DI + 2D0 + 4HDI (NPN) E: 6D1 + 2D0 + 4HDO (NPN) F: 6D1 + 2D0 + 2HDI + 2HD0 (NPN) G: 8D1 + 4D0 + 2A1 (+5 V, +10 V, 0-20 mA, 4-20 mA)	
ELCO logic series			***Quantity of pulse signals for servo axes*** 0: no extended I/O by backplane 1: with extended I/O by backplane			***Fieldbus type*** E: EtherCAT P: PROFINET C: CANopen

LOGICX0 SERIES

BODY I/O FUNCTION A

Article number	Digital input on body (24 V, 50 mA)	Digital output on body (24 V, max. 200 mA)	I/O extention		
LogicX0-0AN-*	8	8	/		
LogicX0-1AN-*	8	8	16		
LogicX0-0AP-*	8	8	/		
LogicX0-1AP-*	8	8	16		

BODY I/O FUNCTION B

Article number	Digital input on body (24 V, 50 mA)	Digital output on body (24 V, max. 200 mA)	I/O extention		
LogicX0-0BN-*	12	4	/		
LogicX0-1BN-*	12	4	16		
LogicX0-0BP-*	12	4	/		
LogicX0-1BP-*	12	4	16		

BODY I/O FUNCTION C

Article number	Digital input on body (24 V, 50 mA)	Digital output on body (24 V, max. 200 mA)	I/O extention	High-speed output on body (100 KHz)	
Logic X0-0CN-*	8	4	/	2	
Logic X0-1CN-*	8	4	16	2	

BODY I/O FUNCTION D

Article number	Digital input on body (24 V, 50 mA)	Digital output on body (24 V, max. 200 mA)	I/O extention	High-speed counter on body (100 KHz)	
LogicX0-0DN-*	6	2	/	4	
LogicX0-1DN-*	6	2	16	4	

BODY I/O FUNCTION E

Article number	Digital input on body (24 V, 50 mA)	Digital output on body (24 V, max. 200 mA)	I/O extention	High-speed output on body (100 KHz)	
LogicX0-0EN-*	6	2	/	4	
LogicX0-1EN-*	6	2	16	4	

* E - EtherCAT P - PROFINET C - CANopen

PRODUCT STRUCTURE

Item	Port type	Identification	Define	Indicator light color	Clarification
1	operation switch	RUN/STOP	operation mode switching		
2	I/O indicator	IN/OUT	I/O status display	green	ON: indicates that the input or output is valid OFF: indicates invalid inputs or outputs
3	operation status	PWR	the power supply is normal	green	ON: indicates normal power supply OFF: indicates abnormal power supply
		RUN	running normally	green	ON: indicates that the user program is running OFF: indicates that the user program is stopped
		ERR	run-time error (in computing)	red	OFF: indicates no serious error Flashing: indicates a serious error has occurred
		REV*3	reserve	-	
4	type-C port		communication with PC		-
5	TF expansion card	TF	firmware upgrade	-	
6	power connect	+24 V	DC 24 V power positive	-	-
		0 V	DC 24 V power supply negative	-	-
			PE	-	-
7	I/O terminal	–	8 inputs, 8 outputs	-	
8	EtherNet port	EtherNet	EtherNet communication RJ45 interface	-	100 Mbps, support Modbus-TCP, OPC-UA, and User defined protocol communication
9	EtherCAT port	EtherCAT	for EtherCAT communication	-	support 72 slaves connections
10	expansion backplane		expansion backplane for expanded I/O		support max. 16 I/O modules extention
11	RS232 and RS485 terminal	RS232/485	Supports Modbus RTU/ASCII, with baud rates ranging 2400-115200bps, parameter configuration for checksum and stop bit, with a maximum of 20 slave stations		RS485: 4800 ... 115200 bps, 2-wire half duplex RS232: 4800 ... 115200 bps, R, T, GND 3-wire full duplex

Logic Series of PLC

The LogicX1 series PLC meets various needs of users for small and medium-sized automation equipment.

The LogicX3 series compact PLC is a high-end controller for medium to big-sized programs and multi-axis complex motion control. This product further improves the ELCO automation product system, adapts to a wide range of automatic control application, and provides customers with more choices.

The product adopts modular design, supports local backplane expansion, and seamlessly connects with the ELCO FX20 series IO modules.

This product meets various needs on automation control, such as,

- Fieldbus communication
- Motion control
- Local and fieldbus extension ios
- Informationization functions for IT technology

CODESYS

The controllers run the latest CodeSys Runtime system, an open and standardized programming platform CodeSys V3.5 SP19, which is in line with mainstream programming trends.

Logic Series of PLC

Type Code

Logic	X1	-	0	08	N	0	0	1

ELCO Logic Series

Type Code
X1: series X1
X3: series X3

Quantity of pulse signals for servo axes
0: No pulse signal
2: 2 pulse signal
4: 4 pulse signal

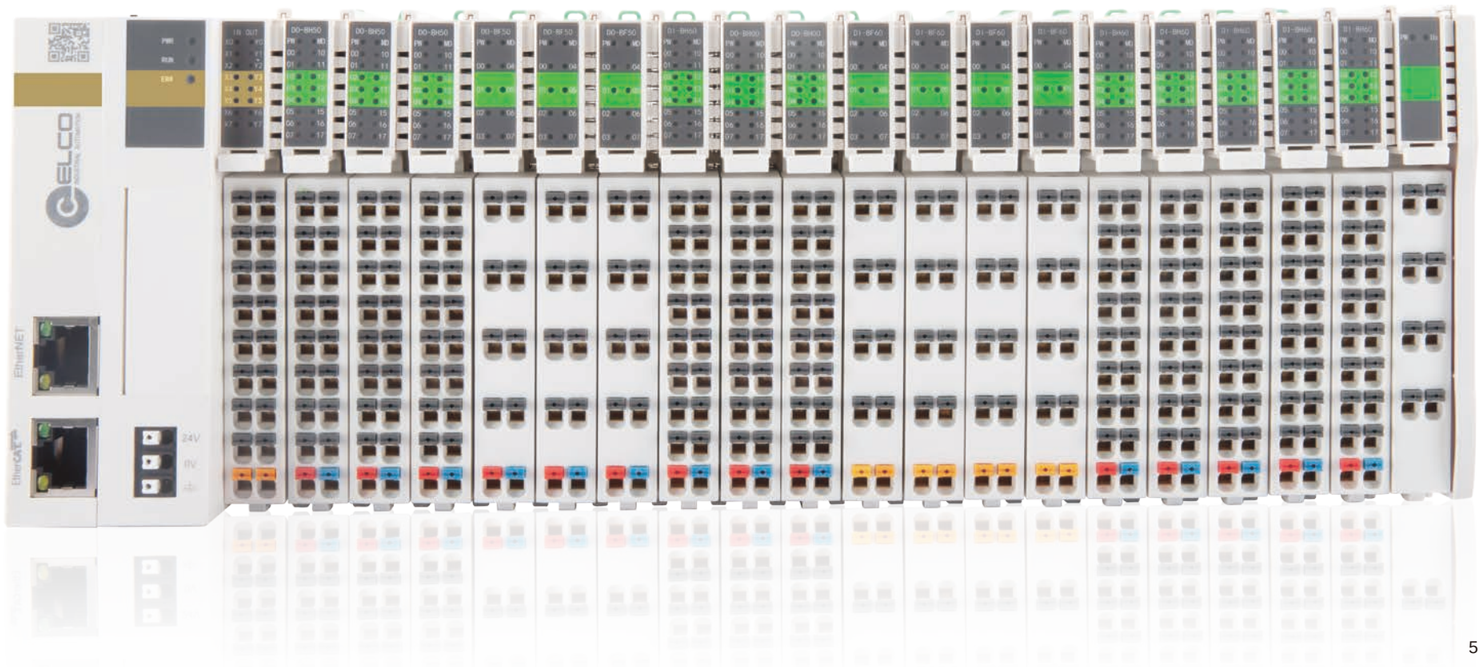
Servo axes processing capacity by EtherCAT
08: 8 servo axes
16: 16 servo axes
24: 24 servo axes
32: 32 servo axes

Tpye of digital output : NPN /PNP
N: NPN type DO output
P: PNP type DO output

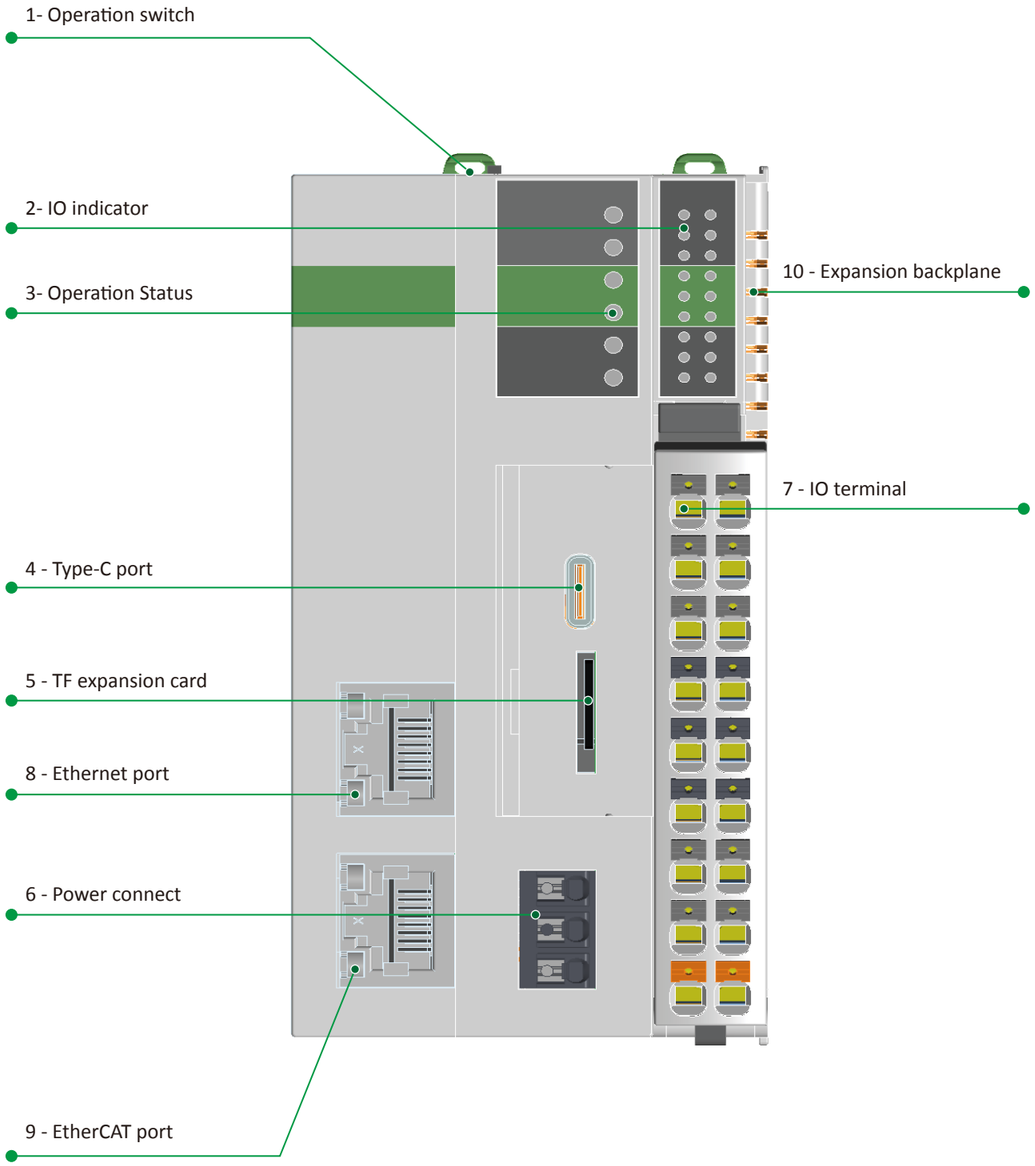
Other fieldbus type support
0: None
1: RS485
2: RS232
3: RS485+RS232
4: CANopen

Support high speed I/O or not
0: None
1: Support

Quantity of RJ45 ports for EtherCAT
1: 1 port for EtherCAT
2: 2 RJ45 ports for EtherCAT



Product structure

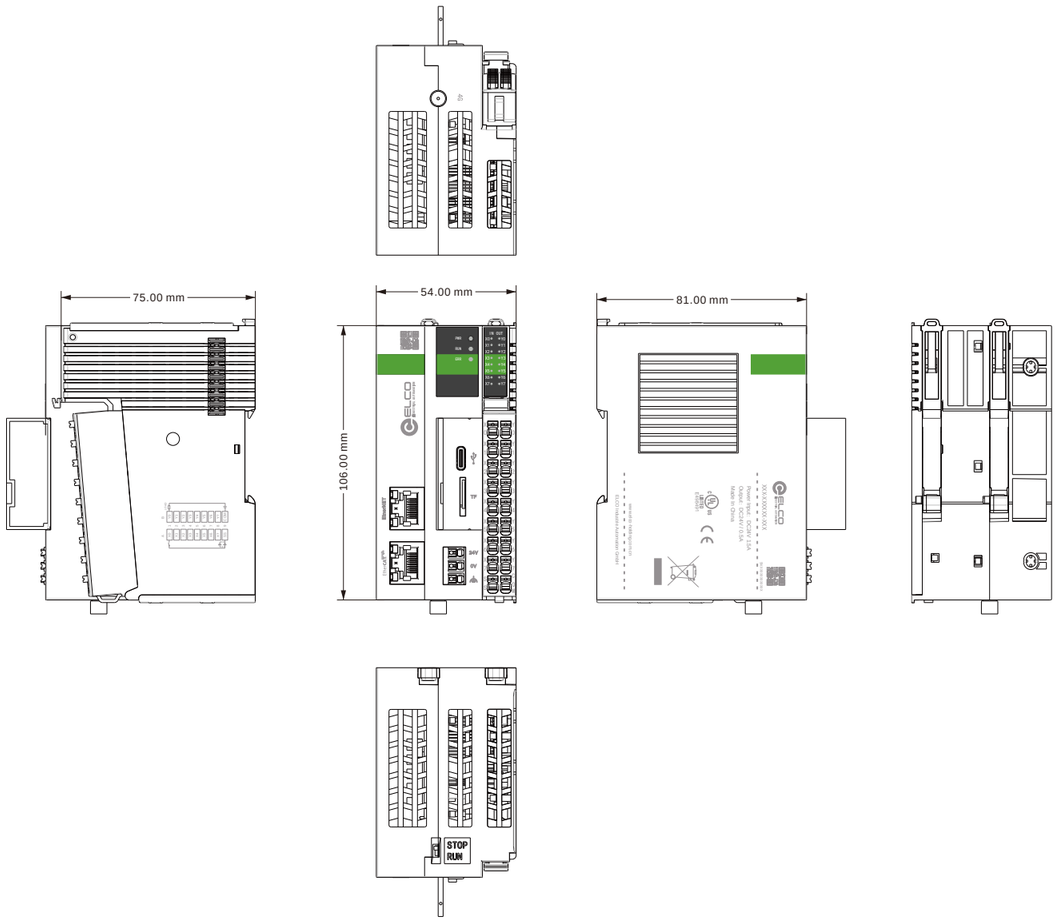


Item	Port Type	Identification	Define	Indicator color	Instruction
1	Operation switch	RUN/STOP	Operation mode switching		
2	IO indicator	IN/OUT	IO Status Display	Green	ON: Indicates that the input or output is valid OFF: Indicates invalid inputs or outputs
3	Operation Status	PWR	The power supply is normal.	Green	ON: indicates normal power supply OFF: Indicates abnormal power supply
		RUN	Running normally	Green	ON: Indicates that the user program is running OFF: Indicates that the user program is stopped
		ERR	Run-time error (in computing)	Red	OFF: Indicates no serious error Flashing: Indicates a serious error has occurred
		REV*3	Reserve	-	
4	Type-C port		Communication with PC		-
5	TF Expansion Card	TF	Firmware Upgrade	-	
6	Power connect	+24 V	DC 24 V Power Positive	-	-
		0V	DC 24 V Power Supply Negative	-	-
			PE	-	-
7	IO terminal	–	8 inputs, 8 outputs	-	-
8	Ethernet port	EtherNet	Ethernet communication RJ45 interface	-	-
9	EtherCAT port	EtherCAT	For EtherCAT communication	-	-
10	Expansion backplane		Expansion backplane for Expanded IO		-

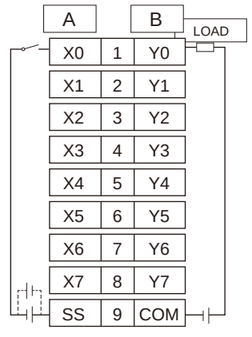
Hardware	
CPU	4-core ARM cortex-A7 processor design, per core frequency up to 1.2 GHz
Memory	16 M user program space; 2 M Byte of custom variables, of which 128 kByte non-volatile
Computing power	C = NOT (A&B) 20000 cycles :
	BOOL : 180 us
	BYTE: 195 us
	INT: 201 us
	DINT: 200 us
	REAL: (A=A*2+1) 264 us
EtherNet	Support socket custom communication, program on the download and debugging
Ethercat communication	Supports 1 EtherCAT master, up to 72 EtherCAT slaves
Number of axes available (EtherCAT port)	8 axes (bus cycle 1 ms) / 16 axes (bus cycle 4 ms)
Local input	8 points
Local output	8 points
Expansion module	Supports up to 16 local expansion modules
TF card	Supports up to 1 TF card, firmware upgradeable
Programming platform	CODESYS V3.5 SP19
Programming standards	IEC61131-3
Programming language	ST (structured text), LD (ladder logic diagram), CFC (continuous function chart), FBD (function block diagram), SFC (sequential function chart)
Motion control library	Supports part1, part2 of the PLC open motion control specification, i.e. single axis motion, electronic gears, electronic cams.
Type-C	System commissioning, diagnostics, upgrades
Power supply specifications	
Terminal input rated voltage	24 V DC ± 10% (21.6 V DC~26.4 V DC)
Terminal input rated current	1A (max. at 24 V DC)
24v input power protection	Support short circuit protection, support reverse connection protection
Module hot swap function	unsupported
General data	
Use environment	No corrosive, combustible gas, conductive dust (dust) is not serious occasions
Altitude	Up to 2000 m (80 kPa)
Pollution level	Level 2
Anti-interference degree	IEC 61000-6-2
EMC anti-interference level	Zone B, IEC61131-2
Overcurrent protection device	2.5 A fuse
Storage temperature and humidity	Storage temperature: -20 °C ... 70 °C Relative humidity: < 90%RH, no condensation
Transport temperature and humidity	Transport temperature: -40 °C ... 70 °C Relative humidity: < 90%RH, no condensation
Operating temperature and humidity	Operating temperature: -20 °C ... 55 °C Relative humidity: < 90%RH, no condensation
	Note: When the operating temperature is higher than the maximum temperature,
	install a forced fan or air conditioner in the direction of the heat dissipation hole.

LogicX1 PLC

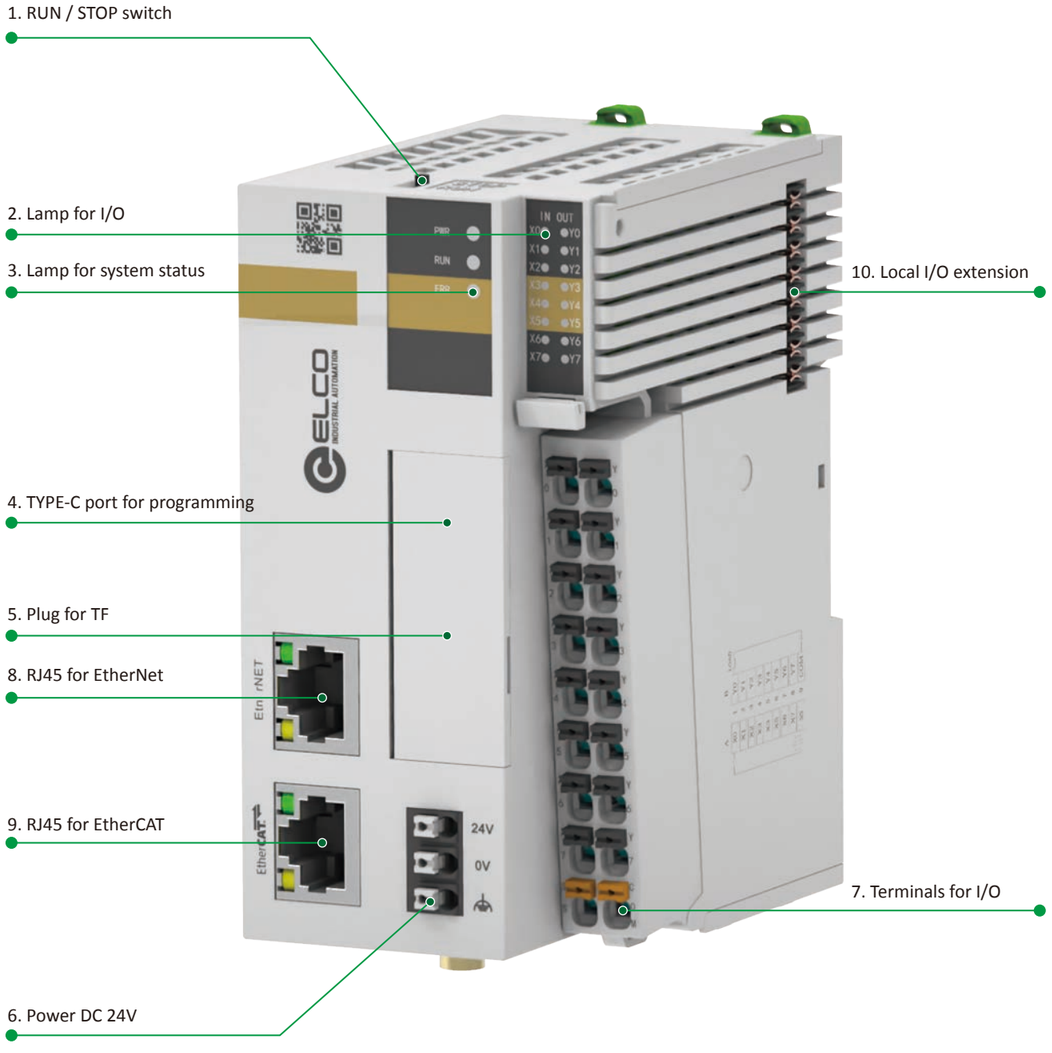
Product Dimension



Wiring diagram



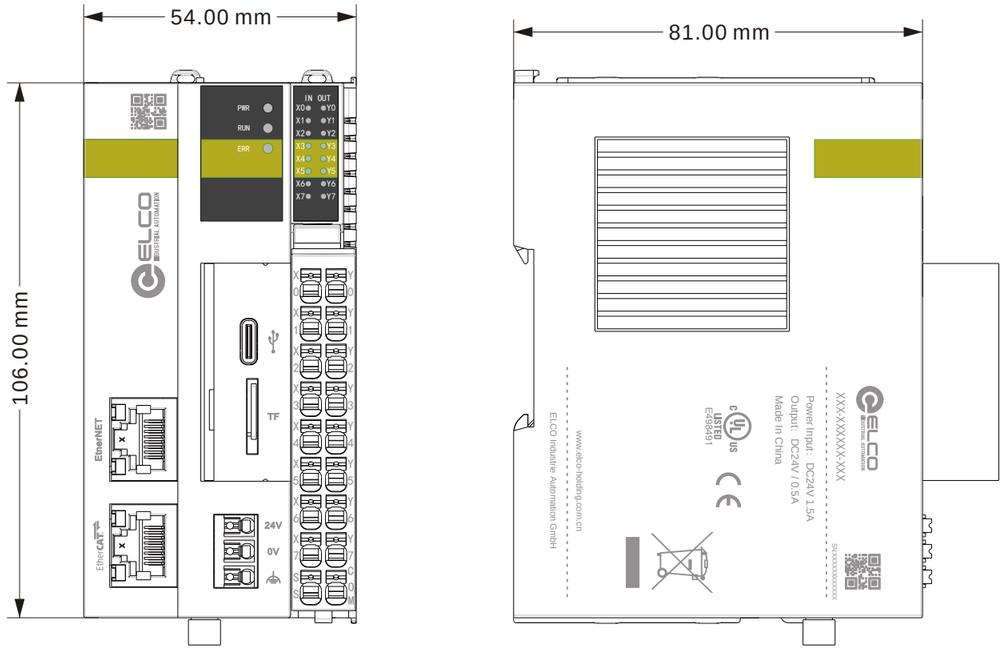
Product structure



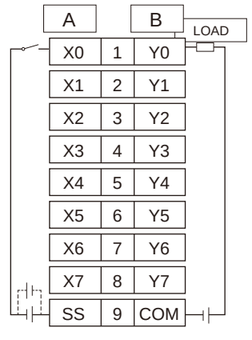
Item No	Port Type	Interface Identification	Define	Indicator Color	Instruction
1	RUN / STOP switch	RUN/STOP	Operation mode switching		
2	Lamp for I/O	IN/OUT	IO Status Display	Green	● ON: Indicates that the input or output is valid. ● OFF: Indicates invalid inputs or outputs.
3	Lamp for system status	PWR	The power supply is normal	Green	● ON: indicates normal power supply. ● OFF: Indicates abnormal power supply.
		RUN	running normally	Green	● ON: Indicates that the user program is running. ● OFF: Indicates that the user program is stopped.
		ERR	Run-time error (in computing)	Red	● OFF: Indicates no serious error. ● Flashing: Indicates a serious error has occurred.
		BUS	Bus state	Green	● OFF: EC bus is running. ● Flashing: EC bus is stopped.
4	Type-C Port		Communication with PC	-	-
5	Plug for TF	TF	Firmware Upgrade	-	-
6	Power DC 24 V	+24V	DC 24V Power Positive	-	-
		0V	DC 24V Power Supply Negative	-	-
			PE	-	-
7	Terminals for I/O	–	8 inputs, 8 outputs	-	-
8	RJ45 for EtherNet	EtherNet	Ethernet communication RJ45 interface	-	-
9	RJ45 for EtherCAT	EtherCAT	For EtherCAT communication	-	-
10	Local I/O extension		Expansion Card Slot for Expanded Functionality	-	-

Hardware parameters	
CPU	4-core ARM cortex-A55 64 bit processor design, per core frequency up to 1.8 GHz
Memory	64 M user program space; 2 M Byte of custom variables, of which 128 kByte non-volatile
Program operating speed	C = NOT (A&B) 20000 cycles: BOOL: 89 µs BYTE: 100 µs INT: 101 µs DINT: 104 µs REAL: (A = A*2+1) 167 µs
EtherNet	Support socket custom communication, program on the download and debugging
EtherCAT communication	Supports 1 EtherCAT master, up to 72 EtherCAT slaves
Number of axes available (EtherCAT port)	16 axis (1 ms) / 32 axis (4 ms)
Local ordinary input	8 points
Local ordinary output	8 points
Expansion module	Supports up to 16 local expansion modules
TF card	Supports up to 1 TF card, firmware upgradeable
Programming platform	CODESYS V3.5 SP19
Programming standards	IEC61131-3
Programming language	ST (Structured Text), LD (Ladder Logic Diagram), CFC (Continuous Function Chart),
Motion control library	FBD (Function Block Diagram), SFC (Sequential Function Chart) Supports part1, part2, part4 of the PLC open motion control specification,
Type-C	i.e. single axis motion, electronic gears, electronic cams. System commissioning, diagnostics, upgrades
Power supply specifications	
Terminal input power supply rated voltage	24 V DC ± 10% (21.6 V DC~26.4 V DC)
Terminal input power supply rated current	1 A (max. at 24 V DC)
24 V input power protection	Support short circuit protection, support reverse connection protection
Module hot swap function	unsupported
General data	
Use environment	No corrosive, combustible gas, conductive dust (dust) is not serious occasions
Altitude	Up to 2000 m (80 kPa)
Pollution level	Level 2
Anti-interference degree	IEC 61000-6-2
EMC anti-interference level	Zone B, IEC61131-2
Overcurrent protection device	2.5 A fuse
Storage temperature and humidity	Storage temperature: -20 °C ... 70 °C Relative humidity: < 90%RH, no condensation
Transport temperature and humidity	Transport temperature: -40 °C ... 70 °C Relative humidity: < 90%RH, no condensation
Operating temperature and humidity	Operating temperature: -20 °C ... 55 °C Relative humidity: < 90%RH, no condensation
	Note: When the operating temperature is higher than the maximum temperature,
	install a forced fan or air conditioner in the direction of the heat dissipation hole.

Product Dimension



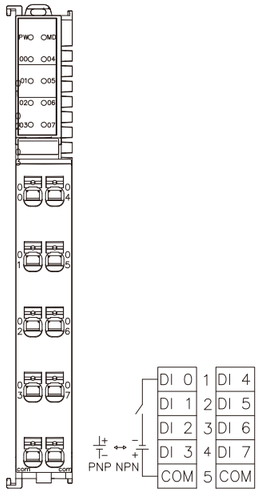
Wiring diagram



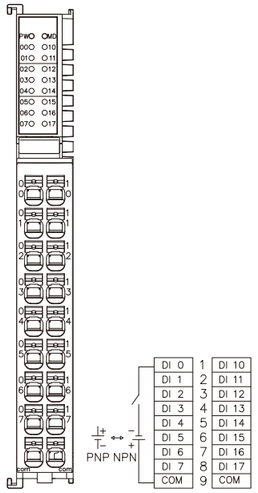
IP20 distributed I/O - digital input module

Order			
Model	FX20-DI-BF60	FX20-DI-BH60	FX20-DI-BL60
Description	8-channel input PNP/NPN universal module	16-channel input PNP/NPN universal module	32-channel input PNP/NPN universal module
Electrical parameters			
Input channel	8	16	32
Input type	Universal for PNP/NPN	Universal for PNP/NPN	Universal for PNP/NPN
Input signal '0'	DC 0-5 V	DC 0-5 V	DC 0-5 V
Input signal '1'	DC 18-30 V	DC 18-30 V	DC 18-30 V
Input current	typ. 4 mA	typ. 4 mA	typ. 4 mA
Input filtering delay	0 ms, 1 ms, 3 ms, 10 ms	0 ms, 1 ms, 3 ms, 10 ms	0 ms, 1 ms, 3 ms, 10 ms
Current consumption (5V)	60 mA	60 mA	60 mA
Process data length	1 byte	2 bytes	4 bytes
General data			
Protection grade	IP20		
Installation	Standard 35 mm DIN rail installation		
Temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C		
Relative humidity	95%, non condensation		
Module weight	63 g	63 g	128 g
Module size (H × W × D)	79 mm × 15 mm × 110 mm	79 mm × 15 mm × 110 mm	79 mm × 28 mm × 110 mm
Wiring diagram			

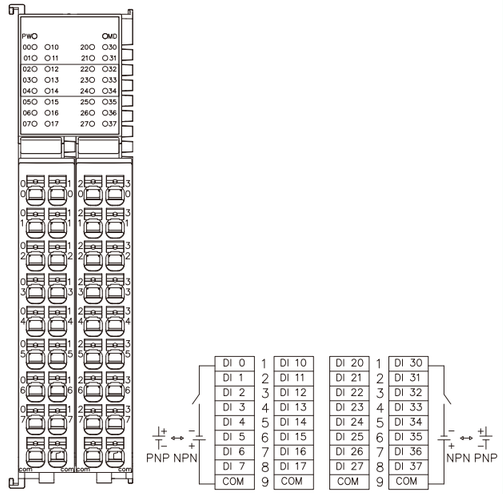
8-channel input module



16-channel input module

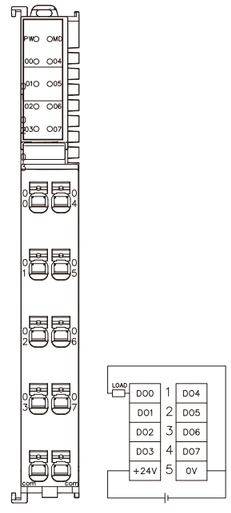


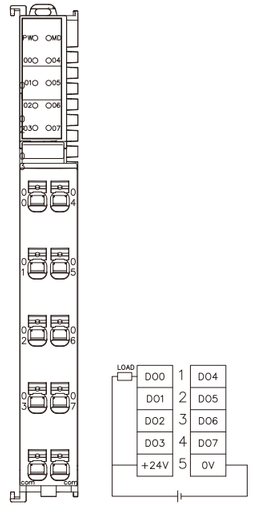
32-channel input module



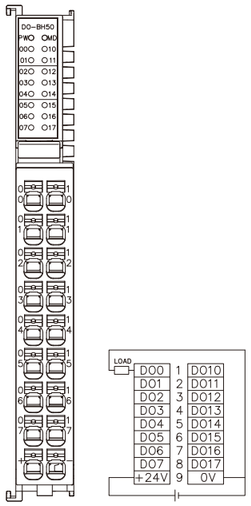
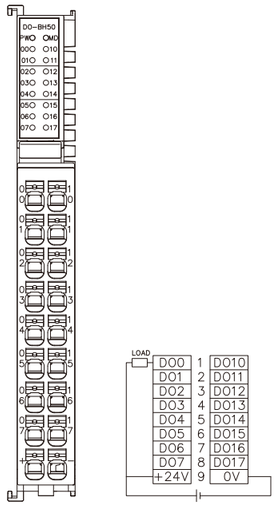
IP20 distributed I/O - digital output module

Order		
Model	FX20-DO-BF00	FX20-DO-BF50
Description	8-channel output module for PNP	8-channel output module for NPN
Electrical parameters		
Output channel	8	8
Output type	PNP	NPN
Output current	Max. 0.5A per channel, total 4A	Max. 0.5A per channel, total 4A
Load type	Resistive load / inductive load / lamp load	Resistive load / inductive load / lamp load
Switching frequency	Max 1 KHz / Max 1 Hz / Max 10 Hz	Max 1 KHz / Max 1 Hz / Max 10 Hz
Current consumption (5V)	60 mA	60 mA
Process data length	1 byte	1 byte
General data		
Protection grade	IP20	
Installation	Standard 35 mm DIN rail installation	
Temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C	
Relative humidity	95 %, non condensation	
Module weight	66 g	
Module size (H × W × D)	79 mm × 15 mm × 110 mm	
Wiring diagram		





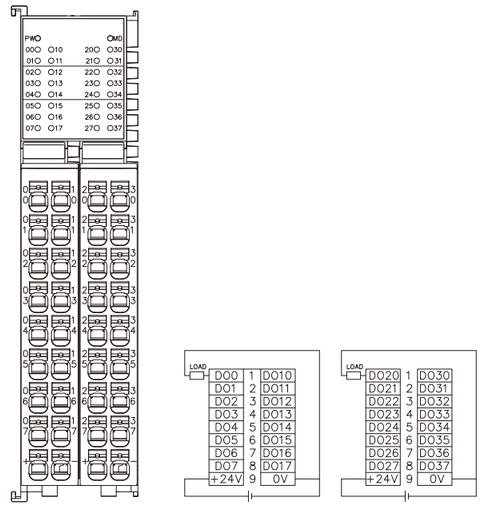
IP20 distributed I/O - digital output module

Order		
Model	FX20-DO-BH00	FX20-DO-BH50
Description	16-channel output module for PNP	16-channel output module for NPN
Electrical parameters		
Output channel	16	16
Output type	PNP	NPN
Output current	Max. 0.5 A per channel, total 2 A	Max. 0.5 A per channel, total 2 A
Load type	Resistive load / inductive load / lamp load	Resistive load / inductive load / lamp load
Switching frequency	Max 1 KHz / Max 1 Hz / Max 10 Hz	Max 1KHz/Max1Hz/Max 10Hz
Current consumption (5 V)	65 mA	65 mA
Process data length	2 bytes	2 bytes
General data		
Protection grade	IP20	
Installation	Standard 35 mm DIN rail installation	
Temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C	
Relative humidity	95 %, non condensation	
Module weight	66 g	
Module size (H × W × D)	79 mm × 15 mm × 110 mm	
Wiring diagram		
		

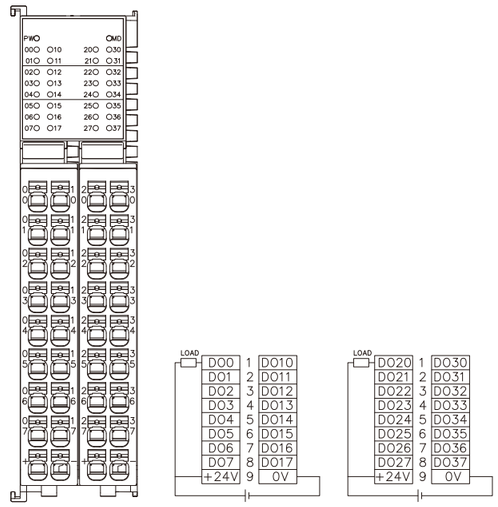
IP20 distributed I/O - digital output module

Order		
Model	FX20-DO-BL00	FX20-DO-BL50
Description	32-channel output module for PNP	32-channel output module for NPN
Electrical parameters		
Output channel	32	32
Output type	PNP	NPN
Output current per channel	Max. 0.5 A per channel, total 4 A	Max. 0.5 A per channel, total 4 A
Load type	Resistive load / inductive load / lamp load	Resistive load / inductive load / lamp load
Switching frequency	Max 1 KHz / Max 1 Hz / Max 10 Hz	Max 1 KHz / Max 1 Hz / Max 10 Hz
Current consumption (5 V)	65 mA	65 mA
Process data length	4 bytes	4 bytes
General data		
Protection grade	IP20	
Installation	Standard 35 mm DIN rail installation	
Temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C	
Relative humidity	95 %, non condensation	
Module weight	128 g	
Module size (H × W × D)	79 mm × 28 mm × 110 mm	
Wiring diagram		

PNP



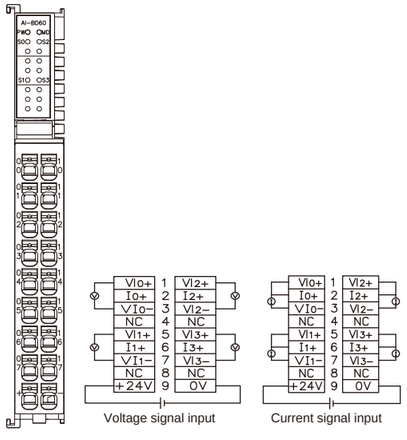
NPN



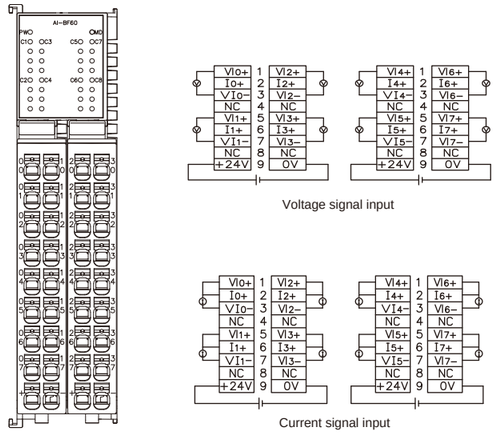
IP20 distributed I/O - analog input/output module

Order		
Model	FX20-AI-BD60	FX20-AI-BF60
Description	4-channel input module for voltage and current types	8-channel input module for voltage and current types
Electrical parameters		
Input channel	4	8
Input Type	0-10 V, +/-10 V, 1-5 V, 0/4-20 mA, +/-20 mA	0-10 V, +/- 10V, 1-5 V, 0/4-20 mA, +/-20 mA
Input impedance	Current type: 250 Ω; Voltage type: 1M Ω	Current type: 250 Ω; Voltage type: 1M Ω
Input resolution	16 Bits	16 Bits
Conversion time	3 ms	3 ms
Measurement accuracy	± 0.2%	± 0.2%
Output channel	/	/
Output type	/	/
Output resolution	/	/
Conversion time	/	/
Output accuracy	/	/
Process data length	8 bytes	16 bytes
General data		
Protection grade	IP20	
Installation	Standard 35 mm DIN rail installation	
Temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C	
Relative humidity	95 %, non condensation	
Module weight	70 g	130 g
Module size (H × W × D)	79 mm × 15 mm × 110 mm	79 mm × 28 mm × 110 mm
Wiring diagram		

FX20-AI-BD60



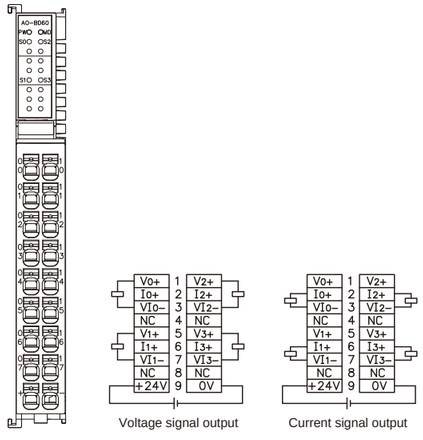
FX20-AI-BF60



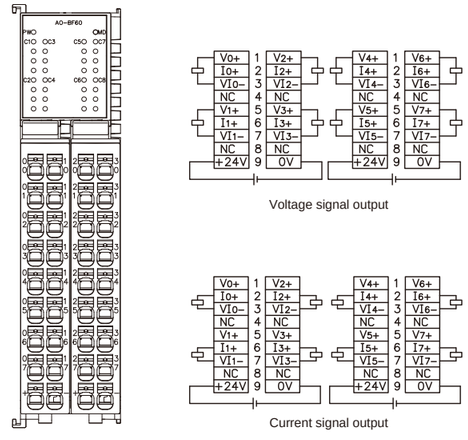
IP20 distributed I/O - analog input/output module

Order		
Model	FX20-AO-BD60	FX20-AO-BF60
Description	4-channel output module for voltage and current types	8-channel output module for voltage and current types
Electrical parameters		
Input channel	/	/
Input Type	/	/
Input impedance	/	/
Input resolution	/	/
Conversion time	/	/
Measurement accuracy	/	/
Output channel	4	8
Output type	1-5 V, 0-10 V, ±10 V, 0/4-20 mA	1-5 V, 0-10 V, ±10 V, 0/4-20 mA
Output resolution	16 Bits	16 Bits
Conversion time	2 ms	2 ms
Output accuracy	± 0.2%	± 0.2%
Process data length	8 bytes	16 bytes
General data		
Protection grade	IP20	
Installation	Standard 35 mm DIN rail installation	
Temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C	
Relative humidity	95 %, non condensation	
Module weight	70 g	130 g
Module size (H × W × D)	79 mm × 15 mm × 110 mm	79 mm × 28 mm × 110mm
Wiring diagram		

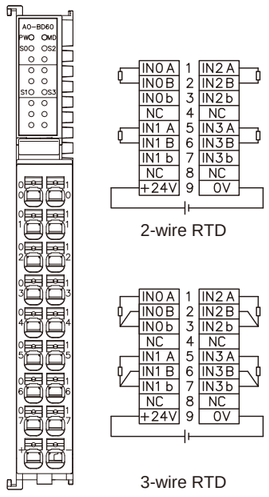
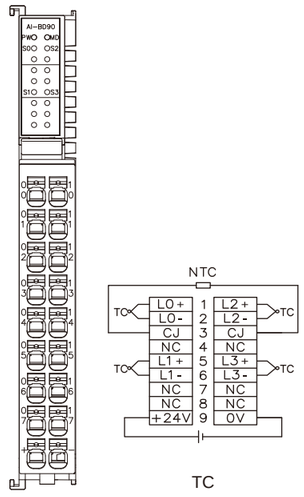
FX20-AO-BD60



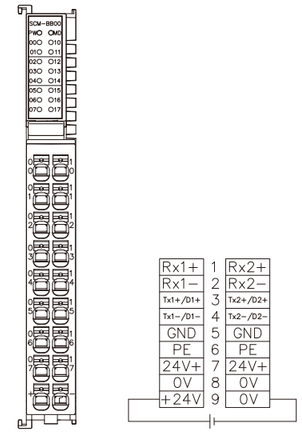
FX20-AO-BF60



IP20 distributed I/O - temperature measuring module

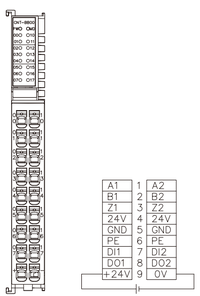
Order		
Model	FX20-AI-BD80	FX20-AI-BD90
Description	4-channel, RTD measurement module	4-channel, TC measurement module
Electrical parameters		
Input channel	4	4
Input type	Thermal resistance, (2-wire, 3-wire):	Thermocouple: J, K, T, N, E type
Resolution	16 Bits	16 Bits
Sensitivity	0.1 °C	0.1 °C
Measurement accuracy	Within 2 °C	Within 2 °C
Process data length	8 bytes	8 bytes
General data		
Protection grade	IP20	
Installation	Standard 35 mm DIN rail installation	
Temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C	
Relative humidity	95 %, non condensation	
Module weight	70 g	
Module size (H × W × D)	79 mm × 15 mm × 110 mm	
Wiring diagram		
		

IP20 distributed I/O - serial communication module

Ordering data	
Product model	FX20-SCM-BB00
Description	Dual channel, compatible with RS485 / RS422 / RS232
Electrical parameters	
Input channel	2
Interface type	Terminal type
Communication methods	RS485: 2-wire, half duplex; RS422: 4-wire, full duplex; RS232: 2-wire, half duplex;
Working mode	MODBUS master station, slave station, free transparent transmission
Communication protocol	MODBUS RTU, MODBUS ASCII, free port
Baud rate	Default 115200bps, 300bps-921600bps can be set
Data bits	7-bit or 8-bit
Stop bit	1 or 2 stop bits can be set
Check bit	No checksum, odd or even checksum can be set
Timeout time	Default 100ms, 2-65535ms can be set
Slave station number	1-247
Communication distance	RS485 / RS422: Max. 30 m; RS232: Max. 10 m
Process data length	Received data: 21 bytes, sent data: 15 bytes
General data	
Protection level	IP20
Installation method	Standard 35 mm DIN rail installation
temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C
relative humidity	95 %, non condensing
Module weight	70 g
Module size (H x W x D)	79 mm x 15 mm x 110 mm
Wiring diagram	
	

IP20 distributed I/O - high speed counting module

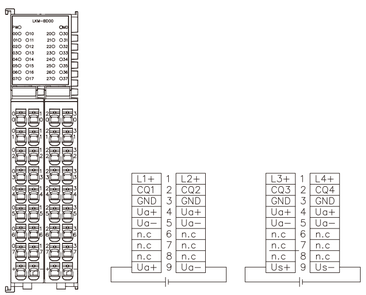
Ordering data	
Product model	FX20-CNT-BB00
Description	Dual channe ABZ three-phase high-speed counting module, 24 V
Electrical parameters	
Input channel	2
Interface type	Terminal type
Encoder power supply terminal	2 x 24 VDC
Encoder input	ABZ three-phase, 24 V
Input type	Source type, leakage type, and push-pull type can be set
Counting mode	B pulse mode, B pulse+A direction mode,A+B mode, A+B+Z mode
Counting frequency	Max.500 kHz
Encoder frequency doubling mode	x1 / x2 / x4
Count data length	32 bits
Counting range	-2147483648~2147483647
Count comparison function	support
Forward and reverse counting	support
Counting alarm function	support
Filtering function	0-10 ms can be set
IO channel	Input: 2 PNP/NPN, Output: 2 PNP
General data	
Protection level	IP20
Installation method	Standard 35 mm DIN rail installation
temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C
relative humidity	95 %, non condensing
Module weight	70g
Module size (H x W x D)	79 mm x 15 mm x 110 mm
Wiring diagram	



A1	1	2	A2
B1	2	3	B2
Z1	3	4	Z2
24V	4	5	24V
GND	5	6	GND
PE	6	7	PE
DI1	7	8	DI2
DO1	8	9	DO2
+24V	9		0V

FX20 series IP20 distributed I/O - IO Link Master Station Module

Ordering data	
Product model	FX20-LKM-BD00
Description	4-channel IO Link master station, compatible with ClassA and ClassB
Electrical parameters	
Working voltage	24 VDC
System power supply Us current	4 A
Auxiliary power supply Ua current	4 A
IO Link Channel Count	4
IO Link type	IO Link Master ClassA / ClassB
IO Link version	IO Link V 1.1.2
IO Link communication speed	COM1 (4.8 kbps), COM2 (38.4 kbps), COM3 (230.4 kbps)
Input channel	Max. 8
Input power supply current	Pin1:200 mA per channel
Input signal type	PNP type sensors, travel switches, dry contacts, etc. (SIO mode)
Input filtering delay	1.6 ms
Number of output channels	Max. 8
Output current	Pin2: Max. 2 A; Pin4: Max. 100 mA
Type of output	Indicator lights, micro solenoid valves, etc. (SIO mode)
General data	
Protection level	IP20
Installation method	Standard 35 mm DIN rail installation
Temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C
Relative humidity	95 %, non condensing
Module weight	128 g
Module size (H x W x D)	79 mm x 28 mm x 110 mm
Wiring diagram	

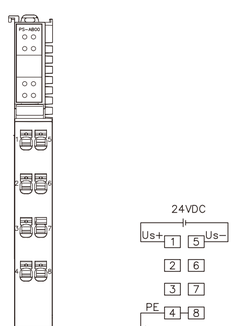
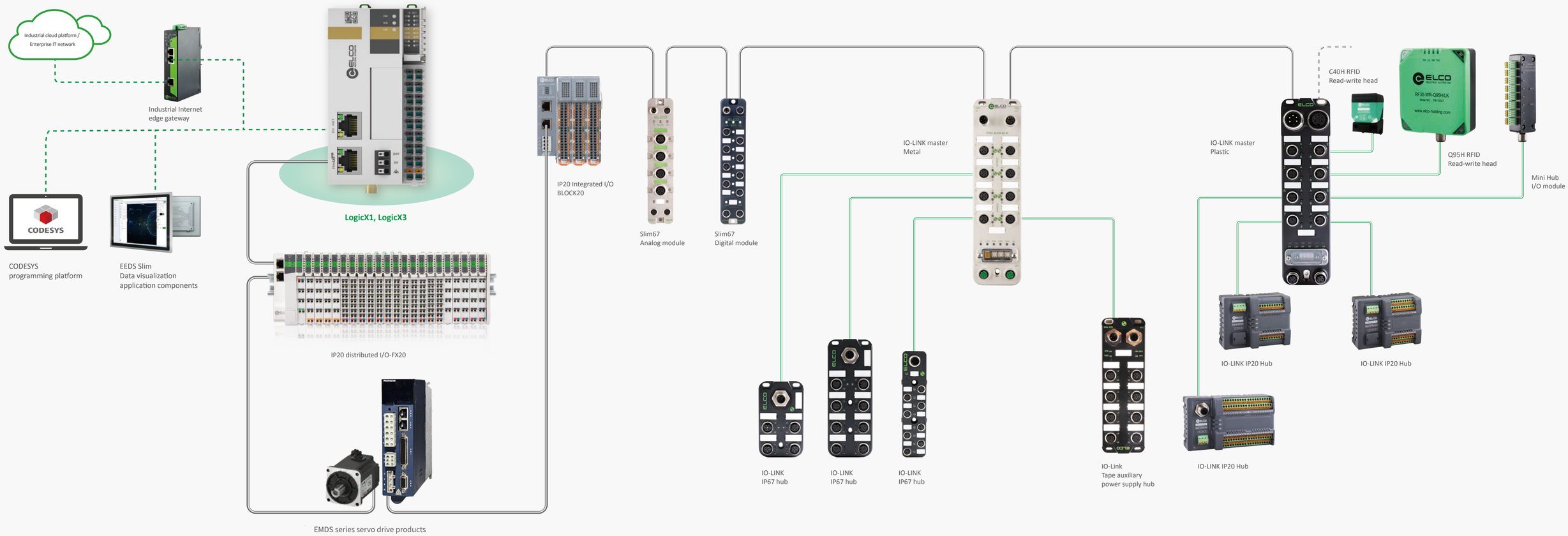


L1+	1	2	L2+
CQ1	2	2	CQ2
GND	3	3	GND
Ua+	4	4	Ua+
Ua−	5	5	Ua−
n.c	6	6	n.c
n.c	7	7	n.c
n.c	8	8	n.c
Ua+	9	9	Ua−

L3+	1	1	L4+
CQ3	2	2	CQ4
GND	3	3	GND
Ua+	4	4	Ua+
Ua−	5	5	Ua−
n.c	6	6	n.c
n.c	7	7	n.c
n.c	8	8	n.c
Us+	9	9	Us−

IP20 distributed I/O - auxiliary power module

Order	
Model	FX20-PS-AB00
Description	Power auxiliary module, 5 V
Electrical parameters	
Input voltage	24 VDC
Input voltage range	DC 20.4 V-DC 28.8 V
Output voltage	5 V
Output current	Max 3 A
Power protection	Over current and reverse polarity protection
Efficiency	95 %
General data	
Protection grade	IP20
Installation	Standard 35 mm DIN rail installation
Temperature range	Working temperature: -5 °C to 60 °C, storage temperature: -25 °C to 70 °C
Relative humidity	95%, non condensation
Module weight	66 g
Module size (H × W × D)	79 mm × 15mm × 110mm
Wiring diagram	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