



Stock Code: 002979



EtherNet/IP™

EtherCAT®

PROFINET®

R3 Series

Ultra-thin Remote IO Modules



- Headquarters in Shenzhen



- Shanghai Intelligent Industry Park



- Production base in Shenzhen

- Founded in 1997
- Public Listed Company in China (002979.SZ)
- Dedication in Motion Control
Stepper / Servo systems, Motion Controllers, PLC
Control systems, I / O Modules, Encoders
- A leading supplier of motion control products and solutions in the world
- Customer Oriented, Technology Oriented, Forever Improving, Sharing of Success



25+
Experience



400+
R&D Engineers



5
Subsidiaries



60+
Countries Clients



10000+
Global Partners

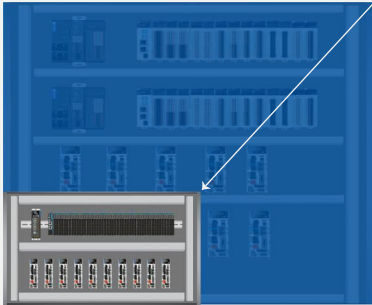


30 million+
Installed Axes

Features

Space Saving

- 12mm ultra-thin thickness, standard 100mm height.
- Coupler as thin as 25mm.



Save up to **70%** space

Improve Efficiency

- Self-locking terminal, easy to plug and unplug.
- Quick disassembly of modules, tool free wiring.



Conventional connector module
low efficiency



R3 series module
Quick disassembly of modules
Tool free wiring.

70%

Excellent Performance

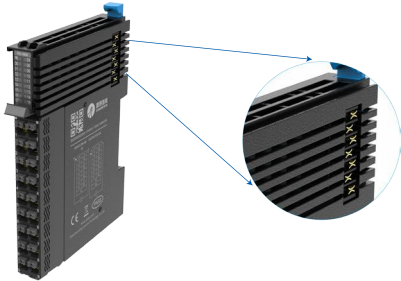
- More than 30 module categories, suitable for various systems.
- Expandable up to 64 modules, microsecond level data response.



100Mbps high speed R-link communication bus
I/O response time< 100 μ s
Analog signal microsecond level convert time

High Stability

- 100M R-link bus.
- Overvoltage/current, short circuit protection.
- Power supply anti reverse connection.



Thickened gold plating process
Double-sided clamping interface

Part Numbers

R3 - □ 16 16- □ - XXX

Series	
SC	Economic
PM	General
R3	Ultra-thin

I / O Type	
Blank	Digital
A	Analog
E	Encoder
T	Temperature
RS	Serial
P	Pulse
L	Weigh

Input Channels	
00	No
08	channel 08
16	channels
32	16 channels
	32 channels

Output Channels	
00	No
08	channel 08
16	channels
32	16 channels
	32 channels

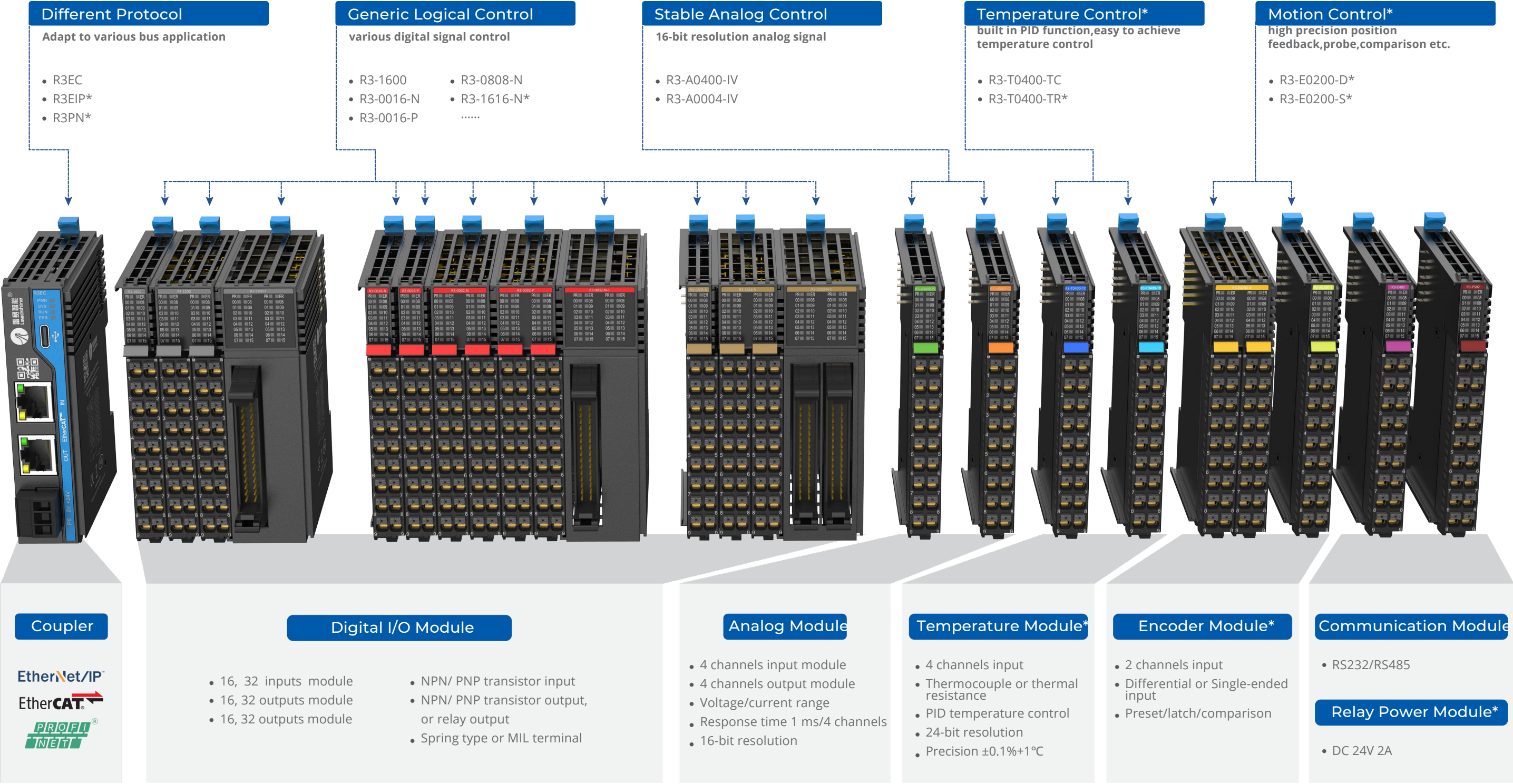
Terminal			
Blank	Spring Type Terminal		
1	MIL terminal		
2	Fujitsu terminal		

I / O Feature			
N	NPN	R	Relay
P	PNP	D	Differential
I	Current	S	Single-ended
V	Voltage		

Specifications

Module	Model	Description
Coupler	R3EC	EtherCAT communication coupler
	R3PN*	ProfINET communication coupler
	R3EIP*	Ethernet / IP communication coupler
Relay power module	R3-PS02A*	DC24V voltage input, 2A current output
Digital input module	R3-1600	16 channels digital (NPN / PNP)input module
	R3-3200*	32 channels digital (NPN / PNP)input module
Digital output module	R3-0016-N	16 channels digital(NPN)output module
	R3-0016-P	16 channels digital(PNP)output module
	R3-0032-N*	32 channels digital(NPN)output module
	R3-0032-P*	32 channels digital(PNP)output module
	R3-0008-R*	8 channels digital(relay)output module
	R3-0808-N	
Digital I / O module		8 channels digital (NPN / PNP)input 8 channels digital(NPN)output module
	R3-1616-N*	16 channels digital (NPN / PNP)input 16 channels digital(NPN)output module
Analog module	R3-A0400-IV	4 channels analog (current / voltage)input module
	R3-A0004-IV	4 channels analog (current / voltage)output module
Temperature module	R3-T0400-TC*	4 channels (thermocouple)input temperature module
	R3-T0400-TR*	4 channels (thermal resistance)input temperature module
Encoder module	R3-E0200-D*	2 channels (differential)input encoder module
	R3-E0200-S*	2 channels (single end)input encoder module
Communication module	R3-RS02-485*	2 channels (RS485) serial communication module
Drive module	R3DM-ST / R3CM-ST*	Stepper Drive Modules
	R3-SVD*	Servo Drive Modules

- The R3 series ultra-thin modules come in over 30 categories, serving as connectors between sensors and actuators in diverse scenarios of intelligent manufacturing;
- Achieve rapid equipment debugging, simple on-site maintenance, and saving manufacturing time.

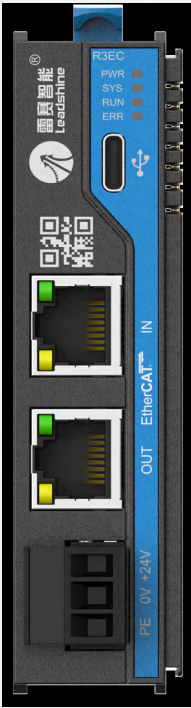


Color code of module model :

- Coupler
- Relay power module*
- Digital input module
- Digital output module
- Digital I/O module
- Analog input module
- Analog output module
- Temperature module*
- Encoder module*
- Communication module*

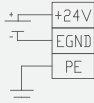
Note: "*"indicates upcoming release, please stay tuned

R3 Series Coupler



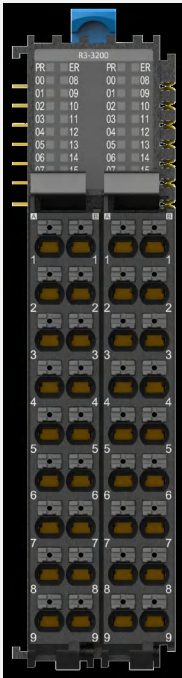
R3EC / R3EIP / R3PN

Specifications		Model	R3EC	R3EIP	R3PN
Power	Input Power		DC24V(-15%~+20%), 2A		
	Output Power		DC24V(-15%~+20%), 2A		
Extension	Bus Type		EtherCAT	EtherNet/IP	
	Bus Port		RJ45 crystal head, internal connector		
Bus Performance	Bus Type		Complies with EtherCAT bus standard	EtherNet/IP Standard	ProfiNet Standard
	Bus Functions		Minimum bus cycle of 125us, occupies one slave station, can expand up to 64 modules with one coupler, and supports SM / DC synchronization mode	Implicit telegram communication, explicit telegram communication, maximum expansion of 64 R3 series modules per coupler	Minimum bus cycle of 125us, occupies one slave station, can expand up to 64 R3 Series modules with one coupler, and supports RT / IRT synchronization mode
Others	Installation		Standard DIN rail		
	Certification		CE		



Digital Input Module

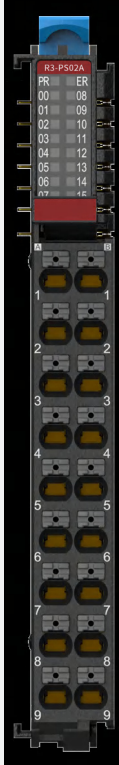






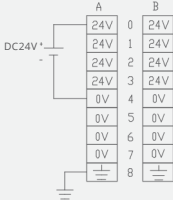
R3-1600 R3-3200* R3-3200-1*

Repeater Power Supply Module



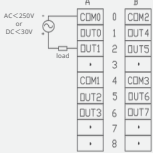
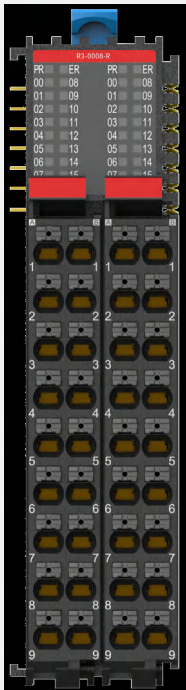
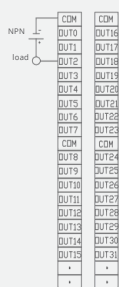
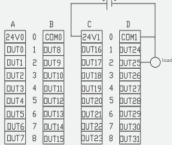
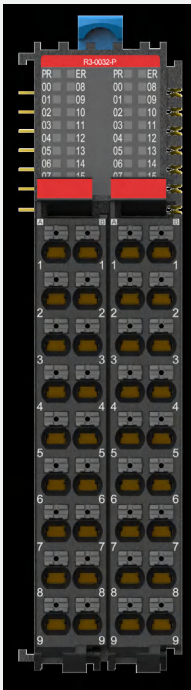
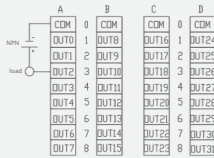
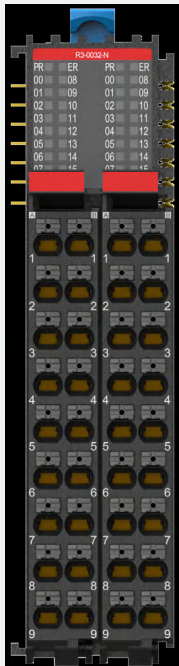
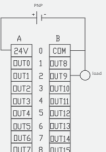
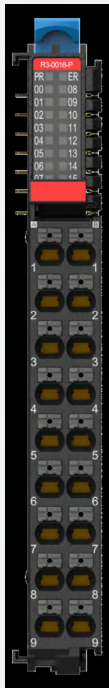
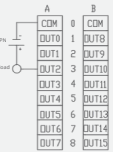
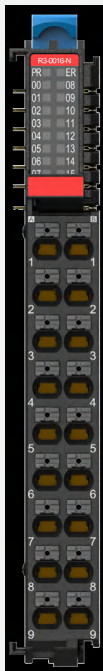
R3-PS02A*

Specifications		Model	R3-PS02A*
Power	Input Power		DC24V(-15%~+20%), 2A
	Output Power		DC24V,2A
Output	Output Current		2A
	Outport Current Capability		Less than 4A
Others	Installation		Standard DIN rail
	Certification		CE



Specifications		Model	R3-1600	R3-3200*	R3-3200-1*
I / O	Input pins		16	32	32
	Output pins		\		
Input Connection Method			Inline Large Bore Push-In	MIL Connectors	Inline Large Bore Push-In
Input Method			NPN / PNP		
Input Current			5mA		
Input Power			DC24V(-15%~+20%)		
Inport impedance			4.7KΩ		
OFF-ON statuses			Higher than DC15V, current 1.5mA		
ON-OFF statuses			Below DC15V, current 1mA		
Input protection			Optical coupling isolation, anti-interference filtering		
Hardware port filtering time			1ms		
Frequency			1K		
Software Filtering Time			0ms~255ms		
Others	Installation		Standard DIN rail		
	Certification		CE		

Digital Output Module



R3-0016-N

R3-0016-P

R3-0032-N*

R3-0032-P*

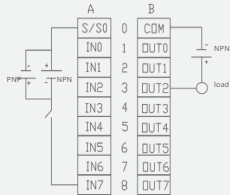
R3-0032-N-1*

R3-0008-R*

Specifications		Model	R3-0016-N	R3-0016-P	R3-0032-N*
I / O	Input pins		\		
	Output pins		16	16	32
Output Connection Method			Inline Large Bore Push-In		
Output Method			NPN	PNP	NPN
Output Current			Peak 500mA / Pins (full load 300mA / Pins)		
Output Voltage Range			DC5V-DC24V		
OFF leakage current			5mA		
Frequency			1K		
Isolation method			Optical coupling isolation		
Output protection			Short circuit protection, over current protection		
Others	Installation		Standard DIN rail		
	Certification		CE		

Specifications		Model	R3-0032-P*	R3-0032-N-1*	R3-0008-R*
I / O	Input pins		\		
	Output pins		32	32	8
Output Connection Method				MIL Connectors	Inline Large Bore Push-In
Output Method			PNP	NPN	Relay
Output Current			Peak 500mA / Pins (full load 300mA / Pins)		2A / Pins
Output Voltage Range			DC5V-DC24V		AC250 / DC30V
OFF leakage current			5mA		Resistive loads: 100000 Times @ DC30VAC250V 2A
Frequency			1K		1k
Isolation method			Optical coupling isolation		Emotional responsibility: 20000 Times @ DC30V 2A
Output protection			Short circuit protection, over current protection		OFF-ON,<15ms; ON-OFF,<15ms
Others	Installation		Standard DIN rail		
	Certification		CE		

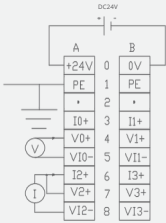
Digital I / O Module



R3-0808-N

Specifications		Model	R3-0808-N
I / O	Input pins		8
	Output pins		8
Input Connection Method			Inline Large Bore Push-In
Input port	Input Method		NPN / PNP
	Input Current		5mA
	Input Power		DC24V(-15%~+20%)
	Input impedance		4.7KΩ
	Input protection		Optical coupling isolation, anti-interference filtering
	Frequency		1K
Output port	Output Method		NPN
	Output Current		Peak 500mA / Pins (full load 300mA / Pins)
	Output Power		DC5V~DC24V
	OFF leakage current		5mA
	Frequency		1K
	Isolation method		Optical coupling isolation
	Output protection		Short circuit protection, over current protection
Others	Installation		Standard DIN rai
	Certification		CE

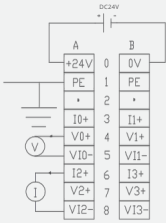
Analog Input Module



R3-A0400-IV

Specifications		Model	R3-A0400-IV
Input pins			4
Input Connection Method			Inline Large Bore Push-In
Input Power			DC24V(-15%~+20%)
Resolution			16-Bit
Respond time			1ms / 4 Channels
conversion time			250us Channels
Input resistance			Voltage input resistance: > 1MΩ Current sampling resistance: 250Ω
Accuracy			Voltage±0.1% Current±0.2% 0-25°C
Voltage input range			±5V(-32000~32000)
			1-5V(0~32000)
			±10V(-32000~32000)
			0-10V(0~32000)
			0-5V(0~32000)
Current input range			0-20mA(0~32000)
			4-20mA(0~32000)
			±20mA(-32000~32000)
			Standard DIN rai
Others	Installation		CE
	Certification		

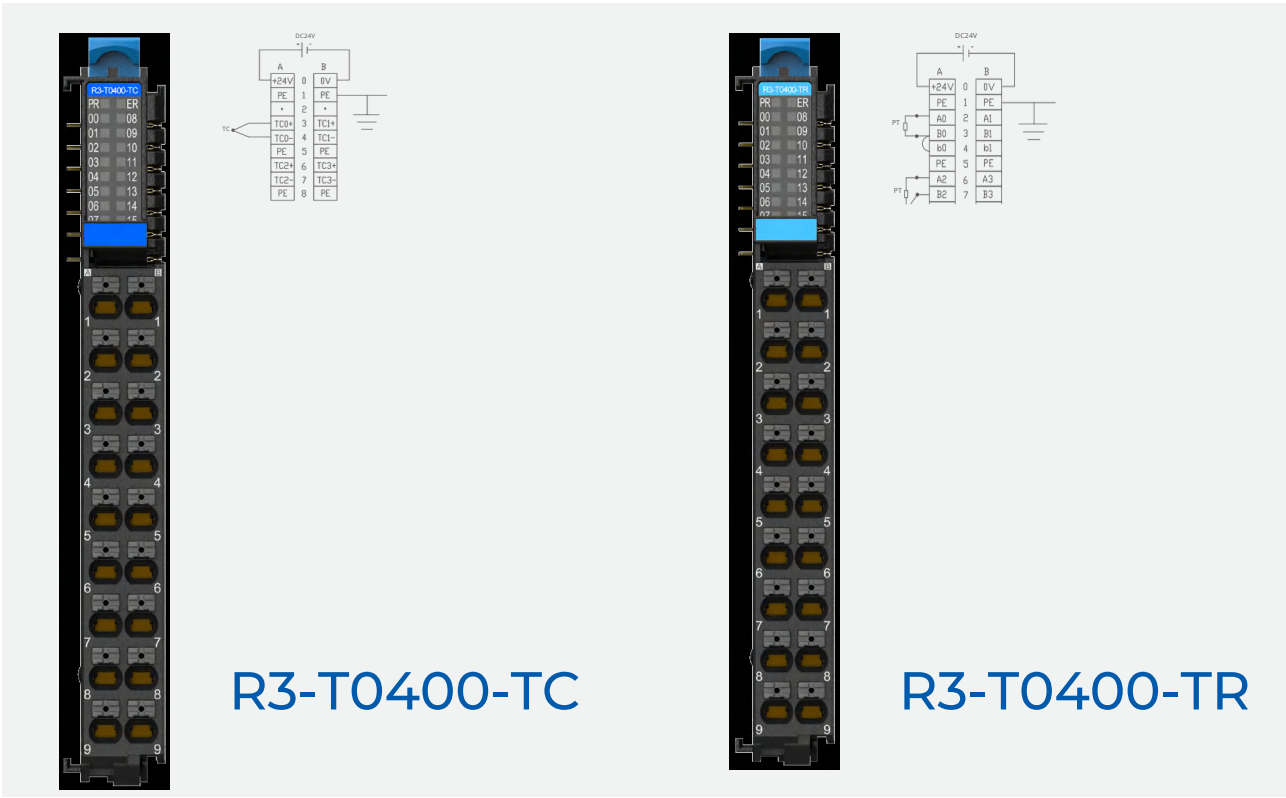
Analog Output Module



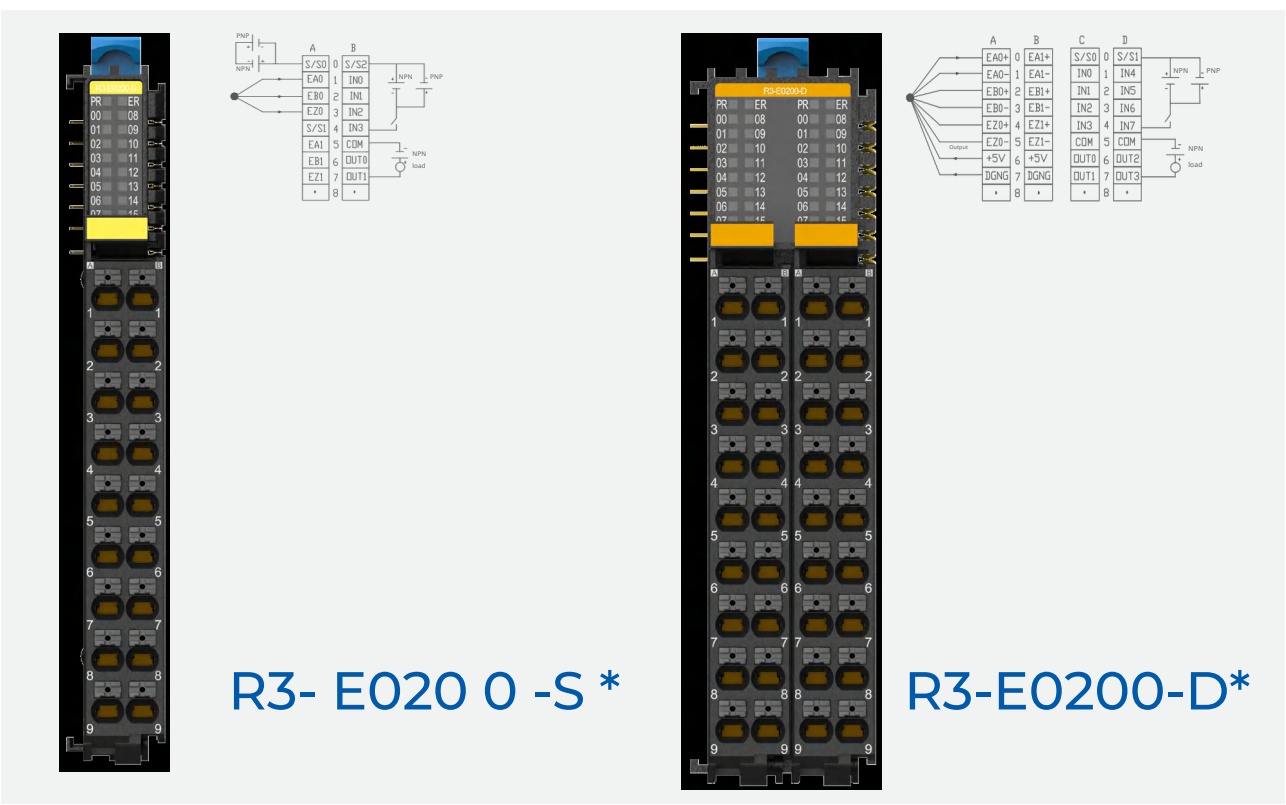
R3-A0004-IV

Specifications		Model	R3-A0004-IV
Input pins			4
Input Connection Method			Inline Large Bore Push-In
Input Power			DC24V(-15%~+20%)
Resolution			16-Bit
Response time			1ms / 4 Channels
conversion time			50us Channels
Input resistance			Voltage input resistance: > 1MΩ Current sampling resistance: 250Ω
Accuracy			Voltage±0.1% Current±0.2% 0-25°C
Voltage input range			±5V(-32000~32000)
			1-5V(0~32000)
			±10V(-32000~32000)
			0-10V(0~32000)
			0-5V(0~32000)
Current input range			0-20mA(0~32000)
			4-20mA(0~32000)
			±20V(-32000~32000)
			Standard DIN rai
Others	Installation		CE
	Certification		

Thermocouple Temperature Module

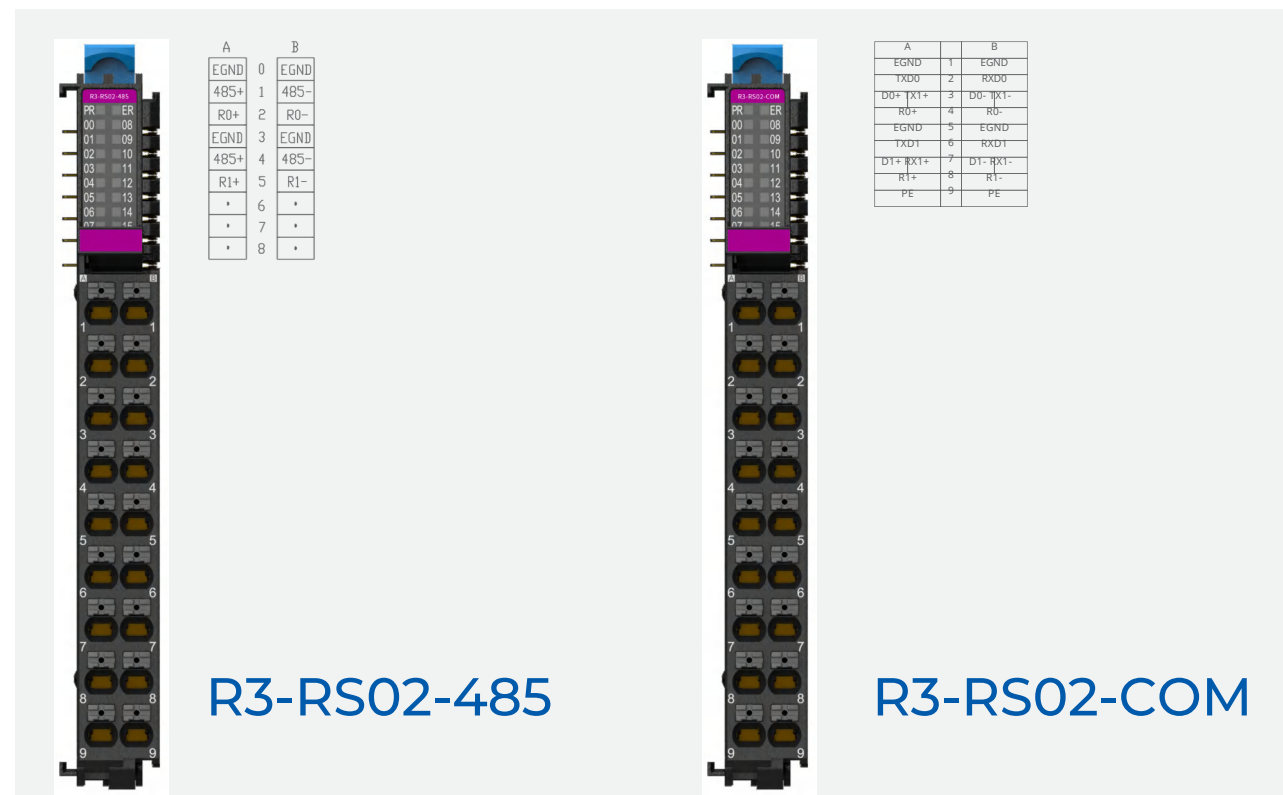


Single-End Encoder Module



Specifications		Model	R3-T0400-TC	R3-T0400-TR
Input pins			4	
Input Connection Method			Inline Large Bore Push-In	
Input Power			DC24V(-15%~+20%)	
Sensor Type			J, K, R, S, T, E, N, B type, ±100mV voltage input	(Pt100 / Pt1000 / JPt100 / Ni100 / Ni1000 / LG-Ni1000 / Cu50 / Cu100) 0~300.0 or 0~3000.0
Wiring Type			two wire	two wire or three wire
Resolution			24-Bit	
Respond time			250ms, 500ms, 1000ms / four channels (configurable by software)	
Accuracy			(±0.1%) ±1° (0-25°C)	
Sensitivity			0.1°C, 0.1°F	
Temperature			°C / °F	
Cold End Compensation Method			Internal / external cold end compensation	\
Diagnosis Protection			disconnection detection, power protection	
Others	Installation		Standard DIN rai	
	Certification		CE	

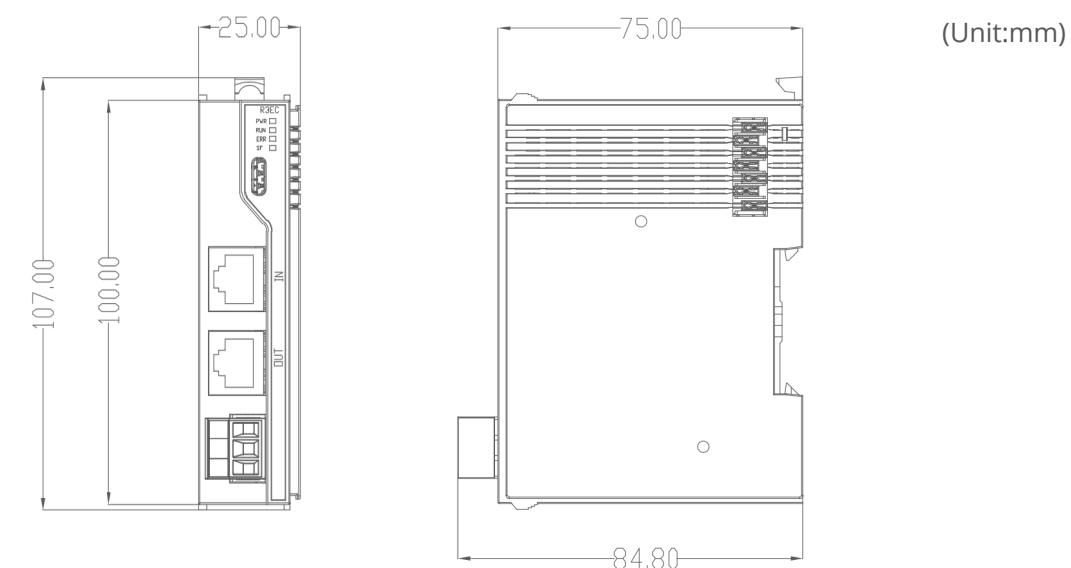
Specifications		Model	R3-E0200-S*	R3-E0200-D*
Input pins			2	
Input Connection Method			Inline Large Bore Push-In	
Input Type			5V single-ended encoder signal input single-end ABZ (multiple 1 / 2 / 4), pulse+direction, or CW / CCW	5V differential / single-ended encoder signal inputs single-end ABZ (multiple 1 / 2 / 4), pulse+direction, or CW / CCW
Counting mode			Cyclic / Linear	
Counting range			-2147483648 ~ 2147483647	
Frequency			single phase 4MHz (quadruple frequency 16MHz)	
Direction			Configurable	
Software function			Support preset / latching / one-dimensional comparison / two-dimensional comparison Standard DIN rai	
Others	Installation		CE	
	Certification			



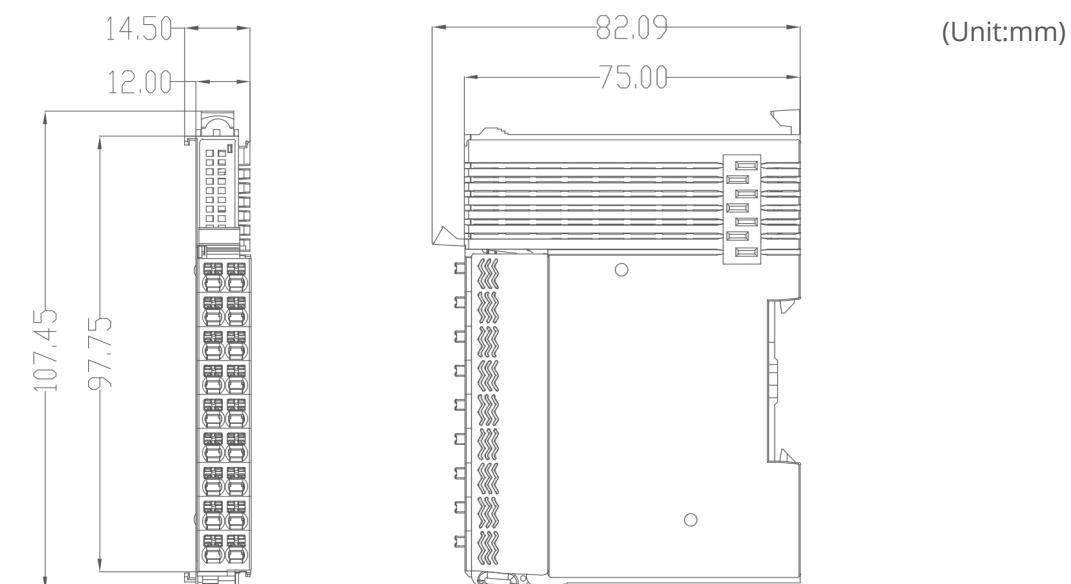
Specifications		Model	R3-RS02-485	R3-RS02-COM
Input pins			2	
Input Connection Method			Inline Large Bore Push-In	
Communication port			RS485	RS232 / RS485 / RS422
Protocols			Modbus RTU Master / Slave and protocol-free	
Baudrate			4800 / 9600 / 19200 / 38400 / 57600 / 115200 bit/s	
Byte Size			7 bit / 8 bit	
Start Bits			1 bit	
Stop Bits			1 bit / 2 bit	
Parity			None Parity / Odd Parity / Even Parity	
Slaves - number			RS485 Supports up to 31 slaves per port RS232 / RS422 port, supports 1 slave only	
Terminating resistor			Built-in (requires shorting when in use)	
Others	Installation		Standard DIN rail	
	Certification		CE	

Dimension

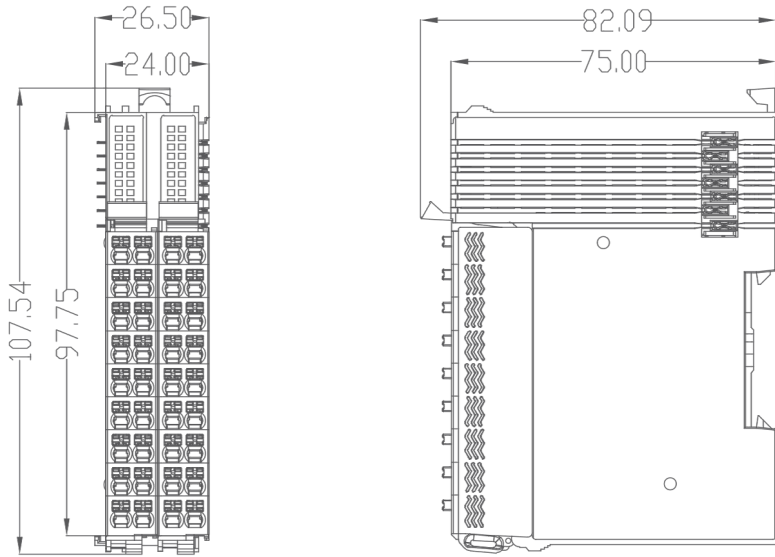
R3EC/R3PN*/R3EIP*



R3-1600 / R3-0016-N / R3-0016-P / R3-0808-N / R3-A0400-IV
/ R3-A0004-IV / R3-T0400-TC / R3-T0400-TR / R3-E0200-S*
/ R3-PS02A* / RS-RS02-485 / RS-RS02-COM

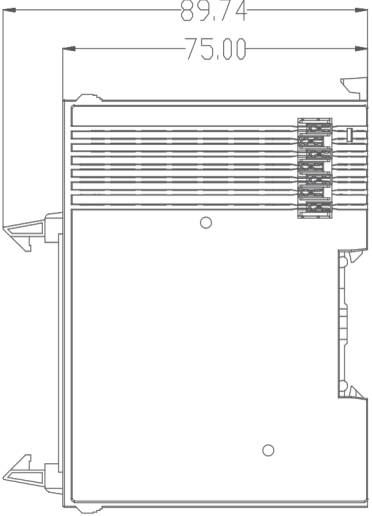
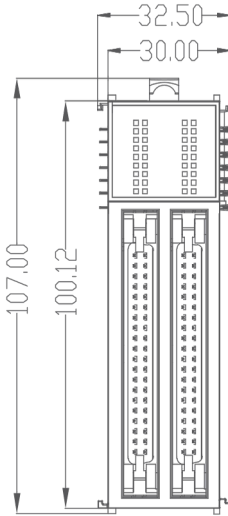


R3-3200* / R3-0032-N* / R3-0008-R* / R3-1616-N* / R3-1616-P*
/ R3-E0200-D*



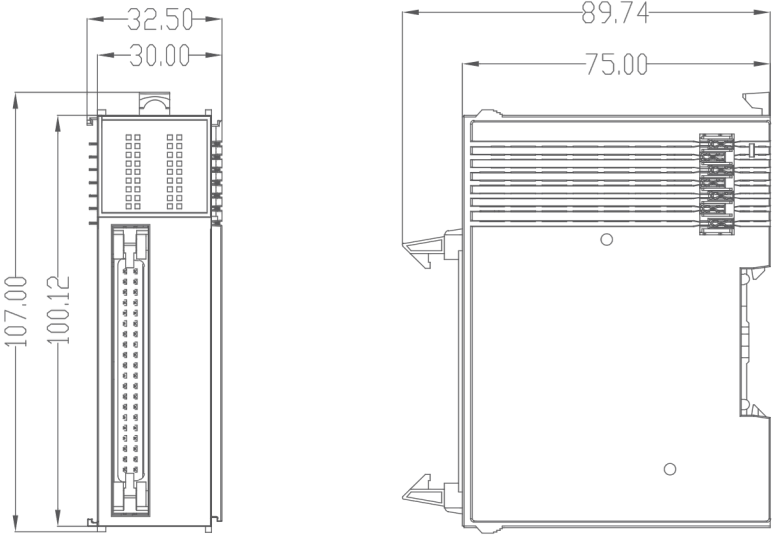
(Unit:mm)

R3-3232-N-1*



(Unit:mm)

R3-3200-1* / R3-0032-N-1*



(Unit:mm)



Headquarters
China Leadshine Technology Co., Ltd.

☎ +86 755 26411692 📠 +86 755 26402718
🌐 www.leadshine.com
✉ sales@leadshine.com (Sales)
 tech@leadshine.com (Technical Support)
📍 15-20/F, Block B, Nanshan i-Valley, Shuguang Community,
 Xili Town, Nanshan District, Shenzhen 518055, China

North America Office
Leadshine America, Inc.

☎ 1-949-608-7270 📠 1-949-638-7298
🌐 www.leadshineusa.com
✉ sales@leadshineusa.com (Sales)
 support@leadshineusa.com (Technical Support)
📍 26050 Towne Centre Dr. Foothill Ranch, CA 92610 USA

Distributors for Italy
ErreUno S.r.l.

☎ 00390521694164
🌐 www.erre1.it
🌐 E-commerce: www.syby.it
✉ info@erre1.it (Sales)
📍 13 Novella Street, 43058 Sorbolo, PR, Italy

