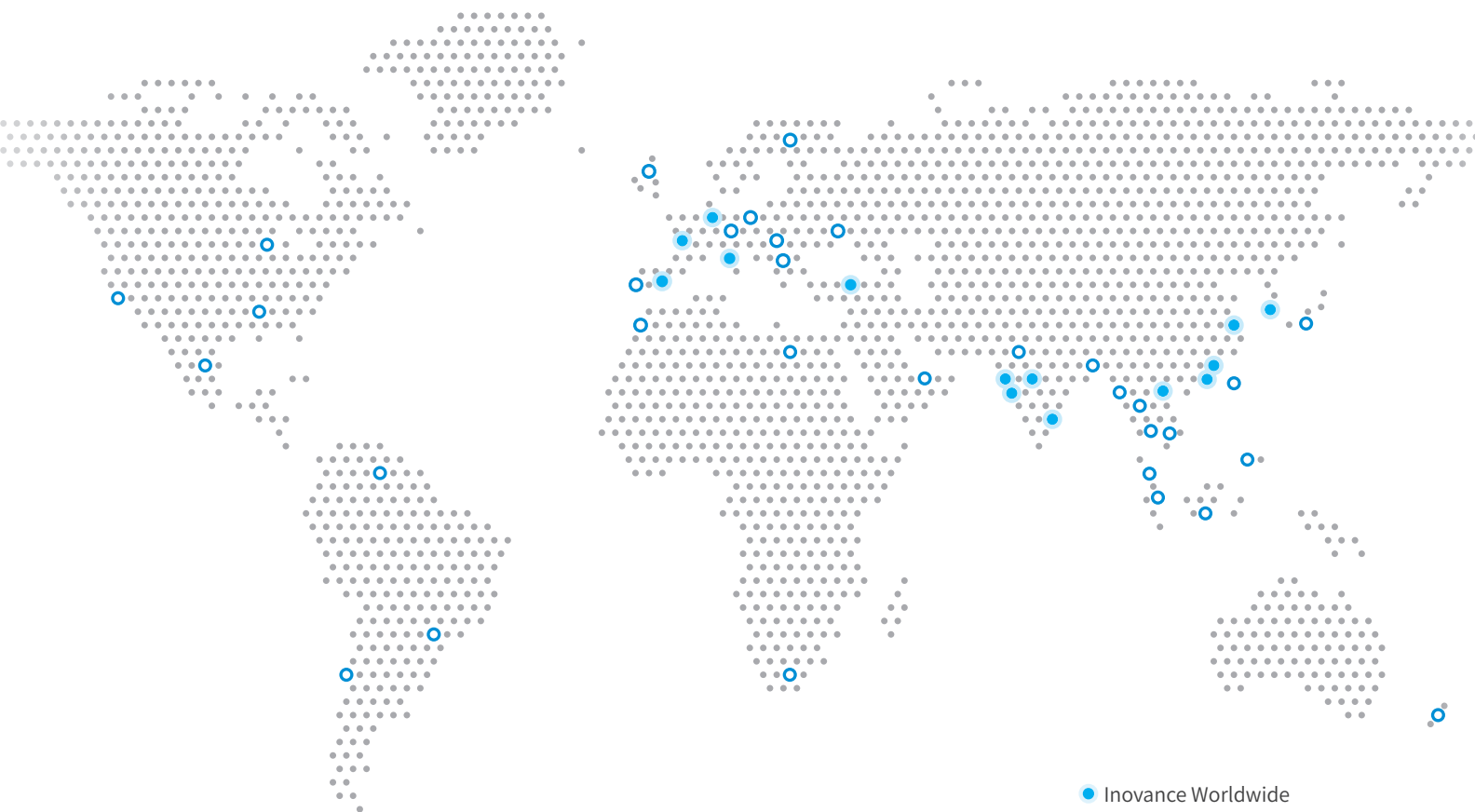




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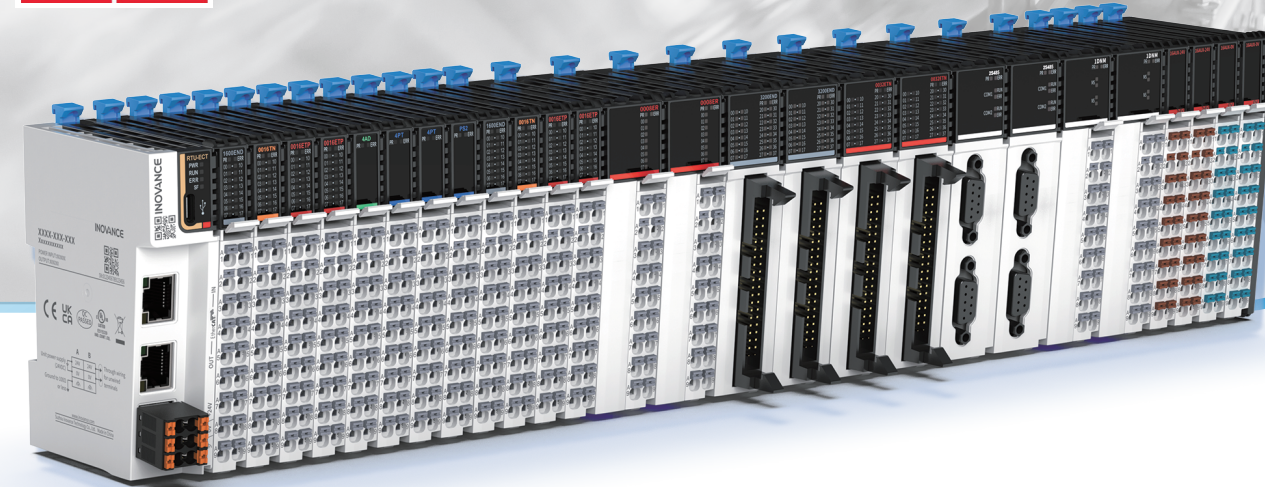
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INOVANCE

GL20 Series

Compact, flexible, high-speed distributed I/O system



Features & functions

- Compact footprint
- Easy installation, wiring and replacement
- Microsecond range response
- Conformal coating - compliant with 3C3 and 3S2
- Multiprotocol supported

EtherNet/IP™

EtherCAT™

PROFINET®



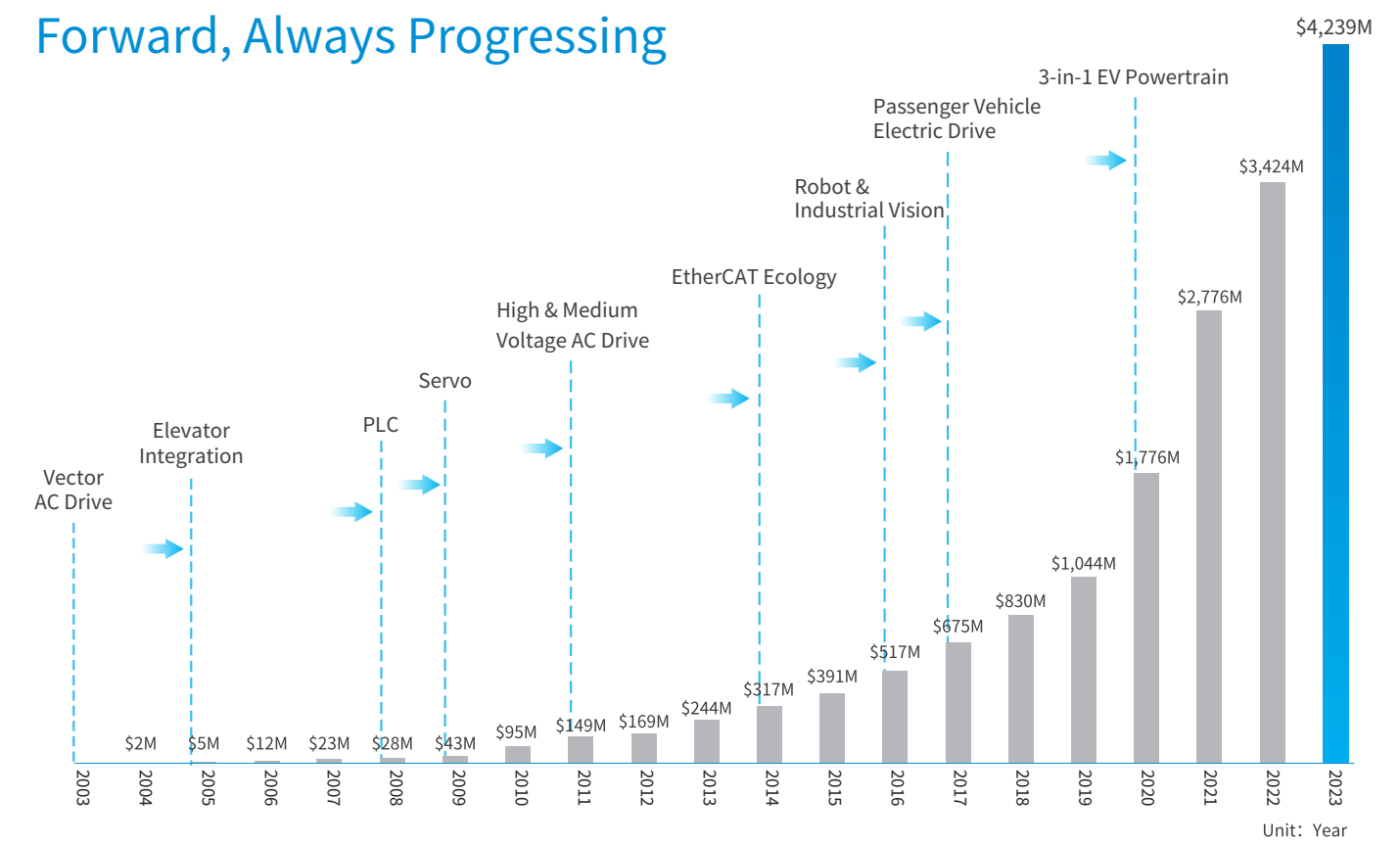


About Inovance

The Inovance Group, founded in 2003, is a rising star in the global industrial automation business and has revenues of \$4.2 in 2023. Inovance is headquartered in Shenzhen, China, and has built a global operation with offices and facilities in Germany, France, Italy, Spain, Turkey, India, and South Korea. Additionally, the company has a strong network of distribution partners around the world.

The company 's flexible production techniques and expert understanding of all industry sectors - from plastics to printing to packaging to iron & steel production - have allowed it to establish globally leading industry-specific business units. Over the years, Inovance has built an engineering team with specialist expertise in industrial automation. This knowledge allows it to form strong partnerships with OEMs and end users, providing ongoing advice about how to get the most out of their automation solutions today, and how to stay prepared for the market and technology changes that are coming in future.

Forward, Always Progressing





2003
founded



IPO:2010
Shenzhen, China



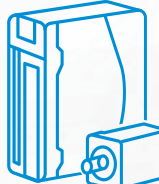
20,000
employees



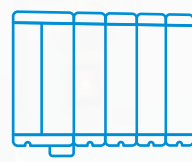
Global
network of offices and distributors



\$4.2+bn
revenues in 2023



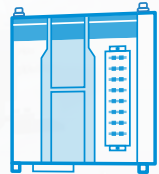
Servo System
4,500,000+
sets delivered in 2023



AC Drive
2,20,000+
sets delivered in 2023



Industrial Robot
22,000+
sets delivered in 2023



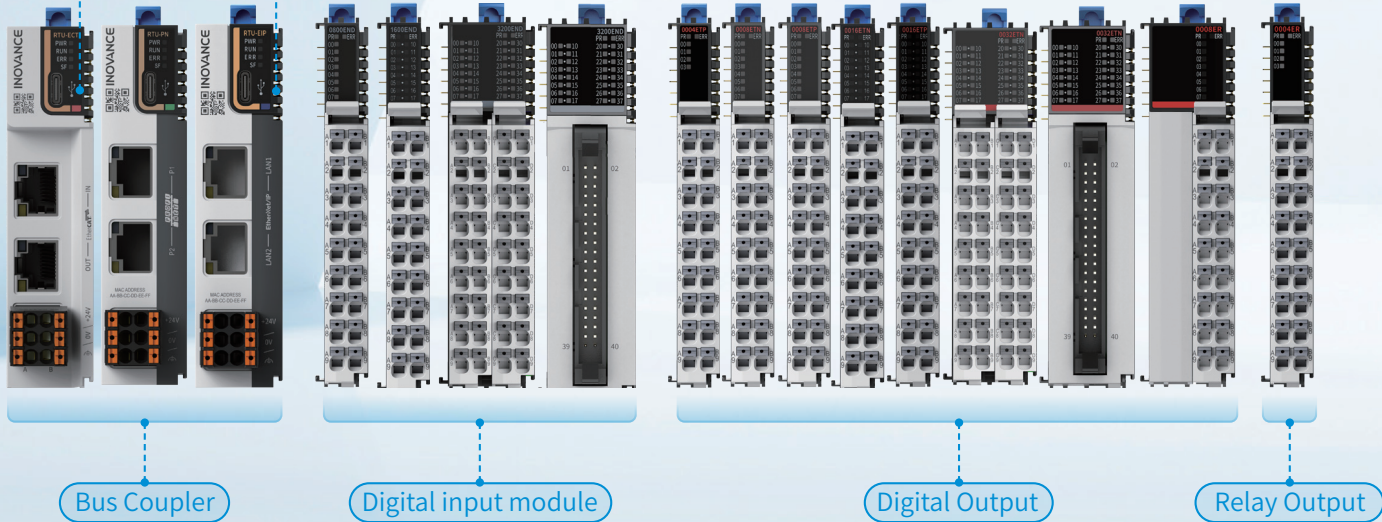
Controller
3,400,000+
sets delivered in 2023

GL20 Series I/O Module

Powerful, Stable, and Efficient Distributed I/O System

User guides and documents
available by scanning the QR code

Firmware update available by connecting
firmware update tools to the Type-C port

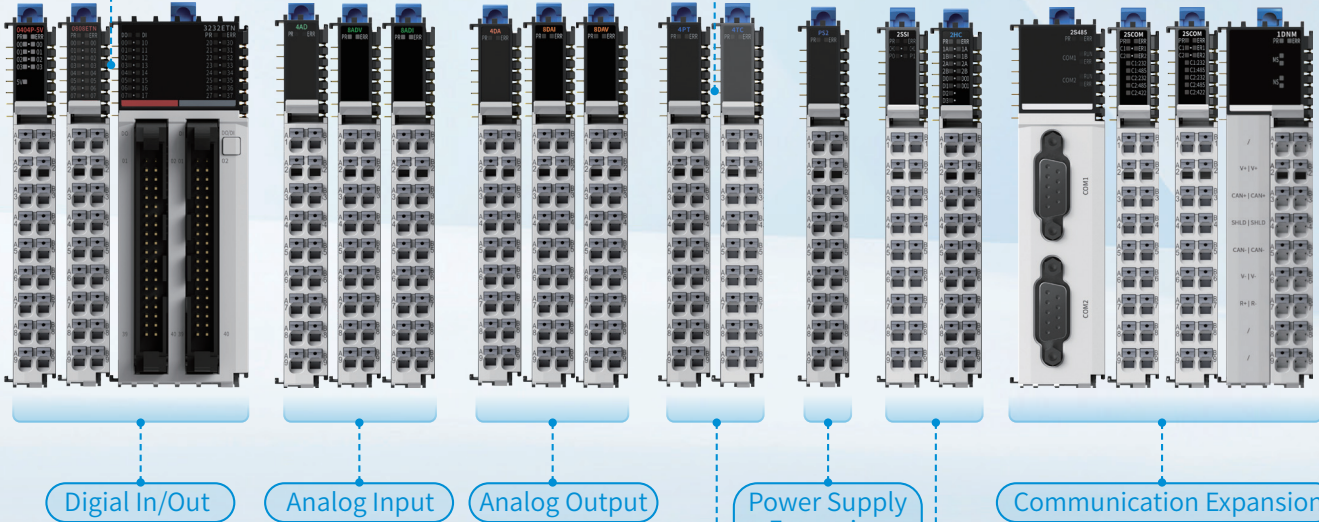


Independent status diagnosis and LED indicators;
Colored letters for quick identification of I/O functions;
Clear codes for easy wiring

D-BUS connector design with high reliability,
protecting the connector from sweat corrosion



100 Mbit/s local bus



Colored coding for modules

DO AO DI AI Communication Others



Compact Design

with a width as narrow as 12mm



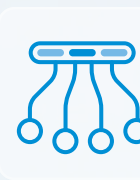
Screw-Free Wiring

using 1.5mm² push-in terminals



Stable & Reliable Connection

with a 10-year lifetime design



Multi-Protocol Support

providing a wide selection of devices

GL20 Series I/O Module Overview

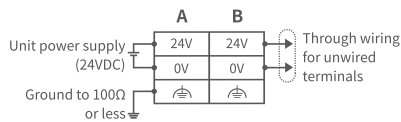
Type	Model	Description	Terminal type	Certification
Bus Coupler	GL20-RTU-ECT32-INT	EtherCAT bus coupler module, supports up to 32 expansion modules.	Push-in	CE, UL, UKCA, KC
	GL20-RTU-PN-INT	PROFINET bus coupler module, supports up to 32 expansion modules	Push-in	CE, UL, UKCA, KC
	GL20-RTU-EIP-INT	EtherNET/IP bus coupler module, supports up to 16 expansion modules	Push-in	CE
Digital Input	GL20-0800END-INT	8 channel digital input module	Push-in	CE, UL, UKCA
	GL20-1600END-INT	16 channel digital input module (NPN/PNP)	Push-in	CE, UL, UKCA, KC
	GL20-3200END-INT	32 channel digital input module	Push-in	CE, KC
	GL20-3200END-M-INT	32 channel digital input module (operated with the cable: XA3210A-40-L0.5M-01, T024-K)	Ejector header	CE, KC
Digital Output	GL20-0004ETP-2A-INT	4 channel digital output module (PNP)	Push-in	CE
	GL20-0008ETN-INT	8 channel digital output module (NPN)	Push-in	CE, UL, UKCA
	GL20-0008ETP-INT	8 channel digital output module (PNP)	Push-in	CE, UL, UKCA
	GL20-0016ETN-INT	16 channel digital output module (NPN)	Push-in	CE, UL, UKCA, KC
	GL20-0016ETP-INT	16 channel digital output module (PNP)	Push-in	CE, UL, UKCA, KC
	GL20-0032ETN-INT	32 channel digital output module (NPN)	Push-in	CE, KC
	GL20-0032ETN-M-INT	32 channel digital output module (NPN) (operated with the cable: XA3210A-40-L0.5M-01, T024-K)	Ejector header	CE, KC
	GL20-0008ER-INT	8 channel digital output module	Push-in	CE
Relay Output	GL20-0004ER-INT	4 channel relay output module (channel separation)	Push-in	CE, UL, UKCA, KC
Digial In/Out	GL20-0404ETP-5V-INT	4 channel DI/DO module(PNP)	Push-in	CE
	GL20-0808ETN-INT	8 channel DI/DO module(NPN)	Push-in	CE, UL, UKCA, KC
	GL20-3232ETN-M-INT	32 channel DI/DO module(NPN)(operated with the cable: XA3210A-40-L0.5M-01, T024-K)	Ejector header	CE, KC
Analog Input	GL20-4AD-INT	4 channel analog input module (Resolution 16 bits, sampling time 250 μs)	Push-in	CE, UL, UKCA, KC
	GL20-8ADV-INT	8 channel analog input module-voltage type	Push-in	CE
	GL20-8ADI-INT	8 channel analog input module-current type	Push-in	CE
Analog Output	GL20-4DA-INT	4 channel analog output module (Resolution 16 bits, sampling time 250 μs)	Push-in	CE, UL, UKCA, KC
	GL20-8DAI-INT	8 channel analog output module-voltage type	Push-in	CE
	GL20-8DAV-INT	8 channel analog output module-current type	Push-in	CE
Temperature Detection	GL20-4PT-INT	4 channel thermal resistance inputs temperature detection module (Pt 100, Pt 500, Pt 1000, Cu 100, KTY 84, NTC 5K, NTC 10K)	Push-in	CE, UL, UKCA, KC
	GL20-4TC-INT	4 channel thermocouple inputs temperature detection module (Thermocouple type: B,E,N,J,K,R,S,T)	Push-in	CE, UL, UKCA, KC

Type	Model	Description	Terminal type	Certification
Power Supply Expansion	GL20-PS2-INT	Extra power supply module. The rated current of the internal bus of the coupler is 2A. If a higher current is required,a combination of the coupler and the power supply unit GL20-PS2 should be used	Push-in	CE, UL, UKCA, KC
Functional I/O	GL20-2SSI-INT	2 channel encoder input module (SSI protocol)	Push-in	CE
	GL20-2HC-INT	2 channel high-speed counting module	Push-in	CE
Communication Expansion	GL20-2S485-INT	2 channel RS485 communication expansion module (Support Inovance PLC)	DB9	CE, UL, KC
	GL20-2S485-MDB-INT	2 channel RS485 communication expansion module (Support third-party PLC)	DB9	CE, UL
	GL20-2SCOM-INT	2 channel RS232/RS485/RS422 communication expansion module (Support Inovance PLC)	Push-in	CE
	GL20-2SCOM-MDB-INT	2 channel RS232/RS485/RS422 communication expansion module (Support third-party PLC)	Push-in	CE
	GL20-1DNM-INT	1 channel DeviceNet master station communication module	Push-in	CE
Options	XA3210A-40-L0.5M-01	40 Pin-I/O extension cable - 0.5m length (Required for GL20-XXXX-M)	-	CE
	XA3210A-40-L2M-01	40 Pin-I/O extension cable - 2m length (Required for GL20-XXXX-M)	-	CE
	T024-K	32 point screw terminal block (Required for GL20-XXXX-M)	-	CE

GL20 Coupler Modules

GL20-RTU-ECT32-INT

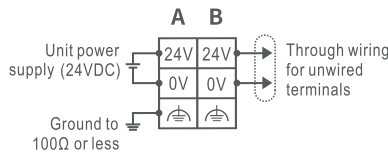
EtherCAT



Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	24mm × 100mm × 75mm
Weight	91g
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated voltage of terminal input power supply	24V DC (20.4V DC to 28.8V DC)
Rated current of terminal input power supply	0.6A (typical @ 24V)
Rated voltage of bus output power supply	5V DC (4.75V DC to 5.25V DC)
Rated current of bus output power supply	2A (typical @ 5V)
Power supply protection	Overcurrent protection, reverse-connection-proof, surge protection
Transmission distance	100m
Minimum scan cycle	125μs
Pollution degree	PD2
Overvoltage category	I
Altitude	≤ 2,000m (80 kPa)
EMC immunity level	Zone B, IEC 61131-2
Input PDO	1024 Byte
Output PDO	1024 Byte
I/O Expansion	Up to 32 modules

GL20-RTU-EIP-INT

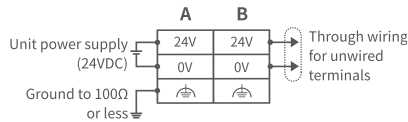
EtherNet/IP



Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	24mm × 100mm × 83mm
Weight	123g
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated voltage of terminal input power supply	24V DC (20.4V DC to 28.8V DC)
Rated current of terminal input power supply	0.6A (typical@24V)
Rated voltage of bus output power supply	5V DC (4.75V DC to 5.25V DC)
Rated current of bus output power supply	2A (typical@ 5V)
Power supply protection	Overcurrent protection, reverse-connection-proof, surge protection
Transmission distance	100m
Minimum communication cycle	1ms
Pollution degree	PD2
Overvoltage category	I
Altitude	≤ 2,000m (80kPa)
EMC immunity level	Zone B, IEC 61131-2
Input PDO	504 Byte
Output PDO	504 Byte
I/O Expansion	Up to 16 modules

GL20-RTU-PN-INT

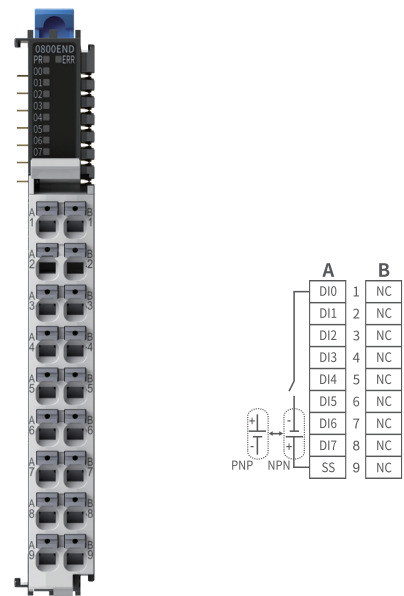
PROFINET



Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	24mm × 100mm × 83mm
Weight	100g
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated voltage of terminal input power supply	24V DC (20.4V DC to 28.8V DC)
Rated current of terminal input power supply	0.6 A (typical@24 V)
Rated voltage of bus output power supply	5V DC (4.75V DC to 5.25V DC)
Rated current of bus output power supply	2 A (typical@ 5 V)
Power supply protection	Reverse-connection-proof, surge protection
Transmission distance	100 m
Minimum communication cycle	1ms
Pollution degree	PD2
Overvoltage category	I
Altitude	≤ 2,000 m (80 kPa)
EMC immunity level	Zone B, IEC 61131-2
Input PDO	1440 Byte
Output PDO	1440 Byte
I/O Expansion	Up to 32 modules

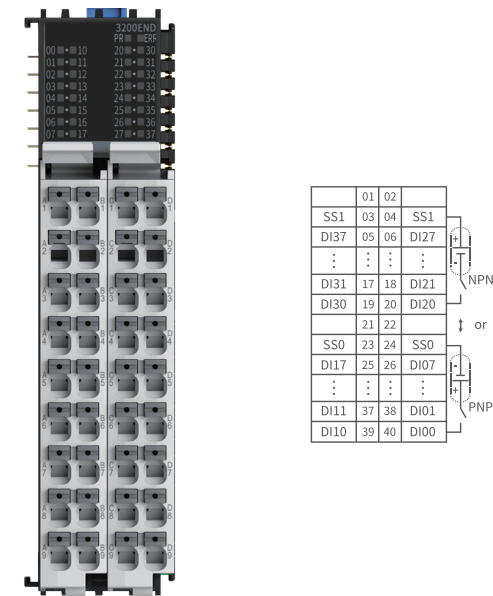
GL20 Digital Input Modules

GL20-0800END-INT



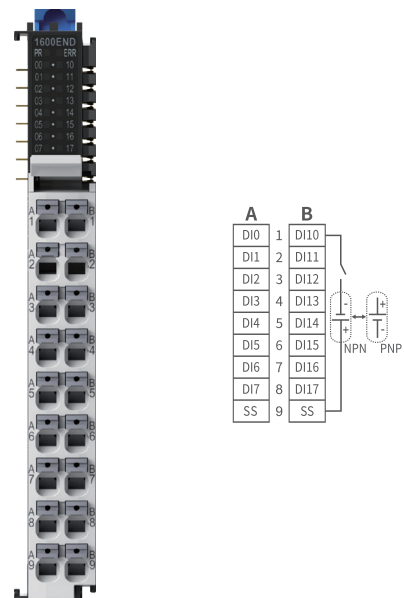
Item	Specification
Certification	CE, UL, UKCA
IP rating	IP20
Dimensions (W × H × D)	12mm×100mm×75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	100mA (typical@5V DC)
Input mode	Digital input
Input type	PNP/NPN
Input channels	8
Input voltage class	24V DC±10% (21.6V DC to 26.4V DC)
Input current (typical)	4mA (typical value at 24V)
ON voltage	> 15V DC
OFF Voltage	< 5V DC
Hardware response time (ON/OFF)	100µs/100µs
Input impedance	Reference value 5.3k to 5.6k
Module power	105mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

GL20-3200END-INT



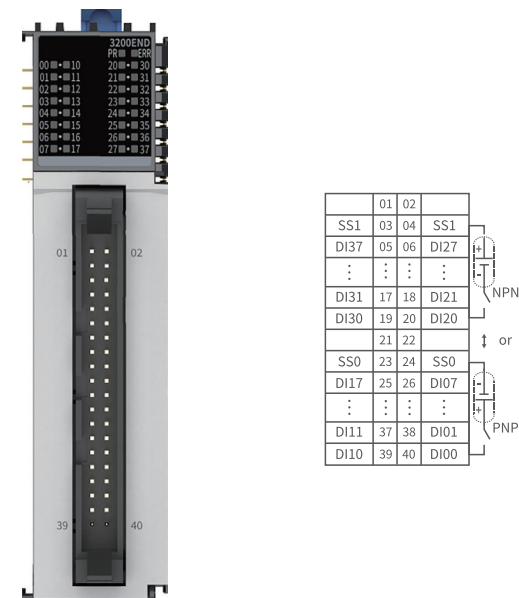
Item	Specification
Certification	CE, KC
IP rating	IP20
Dimensions (W × H × D)	24mm×100mm×75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	85mA (typical@5V DC)
Input mode	Digital input
Input type	PNP/NPN
Input channels	32
Input voltage class	24V DC±10% (21.6V DC to 26.4V DC)
Input current (typical)	4mA (typical value at 24V)
ON voltage	>15V DC
OFF Voltage	< 5V DC
Hardware response time (ON/OFF)	100µs/100µs
Input impedance	Reference value 5.3k to 5.6k
Module power	85mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

GL20-1600END-INT



Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	12mm×100mm×75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	60mA (typical@5V DC)
Input mode	Digital input
Input type	PNP/NPN
Input channels	16
Input voltage class	24V DC±10% (21.6V DC to 26.4V DC)
Input current (typical)	4mA (typical value at 24V)
ON voltage	> 15V DC
OFF Voltage	< 5V DC
Hardware response time (ON/OFF)	100µs/100µs
Input impedance	Reference value 5.3k to 5.6k
Module power	120mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

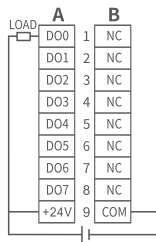
GL20-3200END-M-INT



Item	Specification
Certification	CE, KC
IP rating	IP20
Dimensions (W × H × D)	24mm×100mm×75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	125mA (typical@5V DC)
Input mode	Digital input
Input type	PNP/NPN
Input channels	32
Input voltage class	24V DC±10% (21.6V DC to 26.4V DC)
Input current (typical)	4mA (typical value at 24V)
ON voltage	> 15V DC
OFF Voltage	< 5V DC
Hardware response time (ON/OFF)	100µs/100µs
Input impedance	Reference value 5.3k to 5.6k
Module power	95mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

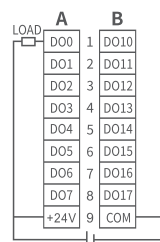
GL20 Digital Output Modules

GL20-0008ETN-INT



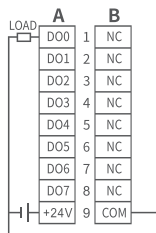
Item	Specification
Certification	CE, UL, UKCA
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	100mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	50mA (typical@24V)
Output mode	Digital Output, Transistor Low Side Output
Output type	NPN
Output channels	8
Hardware response time (ON/OFF)	100μs/100μs
Output voltage class	24V DC ± 10% (21.6V DC to 26.4V DC)
Output load (resistive load)	0.5A/point, 2A/module
Output load (inductive load)	7.2W/point, 12W/module
Output load (lamp load)	5W/point, 9W/module
Module power	115mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

GL20-0016ETN-INT



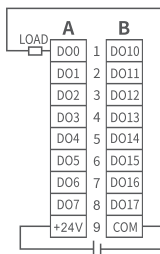
Item	Specification
Certification	CE, UL, UKCA
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	145mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	100mA
Output mode	Digital Output, Transistor Low Side Output
Output type	NPN
Output channels	16
Hardware response time (ON/OFF)	100μs/100μs
Output voltage class	24V DC ± 10% (21.6V DC to 26.4V DC)
Output load (resistive load)	0.5A/point, 4A/module
Output load (inductive load)	7.2W/point, 24W/module
Output load (lamp load)	5W/point, 18W/module
Module power	145mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

GL20-0008ETP-INT



Item	Specification
Certification	CE, UL, UKCA
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	85mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	1A (typical@24V)
Output mode	Digital output, Transistor High Side Output
Output type	PNP
Output channels	8
Hardware response time (ON/OFF)	100 μs/100 μs
Output voltage class	24V DC ± 10% (21.6V DC to 26.4V DC)
Output load (resistive load)	0.5A/point, 1A/module
Output load (inductive load)	7.2W/point, 7.2W/module
Output load (lamp load)	5 W/point, 5 W/module
Module power	80mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

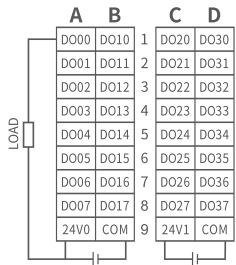
GL20-0016ETP-INT



Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	100 mA (typical@5 V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	2 A (typical@24 V)
Output mode	Digital output, Transistor High Side Output
Output type	PNP
Output channels	16
Hardware response time (ON/OFF)	100μs/100μs
Output voltage class	24V DC ± 10% (21.6V DC to 26.4V DC)
Output load (resistive load)	0.5A/point, 2A/module
Output load (inductive load)	7.2W/point, 12W/module
Output load (lamp load)	5W/point, 18W/module
Module power	100mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

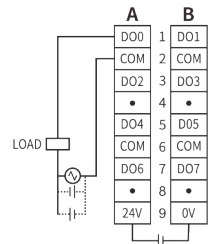
GL20 Digital Output Modules

GL20-0032ETN-INT



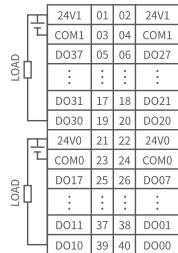
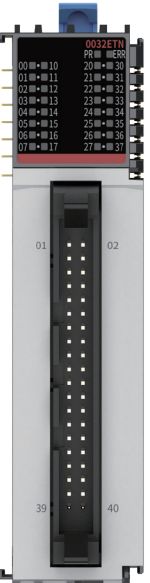
Item	Specification
Certification	CE, KC
IP rating	IP20
Dimensions (W × H × D)	24mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	80 mA (typical@5 V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	100 mA (typical@24 V)
Output mode	Digital Output, Transistor Low Side Output
Output type	NPN
Output channels	32
Hardware response time (ON/OFF)	100 μs/100 μs
Output voltage class	24V DC ±10% (21.6V DC to 26.4V DC)
Output load (resistive load)	0.5 A/point, 8 A/module
Output load (inductive load)	7.2 W/point, 48 W/module
Output load (lamp load)	5 W/point, 36 W/module
Module power	80 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

GL20-0008ER-INT



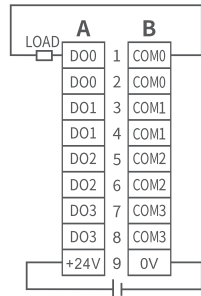
Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	24mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	110mA (typical@5V)
Rated terminal input voltage	24V DC (21.6V DC to 26.4V DC)
Rated terminal input current	60mA (typical@24V)
Output mode	Digital Output, Relay Output
Output type	Dry contact
Output channels	8
Hardware response time (ON/OFF)	15ms/15ms
Output voltage class	250V AC/30V DC
Output load (resistive load)	2A/point, 8A/module
Output load (inductive load)	1A/point, 4A/module
Output load (lamp load)	30W/point, 120W/module
Module power	110mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

GL20-0032ETN-M-INT



Item	Specification
Certification	CE, KC
IP rating	IP20
Dimensions (W × H × D)	24mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	85 mA (typical@5 V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	100 mA (typical@24 V)
Output mode	Digital Output, Transistor Low Side Output
Output type	NPN
Output channels	32
Hardware response time (ON/OFF)	100 μs/100 μs
Output voltage class	24V DC ±10% (21.6V DC to 26.4V DC)
Output load (resistive load)	0.5 A/point, 8 A/module
Output load (inductive load)	7.2 W/point, 48 W/module
Output load (lamp load)	5 W/point, 36 W/module
Module power	85 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

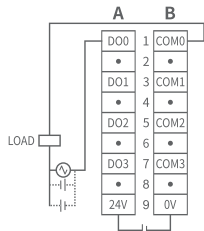
GL20-0004ETP-2A-INT



Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	< 100 mA (typical@5 V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	8 A (typical@24 V)
Output mode	Digital output, Transistor High Side Output
Output type	PNP
Output channels	4
Hardware response time (ON/OFF)	100 μs/100 μs
Output voltage class	24V DC (20.4V DC to 28.8V DC)
Output current (typical)	8 A (typical value at 24 V)
Output load (resistive load)	2 A/point, 8 A/module
Output load (inductive load)	28.8 W/point, 57.6 W/module
Output load (lamp load)	10 W/point
Module power	80 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

GL20 Relay Output Module

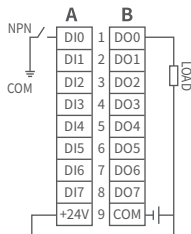
GL20-0004ER-INT



Item	Specification
Certification	CE, UL, UKCA
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	85 mA (typical@5 V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	30mA (typical@24V)
Output mode	Digital Output, Relay Output
Output type	Dry contact
Output channels	4
Hardware response time (ON/OFF)	15ms/15ms
Output voltage class	250V AC/30V DC
Output load (resistive load)	2A/point, 8A/module
Output load (inductive load)	1A/point, 4A/module
Output load (lamp load)	30W/point, 120W/module
Module power	90 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

GL20 DI/DO Modules

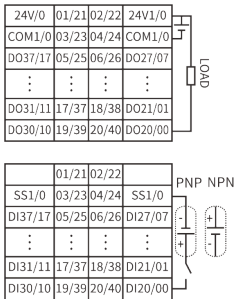
GL20-0808ETN-INT



Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	85mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	50mA (typical@24V)
Input/Output mode	Digital input/ Digital output, transistor output
Input/Output type	Input NPN/Output NPN
Input/Output channels	8 input/8 output
Hardware response time (ON/OFF)	100µs/100µs
Input/Output voltage class	24V DC ±10% (21.6V DC to 26.4V DC)
Input current (typical)	4mA (typical@24V)
Output load (resistive load)	0.5A/point, 2A/module
Output load (inductive load)	7.2A/point, 12A/module
Output load (lamp load)	5W/point, 9W/module
Module power	130mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

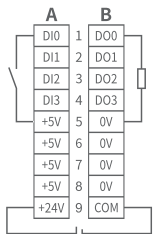
GL20 DI/DO Modules

GL20-3232ETN-M-INT



Item	Specification
Certification	CE, KC
IP rating	IP20
Dimensions (W × H × D)	36mm × 100mm × 76.1mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	250 mA (typical@5 V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	24 mA (typical@24 V)
Input/Output mode	Digital input/ Digital output, transistor low-side output
Input/Output channels	32 input/32 output
Input/Output type	NPN, PNP input/NPN output
Hardware response time (ON/OFF)	100 µs/100 µs
Input/Output voltage class	24 V DC ±10% (21.6 V DC to 26.4 V DC)
Input current (typical)	4 mA (typical@24 V)
Output load (resistive load)	0.5 A/point, 8 A/module
Output load (inductive load)	7.2 A/point, 48 A/module
Output load (lamp load)	5 W/point, 36 W/module
Module power	250 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

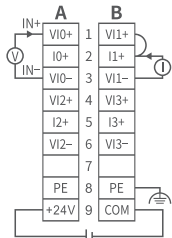
GL20-0404ETP-5V-INT



Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	100 mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	150 mA (typical@24 V)
Input/Output mode	Digital input/ Digital output
Input/Output channels	4 input/4 output
Input/Output type	NPN input/NPN output
Hardware response time (ON/OFF)	1 µs/1 µs
Input/Output voltage class	5V DC
Input current	50 µA (typical)
Input ON/OFF voltage	> 2.4V DC/ < 0.8V DC
Output load (resistive load)	20 mA/point, 80 mA/module
Output load (lamp load)	0.1 W/point, 0.4 W/module
Power Output Specifications	Voltage: 5V DC ±5%; Current: 500mA (Max.)
Module power	90 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

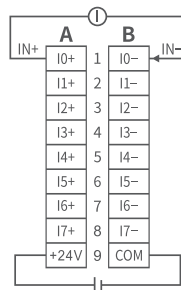
GL20 Analog Input Modules

GL20-4AD-INT



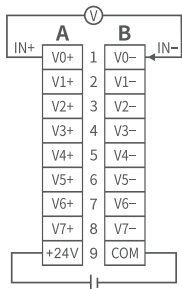
Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	95mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	100mA (typical@24V)
Input type	Analog input
Input mode	Voltage/Current
Input channels	4
Current input range	±20mA, 0 to 20mA, 4 to 20mA
Voltage input range	±10V, 0 to 10V, ±5V, 0 to 5V, 1 to 5V
Conversion time	1ms/channel
Resolution	16 bits
Input PDO data size	Max. 8 Bytes
Voltage input accuracy (25° C)	±0.1% (full range)
Current input accuracy (full temperature range)	±0.2% (full range)
Module power	95mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

GL20-8ADI-INT



Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	65mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	50mA (typical@24V)
Input mode	Current input
Input type	Analog input
Input channels	8
Current input range	±20mA, 0 to 20mA, 4 to 20mA
Conversion time	125µs/channel
Resolution	16 bits
Input PDO data size	Max. 16 Bytes
Output PDO data size	0 byte
Voltage input accuracy (25° C)	±0.2% (full range)
Current input accuracy (full temperature range)	±0.4% (full range)
Module power	65mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

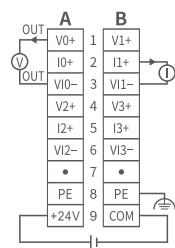
GL20-8ADV-INT



Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	65mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	50mA (typical@24V)
Input mode	Voltage input
Input type	Analog input
Input channels	8
Voltage input range	±10V, 0 to 10V, ±5V, 0 to 5V, 1 to 5V
Conversion time	125µs/channel
Resolution	16 bits
Input PDO data size	Max. 16 Bytes
Output PDO data size	0 byte
Voltage input accuracy (25° C)	±0.2% (full range)
Current input accuracy (full temperature range)	±0.4% (full range)
Module power	65mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-EIP-INT, GL20-RTU-PN-INT

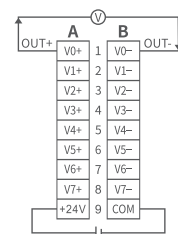
GL20 Analog Output Modules

GL20-4DA-INT



Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	70 mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	100mA (typical@24 V)
Output type	Analog output
Output mode	Voltage output/Current output
Output channels	4
Current output range	0 to 20mA, 4 to 20mA
Voltage output range	±10V, 0 to 10V, ±5V, 0 to 5V, 1 to 5V
Conversion time	60μs/channel
Resolution	16 bits
Voltage/Current input accuracy (25° C)	±0.1% (full range)
Voltage/Current input accuracy (full temperature range)	±0.5% (full range)
Module power	70mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT, GL20-RTU-EIP-INT

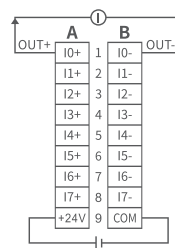
GL20-8DAV-INT



Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Output type	Analog output
Output mode	Voltage
Output channels	8
Voltage output range	±10V, 0 to 10V, ±5V, 0 to 5V, 1 to 5V
Conversion time	60 μs/channel
Resolution	16 bits
Voltage input accuracy (25° C)	±0.1% (full range)
Module power	100mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT, GL20-RTU-EIP-INT

coming soon...

GL20-8DAI-INT

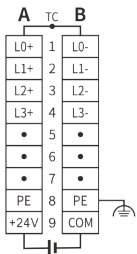
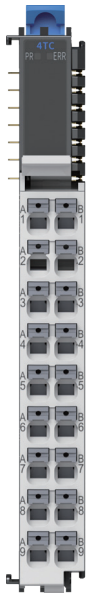


Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Output type	Analog output
Output mode	Current output
Output channels	8
Current output range	0 to 20mA, 4 to 20mA
Conversion time	60μs/channel
Resolution	16 bits
Voltage input accuracy (25° C)	±0.1% (full range)
Module power	100mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT, GL20-RTU-EIP-INT

coming soon...

GL20 Temperature Detection Modules

GL20-4TC-INT

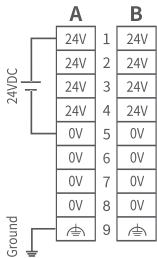


Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	95mA (typical@5V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	100mA (typical@24V)
Input terminal	Thermocouple input, thermocouple type: B, E, N, J, K, R, S, T
Compensation method	Internal cold junction compensation
Input channels	4
Display sensitivity	0.1°C , 0.1 °F
Accuracy (room temperature 25° C)	(±0.1%) ±1°C (±100 mV full scale)
Accuracy (operating temperature -20° C to 55° C)	(±0.3%) ±1°C (±100 mV full scale)
Resolution	24bits
Input PDO data size	Max. 16 Bytes
Module power	95 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT, GL20-RTU-EIP-INT

C type thermocouple supporting coming soon...

GL20 Power Supply Expansion Modules

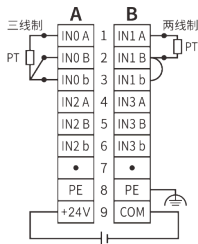
GL20-PS2-INT



Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Input terminal	24V DC (20.4V DC to 28.8V DC)
Output bus current	2A
Input/Output	8 × 24V
Bus output power ripple	3%
Power conversion efficiency	70%, more than 85% @ 2A
Bus output short-circuit protection	3A, hiccup mode protection
Bus output derating	85% derating at 55° C (the output current does not exceed 1.7A), or 45° C derating when output current is 2A
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT, GL20-RTU-EIP-INT

GL20-PS2-INT can provide 2A bus current to subsequent modules and can be placed anywhere.

GL20-4PT-INT

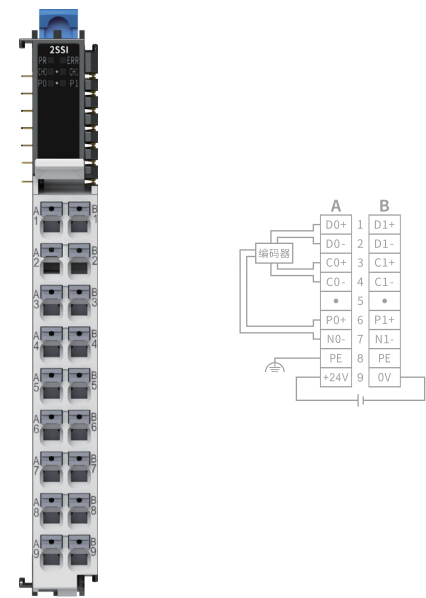


Item	Specification
Certification	CE, UL, UKCA, KC
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	95 mA (typical@5 V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	100mA (typical@24V)
Input terminal	Pt100, Pt500, Pt1000, Cu100, KTY84-130, NTC5K, NTC10K
Wiring method	Two wire/Three wire
Input channels	4
Display sensitivity	0.1°C , 0.1 °F
Accuracy (room temperature 25° C)	(±0.1%) ±1°C (±100 mV full scale)
Accuracy (operating temperature -20° C to 55° C)	(±0.3%) ±1°C (±100 mV full scale)
Resolution	24bits
Input PDO data size	Max. 16 Bytes
Module power	95mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT, GL20-RTU-EIP-INT

KTY83 type resistance supporting coming soon...

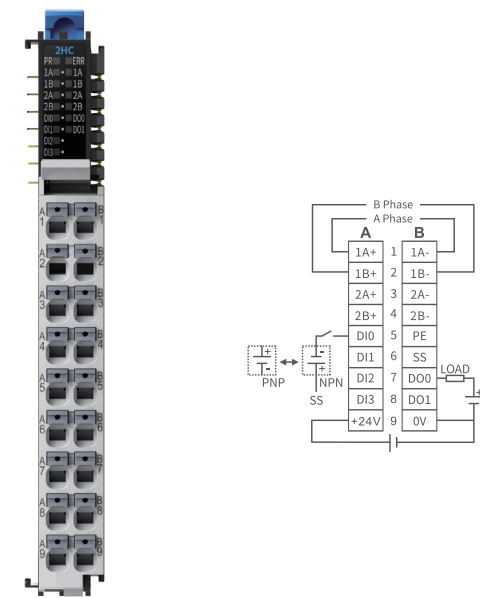
GL20 Functional I/O Modules

GL20-2SSI-INT



Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	1 A (Max.)
Rated terminal output voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal output current	300 mA/channel
Channels	2
Terminal type	SSI
Channel interface signal	SSI output: 2, clock output (C+, C-) SSI input: 2, data input (D+, D-)
SSI signal voltage	5 V
Output voltage	2×24 V
Signal type	Binary/Gray code Default: Gray code
Data type	Adjustable length: 10 bits to 32 bits Default: 25 bits
Baud rate and transmission distance	100 kHz - 200 m 200 kHz - 120 m 300 kHz - 100 m 400 kHz - 80 m 500 kHz - 60 m 1 MHz - 25 m 1.25 MHz - 20 m 1.5 MHz - 15 m 2 MHz - 10 m Default: 500 kHz - 60 m
Reverse identification	ON/OFF
Parity bit	None/Odd/Even
Module power	115 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT, GL20-RTU-EIP-INT

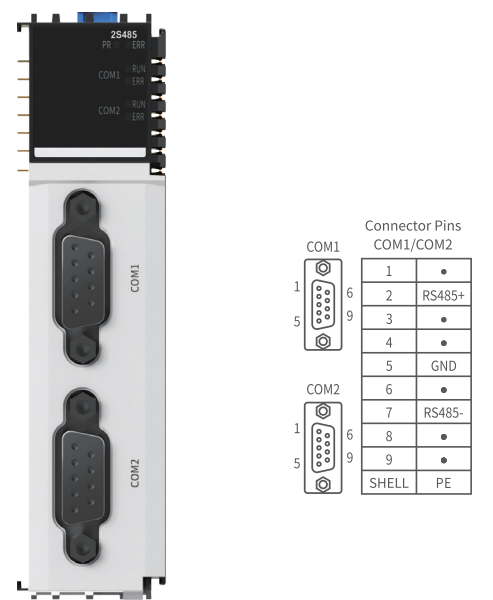
GL20-2HC-INT



Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Rated bus input voltage	5V DC (4.75V DC to 5.25V DC)
Rated bus input current	Max. 200mA, typical 180mA (typical@5 V)
Rated terminal input voltage	24V DC (20.4V DC to 28.8V DC)
Rated terminal input current	50 mA (typical@24 V)
Channels	2
Input type	Differential interface: Counter Input (Single Phase, Pulse + Direction, AB Phase, CW/CCW) Single ended input: Digital input (NPN/PNP)
Output type	Digital output
Differential input frequency	0.04 Hz to 4 MHz
Single ended input frequency	0.04 Hz to 500 KHz
Counting range	32 bits
Counting accuracy	100 ppm
Hardware response time (ON/OFF)	Input: differential interface: 100ns/100ns single ended interface: 250ns/250ns Output: 1 μs/1μs
Functions support	Count/frequency measure/compare consistent output
Module power	120 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT

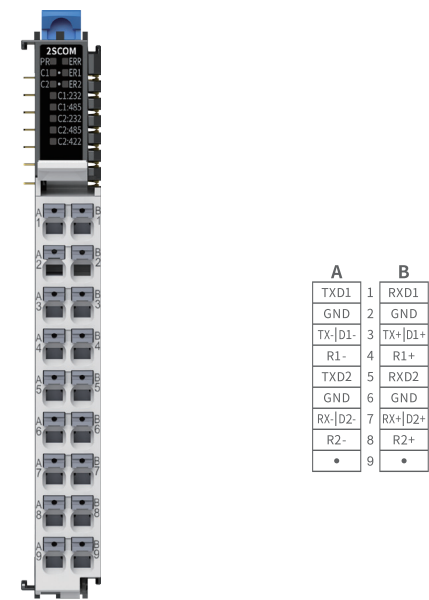
GL20 Communication Expansion Modules

GL20-2S485-INT



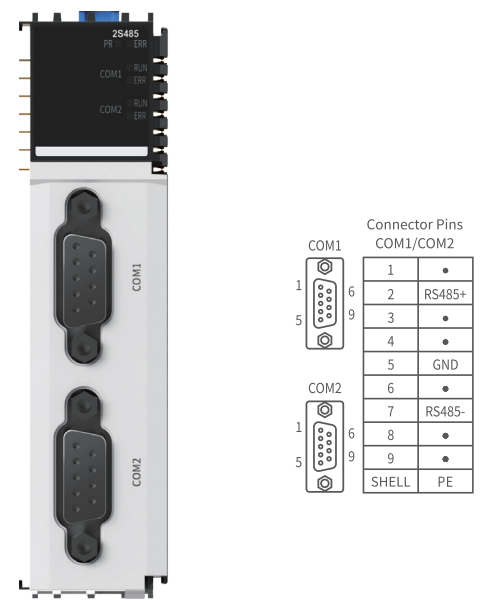
Item	Specification
Certification	CE, UL, KC
IP rating	IP20
Dimensions (W × H × D)	24mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Channels	2 channels, no isolation between channels
Terminal type	DB9 (female)
Communication port	RS485
Communication distance	Max. 1200m
Slave station	Up to 31 slaves
Baud rate	4800 bit/s, 9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, 115200 bit/s
Parity bit	None/Odd/Even
Termination resistor	Not available. When the module is at either end of the network, an external matching resistor can be added.
Module power	155 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT (Only for Inovance PLC)

GL20-2SCOM-INT



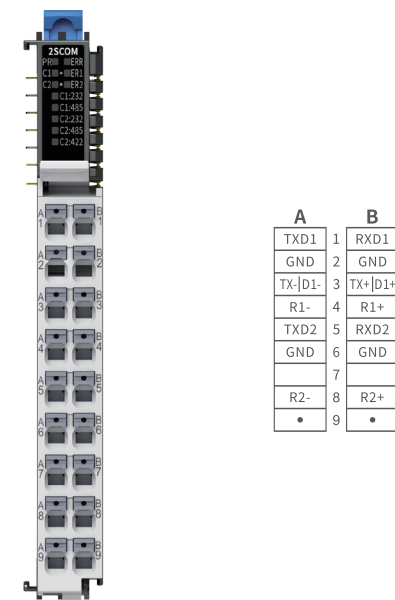
Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Channels	2 channels, no isolation between channels
Signal connection mode	Spring-clamp terminal, pluggable
Communication port	RS232, RS422, RS485 The module supports two channels of serial communication simultaneously. • 2 x RS232 • 2 x RS485 • 1 x RS232 and 1 x RS422 Note: Only Port 2 can be configured to RS422 mode, and in this case Port 1 can only be in RS232 mode. Otherwise, a port protocol configuration error occurs.
Communication distance	RS232: Max. 15 m RS422/RS485: Max. 1200 m
Slave station	• Up to 31 Modbus slaves supported in RS485 mode • Only one Modbus slave supported in RS232/RS422 mode
Baud rate	4800 bit/s, 9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, 115200 bit/s
Parity bit	None/Odd/Even Default: Even
Termination resistor	Supported, shorted the R+ and R- terminals to the termination resistor.
Module power	170 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT (Only for Inovance PLC)

GL20-2S485-MDB-INT



Item	Specification
Certification	CE, UL
IP rating	IP20
Dimensions (W × H × D)	24mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Channels	2 channels, no isolation between channels
Terminal type	DB9 (female)
Communication port	RS485
Communication distance	Max. 1200m
Slave station	Up to 31 slaves
Baud rate	4800 bit/s, 9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, 115200 bit/s
Parity bit	None/Odd/Even Default: None
Termination resistor	Not available. When the module is at either end of the network, an external matching resistor can be added.
Module power	155 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT (Support third-party PLC, please refer to user guide)

GL20-2SCOM-MDB-INT



Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	12mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Channels	2 channels, no isolation between channels
Communication protocol	Modbus RTU master/slave, free protocol
Communication port	RS232, RS422, RS485 support 2× serial communication • 2× RS232 • 2× RS485 • 1× RS232 + 1× RS422 Note: Only port 2 can be configured in RS422 mode, and at this time, port 1 can only be in RS232 mode, otherwise the port protocol configuration will report an error.
Communication distance	RS232: Max. 15 m RS422/RS485: Max. 1200 m
Slave station	• Up to 31 Modbus slaves supported in RS232/RS422 mode • Only one Modbus slave supported in RS485 mode
Baud rate	4800 bit/s, 9600 bit/s, 19200 bit/s, 38400 bit/s, 57600 bit/s, 115200 bit/s
Parity bit	None/Odd/Even Default: None
Termination resistor	Supported, shorted the R+ and R- terminals to the termination resistor.
Module power	170 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT, GL20-RTU-PN-INT (Support third-party PLC, please refer to user guide)

GL20 Communication Expansion Modules

GL20-1DNM-INT



A		B	
TXD1	1	RXD1	1
GND	2	GND	2
TX- D1-	3	TX+ D1+	3
R1-	4	R1+	4
TXD2	5	RXD2	5
GND	6	GND	6
	7		7
R2-	8	R2+	8
•	9	•	9

Item	Specification
Certification	CE
IP rating	IP20
Dimensions (W × H × D)	24mm × 100mm × 75mm
Ambient operating temperature	-20° C to 55° C (10% RH to 90% RH, non-condensing)
Channels	1 × CAN communication channel
Communication distance	4-core flat cable Main cable length: 100m~500m Branch length: 6m Total branch length: 39m~156m 5-core shielded cable Main cable length: 75m~265m Branch length: 6m Total branch length: 35m~135m
Slave station	Up tp 63 slaves
Baud rate	125 kbit/s, 250 kbit/s, 500 kbit/s, default 125 kbit/s
Termination resistor	Supported, shorted the R+ and R- terminals to the termination resistor.
Module power	100 mA
I/O bus coupler supports	GL20-RTU-ECT32-INT (Only for Inovance PLC)

Dimensions

GL20 Series Modules Dimensions Overview

Front view Side view	The picture shows the GL20-1600END-INT module, and other the consistent size of GL20 modules are showed as below: GL20-0800END-INT / GL20-0004ETP-2A-INT / GL20-0008ETN-INT / GL20-0008ETP-INT / GL20-0016ETN-INT / GL20-0016ETP-INT / GL20-0004ER-INT / GL20-0404ETP-5V-INT / GL20-0808ETN-INT / GL20-4AD-INT / GL20-8ADV-INT / GL20-8ADI-INT / GL20-4DA-INT / GL20-8DAI-INT / GL20-8DAV-INT / GL20-4PT-INT / GL20-4TC-INT / GL20-PS2-INT / xGL20-2SSI-INT / GL20-2HC-INT / GL20-2SCOM-INT / GL20-2SCOM-MDB-INT	Front view Side view	The picture shows the GL20-3232ETN-M-INT module.
Front view Side view	The picture shows the GL20-RTU-PN-INT module, and other the consistent size of GL20 modules are showed as below: GL20-RTU-EIP-INT / GL20-RTU-ECT32-INT	Front view Side view	The picture shows the GL20-2S485-INT module, and other the consistent size of GL20 modules are showed as below: GL20-2S485-MDB-INT
Front view Side view	The picture shows the GL20-3200END-INT module, and other the consistent size of GL20 modules are showed as below: GL20-0032ETN-INT / GL20-0008ER-INT / GL20-1DNM-INT	Front view Side view	The picture shows the GL20-3200END-M-INT module, and other the consistent size of GL20 modules are showed as below: GL20-0032ETN-M-INT