



GX/GXC Block I/O





GX Series IP67 Compact Modules B

■ Features

- Protection degree upto IP67- ensures most successful application on-site
- Fully sealed design- gives excellent vibration resistance feature
- Smart and compact housing- makes installation much more easier



EtherNet/IP®



EtherCAT®

DeviceNet®



■ Communication

- Support for multiple open bus protocol
- IP67 connector design, safety and reliability
- High integration communication kernel, high-speed & stability



CC-Link IE

DI



DO



■ Signal

- Support various kinds of signals
- Various signal combination function, suitable for complex signal transmission requirements
- Configurable modules for Input/Output

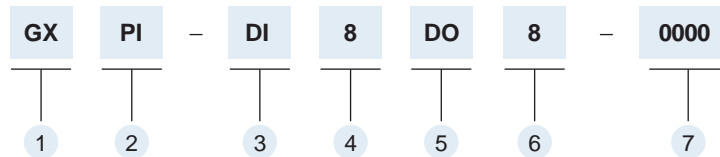
DIO



■ Connection

- Perfect connectors product line ensures
- Pre-moulding - T type - Field wirable connectors
- Various kinds of connectors, fully satisfy your different requirement

GX series modules type codes

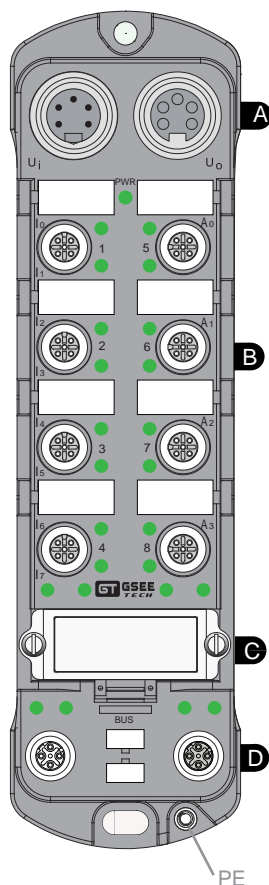


- 1 Product series
- 2 Communication protocol
 DP: PROFIBUS-DP
 DN: DeviceNET
 PI: PROFINET
 EN: MODBUS TCP/IP
 EI: EtherNET/IP
 EC: EtherCAT
 CL: CC-Link
 CI: CC-Link IE
- 3 Signal types
 DI : Digital input
 DO : Digital output
 DIO : DI/DO configured
 DXC : DI/DO configured
 (Limit port)

- 4 Number of channels
 8 : 8 channels
 16 : 16 channels
- 5 Signal types
 DI : Digital input
 DO : Digital output
 DIO : DI/DO configured
 DXC : DI/DO configured
 (Limit port)
- 6 Number of channels
 8 : 8 channels
 16 : 16 channels

- 7 Special codes
 - 0000 - ④
 - ①
 - ②
 - ③
 - ①
- ① 0 : PNP
 1 : NPN
 4 : PNP
 (Power connector: 4PIN ,
 Except the DeviceNet protocol)
 5 : NPN
 (Power connector: 4PIN ,
 Except the DeviceNet protocol)
- ② 0 : 0.5A
 1 : 2A

GX series module structure



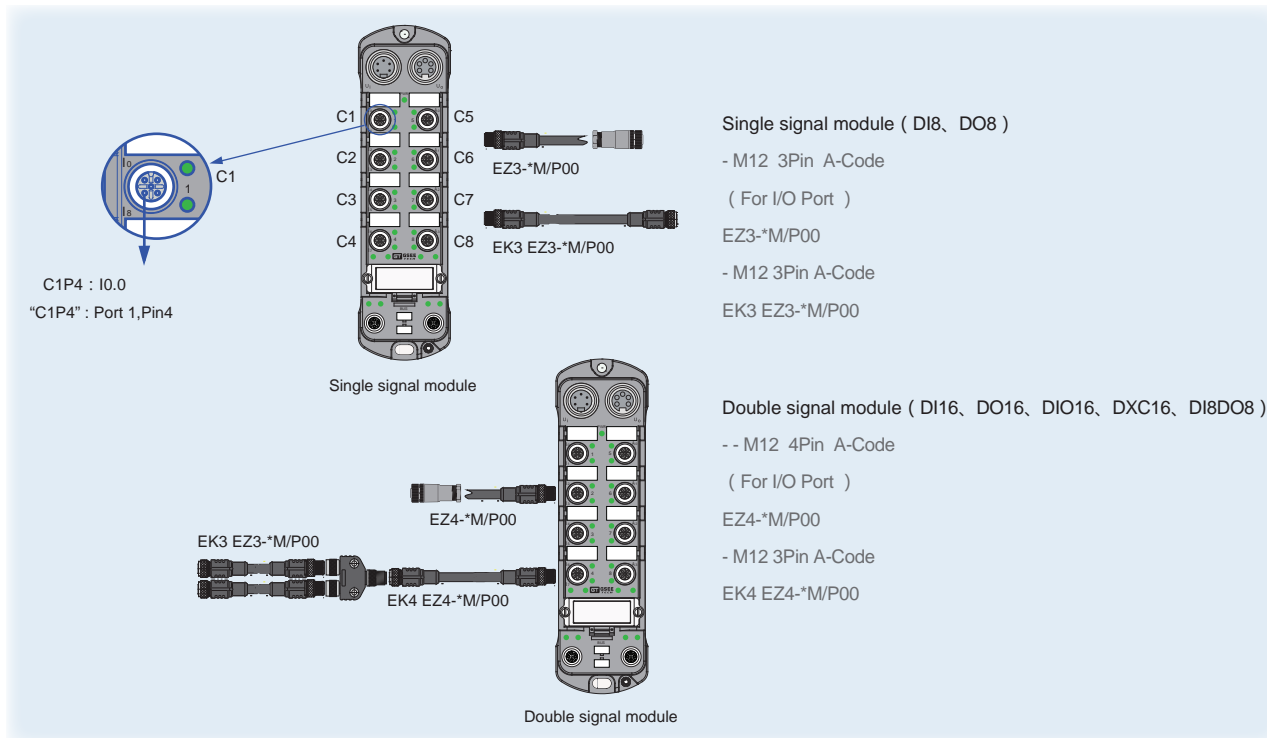
- A The power interface
 - Each module has two 7/8" power supply interface male and female
 - Each power supply interface including the system power supply and load power supply
 - Pre-moulding/Field wirable connectors

- B The I/O interface
 - Each module has 8 hole M12 A code I/O interface
 - Each M12 interface includes power supply and signal channel
 - Pre-moulding/Field wirable connectors

- C Station address dial switch
 - Set the Modules address

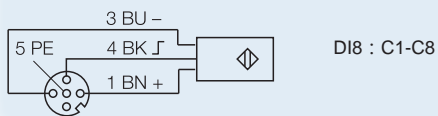
- D The bus interface
 - Ethernet modules, each module has 2 M12 D code bus intherface (2 male)
 - PROFIBUS-DP,each module has 2 M12 B code bus intherface (1 male,1 female)
 - DeviceNET,each module has 2 M12 A code bus intherface (1 male,1 female)
 - Pre-moulding/Field wirable connectors

GX series modules address distribution and wiring mode

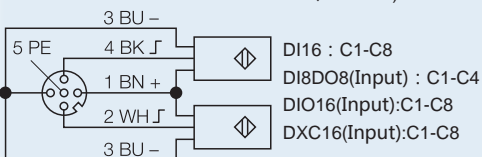


Digital signal address and wiring

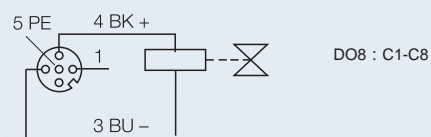
M12 x 1 Single signal module (DI8)



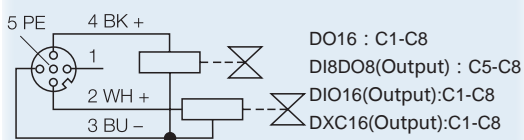
M12 x 1 Double signal module(DI16、DI8DO8、DIO16、DXC16)



M12 x 1 Single signal module (DO8)



M12 x 1 Double signal module((DO16、DI8DO8、DIO16、DXC16)



Channel Address	Type	DI8	DI16	DO8	DO16	DI8DO8	DIO16	DXC16
bit00		C1P4	C1P4	-	-	C1P4	C1P4	C1P4
bit01		C2P4	C2P4	-	-	C1P2	C2P4	C1P2
bit02		C3P4	C3P4	-	-	C2P4	C3P4	C2P4
bit03		C4P4	C4P4	-	-	C2P2	C4P4	C2P2
bit04		C5P4	C5P4	-	-	C3P4	C5P4	C3P4
bit05		C6P4	C6P4	-	-	C3P2	C6P4	C3P2
bit06		C7P4	C7P4	-	-	C4P4	C7P4	C4P4
bit07		C8P4	C8P4	-	-	C4P2	C8P4	C4P2
bit10		-	C1P2	-	-	-	C1P2	C5P4
bit11		-	C2P2	-	-	-	C2P2	C5P2
bit12		-	C3P2	-	-	-	C3P2	C6P4
bit13		-	C4P2	-	-	-	C4P2	C6P2
bit14		-	C5P2	-	-	-	C5P2	C7P4
bit15		-	C6P2	-	-	-	C6P2	C7P2
bit16		-	C7P2	-	-	-	C7P2	C8P4
bit17		-	C8P2	-	-	-	C8P2	C8P2
bit00		-	-	C1P4	C1P4	C5P4	C1P4	C1P4
bit01		-	-	C2P4	C2P4	C5P2	C2P4	C1P2
bit02		-	-	C3P4	C3P4	C6P4	C3P4	C2P4
bit03		-	-	C4P4	C4P4	C6P2	C4P4	C2P2
bit04		-	-	C5P4	C5P4	C7P4	C5P4	C3P4
bit05		-	-	C6P4	C6P4	C7P2	C6P4	C3P2
bit06		-	-	C7P4	C7P4	C8P4	C7P4	C4P4
bit07		-	-	C8P4	C8P4	C8P2	C8P4	C4P2
bit10		-	-	-	C1P2	-	C1P2	C5P4
bit11		-	-	-	C2P2	-	C2P2	C5P2
bit12		-	-	-	C3P2	-	C3P2	C6P4
bit13		-	-	-	C4P2	-	C4P2	C6P2
bit14		-	-	-	C5P2	-	C5P2	C7P4
bit15		-	-	-	C6P2	-	C6P2	C7P2
bit16		-	-	-	C7P2	-	C7P2	C8P4
bit17		-	-	-	C8P2	-	C8P2	C8P2

- PROFINET Slave module
- Support MRP
- Support FSU
- Integrated Ethernet switch function
- Short-circuit\overload\reverse polarity protection
- IP67 Protection degree



Digital input module

Ordering data	GXPI-DI8-1000	GXPI-DI16-1000	GXPI-DI8	GXPI-DI16
Number of input	8	16	8	16
Connection	M12, A-coded			
Input				
Input signal	3-wire sensors ,npn , or mes. switches		3-wire sensors ,pnp , or mes. switches	
Input voltage	0VDC		18...30 VDC	
Supply current	<200 mA, Short circuit protection			
Switching threshold	IEC 61131-2			
Input delay	2.5 ms			
Switching frequency	≤ 250 Hz			
Max.input current	6 mA			

* I/O wiring diagram and address distribution refer to B04

Digital output module

Ordering data	GXPI-DO8	GXPI-DO16	GXPI-DO8-0100
Number of output	8	16	8
Connection	M12, A-coded		
Output			
Output voltage	18...30 VDC		
Output current /channel	0.5 A, Short circuit protection		2 A, Short circuit protection
Load type	resistive, inductive, lamp load		
Simultaneity factor	1		
Switching frequency	≤ 250 Hz		
Max. output current	0.7A/ch		2A/ch
Electrical isolation	galvanic isolation against the bus		

* I/O wiring diagram and address distribution refer to B04

Digital input and output combined module

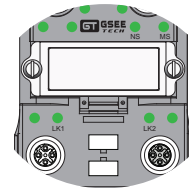
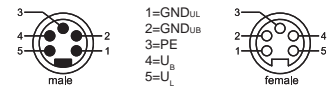
Ordering data	GXPI-DI8DO8	GXPI-DIO16	GXPI-DXC16	GXPI-DI8DO8-0100
Number of input	8	16	16	8
Number of output	8	16	16	8
Connection	M12, A-coded			
Input				
Input signal	3-wire sensors ,pnp , or mes. switches			
Input voltage	18...30 VDC			
Supply current	<200 mA, Short circuit protection			
Switching threshold	IEC 61131-2			
Input delay	2.5 ms			
Switching frequency	≤ 250 Hz			
Max.input current	6 mA			
Output				
Output voltage	18...30 VDC			
Output current /channel	0.5 A, Short circuit protection		2A,Short circuit protection	
Load type	resistive, inductive, lamp load			
Simultaneity factor	1			
Switching frequency	≤ 250 Hz			
Max. output current	0.7A/ch		2A/ch	
Electrical isolation	galvanic isolation against the bus			

* I/O wiring diagram and address distribution refer to B04(DIO16 system power GND and load power GND are not insulation, DXC16 system power GND and load power GND are completely insulation (c1-c4 from UB, c5-c8 from UL))

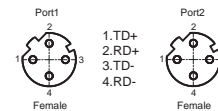
Basic Data

PROFINET Interface	
Protocol	PROFINET IO
Connection	7/8"; 5-Pin; U _B Max.9A, U _L Max.9A
Supply voltage	24VDC (18...30VDC)
Operating current	< 150 mA
Physical layer	Ethernet
Transmission rate	10/100 Mbps,full duplex
Connection	2 x M12 (D-Code) , 4PIN ,female, Integrated switch function
Characteristic	IRT、MRP、LLDP/DCP、PTCP
Alarm function	Diagnose alarm, process alarm, insert connector alarm
Minimum cycle time	250 μs
FSU	< 500ms
LED-indication	
PWR	Green: OK Red: U _L load power failure
MS	Green: Module OK Red: Major fault (Exception-state, Fatal error)
NS	Green: Online (RUN) Green, flashing: Online (STOP) Red: Internal error Red,flashing: Station name/ IP address/ Configuration error
LINK	Green: Ethernet link established,communication present Green, flashing: Ethernet link established,no communication present OFF: NO link, no communication present
I/O	Green: Input or output active Red: Fault

U_B: System Power, U_L: Load Power
7/8" Power supply

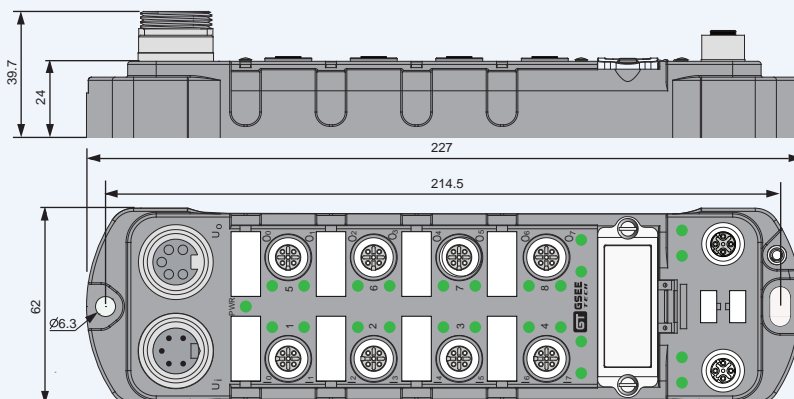


PROFINET PORT1/2



General Data

Protection degree	IP67
Operating temperature	-30 ~ 70°C
Storage temperature	-40 ~ 85°C
Relative humidity	5 ~95% without condensation
Application environment	Acc.to EN-61131
Housing material	Glass fiber enhanced nylon(PA6)
Housing colour	Black
Vibration test	IEC60068-2-6
Impact test	IEC60068-2-27
Free fall test	IEC60068-2-32
EMC	IEC61000-4-2, -3, -4
Certification	CE
Installation	installation wall mount
Installation hole specification	2↑Φ6.3mm
Weight	515g
Dimensions (LxWxH)	227mm x 62mm x 24mm



- EtherNET/IP Slave module
- Support DLR
- Support QC
- Integrated Ethernet switch function
- Short-circuit\overload\reverse polarity protection
- IP67 Protection degree



EtherNet/IP™

GX

Digital input module

Ordering data	GXEI-DI8-1000	GXEI-DI16-1000	GXEI-DI8	GXEI-DI16	GXEI-DI16-4000
Number of input	8	16	8	16	16
Connection	M12, A-coded				
Input					
Input signal	3-wire sensors ,npn , or mes. switches		3-wire sensors ,pnp , or mes. switches		
Input voltage	0VDC		18...30 VDC		
supply current	<200 mA, Short circuit protection				
Switching threshold	IEC 61131-2				
Input delay	2.5 ms				
Switching frequency	≤ 250 Hz				
Max.input current	6 mA				

* I/O wiring diagram and address distribution refer to B04

Digital output module

Ordering data	GXEI-DO8	GXEI-DO16	GXEI-DO16-4000	GXEI-DO8-0100
Number of output	8	16	16	8
Connection	M12, A-coded			
Output				
Output voltage	18...30 VDC			
Output current /channel	0.5 A, Short circuit protection		2 A, Short circuit protection	
Load type	resistive, inductive, lamp load			
Simultaneity factor	1			
Switching frequency	≤ 250 Hz			
Max. output current	0.7A/ch		2A/ch	
Electrical isolation	galvanic isolation against the bus			

* I/O wiring diagram and address distribution refer to B04

Digital input and output combined module

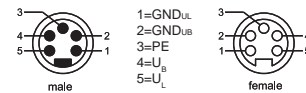
Ordering data	GXEI-DI8DO8	GXEI-DI8DO8-4000	GXEI-DIO16	GXEI-DXC16	GXEI-DI8DO8-0100
Number of input	8	8	16	16	8
Number of output	8	8	16	16	8
Connection	M12, A-coded				
Input					
Input signal	3-wire sensors ,npn , or mes. switches				
Input voltage	18...30 VDC				
Supply current	<200 mA, Short circuit protection				
Switching threshold	IEC 61131-2				
Input delay	2.5 ms				
Switching frequency	≤ 250 Hz				
Max.input current	6 mA				
Output					
Output voltage	18...30 VDC				
Output current /channel	0.5 A, Short circuit protection			2A,Short circuit protection	
Load type	resistive, inductive, lamp load				
Simultaneity factor	1				
Switching frequency	≤ 250 Hz				
Max. output current	0.7A/ch			2A/ch	
Electrical isolation	galvanic isolation against the bus				

* I/O wiring diagram and address distribution refer to B04(DIO16 system power GND and load power GND are not insulation, DXC16 system power GND and load power GND are completely insulation (c1-c4 from UB, c5-c8 from UL))

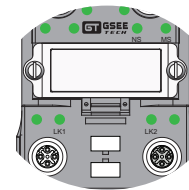
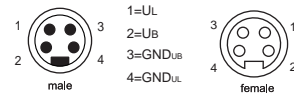
Basic Data

ETHERNET/IP Interface	
Protocol	ETHERNET/IP
Connection	7/8"; 4/5-Pin; UB Max.9A, ULMax.9A
Supply voltage	24VDC (18...30VDC)
Operating current	< 150 mA
Physical layer	Ethernet
Transmission rate	10/100 Mbps
Connection	2 x M12, 4Pin ,D-code ,female, Integrated switch function
QC	< 500ms
DLR	Support
IP address/DHCP	Through software Setting or rotating switch
LED-indication	
PWR	Green: OK Red: UL load power failure
NS	OFF: No power or no IP address Green: Online, one or more connections established (CIP Class 1 or 3) Green, flashing: Online, no connections established Red: Duplicate IP address, FATAL error Red, flashing: One or more connections timed out (CIP Class 1 or 3)
MS	OFF: No power Green: Controlled by a Scanner in Run state Green, flashing: Not configured, or Scanner in Idle state Red: Major fault (EXCEPTION-state, FATAL error etc.) Red, flashing: stored parameters differ from currently used parameters.
LINK	OFF: No link, no activity Green/Yellow: Link (100 Mbit/s) /Link (10 Mbit/s) established Green/Yellow,flashing: Activity (100 Mbit/s)/(10 Mbit/s)
I/O	Green: Input or output active Red: Fault

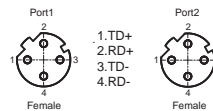
Ub: System Power , UL: Load Power
7/8" 5Pin Power supply



Ub: System Power , UL: Load Power
7/8" 4Pin Power supply(-4000)



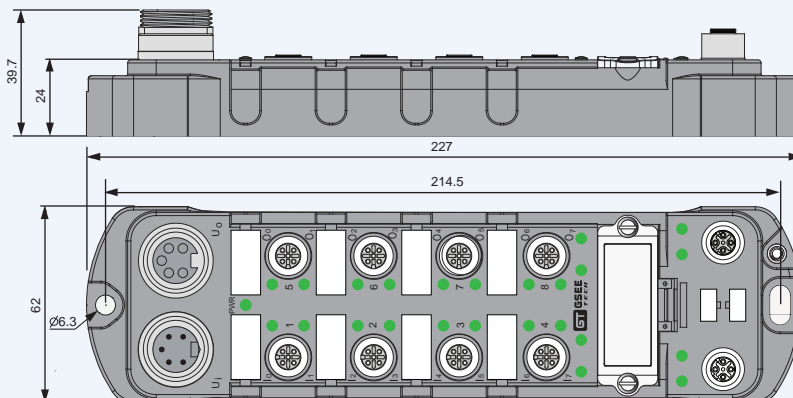
EtherNet/IP PORT1/2



x100 x10 x1	0	- DHCP	
	1 ... 254	- IP Address :192.168.0.xxx	
IP Address	255	- DHCP	

General Data

Protection degree	IP67
Operating temperature	-30 ~ 70°C
Storage temperature	-40 ~ 85°C
Relative humidity	5 ~95% without condensation
Application environment	Acc.to EN-61131
Housing material	Glass fiber enhanced nylon(PA6)
Housing colour	Black
Vibration test	IEC60068-2-6
Impact test	IEC60068-2-27
Free fall test	IEC60068-2-32
EMC	IEC61000-4-2, -3, -4
Certification	CE
Installation	installation wall mount
Installation hole specification	2 ↑Φ6.3mm
Weight	515g
Dimensions (LxWxH)	227mm x 62mm x 24mm



- EtherCAT Slave module
- 2xM12, 100BASE-TX
- Support distributed clock function
- System power supply and load power supply independently
- Short-circuit\overload\reverse polarity protection
- IP67 Protection degree



GX

Digital input module

Ordering data	GXEC-DI8-1000	GXEC-DI16-1000	GXEC-DI8	GXEC-DI16
Number of input	8	16	8	16
Connection	M12, A-coded			
Input				
Input signal	3-wire sensors ,npn , or mes. switches		3-wire sensors ,npn , or mes. switches	
Input voltage	0VDC		18...30 VDC	
Supply current	<200 mA, Short circuit protection			
Switching threshold	IEC 61131-2			
Input delay	25µs			
Switching frequency	≤ 250 Hz			
Max.input current	6 mA			

* I/O wiring diagram and address distribution refer to B04

Digital output module

Ordering data	GXEC-DO8	GXEC-DO16	GXEC-DO8-0100
Number of output	8	16	8
Connection	M12, A-coded		
Output			
Output voltage	18...30 VDC		
Output current /channel	0.5 A, Short circuit protection		2 A, Short circuit protection
Load type	resistive, inductive, lamp load		
Simultaneity factor	1		
Switching frequency	≤ 250 Hz		
Max. output current	0.7A/ch		2A/ch
Electrical isolation	galvanic isolation against the bus		

* I/O wiring diagram and address distribution refer to B04

Digital input and output combined module

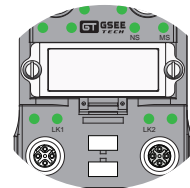
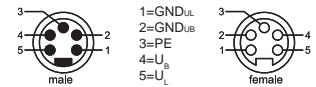
Ordering data	GXEC-DI8DO8	GXEC-DIO16	GXEC-DXC16
Number of input	8	16	16
Number of output	8	16	16
Connection	M12, A-coded		
Input			
Input signal	3-wire sensors ,pnp , or mes. switches		
Input voltage	18...30 VDC		
Supply current	<200 mA, Short circuit protection		
Switching threshold	IEC 61131-2		
Input delay	25µs		
Switching frequency	≤ 250 Hz		
Max.input current	6 mA		
Output			
Output voltage	18...30 VDC		
Output current /channel	0.5 A, Short circuit protection		
Load type	resistive, inductive, lamp load		
Simultaneity factor	1		
Switching frequency	≤ 250 Hz		
Max. output current	0.7A/ch		
Electrical isolation	galvanic isolation against the bus		

* I/O wiring diagram and address distribution refer to B04(DIO16 system power GND and load power GND are not insulation, DXC16 system power GND and load power GND are completely insulation (c1-c4 from UB, c5-c8 from UL))

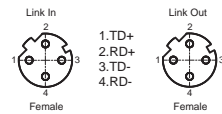
Basic Data

ETHERCAT Interface	
Protocol	EtherCAT
Connection	7/8"; 5Pin; UB Max.9A, ULMax.9A
Supply voltage	24VDC (18...30VDC)
Operating current	< 150 mA
Physical layer	Ethernet
Transmission rate	100 Mbps
Connection	2 x M12, 4Pin ,D-code,female
DC Function	Support
EtherCAT Function	Modular description, CoE emergency message, automatic mapping
LED-indication	
PWR	Green: OK Red : UL load power failure
RUN	Off :Non-working status Green :Operational status
LINK	Off : No link Flashing green:Link OK, communication established Green:Link OK, no communication
I/O	Green: Input or output active Red:Fault

Ub: System Power , UL: Load Power
7/8" 5Pin Power supply

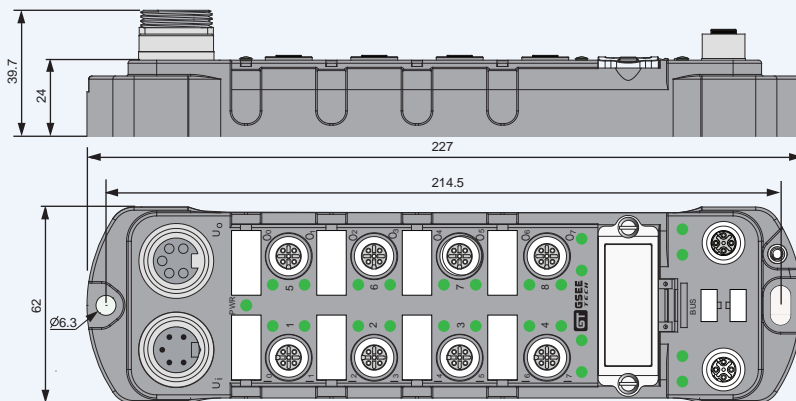


EtherCAT PORT1/2



General Data

Protection degree	IP67
Operating temperature	-30 ~ 70°C
Storage temperature	-40 ~ 85°C
Relative humidity	5 ~95% without condensation
Application environment	Acc.to EN-61131
Housing material	Glass fiber enhanced nylon(PA6)
Housing colour	Black
Vibration test	IEC60068-2-6
Impact test	IEC60068-2-27
Free fall test	IEC60068-2-32
EMC	IEC61000-4-2, -3, -4
Certification	CE
Installation	installation wall mount
Installation hole specification	2个Φ6.3mm
Weight	515g
Dimensions (LxWxH)	227mm x 62mm x 24mm



- MODBUS TCP/IP Slave module
- Open protocol, TCP port 502
- Integrated Ethernet switch function
- System power supply and load power supply independently
- Short-circuit\overload\reverse polarity protection
- IP67 Protection degree



Digital input module

Ordering data	GXEN-DI8-1000	GXEN-DI16-1000	GXEN-DI8	GXEN-DI16
Number of input	8	16	8	16
Connection	M12, A-coded			
Input				
Input signal	3-wire sensors ,npn , or mes. switches		3-wire sensors ,pnp , or mes. switches	
Input voltage	0VDC		18...30 VDC	
supply current	<200 mA, Short circuit protection			
Switching threshold	IEC 61131-2			
Input delay	2.5 ms			
Switching frequency	≤ 250 Hz			
Max.input current	6 mA			

* I/O wiring diagram and address distribution refer to B04

Digital output module

Ordering data	GXEN-DO8	GXEN-DO16	GXEN-DO8-0100
Number of output	8	16	8
Connection	M12, A-coded		
Output			
Output voltage	18...30 VDC		
Output current /channel	0.5 A, Short circuit protection		2 A, Short circuit protection
Load type	resistive, inductive, lamp load		
Simultaneity factor	1		
Switching frequency	≤ 250 Hz		
Max. output current	0.7A/ch		2A/ch
Electrical isolation	galvanic isolation against the bus		

* I/O wiring diagram and address distribution refer to B04

Digital input and output combined module

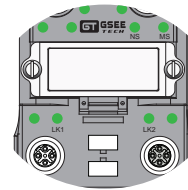
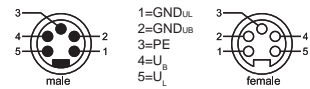
Ordering data	GXEN-DI8DO8	GXEN-DIO16	GXEN-DXC16	GXEN-DI8DO8-0100
Number of input	8	16	16	8
Number of output	8	16	16	8
Connection	M12, A-coded			
Input				
Input signal	3-wire sensors ,npn , or mes. switches			
Input voltage	18...30 VDC			
Supply current	<200 mA, Short circuit protection			
Switching threshold	IEC 61131-2			
Input delay	2.5 ms			
Switching frequency	≤ 250 Hz			
Max.input current	6 mA			
Output				
Output voltage	18...30 VDC			
Output current /channel	0.5 A, Short circuit protection		2A, Short circuit protection	
Load type	resistive, inductive, lamp load			
Simultaneity factor	1			
Switching frequency	≤ 250 Hz			
Max. output current	0.7A/ch		2A/ch	
Electrical isolation	galvanic isolation against the bus			

* I/O wiring diagram and address distribution refer to B04(DIO16 system power GND and load power GND are not insulation, DXC16 system power GND and load power GND are completely insulation (c1-c4 from UB, c5-c8 from UL))

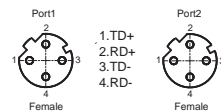
Basic Data

Modbus TCP/IP Interface	
Protocol	Modbus TCP/IP
Connection	7/8"; 4/5-Pin; UB Max.9A, ULMax.9A
Supply voltage	24VDC (18...30VDC)
Operating current	< 150 mA
Physical layer	Ethernet
Transmission rate	10/100 Mbps
Connection	2 x M12, 4Pin ,D-code ,female, Integrated switch function
Address	Static IP, BOOTP, DHCP
Function Code	1, 2, 3, 4, 5, 6, 15, 23
LED-indication	
PWR	Green: OK Red: UL load power failure
NS	OFF: No IP Address Green: Receive at least one MODBUS message Green, blinking: Wait for the first MODBUS message Red: IP address conflict detected, FATAL ERROR Red, blinking: Connection timeout
MS	OFF: System power supply exception Green: Normal operation Red: Major fault, FATAL ERROR Red, blinking: Minor fault
LINK	OFF: No link, no activity Green/Yellow: Link (100 Mbit/s) established/Link (10 Mbit/s) established Green/Yellow blinking: Activity (100 Mbit/s)/ (10 Mbit/s)
I/O	Green: Input or output active Red: Fault

Ub: System Power , Ul: Load Power
7/8" 5Pin Power supply



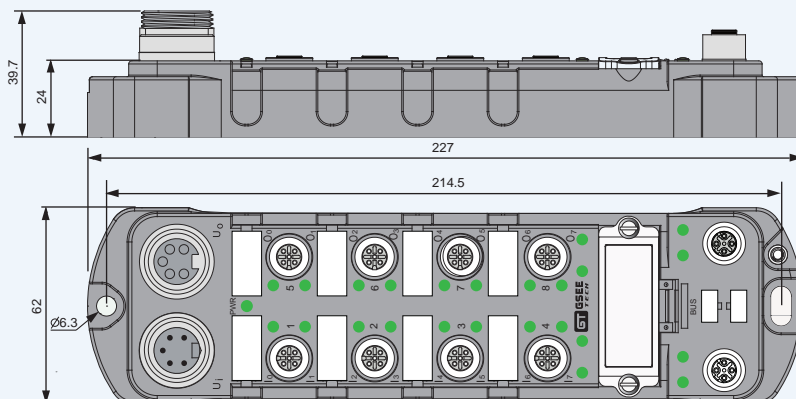
Modbus TCP/IP PORT1/2



x100 x10 x1	0	- DHCP	
	1 ... 254	- IP Address :192.168.0.xxx	
IP Address	255	- DHCP	

General Data

Protection degree	IP67
Operating temperature	-30 ~ 70°C
Storage temperature	-40 ~ 85°C
Relative humidity	5 ~95% without condensation
Application environment	Acc.to EN-61131
Housing material	Glass fiber enhanced nylon(PA6)
Housing colour	Black
Vibration test	IEC60068-2-6
Impact test	IEC60068-2-27
Free fall test	IEC60068-2-32
EMC	IEC61000-4-2, -3, -4
Certification	CE
Installation	installation wall mount
Installation hole specification	2 x Φ6.3mm
Weight	515g
Dimensions (LxWxH)	227mm x 62mm x 24mm



- PROBUS-DP Slave module
- Support DP-V0
- System power supply and load power supply independently
- Short-circuit\overload\reverse polarity protection
- IP67 Protection degree



Digital input module

Ordering data	GXDP-DI8-1000	GXDP-DI16-1000	GXDP-DI8	GXDP-DI16
Number of input	8	16	8	16
Connection	M12, A-coded			
Input				
Input signal	3-wire sensors ,npn , or mes. switches		3-wire sensors ,pnp , or mes. switches	
Input voltage	0VDC		18...30 VDC	
Supply current	<200 mA, Short circuit protection			
Switching threshold	IEC 61131-2			
Input delay	2.5 ms			
Switching frequency	≤ 250 Hz			
Max.input current	6 mA			

* I/O wiring diagram and address distribution refer to B04

Digital output module

Ordering data	GXDP-DO8	GXDP-DO16	GXDP-DO8-0100
Number of output	8	16	8
Connection	M12, A-coded		
Output			
Output voltage	18...30 VDC		
Output current /channel	0.5 A, Short circuit protection		2 A, Short circuit protection
Load type	resistive, inductive, lamp load		
Simultaneity factor	1		
Switching frequency	≤ 250 Hz		
Max. output current	0.7A/ch		2A/ch
Electrical isolation	galvanic isolation against the bus		

* I/O wiring diagram and address distribution refer to B04

Digital input and output combined module

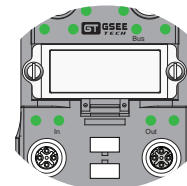
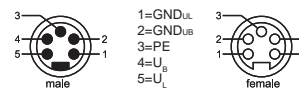
Ordering data	GXDP-DI8DO8	GXDP-DIO16	GXDP-DXC16
Number of input	8	16	16
Number of output	8	16	16
Connection	M12, A-coded		
Input			
Input signal	3-wire sensors ,pnp , or mes. switches		
Input voltage	18...30 VDC		
Supply current	<200 mA, Short circuit protection		
Switching threshold	IEC 61131-2		
Input delay	2.5 ms		
Switching frequency	≤ 250 Hz		
Max.input current	6 mA		
Output			
Output voltage	18...30 VDC		
Output current /channel	0.5 A, Short circuit protection		
Load type	resistive, inductive, lamp load		
Simultaneity factor	1		
Switching frequency	≤ 250 Hz		
Max. output current	0.7A/ch		
Electrical isolation	galvanic isolation against the bus		

* I/O wiring diagram and address distribution refer to B04(DIO16 system power GND and load power GND are not insulation, DXC16 system power GND and load power GND are completely insulation (c1-c4 from UB, c5-c8 from UL))

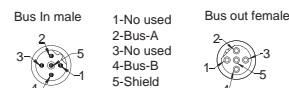
Basic Data

PROFIBUS-DP Interface	
Protocol	PROFIBUS DP
Connection	7/8"; 5-Pin; U _B Max.9A, U _L Max.9A
Supply voltage	24VDC (18...30VDC)
Operating current	< 150 mA
Physical layer	RS485
Transmission rate	9.6 Kbaud ~ 12 Mbaud
Connection	2 x M12 (B-Code)
Communication distance	1200M ~ 100M /(according to baud rate)
Address	0 ... 99
LED-indication	
PWR	Green : OK
	Red : U _L failure
BUS	Green : OK
	Red : PLC stop or communication failure
I/O	Green : Input or output active
	Red : Fault

U_B: System Power , U_L: Load Power
7/8" 5Pin Power supply



PROFIBUS-DP Port

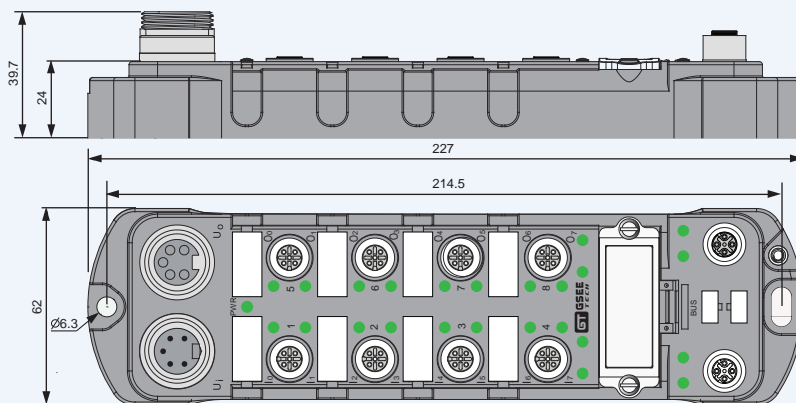


Station address : 0 ... 99



General Data

Protection degree	IP67
Operating temperature	-30 ~ 70°C
Storage temperature	-40 ~ 85°C
Relative humidity	5 ~95% without condensation
Application environment	Acc.to EN-61131
Housing material	Glass fiber enhanced nylon(PA6)
Housing colour	Black
Vibration test	IEC60068-2-6
Impact test	IEC60068-2-27
Free fall test	IEC60068-2-32
EMC	IEC61000-4-2, -3, -4
Certification	CE
Installation	installation wall mount
Installation hole specification	2↑Φ6.3mm
Weight	515g
Dimensions (LxWxH)	227mm x 62mm x 24mm



- DeviceNETSlave module
- Transmission Technology: CAN
- System power supply and load power supply independently
- Short-circuit\overload\reverse polarity protection
- IP67 Protection degree


DeviceNet

GX

Digital input module

Ordering data	GXDN-DI8-1000	GXDN-DI16-1000	GXDN-DI8	GXDN-DI16
Number of input	8	16	8	16
Connection	M12, A-coded			
Input				
Input signal	3-wire sensors ,npn , or mes. switches		3-wire sensors ,pnp , or mes. switches	
Input voltage	0VDC		18...30 VDC	
Supply current	<200 mA, Short circuit protection			
Switching threshold	IEC 61131-2			
Input delay	2.5 ms			
Switching frequency	≤ 250 Hz			
Max.input current	6 mA			

* I/O wiring diagram and address distribution refer to B04

Digital output module

Ordering data	GXDN-DO8	GXDN-DO16	GXDN-DO8-0100
Number of output	8	16	8
Connection	M12, A-coded		
Output			
Output voltage	18...30 VDC		
Output current /channel	0.5 A, Short circuit protection		2 A, Short circuit protection
Load type	resistive, inductive, lamp load		
Simultaneity factor	1		
Switching frequency	≤ 250 Hz		
Max. output current	0.7A/ch		2A/ch
Electrical isolation	galvanic isolation against the bus		

* I/O wiring diagram and address distribution refer to B04

Digital input and output combined module

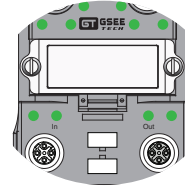
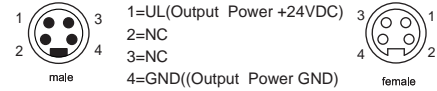
Ordering data	GXDN-DI8DO8	GXDN-DIO16
Number of input	8	16
Number of output	8	16
Connection	M12, A-coded	
Input		
Input signal	3-wire sensors ,pnp , or mes. switches	
Input voltage	18...30 VDC	
Supply current	<200 mA, Short circuit protection	
Switching threshold	IEC 61131-2	
Input delay	2.5 ms	
Switching frequency	≤ 250 Hz	
Max.input current	6 mA	
Output		
Output voltage	18...30 VDC	
Output current /channel	0.5 A, Short circuit protection	
Load type	resistive, inductive, lamp load	
Simultaneity factor	1	
Switching frequency	≤ 250 Hz	
Max. output current	0.7A/ch	
Electrical isolation	galvanic isolation against the bus	

* I/O wiring diagram and address distribution refer to B04

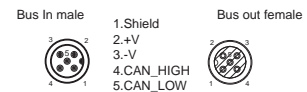
Basic Data

DeviceNET Interface	
Protocol	DeviceNET
Connection	7/8"; 4PIN; UL Max.9A
Supply voltage	24VDC (18...30VDC)
Operating current	< 150 mA
Physical layer	CAN
Transmission rate	125/250/500 kbps,Auto
Connection	2 x M12 (A-Code) , 5Pin
Address range	0 ... 63
Address set	Rotation switches
Termination resistors	External
LED-indication	
PWR	Green : OK Red : UL failure
NS	OFF : Not online / No network power Green : On-line, one or more connections are established Green, flashing : Online, but countless links Red : Network failure Red, flashing : One or more connections timed-out Alternating Red/Green : self-inspection
MS	OFF : Not operating Green : OK Green, flashing : Configuration error Red : Module failure (unrecoverable) Red, flashing : Module failure (recoverable) Alternating Red/Green : self-inspection
I/O	Green : Input or output active Red : Fault

UL: Load Power
7/8" 4Pin Power supply



DeviceNet Port

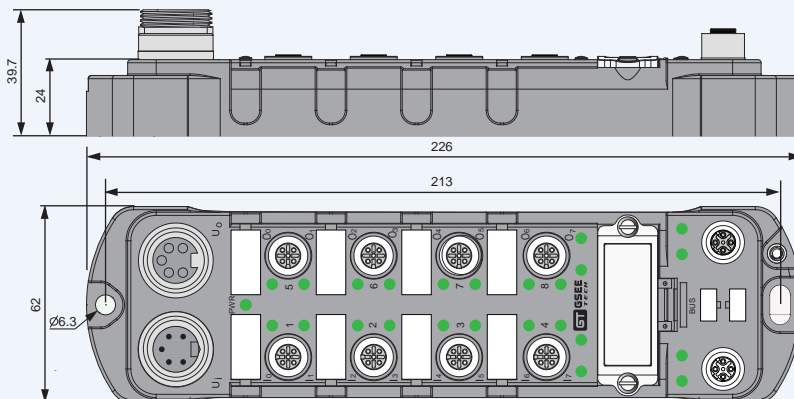


Station address : 0 ... 64 Communication rate setting



General Data

Protection degree	IP67
Operating temperature	-30 ~ 70°C
Storage temperature	-40 ~ 85°C
Relative humidity	5 ~95% without condensation
Application environment	Acc.to EN-61131
Housing material	Glass fiber enhanced nylon(PA6)
Housing colour	Black
Vibration test	IEC60068-2-6
Impact test	IEC60068-2-27
Free fall test	IEC60068-2-32
EMC	IEC61000-4-2, -3, -4
Certification	CE
Installation	installation wall mount
Installation hole specification	2 x Φ6.3mm
Weight	515g
Dimensions (LxWxH)	226mm x 62mm x 24mm



- CC-LINK Slave module
- Open fieldbus
- Automatic refresh function, reservation station function, RAS function
- System power supply and load power supply independently
- Short-circuit\overload\reverse polarity protection
- IP67 Protection degree



Digital input module

Ordering data	GXCL-DI16-1000	GXCL-DI16
Number of input	16	16
Connection	M12, A-coded	
Input		
Input signal	3-wire sensors ,npn , or mes. switches	3-wire sensors ,pnp , or mes. switches
Input voltage	0VDC	18...30 VDC
Supply current	<200 mA, Short circuit protection	
Switching threshold	IEC 61131-2	
Input delay	2.5 ms	
Switching frequency	≤ 250 Hz	
Max.input current	6 mA	

* I/O wiring diagram and address distribution refer to B04

Digital output module

Ordering data	GXCL-DO8	GXCL-DO16	GXCL-DO16-0400	GXCL-DO8-0100
Number of output	8	16	16	8
Connection	M12, A-coded			
Output				
Output voltage	18...30 VDC		0V,NPN	
Output current /channel	0.5 A, Short circuit protection			2 A, Short circuit protection
Load type	resistive, inductive, lamp load			
Simultaneity factor	1			
Switching frequency	≤ 250 Hz			
Max. output current	0.7A/ch			2A/ch
Electrical isolation	galvanic isolation against the bus			

* I/O wiring diagram and address distribution refer to B04

Digital input and output combined module

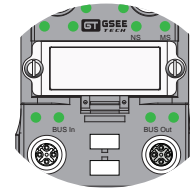
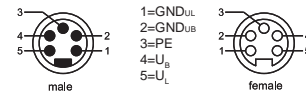
Ordering data	GXCL-DIO16	GXCL-DIO16-1400
Number of input	16	
Number of output	16	
Connection	M12, A-coded	
Input		
Input signal	3-wire sensors ,pnp , or mes. switches	3-wire sensors ,NPN , or mes. switches
Input voltage	18...30 VDC	0V, VDC
Supply current	<200 mA, Short circuit protection	
Switching threshold	IEC 61131-2	
Input delay	2.5 ms	
Switching frequency	≤ 250 Hz	
Max.input current	6 mA	
Output		
Output voltage	18...30 VDC	0V,NPN
Output current /channel	0.5 A, Short circuit protection	
Load type	resistive, inductive, lamp load	
Simultaneity factor	1	
Switching frequency	≤ 250 Hz	
Max. output current	0.7A/ch	
Electrical isolation	galvanic isolation against the bus	

* I/O wiring diagram and address distribution refer to B04

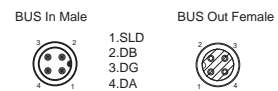
Basic Data

CC-LINK Interface	
Protocol	CC-LINK
Connection	7/8", 5-Pin, U _B Max.9A, U _L Max.9A
Supply voltage	24VDC (18...30VDC)
Operating current	< 150 mA
Physical layer	RS485
Transmission rate	156Kbps~10Mbps
Communication distance	Max.1200m
Connection	2 x M12 4PIN,A-code,Male/Female
Address range	1~64
Station type	Remote I/O station
Uccupy stations	1station
Station Address	Rotation switches
LED-indication	
PWR	Green : OK Red : U _L failure
RUN	Green: network connections are established
ERR	Red: communication failure
I/O	Green : Input or output active Red : Fault

U_B: System Power, U_L: Load Power
7/8" 5Pin Power supply



CC-LINK Port

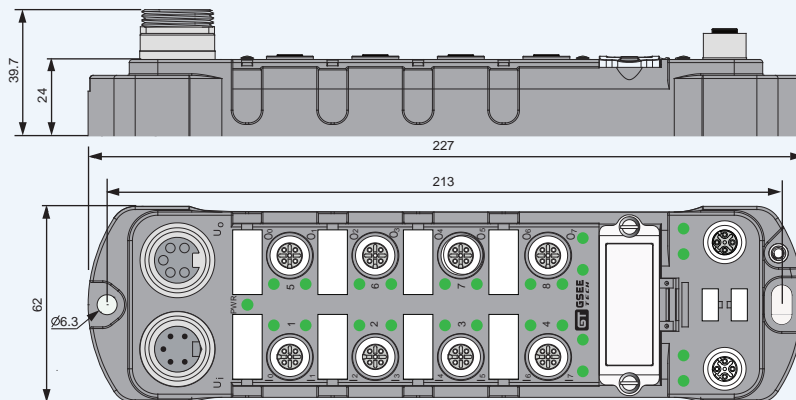


Station address : 0 ... 64 Communication rate setting



General Data

Protection degree	IP67
Operating temperature	-30 ~ 70°C
Storage temperature	-40 ~ 85°C
Relative humidity	5 ~95% without condensation
Application environment	Acc.to EN-61131
Housing material	Glass fiber enhanced nylon(PA6)
Housing colour	Black
Vibration test	IEC60068-2-6
Impact test	IEC60068-2-27
Free fall test	IEC60068-2-32
EMC	IEC61000-4-2, -3, -4
Certification	CE
Installation	installation wall mount
Installation hole specification	2 x Φ6.3mm
Weight	515g
Dimensions (LxWxH)	227mm x 62mm x 24mm



- CC-LINK IE Field Module
- Communication speed:1Gbps
- Network topology: Line, star, line and star, ring
- System power supply and load power supply independently
- Short-circuit\overload\reverse polarity protection
- IP67 Protection degree



CC-Link IE

GX

Digital input module

Ordering data	GXCI-DI16-1000	GXCI-DI16
Number of input	16	16
Connection	M12, A-coded	
Input		
Input signal	3-wire sensors ,npn , or mes. switches	3-wire sensors ,pnp , or mes. switches
Input voltage	0VDC	18...30 VDC
Supply current	<200 mA, Short circuit protection	
Switching threshold	IEC 61131-2	
Input delay	2.5 ms	
Switching frequency	≤ 250 Hz	
Max.input current	6 mA	

* I/O wiring diagram and address distribution refer to B04

Digital output module

Ordering data	GXCI-DO16
Number of output	16
Connection	M12, A-coded
Output	
Output voltage	18...30 VDC
Output current /channel	0.5 A, Short circuit protection
Load type	resistive, inductive, lamp load
Simultaneity factor	1
Switching frequency	≤ 250 Hz
Max. output current	0.7A/ch
Electrical isolation	galvanic isolation against the bus

* I/O wiring diagram and address distribution refer to B04

Digital input and output combined module

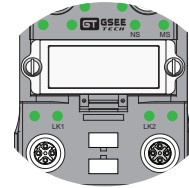
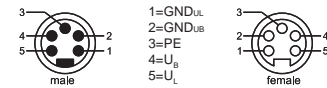
Ordering data	GXCI-DIO16
Number of input	16
Number of output	16
Connection	M12, A-coded
Input	
Input signal	3-wire sensors ,pnp , or mes. switches
Input voltage	18...30 VDC
Supply current	<200 mA, Short circuit protection
Switching threshold	IEC 61131-2
Input delay	2.5 ms
Switching frequency	≤ 250 Hz
Max.input current	6 mA
Output	
Output voltage	18...30 VDC
Output current /channel	0.5 A, Short circuit protection
Load type	resistive, inductive, lamp load
Simultaneity factor	1
Switching frequency	≤ 250 Hz
Max. output current	0.7A/ch
Electrical isolation	galvanic isolation against the bus

* I/O wiring diagram and address distribution refer to B04

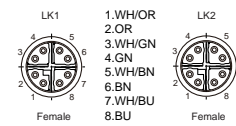
Basic Data

CC-LINK IE Field	
Protocol	CC-LINK IE Field
Connection	7/8"; 5-Pin; UB Max.9A, UL Max.9A
Supply voltage	24VDC (18...30VDC)
Operating current	< 150 mA
Physical layer	Ethernet
Transmission rate	1 Gbps
Connection	2 x M12 ,8PIN, Female, X-CODE
Network topology	Line, star, line and star, ring
Station type	Intelligent Device Station
Station number	1~120
Network number	1-239
LED-Indication	
PWR	Green: OK
	Red : UL failure
RUN	Green: Module is OK
	Red: Fatal Event(If RUN and ERR turn red)
ERR	Red: Error/fatal(If RUN and ERR turn red)
I/O	Green: Input or output active
	Red: Fault

Ub: System Power , UL: Load Power
7/8" 5Pin Power supply

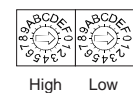
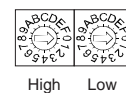


CC-LINK IE LK1/2



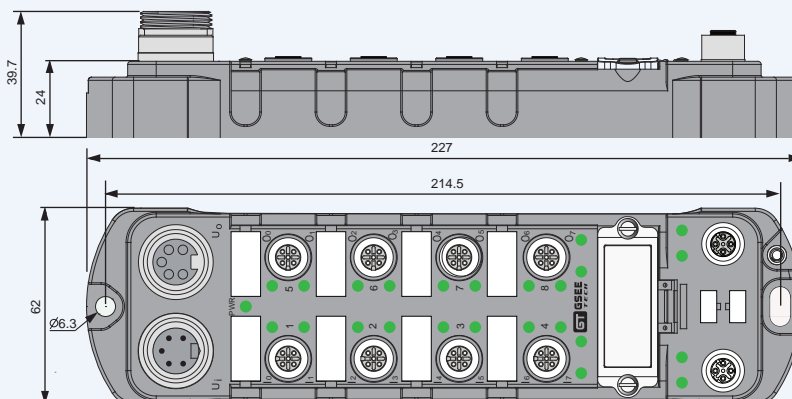
Network Number

Station Number

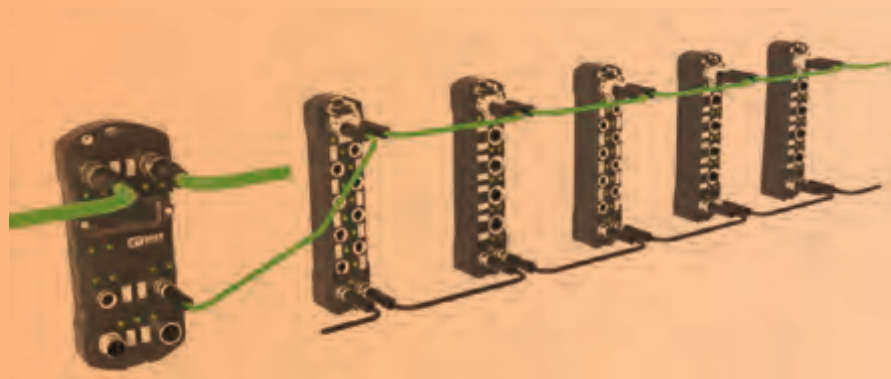


General Data

Protection degree	IP67
Operating temperature	-30 ~ 70°C
Storage temperature	-40 ~ 85°C
Relative humidity	5 ~95% without condensation
Application environment	Acc.to EN-61131
Housing material	Glass fiber enhanced nylon(PA6)
Housing colour	Black
Vibration test	IEC60068-2-6
Impact test	IEC60068-2-27
Free fall test	IEC60068-2-32
EMC	IEC61000-4-2, -3, -4
Certification	CE
Installation	installation wall mount
Installation hole specification	2 x Φ6.3mm
Weight	515g
Dimensions (LxWxH)	227mm x 62mm x 24mm





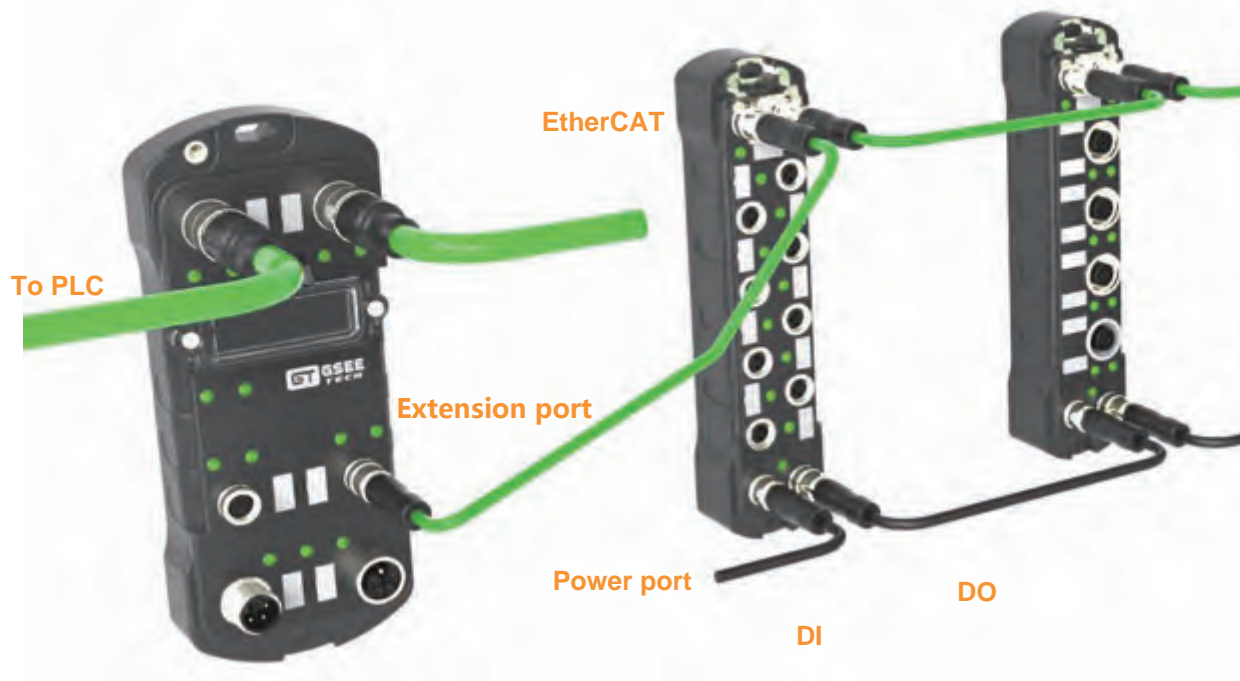


GX/GXC IP67 Extension Modules C

System overview

GSEE-TECH launched GXC/GX series IP67 protection degree extension field bus system, as an innovative field bus system, this product is more concentrated than traditional. The control mode has higher flexibility. It consists of coupler and expansion module, and coupler support PROFINET, ETHERNET/IP, MODBUS TCP, PROFIBUS-DP, DEVICENET and other protocol, the expansion module supports digital, analog, thermal resistance, thermocouple and other signal types. High Performance, modular design, compact structure, durable, high protection level, suitable for a variety of applications.

GX



System Characteristics

- One branch, can connect more I/O modules, up to 32
- The extended distance between modules is 10 meters
- Communication and power isolation
- On line diagnosis of modules and channels
- LED display module and channel state
- Channel protection

PROFI
NET

Modbus

EtherNet/IP

System Composition

- Coupler: support multiple bus protocol
- Expansion module: support digital input and output, analog input and output
- Subnet expansion cable: connection between coupler and extension module, expansion module and expansion module
- Sub network power cable: power supply for expansion module System advantage



GX

Applicable Industry

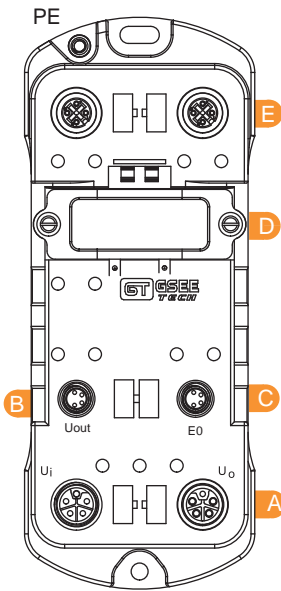
- Automobile industry
- Metallurgical Industry
- Logistics industry
- Machine tool industry
- New energy industry
- Packaging machinery industry
- Food and beverage industry
- Other automation applications

DeviceNet

System advantage

- IP67 high protection degree is suitable for various environments
- Compact design, small size, save space
- More flexible and easy to expand
- Simplify the routing of sensors and actuators
- Reduce the cost of cable
- Save the space in the machine or the control cabinet

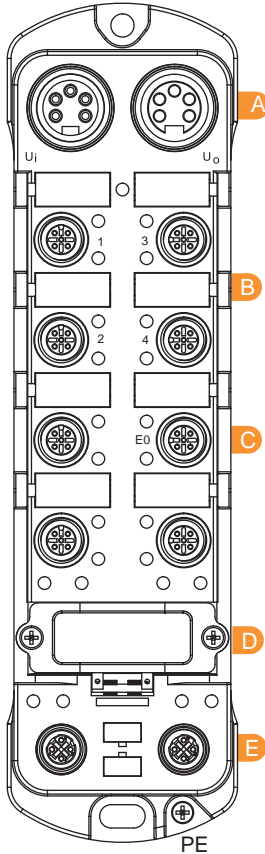
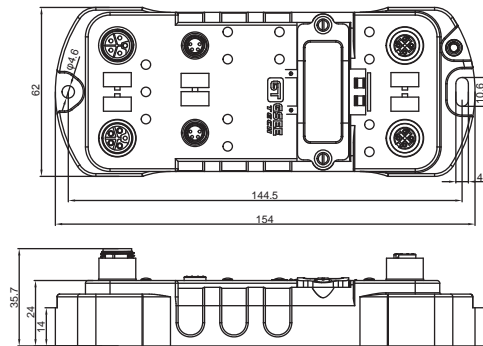
PROFI[®]
BUS



GXC Series coupler port definition

- A The power port
- B M8 Power output port
- C The Extended port (E0)
- D Address setting
- E The BUS port

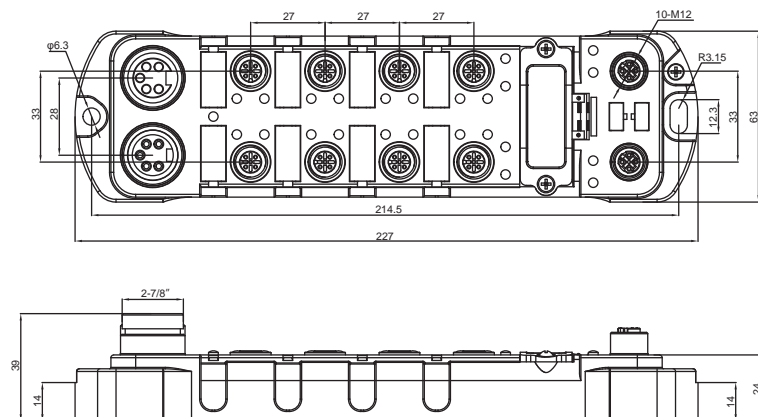
Dimensions of the GXC Series coupler



GX Series coupler port definition

- A The power port
- B The I/O port(C1-C4)
- C The Extended port (E0)
- D Address setting
- E The BUS port

Dimensions of the GX Series coupler



GX/GXC quick selection

Category	Description	Item
Coupler GXC	PROFINET Coupler EtherNET/IP Coupler Modbus TCP/IP Coupler Profibus-DP Coupler DeviceNET Coupler	GXCPI-EC GXCEI-EC GXCEN-EC GXCDP-EC GXCDN-EC
Coupler GX	PROFINET Coupler (DIO8) EtherNET/IP Coupler (DIO8) Modbus TCP/IP Coupler (DIO8) Profibus-DP Coupler (DIO8) DeviceNET Coupler (DIO8)	GXPI-EC GXEI-EC GXEN-EC GXDP-EC GXDN-EC
Digital input extension module (EtherCAT protocol module)□	DI8, PNP, 4*M12 DI8, NPN, 4*M12 DI8, PNP, 8*M8 DI8, NPN, 8*M8	GXEC-DI8S GXEC-DI8S-N GXEC-DI8S-M8 GXEC-DI8S-M8-N
Digital output extension module (EtherCAT protocol module)□	DO8, 0.5A, 4*M12,PNP DO8, 0.5A, 4*M12,NPN DO8, 2A, 4*M12 DO8, 0.5A, 8*M8,PNP DO8, 0.5A, 8*M8,NPN DO8, 2A, 8*M8	GXEC-DO8S GXEC-DO8S-N GXEC-DO8S-H GXEC-DO8S-M8 GXEC-DO8S-M8-N GXEC-DO8S-M8-H
Digital input and output module (EtherCAT protocol module)□	DIO8,PNP,0.5A,4*M12 DIO8,NPN,0.5A,4*M12	GXEC-DIO8S GXEC-DIO8S-N
Analog input extension module (EtherCAT protocol module)□	AI4, current, 4*M12 AI4, voltage, 4*M12 AI4, current/voltage, 4*M12 AI4, RTD, 4*M12 AI4, TC, 4*M12 AI4, RTD/TC, 4*M12	GXEC-AI4S-I GXEC-AI4S-U GXEC-AI4S-I/U GXEC-AI4S-RTD GXEC-AI4S-TC GXEC-AI4S-R/T
Analog Output extension module (EtherCAT protocol module)□	AO4, current, 4*M12 AO4, voltage, 4*M12 AO4, current/voltage, 4*M12	GXEC-AO4S-I GXEC-AO4S-U GXEC-AO4S-I/U

GXC PROFINET Coupler

- PROFINET Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- Support MRP,Integrated Ethernet switch function
- IP67 Protection degree



Basic Data

Communication port	
Protocol	PROFINET
Connection	2 x M12,4PIN,Female,D-code, Integrate switch function
Physical layer	Ethernet
Transmission speed	10/100Mbps,Full duplex
Features	IRT, MRP, DCP
Alarm function	Acc. to PROFINET alarm handling
Min. period time	250μsec.
IRT bridge delay	<3μsec.

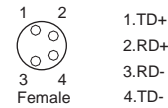
Power port	
Power Connection	2xM12,L-code 5-pin ,Male/Female, Max.16A
Uout Connection	1xM8,4-pin female, Uout4A, 24 VDC
Supply voltage	18...30VDC
Operating current	<150mA

Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M8 4-pin female
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)

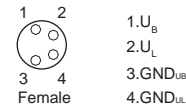
LED-indication	
PWR	Green: system power is ok
UB	Green: Uout port,system power is ok
UL	Green: Uout port,load power is ok
MS	Green: module OK, red: module Fault
NS	Green:Online (RUN); Green, flashing:Online (STOP) Red:Internal error Red,flashing:Station name/ IP address/ Configuration error
LINK	Green:Ethernet link established,communication present Green, flashing: Ethernet link established,no communication present OFF:NO link, no communication present
ES	Green: extension module is ok; Red: extended module fault
E0	Green:Physical connection OK; Green,flashing: extension communication OK

Order information	
Type	GXCPI-EC
Protocol	PROFINET Coupler
Description	IP67 Protection degree, Operating temperature:-30~70°C Dimension:154(H)x62(W)x35.7(D)mm

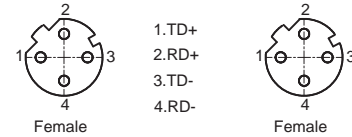
M8, 4Pin,Female, ETHERCAT Extension port E0:



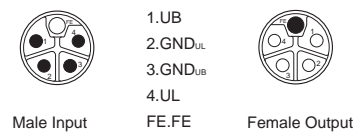
M8 4Pin,Female,Uout:(power for extension module)



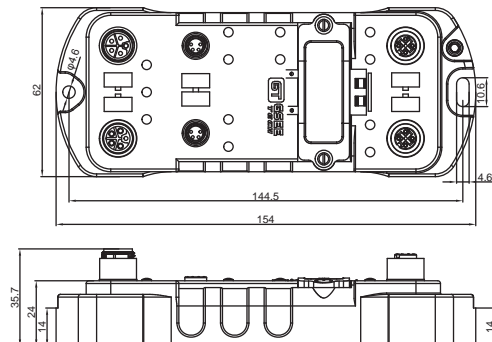
M12 D-coded Female, PROFINET Port 1/2



M12 L-CODE Power port , U_b:System power , U_l:Load power



Dimension:



- EtherNet/IP Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- Support DLR,Integrated Ethernet switch function
- IP67 Protection degree



EtherNet/IP

Basic Data

Communication port	
Protocol	EtherNET/IP
Connection	2 x M12,4PIN,Female,D-code, Integrate switch function
Physical layer	Ethernet
Transmission speed	10/100Mbps, Full Duplex
Protocol transmission	CIP Class 1 or 3
IP Address/DHCP	Through software Settings or rotating switch

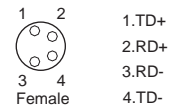
Power port	
Power Connection	2xM12,L-code 5-pin ,Male/Female, Max.16A
Uout Connection	1xM8,4-pin female, Uout,4A, 24 VDC
Supply voltage	18...30VDC
Operating current	<150mA

Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M8 4-pin female
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)

LED-indication	
PWR	Green: system power is ok
UB	Green: Uout port,system power is ok
UL	Green: Uout port,load power is ok
MS	OFF: No power; Green: Controlled by a Scanner in Run state Green, flashing: Not configured, or Scanner in Idle state Red: Major fault (EXCEPTION-state, FATAL error etc.) Red, flashing: stored parameters differ from currently used parameters
NS	OFF: No power or no IP address Green: Online, one or more connections established (CIP Class 1 or 3) Green, flashing: Online, no connections established Red: Duplicate IP address, FATAL error Red, flashing: One or more connections timed out (CIP Class 1 or 3)
LINK	Green:Ethernet link established,communication present Green, flashing: Ethernet link established,no communication present OFF:NO link, no communication present
ES	Green: extension module is ok; Red: extended module fault
E0	Green:Physical connection OK; Green,flashing: extension communication OK

Order information	
Type	GXCEI-EC
Protocol	EtherNET/IP Coupler
Description	IP67 Protection degree, Operating temperature:-30~70°C Dimension:154(H)x62(W)x35.7(D)mm

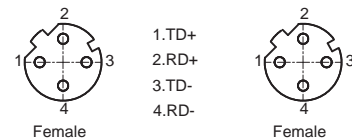
M8, 4Pin,Female, ETHERCAT Extension port E0:



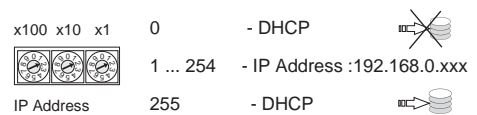
M8 4Pin,Female,Uout:(power for extension module)



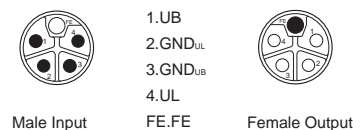
M12 D-coded Female, Ethernet/IP Port 1/2



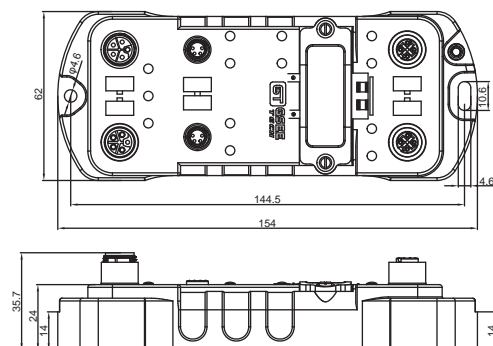
IP Address setting



M12 L-CODE Power port , U_B:System power , U_L:Load power



Dimension:



GXC MODBUS TCP Coupler

- MODBUS TCP/IP Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- Integrated Ethernet switch function
- IP67 Protection degree



Basic Data

Communication port	
Protocol	MODBUS TCP/IP
Connection	2 x M12,4PIN,Female,D-code, Integrate switch function
Physical layer	Ethernet
Transmission speed	10/100Mbps,Full duplex
IP Address	Through software Settings or rotating switch
TCP port	502
Function Code	1 , 2, 3, 4, 5, 6, 15, 16, 23

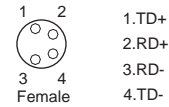
Power port	
Power Connection	2xM12,L-code 5-pin ,Male/Female, Max.16A
Uout Connection	1xM8,4-pin female, Uout4A , 24 VDC
Supply voltage	18...30VDC
Operating current	<150mA

Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M8 4-pin female
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)

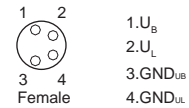
LED-indication	
PWR	Green: system power is ok
UB	Green: Uout port,system power is ok
UL	Green: Uout port,load power is ok
MS	Green : Normal operation Red : Major fault, FATAL ERROR; Red, blinking : Minor fault
NS	OFF : No IP Address Green : Receive at least one MODBUS message Green, blinking : Wait for the first MODBUS message Red : IP address conflict detected, FATAL ERROR Red, blinking : Connection timeout
LINK	OFF : No link, no activity Green/Yellow : Link (100 Mbit/s) established/Link (10 Mbit/s) established Green/Yellow blinking : Activity (100 Mbit/s)/ (10 Mbit/s)
ES	Green: extension module is ok; Red: extended module fault
E0	Green:Physical connection OK; Green,flashing: extension communication OK

Order information	
Type	GXCEN-EC
Protocol	MODBUS TCP/IP Coupler
Description	IP67 Protection degree, Operating temperature:-30~70°C Dimension:154(H)x62(W)x35.7(D)mm

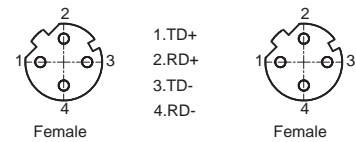
M8, 4Pin,Female, ETHERCAT Extension port E0:



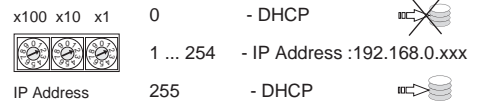
M8 4Pin,Female,Uout:(power for extension module)



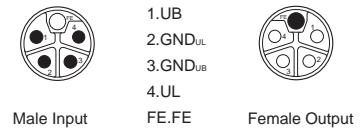
M12 D-coded Female, Modbus TCP Port 1/2



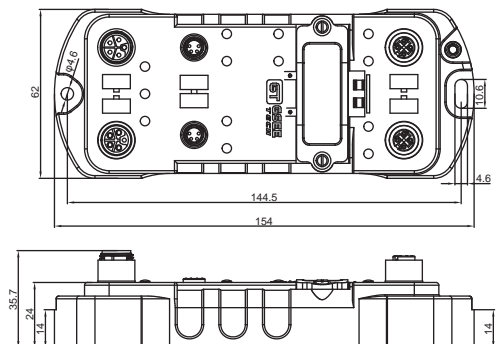
IP Address setting



M12 L-CODE Power port , U_B:System power , U_L:Load power



Dimension:



- PROFIBUS-DP Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- Support DP-V1
- IP67 Protection degree



Basic Data

Communication port	
Protocol	PROFIBUS-DP
Connection	2 x M12 ,5PIN , Male/female,B-code
Physical layer	RS485
Transmission rate	9.6 Kbaud ~ 12 Mbaud
Communication distance	1200M ~ 100M
Address range	0 ... 99
Address setting	rotating switch

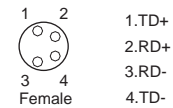
Power port	
Power Connection	2xM12,L-code 5-pin ,Male/Female, Max.16A
Uout Connection	1xM8,4-pin female, Uout4A, 24 VDC
Supply voltage	18...30VDC
Operating current	<150mA

Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M8 4-pin female
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)

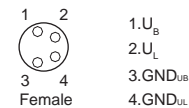
LED-indication	
PWR	Green: system power is ok
UB	Green: Uout port,system power is ok
UL	Green: Uout port,load power is ok
BUS	Green : OK Red : PLC stop or communication failure
ES	Green: extension module is ok; Red: extended module fault
E0	Green:Physical connection OK; Green,flashing: extension communication OK

Order information	
Type	GXC DP-EC
Protocol	PROFIBUS-DP Coupler
Description	IP67 Protection degree , Operating temperature:-30~70°C Dimension:154(H)x62(W)x35.7(D)mm

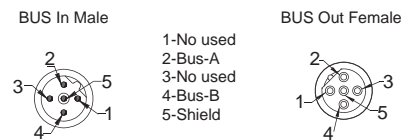
M8, 4Pin,Female, ETHERCAT Extension port E0:



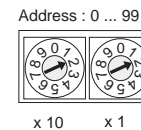
M8 4Pin,Female,Uout:(power for extension module)



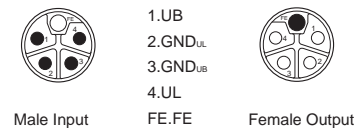
M12 A-coded, Profibus-DP Port 1/2



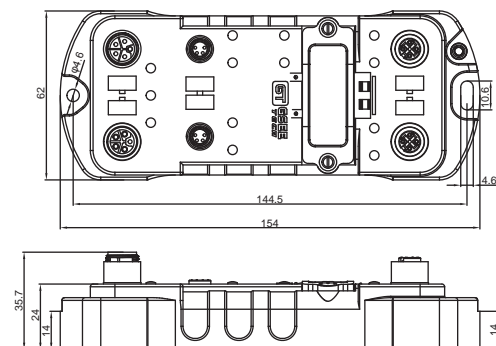
Address Setting



M12 L-CODE Power port , U_B:System power , U_L:Load power



Dimension:



- DEVICENET Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- Transmission Technology: CAN
- IP67 Protection degree



DeviceNet

Basic Data

Communication port	
Protocol	DeviceNET
Connection	2 x M12, 5PIN , Male/female , A-code
Physical layer	CAN
Transmission rate	125/250/500 kbps
Communication distance	Max.500m
Address range	0 ... 63
Address setting	Rotating switch

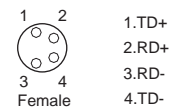
Power port	
Power Connection	2xM12,L-code 5-pin ,Male/Female, Max.16A
Uout Connection	1xM8,4-pin female, Uout4A, 24 VDC
Supply voltage	18...30VDC
Operating current	<150mA

Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M8 4-pin female
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)

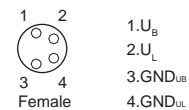
LED-indication	
PWR	Green: system power is ok
UB	Green: Uout port,system power is ok
UL	Green: Uout port,load power is ok
NS	Green: Online,one or more connections established Green, flashing : Online, no connections established Red: Network failure Red, flashing : One or more connections timed-out Alternating Red/Green : self-inspection
MS	Green:OK ; Green, flashing : Configuration error Red : Module failure (unrecoverable) Red, flashing : Module failure (recoverable) Alternating Red/Green : self-inspection
ES	Green: extension module is ok; Red: extended module fault
E0	Green:Physical connection OK; Green,flashing: extension communication OK

Order information	
Type	GXCDN-EC
Protocol	DeviceNET Coupler
Description	IP67 Protection degree, Operating temperature:-30~70°C Dimension:154(H)x62(W)x35.7(D)mm

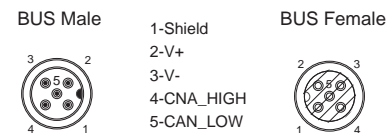
M8, 4Pin,Female, ETHERCAT Extension port E0:



M8 4Pin,Female,Uout:(power for extension module)

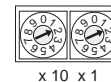


M12 A-coded, DEVICENET Port 1/2

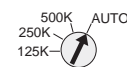


Network node address & transmission rate setting

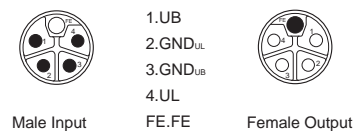
Address : 0 ... 64



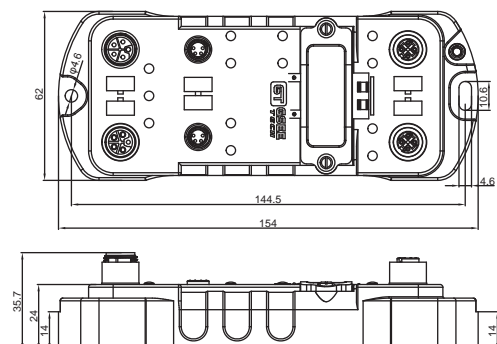
Transmission rate setting



M12 L-CODE Power port , UB: System power , UL: Load power



Dimension:



- PROFINET Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- 8 configurable Digital Input/output channels
- Support MRP,Integrated Ethernet switch function
- IP67 Protection degree



Basic Data

Communication port	
Protocol	PROFINET
Connection	2 x M12,4PIN,Female,D-code, Integrate switch function
Physical layer	Ethernet
Transmission speed	10/100Mbps,Full duplex
Features	IRT, MRP, DCP
Alarm function	Acc. to PROFINET alarm handling
Min. period time	250µsec.
IRT bridge delay	<3µsec.

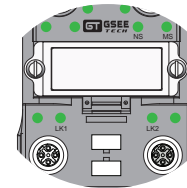
Power port	
Power supply	2 x 7/8", 5PIN,Male/Female, U _B MAX 9A, U _L MAX 9A
Supply voltage	24VDC (18...30VDC)
Operating current	<150mA

Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M12 4PIN,Female , D-code
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)

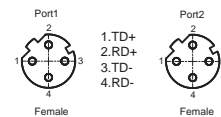
I/O channels	
Input/output channels	8 configurable Digital Input/output channels
Connection	4 x M12,5PIN,Female, A-code
Input signal	3-wire sensors ,npn , or mes. switches 18...30 VDC <200 mA, Short circuit protection
Output signal	Output voltage:18...30 VDC Output current : 0.5 A/ch , Short circuit protection

LED-indication	
PWR	Green: OK; Red: UL load power failure
MS	Green : Module OK; Red : Major fault (Exception-state , Fatal error)
NS	Green : Online (RUN) Green, flashing : Online (STOP) Red : Internal error Red,flashing : Station name/ IP address/ Configuration error
LINK	Green : Ethernet link established,communication present Green, flashing: Ethernet link established,no communication present OFF : NO link, no communication present
I/O	Green : Input or output active; Red : Fault
E0	Green : Ethernet link established ; Green flashing: Extension port communication OK

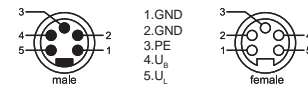
Order information	
Type	GXPI-EC
Protocol	PROFINET Coupler
Description	IP67 Protection degree , Operating temperature:-30~70°C Dimension: 227(H)x62(W)x24(D)mm



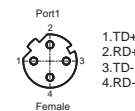
PROFINET Port 1/2



U_B: System Power , U_L: Load Power
7/8" Power supply



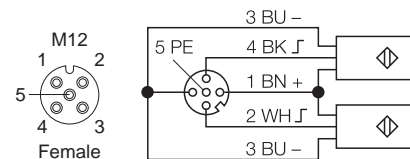
EtherCAT Extension port(E0)



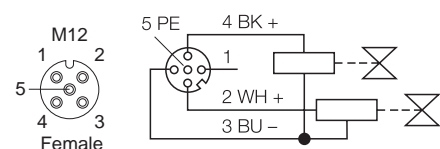
I/O address distribution table

Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
0	C1P4	C1P2	C2P4	C2P2	C3P4	C3P2	C4P4	C4P2

M12 A-coded I/O-port input signals(C1-C4)



M12 A-coded I/O-port Output signals(C1-C4)



GX Ethernet/IP Coupler

- EtherNet/IP Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- 8 configurable Digital Input/output channels
- Support DLR,Integrated Ethernet switch function
- IP67 Protection degree



EtherNet/IP

Basic Data

Communication port	
Protocol	EtherNET/IP
Connection	2 x M12,4PIN,Female,D-code, Integrate switch function
Physical layer	Ethernet
Transmission speed	10/100Mbps, Full Duplex
Protocol transmission	CIP Class 1 or 3
IP Address/DHCP	Through software Settings or rotating switch

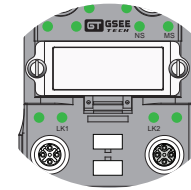
Power port	
Power supply	2 x 7/8", 5PIN,Male/Female, U _b MAX 9A, U _L MAX 9A
Supply voltage	24VDC (18...30VDC)
Operating current	<150mA

Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M12 4PIN,Female , D-code
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)

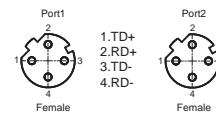
I/O channels	
Input/output channels	8 configurable Digital Input/output channels
Connection	4 x M12,5PIN,Female, A-code
Input signal	3-wire sensors ,npn , or mes. switches 18...30 VDC <200 mA, Short circuit protection
Output signal	Output voltage:18...30 VDC Output current : 0.5 A/ch , Short circuit protection

LED-indication	
PWR	Green: OK ;Red: UL load power failure
MS	Green, flashing: Not configured, or Scanner in Idle state Red: Major fault (EXCEPTION-state, FATAL error etc.) Red, flashing: stored parameters differ from currently used parameters
NS	Green: Online, one or more connections established (CIP Class 1 or 3) Green, flashing: Online, no connections established Red: Duplicate IP address, FATAL error Red, flashing: One or more connections timed out (CIP Class 1 or 3)
LINK	Green/Yellow : Link (100 Mbit/s) /Link (10 Mbit/s) established Green/Yellow,flashing : Activity (100 Mbit/s)/(10 Mbit/s) OFF : No link, no activity
I/O	Green : Input or output active; Red : Fault
E0	Green:Ethernet link established ; Green flashing: Extension communication OK

Order information	
Type	GXEI-EC
Protocol	EtherNET/IP Coupler
Description	IP67 Protection degree, Operating temperature:-30~70°C Dimension: 227(H)x62(W)x24(D)mm

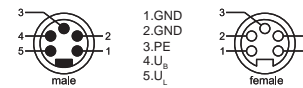


EtherNET/IP Port 1/2

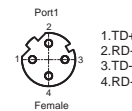


x100 x10 x1	0	- DHCP	
	1 ... 254	- IP Address :192.168.0.xxx	
IP Address	255	- DHCP	

U_b: System Power , U_L: Load Power
7/8" Power supply



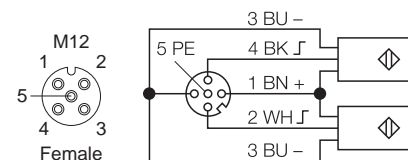
EtherCAT Extension port(E0)



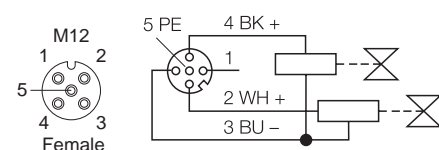
I/O address distribution table

Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
0	C1P4	C1P2	C2P4	C2P2	C3P4	C3P2	C4P4	C4P2

M12 A-coded I/O-port input signals(C1~C4)



M12 A-coded I/O-port Output signals(C1~C4)



- MODBUS TCP/IP Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- 8 configurable Digital Input/output channels
- Integrated Ethernet switch function
- IP67 Protection degree



Basic Data

Communication port	
Protocol	MODBUS TCP/IP
Connection	2 x M12,4PIN,Female,D-code, Integrate switch function
Physical layer	Ethernet
Transmission speed	10/100Mbps,Full duplex
IP Address	Through software Settings or rotating switch
TCP port	502
Function Code	1, 2, 3, 4, 5, 6, 15, 16, 23

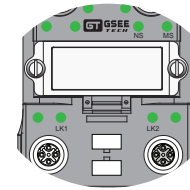
Power port	
Power supply	2 x 7/8", 5PIN,Male/Female, U _b MAX 9A, U _L MAX 9A
Supply voltage	24VDC (18...30VDC)
Operating current	<150mA

Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M12 4PIN,Female , D-code
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)

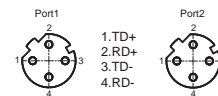
I/O channels	
Input/output channels	8 configurable Digital Input/output channels
Connection	4 x M12,5PIN,Female, A-code
Input signal	3-wire sensors ,npn , or mes. switches 18...30 VDC <200 mA, Short circuit protection
Output signal	Output voltage:18...30 VDC Output current : 0.5 A/ch , Short circuit protection

LED-indication	
PWR	Green: OK ;Red: UL load power failure
MS	Green : Normal operation Red : Major fault, FATAL ERROR; Red, blinking : Minor fault
NS	Green : Receive at least one MODBUS message Green, blinking : Wait for the first MODBUS message Red : IP address conflict detected, FATAL ERROR Red, blinking : Connection timeout
LINK	OFF : No link, no activity Green/Yellow:Link (100 Mbit/s) established/Link (10 Mbit/s) established Green/Yellow blinking : Activity (100 Mbit/s)/ (10 Mbit/s)
I/O	Green : Input or output active; Red : Fault
E0	Green:Physical connection OK; Green,flashing: extension communication OK

Order information	
Type	GXEN-EC
Protocol	MODBUS TCP/IP Coupler
Description	IP67 Protection degree, Operating temperature:-30~70°C Dimension: 227(H)x62(W)x24(D)mm

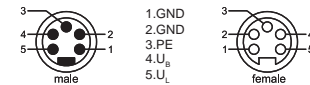


MODBUS TCP/IP Port 1/2

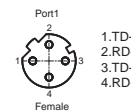


x100 x10 x1	0	- DHCP	
	1 ... 254	- IP Address :192.168.0.xxx	
IP Address	255	- DHCP	

U_b: System Power , U_L: Load Power
7/8" Power supply



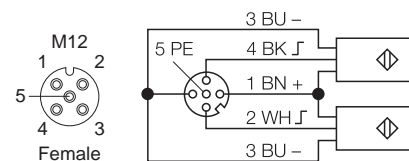
EtherCAT Extension port(E0)



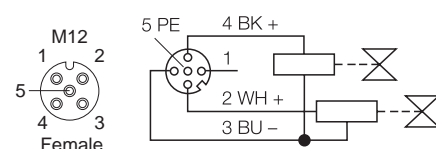
I/O address distribution table

Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
0	C1P4	C1P2	C2P4	C2P2	C3P4	C3P2	C4P4	C4P2

M12 A-coded I/O-port input signals(C1-C4)



M12 A-coded I/O-port Output signals(C1-C4)



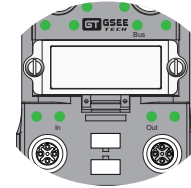
GX PROFIBUS-DP Coupler

- PROFIBUS-DP Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- 8 configurable Digital Input/output channels
- Support DP-V1
- IP67 Protection degree

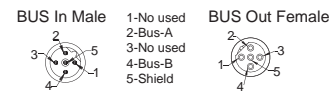


Basic Data

Communication port	
Protocol	PROFIBUS-DP
Connection	2 x M12 ,5PIN , Male/female,B-code
Physical layer	RS485
Transmission rate	9.6 Kbaud ~ 12 Mbaud
Communication distance	1200M ~ 100M
Address range	0 ... 99
Address setting	rotating switch
Power port	
Power supply	2 x 7/8" , 5PIN,Male/Female, U _B MAX 9A, U _L MAX 9A
Supply voltage	24VDC (18...30VDC)
Operating current	<150mA
Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M12 4PIN,Female , D-code
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)
I/O channels	
Input/output channels	8 configurable Digital Input/output channels
Connection	4 x M12,5PIN,Female, A-code
Input signal	3-wire sensors ,npn , or mes. switches 18...30 VDC <200 mA, Short circuit protection
Output signal	Output voltage:18...30 VDC Output current : 0.5 A/ch , Short circuit protection
LED-indication	
PWR	Green: OK ; Red: UL load power failure
BUS	Green : Module Bus Online Red : PLC stop or Module Bus Offline
I/O	Green : Input or output active Red : Fault
E0	Green : Ethernet link established ; Green flashing: Extension port communication OK
Order information	
Type	GXDP-EC
Protocol	PROFIBUS-DP Coupler
Description	IP67 Protection degree, Operating temperature:-30~70°C Dimension: 227(H)x62(W)x24(D)mm



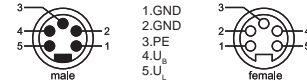
PROFIBUS-DP Port



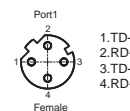
Address : 0 ... 99



U_B: System Power , U_L: Load Power
7/8" Power supply



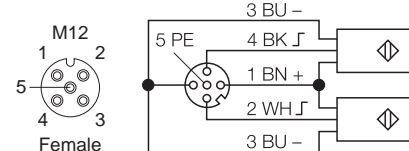
EtherCAT Extension port(E0)



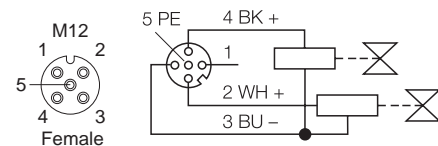
I/O address distribution table

Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
0	C1P4	C1P2	C2P4	C2P2	C3P4	C3P2	C4P4	C4P2

M12 A-coded I/O-port input signals(C1~C4)



M12 A-coded I/O-port Output signals(C1~C4)



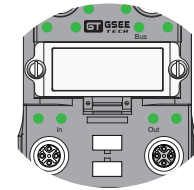
- Coupler
- Support 1 extension branch
- Extension Modules : Max.32
- 8 configurable Digital Input/output channels
- Transmission Technology: CAN
- IP67 Protection degree



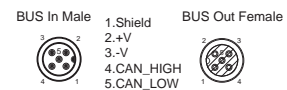
DeviceNet

Basic Data

Communication port	
Protocol	DeviceNET
Connection	2 x M12, 5PIN , Male/female , A-code
Physical layer	CAN
Transmission rate	125/250/500 kbps
Communication distance	Max.500m
Address range	0 ... 63
Address setting	Rotating switch
Power port	
Power supply	2 x 7/8" , 5PIN, Male/Female, U _B MAX 9A, U _L MAX 9A
Supply voltage	24VDC (18...30VDC)
Operating current	<150mA
Extension port(E0)	
Extension protocol	EtherCAT
Connection	1 x M12 4PIN, Female , D-code
Branch structure	1 x Extension branch
Numbers of extension	Max. 32 Modules
Extension distance	Max.10M (between two modules)
I/O channels	
Input/output channels	8 configurable Digital Input/output channels
Connection	4 x M12, 5PIN, Female, A-code
Input signal	3-wire sensors ,npn , or mes. switches 18...30 VDC <200 mA, Short circuit protection
Output signal	Output voltage:18...30 VDC Output current : 0.5 A/ch , Short circuit protection
LED-indication	
PWR	Green : OK; Red : UL load power failure
NS	Green: Online, one or more connections established Green, flashing : Online, no connections established Red: Network failure: Red, flashing : One or more connections timed-out
MS	Green:OK; Green, flashing : Configuration error Red:Module failure (unrecoverable):Red, flashing:Module failure (recoverable)
I/O	Green : Input or output active; Red : Fault
E0	Green : Ethernet link established ; Green flashing: Extension port communication OK
Order information	
Type	GXDN-EC
Protocol	DeviceNET Coupler
Description	IP67 Protection degree, Operating temperature:-30~70°C Dimension: 227(H)x62(W)x24(D)mm



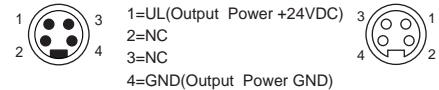
DEVICENET Port



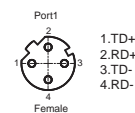
Address : 0 ... 64 Transmission rate setting



7/8" ,U_L:Load power



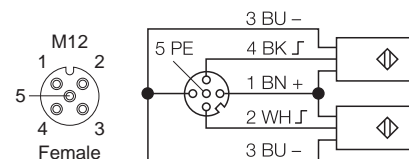
EtherCAT Extension port(E0)



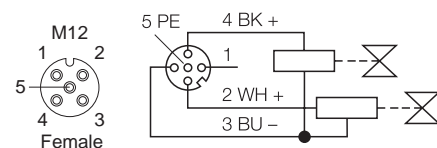
I/O address distribution table

Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
0	C1P4	C1P2	C2P4	C2P2	C3P4	C3P2	C4P4	C4P2

M12 A-coded I/O-port input signals(C1~C4)








M12 A-coded I/O-port Output signals(C1~C4)



Digital input extension module

Module information

 Extension module 8 channel Digital input (EtherCat Module)	GXEC-DI8S 4 x M12  PNP	GXEC-DI8S-N 4 x M12  NPN	GXEC-DI8S-M8 8 x M8  PNP	GXEC-DI8S-M8-N 8 x M8  NPN
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Connection

EtherCat port	2 x M8 , 4PIN,Female	2 x M8 , 4PIN,Female
Power port	1 x M8 , 4PIN,Male; 1 x M8 , 4PIN,Female	1 x M8 , 4PIN,Male; 1 x M8 , 4PIN,Female
I/O port	4 x M12 , 5PIN,Female,A-Code	8 x M8 , 3PIN,Female

Input parameter

Number of input	8channels		8channels	
Input signal	pnp , or mes. switches	npn , or mes. switches	pnp , or mes. switches	npn , or mes. switches
Input voltage	18...30 VDC	0V	18...30 VDC	0V
Operating current	<200 mA , Short circuit protection		<200 mA , Short circuit protection	
Switching threshold	IEC 61131-2		IEC 61131-2	
Input delay	25 µs		25 µs	
Switching frequency	≤250Hz		≤250Hz	

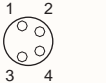
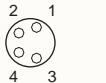


Module LED- indicator

PWR	Green : Power OK , Red : Power Fault	Green : Power OK , Red : Power Fault
LINK	Green: Physical connection OK; Green flash: EtherCat extension communication OK	Green: Physical connection OK; Green flash: EtherCat extension communication OK
RUN	Green :Operational status;Off :Non-working status	Green :Operational status;Off :Non-working status
I/O Port	Green : I/O OK , Red : I/O Fault	Green : I/O OK , Red : I/O Fault

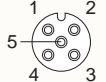

Basic Data

Rated voltage	18-30VDC	18-30VDC
Power dissipation	Max.80mA	Max.80mA
Protection degree	IP67	IP67
Operating temperature	-30°C~70°C	-30°C~70°C
Storage temperature	-40°C~85°C	-40°C~85°C

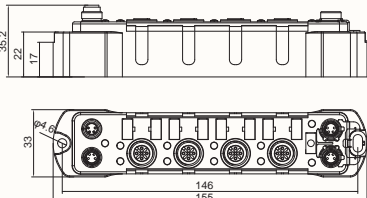
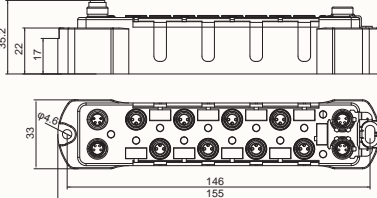
Pin Definition

Extension port & power port pin definition	EtherCAT extension port - 2 x M8 NET_In 		NET_Out 		Power port - 2 x M8 U _I Male 		U _O Female 		
	1	2	1.TD+	2	1	1	2	1.U _B	2
3	4	2.RD+	3	2	3	4	2.U _B	3	2
		3.RD-	4	3			3.GND _{UB}	4	3
		4.TD-					4.GND _{UL}		






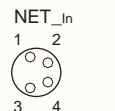
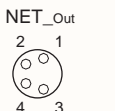
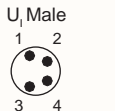
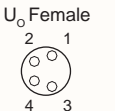
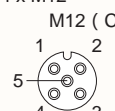

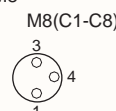

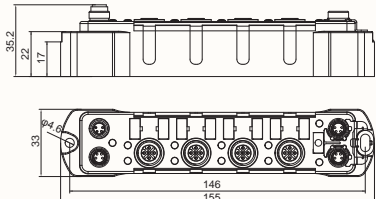
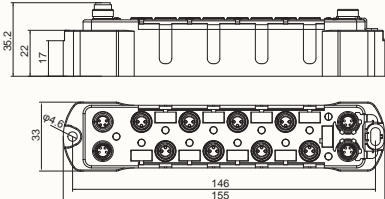
I/O Port

Pin definition & Address distribution	I/O port - 4 x M12 M12(C1-C4) 								I/O port- 8 x M8 M8(C1--C8) 									
	1	2	3	4	5	1.24VDC+	2.Input	3.0V	4.Input	5.PE	1	2	3	4	1.24VDC	3.0V	4.Input	
Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7		Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
0	C1P4	C1P2	C2P4	C2P2	C3P4	C3P2	C4P4	C4P2		0	C1P4	C2P4	C3P4	C4P4	C5P4	C6P4	C7P4	C8P4

Mechanical dimensions



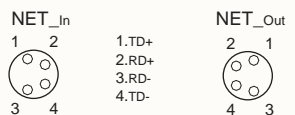
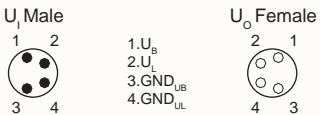
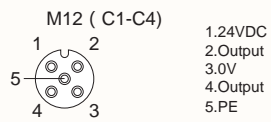
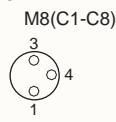
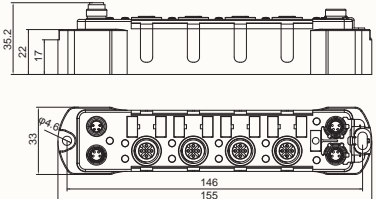
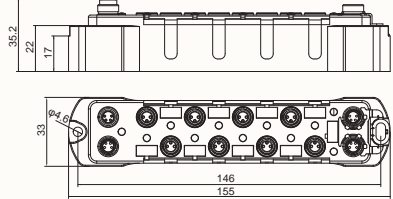
M12& M8		
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Digital Output extension module

Module information				
 Extension module 8 channel Digital Output (EtherCat Module)	GXEC-DO8S 4 x M12  0.5A	GXEC-DO8S-H 4 x M12  2A	GXEC-DO8S-M8 8 x M8  0.5A	GXEC-DO8S-M8-H 8 x M8  2A
	Connection		Connection	
EtherCat port	2 x M8 , 4PIN,Female		2 x M8 , 4PIN,Female	
Power port	1 x M8 , 4PIN,Male; 1 x M8 , 4PIN,Female		1 x M8 , 4PIN,Male; 1 x M8 , 4PIN,Female	
I/O port	4 x M12, 5PIN,Female,A-Code		8 x M8 , 3PIN,Female	
Output parameter				
Number of output	8 channels		8 channels	
Output voltage	18...30 VDC		18...30 VDC	
Output current /ch	0.5 A, Short circuit protection	2A, Short circuit protection	0.5 A, Short circuit protection	2A, Short circuit protection
Load type	resistive, inductive, lamp load		resistive, inductive, lamp load	
Simultaneity factor	1		1	
Switching frequency	≤ 250 Hz		≤ 250 Hz	
Max. output current	0.7A/ch	2A/ch	0.7A/ch	2A/ch
Module LED- indicator				
PWR	Green : Power OK , Red : Power Fault		Green : Power OK , Red : Power Fault	
LINK	Green: Physical connection OK; Green flash: EtherCat extension communication OK		Green: Physical connection OK; Green flash: EtherCat extension communication OK	
RUN	Green :Operational status;Off :Non-working status		Green :Operational status;Off :Non-working status	
I/O Port	Green : I/O OK , Red : I/O Fault		Green : I/O OK , Red : I/O Fault	
Basic Data				
Rated voltage	18-30VDC		18-30VDC	
Power dissipation	Max.80mA		Max.80mA	
Protection degree	IP67		IP67	
Operating temperature	-30°C~70°C		-30°C~70°C	
Storage temperature	-40°C~85°C		-40°C~85°C	
Pin Definition				
Extension port & power port pin definition	EtherCAT extension port - 2 x M8  		Power port - 2 x M8  	
	NET_In 1 2 3 4 1.TD+ 2.RD+ 3.RD- 4.TD-		U _i Male 1 2 3 4 1.U _B 2.U _L 3.GND _{UB} 4.GND _{UL}	
I/O Port	I/O port- 4 x M12  		I/O port - 8 x M8  	
	M12 (C1-C4) 1 2 3 4 5 1.NC 2.Output 3.0V 4.Output 5.PE Byte Bit0 Bit1 Bit2 Bit3 Bit4 Bit5 Bit6 Bit7 0 C1P4 C1P2 C2P4 C2P2 C3P4 C3P2 C4P4 C4P2		M8(C1-C8) 3 4 1 1.NC 3.0V 4.Output Byte Bit0 Bit1 Bit2 Bit3 Bit4 Bit5 Bit6 Bit7 0 C1P4 C2P4 C3P4 C4P4 C5P4 C6P4 C7P4 C8P4	
Mechanical dimensions				
M12& M8				

GX

Digital output extension module

Module information																																						
EtherCAT Extension module 8 channel Digital Output (EtherCat Module)	GXEC-DO8S-N 4 x M12  0.5A, NPN	GXEC-DO8S-M8-N 8 x M8  0.5A,NPN																																				
	Connection																																					
EtherCat port	2 x M8 , 4PIN,Female	2 x M8 , 4PIN,Female																																				
Power port	1 x M8 , 4PIN,Male; 1 x M8 , 4PIN,Female	1 x M8 , 4PIN,Male; 1 x M8 , 4PIN,Female																																				
I/O port	4 x M12, 5PIN,Female,A-Code	8 x M8 , 3PIN,Female																																				
Output parameter																																						
Number of output	8 channels	8 channels																																				
Output voltage	0VDC,NPN	0 VDC,NPN																																				
Output current /ch	0.5 A, Short circuit protection	0.5 A, Short circuit protection																																				
Load type	resistive, inductive, lamp load	resistive, inductive, lamp load																																				
Simultaneity factor	1	1																																				
Switching frequency	≤ 250 Hz	≤ 250 Hz																																				
Max. output current	0.7A/ch	0.7A/ch																																				
Module LED- indicator																																						
PWR	Green : Power OK , Red : Power Fault	Green : Power OK , Red : Power Fault																																				
LINK	Green: Physical connection OK; Green flash: EtherCat extension communication OK	Green: Physical connection OK; Green flash: EtherCat extension communication OK																																				
RUN	Green :Operational status;Off :Non-working status	Green :Operational status;Off :Non-working status																																				
I/O Port	Green : I/O OK , Red : I/O Fault	Green : I/O OK , Red : I/O Fault																																				
Basic Data																																						
Rated voltage	18-30VDC	18-30VDC																																				
Power dissipation	Max.80mA	Max.80mA																																				
Protection degree	IP67	IP67																																				
Operating temperature	-30°C~70°C	-30°C~70°C																																				
Storage temperature	-40°C~85°C	-40°C~85°C																																				
Pin Definition																																						
Extension port & power port pin definition	EtherCAT extension port - 2 x M8 	Power port - 2 x M8 																																				
	I/O Port																																					
Pin definition & Address distribution	I/O port- 4 x M12  1.24VDC 2.Output 3.0V 4.Output 5.PE <table border="1"> <thead> <tr> <th>Byte</th> <th>Bit0</th> <th>Bit1</th> <th>Bit2</th> <th>Bit3</th> <th>Bit4</th> <th>Bit5</th> <th>Bit6</th> <th>Bit7</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>C1P4</td> <td>C1P2</td> <td>C2P4</td> <td>C2P2</td> <td>C3P4</td> <td>C3P2</td> <td>C4P4</td> <td>C4P2</td> </tr> </tbody> </table>	Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7	0	C1P4	C1P2	C2P4	C2P2	C3P4	C3P2	C4P4	C4P2	I/O port - 8 x M8  1.24VDC 3.0V 4.Output <table border="1"> <thead> <tr> <th>Byte</th> <th>Bit0</th> <th>Bit1</th> <th>Bit2</th> <th>Bit3</th> <th>Bit4</th> <th>Bit5</th> <th>Bit6</th> <th>Bit7</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>C1P4</td> <td>C2P4</td> <td>C3P4</td> <td>C4P4</td> <td>C5P4</td> <td>C6P4</td> <td>C7P4</td> <td>C8P4</td> </tr> </tbody> </table>	Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7	0	C1P4	C2P4	C3P4	C4P4	C5P4	C6P4	C7P4	C8P4
	Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7																													
0	C1P4	C1P2	C2P4	C2P2	C3P4	C3P2	C4P4	C4P2																														
Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7																														
0	C1P4	C2P4	C3P4	C4P4	C5P4	C6P4	C7P4	C8P4																														
Mechanical dimensions																																						
M12& M8																																						

Module information

EtherCAT 

Extension module
8 channel Digital
input and output
(self-adaption)
(EtherCat Module)

GXEC-DIO8S 4 x M12



8 channel Digital input and output (self-adaption)(pnp, 0.5A)

Connection

EtherCat port	2 x M8 , 4PIN,Female
Power port	1 x M8 , 4PIN,Male; 1 x M8 , 4PIN,Female
I/O port	4 x M12, 5PIN,Female,A-Code

Input parameter		Output parameter	
Number of input	8channels	Number of output	8 channels
Input signal	PNP , or mes. switches	Output voltage	18-30 VDC,PNP
Input voltage	18-30 VDC	Output current /ch	0.5 A, Short circuit protection
Operating current	<200 mA, Short circuit protection	Load type	resistive, inductive, lamp load
Switching threshold	IEC 61131-2	Simultaneity factor	1
Input delay	25 µs	Switching frequency	≤ 250 Hz
Switching frequency	≤250Hz	Max. output current	0.7A/ch

Module LED- indicator

PWR	Green: Power OK, Red: Power Fault
LINK	Green: Physical connection OK; Green flash: EtherCat extension communication OK
RUN	Green :Operational status;Off :Non-working status
I/O Port	Green: I/O OK, Red: I/O Fault

Basic Data

Rated voltage	18-30VDC
Power dissipation	Max.80mA
Protection degree	IP67
Operating temperature	-30°C~70°C
Storage temperature	-40°C~85°C

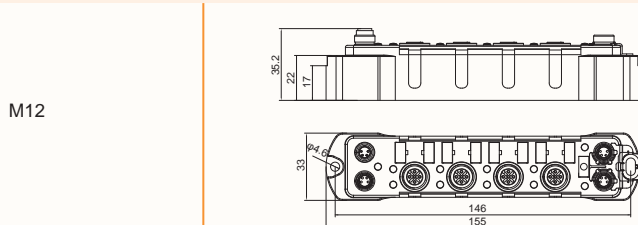
Pin Definition

Extension port & power port pin definition	EtherCAT extension port - 2 x M8				Power port- 2 x M8			
	NET_In		NET_Out		U _i Male		U _o Female	
	1	2	2	1	1	2	2	1
	3	4	4	3	3	4	4	3

I/O Port

Pin definition & Address distribution	I/O port - 4 x M12									
	M12(C1-C4)									
	1	2	3	4	5	1.24VDC+	2.Input/output	3.0V	4.Input/output	5.PE

Mechanical dimensions



Digital input and output extension module

Module information

EtherCAT

Extension module
8 channel Digital
input and output
(self-adaption)
(EtherCat Module)

GXEC-DIO8S-N 4 x M12



8 channel Digital input and output (self-adaption)(npn, 0.5A)

Connection

EtherCat port	2 x M8 , 4PIN,Female
Power port	1 x M8 , 4PIN, Male; 1 x M8 , 4PIN,Female
I/O port	4 x M12, 5PIN,Female,A-Code

Input parameter		Output parameter	
Number of input	8channels	Number of output	8 channels
Input signal	NPN , or mes. switches	Output voltage	0 VDC,NPN
Input voltage	0 VDC	Output current /ch	0.5 A, Short circuit protection
Operating current	<200 mA, Short circuit protection	Load type	resistive, inductive, lamp load
Switching threshold	IEC 61131-2	Simultaneity factor	1
Input delay	25 μs	Switching frequency	≤ 250 Hz
Switching frequency	≤250Hz	Max. output current	0.7A/ch

Module LED- indicator

PWR	Green: Power OK, Red: Power Fault
LINK	Green: Physical connection OK; Green flash: EtherCat extension communication OK
RUN	Green :Operational status;Off :Non-working status
I/O Port	Green: I/O OK, Red: I/O Fault

Basic Data

Rated voltage	18-30VDC
Power dissipation	Max.80mA
Protection degree	IP67
Operating temperature	-30°C~70°C
Storage temperature	-40°C~85°C

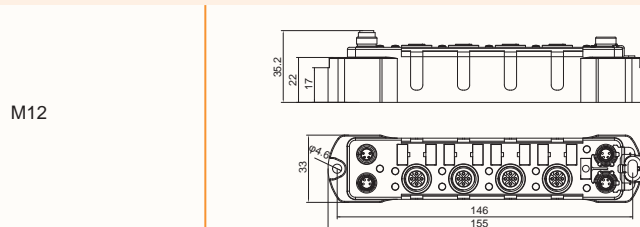
Pin Definition



Extension port & power port pin definition	EtherCAT extension port - 2 x M8				Power port- 2 x M8			
	NET_In		NET_Out		U _i Male		U _o Female	
	1	2	1.TD+	2	1	2	1.U _B	2
			2.RD+	1			2.U _L	1
			3.RD-				3.GND _{UB}	
	3	4	4.TD-	4	3	4	4.GND _{UL}	3

I/O Port

Pin definition & Address distribution	I/O port - 4 x M12								
	M12(C1-C4)								
	1	2	3	4	5	1.24VDC+	2.Input/output	3.0V	4.Input/output
						5.PE			
	Byte	Bit0	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7
	0	C1P4	C1P2	C2P4	C2P2	C3P4	C3P2	C4P4	C4P2

Mechanical dimensions







Module information			
 Extension module 4 channel Analog input (EtherCAT module)	GXEC-AI4S-I 4 x M12  Current 0/4-20mA	GXEC-AI4S-U 4 x M12  Voltage -10/0-10V	GXEC-AI4S-I/U 4 x M12  Current/voltage configurable

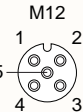
Connection	
Extension port	2 x M8 , 4PIN,Female
Power port	1 x M8 , 4PIN,Male ; 1 x M8 , 4PIN,Female
I/O port	4 x M12 , 5PIN,Female,A-Code

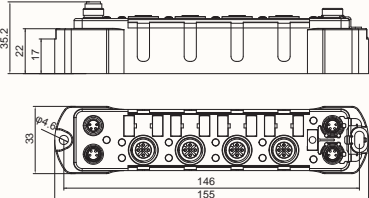
Analog input			
Channels	4		
Input resistance	< 98.5 kΩ	< 98.5 kΩ	Current/voltage configurable , Refer to current and voltage module parameters
supply current	<200mA/ch.	<200 mA/ch	
Scaling Range	0 / 4...20mA	-10/0 ... +10 VDC	
Resolution	16bits(0-32767)		
Conversion time	≤10ms/ch.	≤5ms/ch.	≤10ms/ch.
Input type	Current	Voltage	Current/voltage
Intrinsic error (25°C)	±0.3%		
repeatability precision	±0.05%		
sensor voltage	24VDC (18...30VDC)		

Module LED- indicator	
PWR	Green : Power OK , Red : Power Fault
LINK	Green: Physical connection OK; Green flash: EtherCat extension communication OK
RUN	Green :Operational status;Off :Non-working status
I/O	Green : Channel enabled , Red : Channel fault

Basic Data	
Rated voltage	18-30VDC
Power dissipation	Max.80mA
Protection degree	IP67
Operating temperature	-30°C~70°C
Storage temperature	-40°C~85°C

Pin Definition				
Extension port & power port pin definition	EtherCAT extension port - 2 x M8 NETIn NETOut  		Power port - 2 x M8 U _I Male U _O Female  	

I/O Port																		
Pin definition & Address distribution	I/O port - 4 x M12 AI (I, U, I/U) 																	
	<table border="1"> <thead> <tr> <th>Address</th> <th>Byte0</th> <th>Byte1</th> <th>Byte2</th> <th>Byte3</th> <th>Byte4</th> <th>Byte5</th> <th>Byte6</th> <th>Byte7</th> </tr> </thead> <tbody> <tr> <td>Channel</td> <td>C1(A0)</td> <td>C2(A1)</td> <td>C3(A2)</td> <td>C4(A3)</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Address	Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Channel	C1(A0)	C2(A1)	C3(A2)	C4(A3)			
Address	Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7										
Channel	C1(A0)	C2(A1)	C3(A2)	C4(A3)														

Mechanical dimensions	
M12	

Analog input extension module

Module information

EtherCAT Extension module 4 channel Analog input (EtherCAT module)	GXEC-AI4S-RTD 4 x M12  RTD	GXEC-AI4S-TC 4 x M12  Thermocouple	GXEC-AI4S-R/T 4 x M12  RTD/Thermocouple configurable
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Connection

Extension port	2 x M8 , 4PIN,Female
Power port	1 x M8 , 4PIN, Male; 1 x M8 , 4PIN, Female
I/O port	4 x M12 , 5PIN, Female, A-Code

Analog input

Channels	4		
Resolution	16Bits		
Conversion time	≤20ms / ch.		
Input type	RTD Pt100, Pt200, Pt500, Pt1000, 0...100Ω, 0...200Ω, 0...400Ω, 0...1000Ω	Thermocouple Types E / S / J / T / K / B / N / C / R / L	RTD/Thermocouple configurable , Refer to current and voltage module parameters
Intrinsic error	< 0.2 %		
Repeatability	±0.05%		
Temp.coefficient	Full scale<300 ppm/°C		

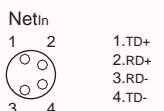
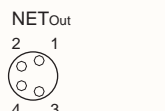
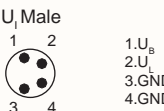
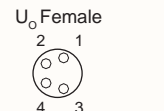
Module LED- indicator

PWR	Green : Power OK , Red : Power Fault
LINK	Green: Physical connection OK; Green flash: EtherCat extension communication OK
RUN	Green :Operational status;Off :Non-working status
I/O	Green : Channel enabled , Red : Channel fault

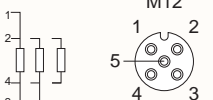
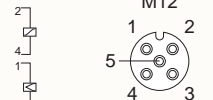
Basic Data

Rated voltage	18-30VDC
Power dissipation	Max.80mA
Protection degree	IP67
Operating temperature	-30°C~70°C
Storage temperature	-40°C~85°C

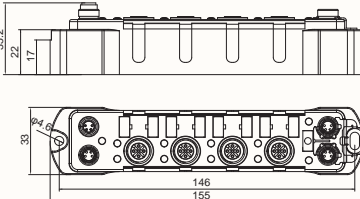
Pin Definition

Extension port & power port pin definition	EtherCAT extension port - 2 x M8  NetIn 1 2 1.TD+ 2.RD+ 3.RD- 3 4 4.TD-		 NETOut 2 1 4 3		Power port - 2 x M8  U _i Male 1 2 3 4		 U _o Female 2 1 4 3	
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I/O Port

Pin definition & Address distribution	I/O port - 4 x M12 AI (RTD)  M12 1 2 1.Red 2.Red 3.White 4.White 4 3 5.NC				I/O port- 4 x M12 AI (TC)  M12 1 2 1.TC+ 2.PT1000 3.TC- 4.PT1000 4 3 5.NC													
	Address	Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7	Address	Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
	Channel	C1(A0)	C2(A1)	C3(A2)	C4(A3)	Channel	C1(A0)	C2(A1)	C3(A2)	C4(A3)								

Mechanical dimensions

M12	
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Module information

EtherCAT Extension module 4 channel Analog Output (EtherCAT module)	GXEC-AO4S-I 4 x M12  Current 0/4-20mA	GXEC-AO4S-U 4 x M12  Voltage -10/0-10V	GXEC-AO4S-I/U 4 x M12  Current/voltage configurable
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Connection

Extension port	2 x M8 , 4PIN,Female
Power port	1 x M8 , 4PIN,Male; 1 x M8 , 4PIN,Female
I/O port	4 x M12 , 5PIN,Female,A-Code

Analog Output

Channels	4		
Impedance	< 0.45 kΩ(I)	≥ 1 kΩ(U)	Current/voltage configurable , Refer to current and voltage module parameters
Output range	0 / 4...20mA	-10/0 ... +10 VDC	
Resolution	16bits(0-32767)		
Conversion time	≤10ms/ch.		
sensor voltage	24VDC(18...30V) , <200mA		
Output type	Current	Voltage	Current/voltage





Module LED- indicator

PWR	Green : Power OK , Red : Power Fault
LINK	Green: Physical connection OK; Green flash: EtherCat extension communication OK
RUN	Green :Operational status;Off :Non-working status
I/O	Green : Channel enabled , Red : Channel fault


Basic Data

Rated voltage	18-30VDC
Power dissipation	Max.80mA
Protection degree	IP67
Operating temperature	-30°C~70°C
Storage temperature	-40°C~85°C

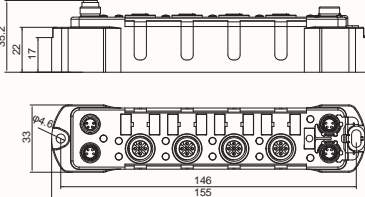
Pin Definition

Extension port & power port pin definition	EtherCAT extension port - 2 x M8		Power port- 2 x M8	
	NET _{In} 	NET _{Out} 	U _I Male 	U _O Female 

I/O Port

Pin definition & Address distribution	I/O port - 4 x M12 AO (I , U , I/U)							
								
	Address	Byte0	Byte1	Byte2	Byte3	Byte4	Byte5	Byte6
Channel	C1(A0)	C2(A1)	C3(A2)	C4(A3)				

Mechanical dimensions

M12	
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GSEE*TECH*

—— 吉言诺行 ——



Geneuo Wechat



Geneuo Website



Tianjin Geneuo Technology Co.,Ltd

Add: Technology Avenue South Jinghai Economic Development Area Tianjin

Tel: +86-22-68277298 Fax: +86-22-68277161

Url: www.gsee-tech.cn www.gsee-tech.com