



Leadshine

Stock Code: 002979



EtherNet/IP™

EtherCAT®

PROFINET®

R3 Series

Ultra-thin Remote IO Modules

Reliable Motion Control Partner



- 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

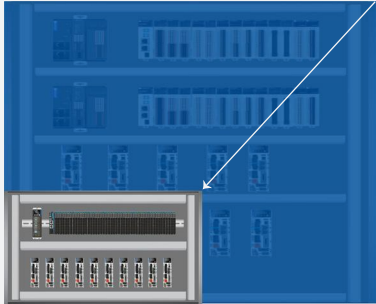
 **10000+**
Global Partners

 **30million+**
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

70%

R3 series module

Quick disassembly of modules Tool free wiring.

Excellent Performance

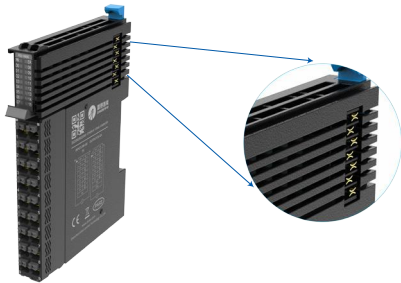
- More than 30 module categories, suitable for various systems.
- Expandable up to 64 modules, microsecond level data response.



100Mbps high speed R-link communication bus
I/O response time< 100 μs
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 channel
08	08 channels
16	16 channels
32	32 channels

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

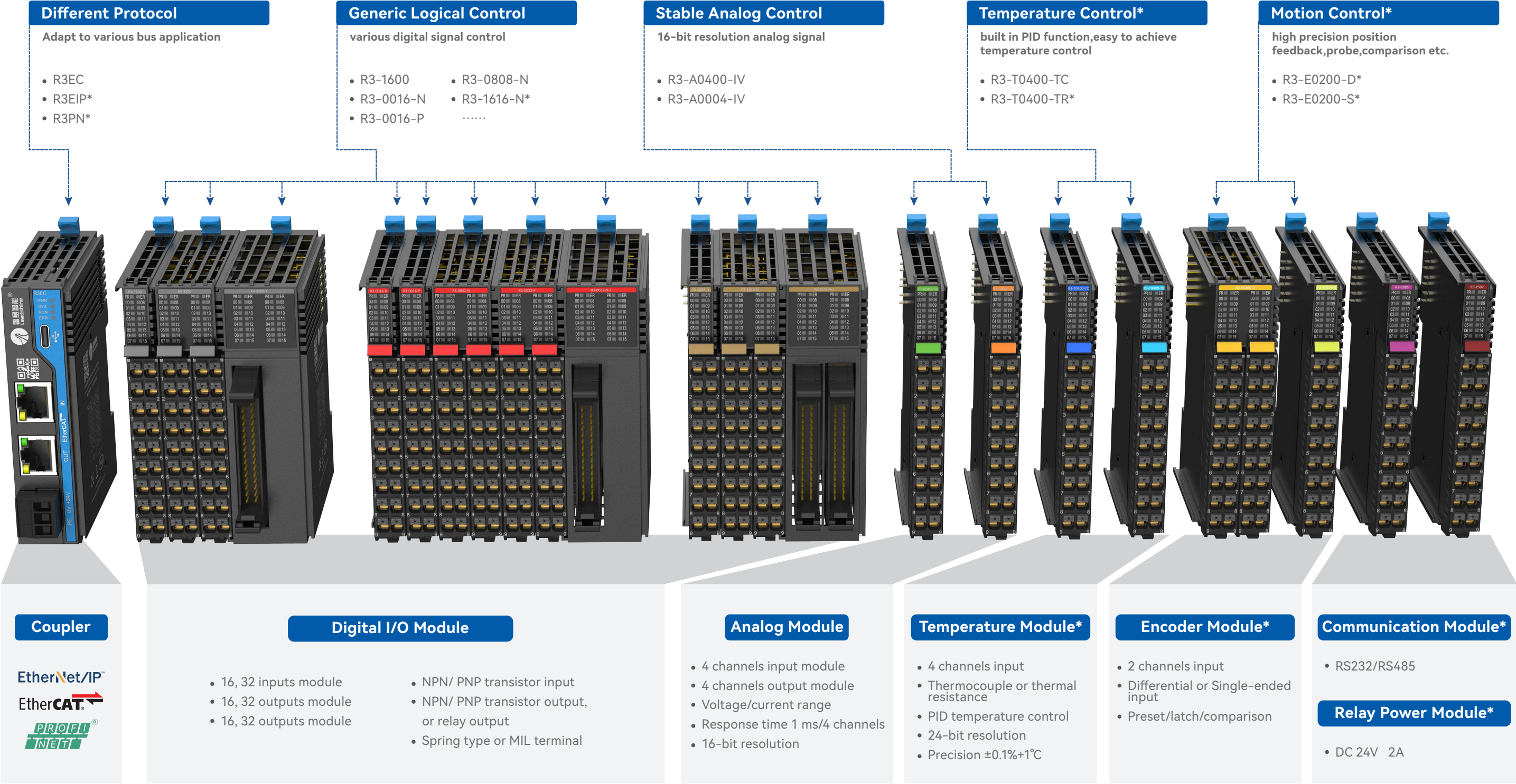
Terminal	
Blank	Spring Type Terminal
1	MIL terminal
2	Fujitsu terminal

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
Digital I / O module	R3-0808-N	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.

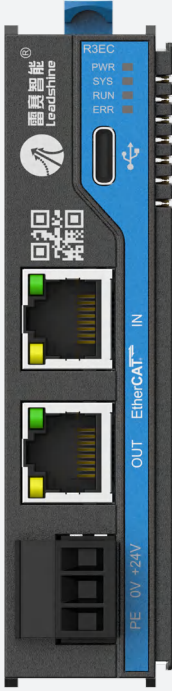


Color code of module model :

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*

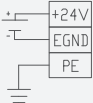
Note: "*"indicates upcoming release, please stay tuned

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	ProfiNet
	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, ooccupies 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, ooccupies one slave station, can expand up to 64 R3 Series modules with one coupler, and supports RT / IRT synchronization mode
Others	Installation		Standard DIN rai		
	Certification		CE		



Digital Input Module







R3-1600

R3-3200*

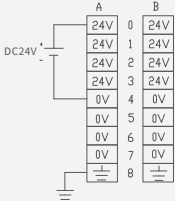
R3-3200-1*

Repeater Power Supply Module



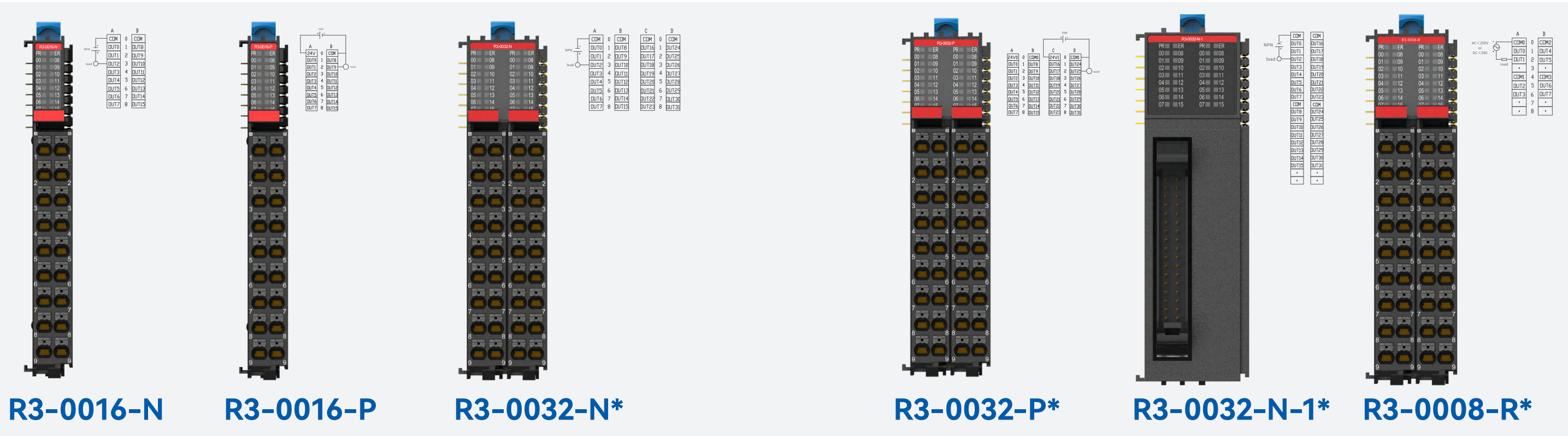
R3-PS02A*

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

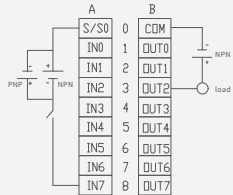
Digital Output Module



Model		R3-0016-N	R3-0016-P	R3-0032-N*
Specifications				
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 rai		
	Certification	CE		

Model		R3-0032-P*	R3-0032-N-1*	R3-0008-R*
Specifications				
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 @ DC30V\AC250V 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 rai		
	Certification	CE		

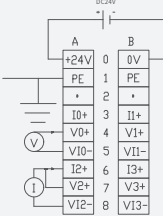
Digital I / O Module



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%)	
	Inport 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	
Others	Output protection	Short circuit protection, over current protection	
	Installation	Standard DIN rai	
		Certification	CE

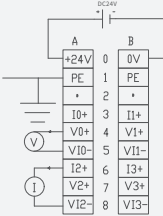
Analog Input Module



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℃ ±5V(-32000~32000) 1-5V(0~32000)	
Voltage input range		±10V(-32000~32000)	
		0-10V(0~32000)	
		0-5V(0~32000)	
		0-20mA(0~32000)	
Current input range		4-20mA(0~32000)	
		±20mA(-32000~32000)	
		Standard DIN rai	
Others	Installation	Standard DIN rai	
	Certification	CE	

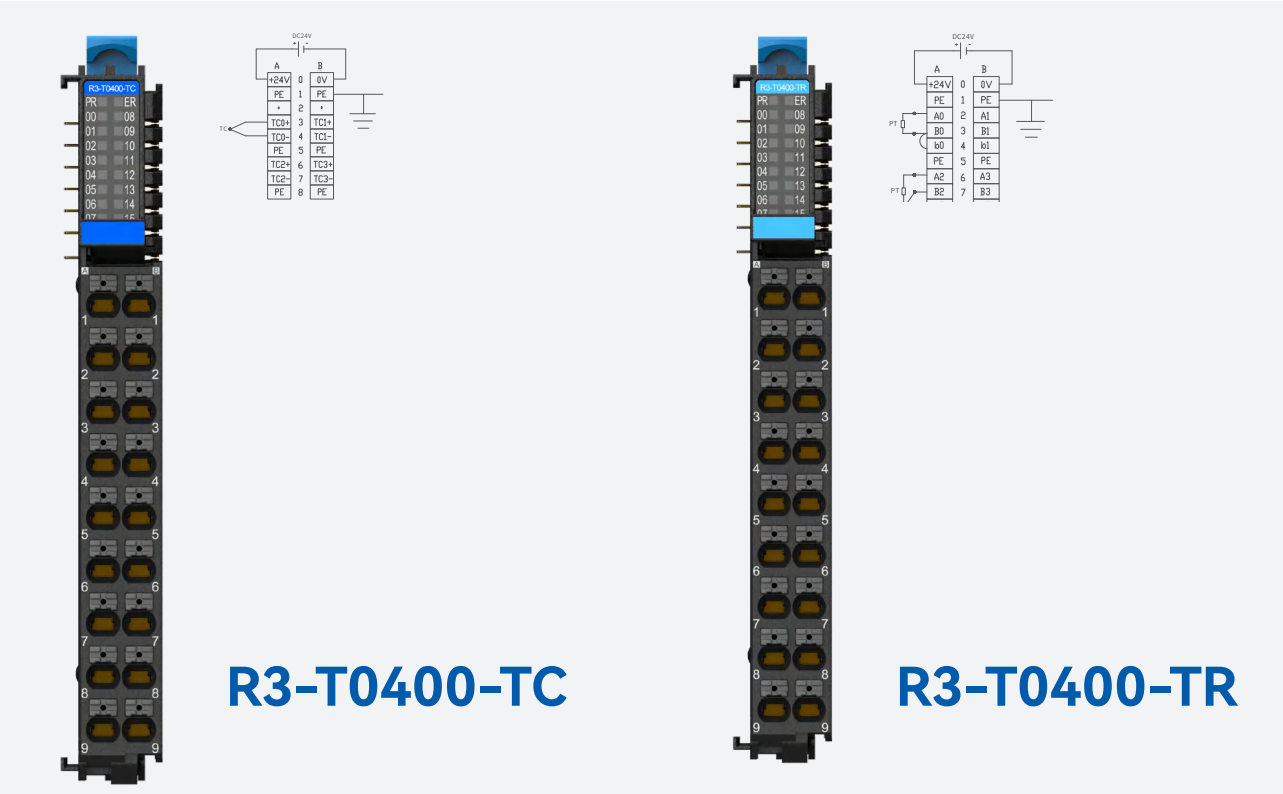
Analog Output Module



R3-A0004-IV

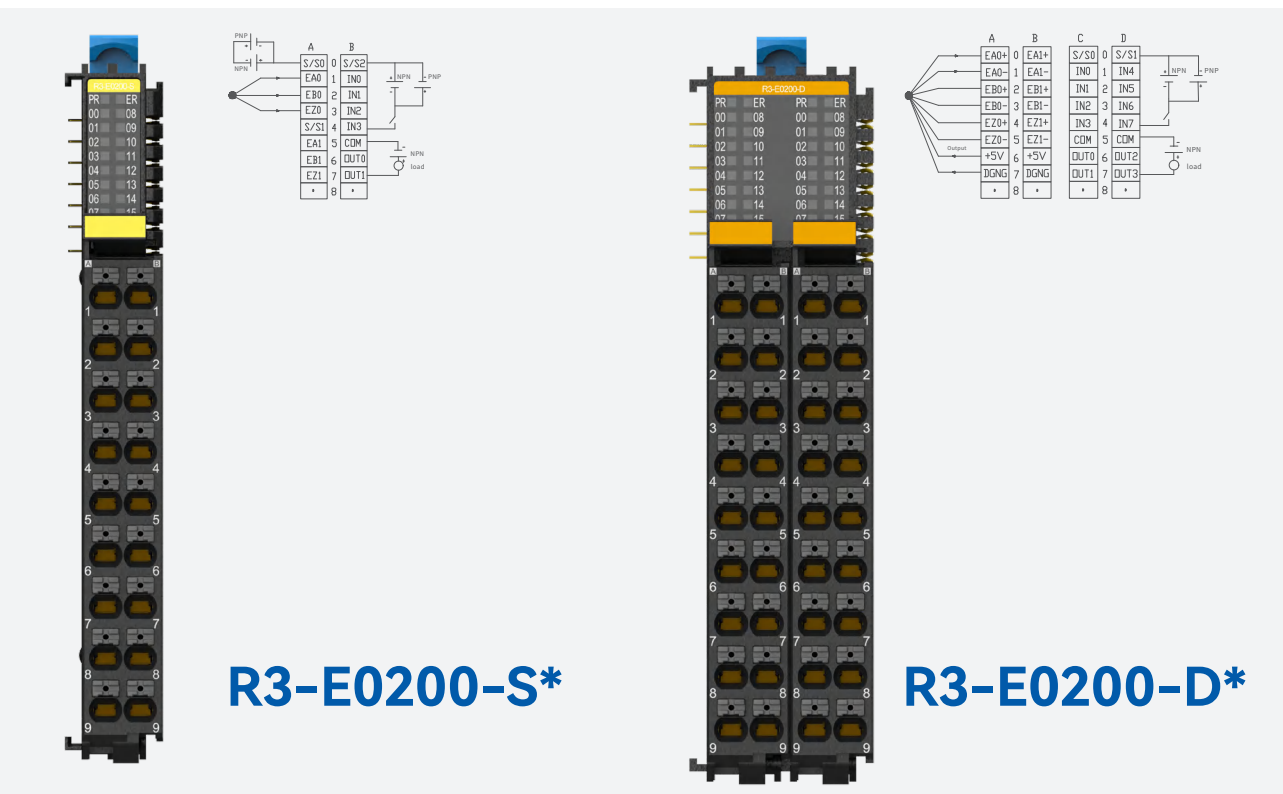
Specifications		Model	R3-A0004-IV
Input pins		4	
Input Connection Method		Inline Large Bore Push-In	
Input Power		DC24V(-15%~+20%)	
Resolution		16-Bit	
Response time		1ms / 4 Channels	
conversion time		50us Channels	
Input resistance		Voltage input resistance: > 1MΩ Current sampling resistance: 250Ω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

Thermocouple Temperature Module



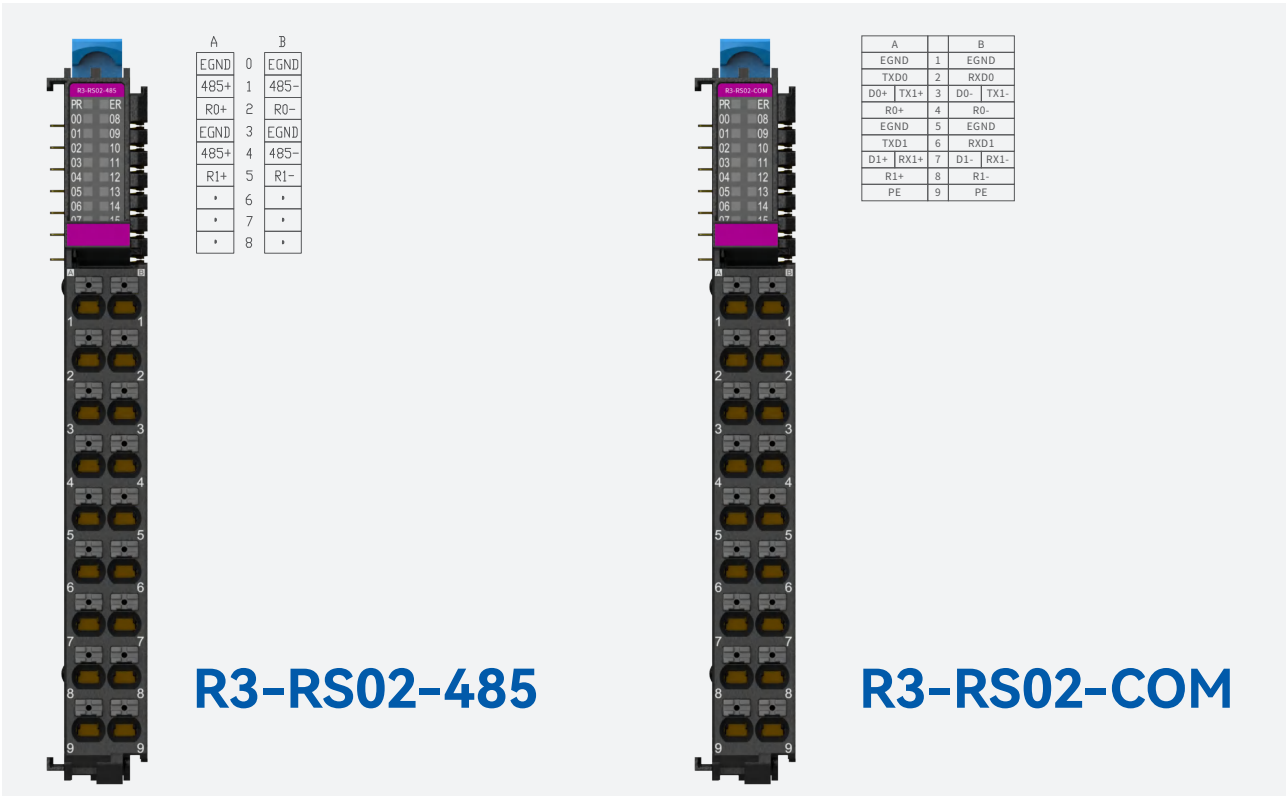
Model		R3-T0400-TC	R3-T0400-TR
Specifications			
Input pins		4	
Input Connection Method		Inline Large Bore Push-In	
Input Power		DC24V(-15%~+20%)	
Sensor Type		J, K, R, S, T, E, N, B type, ±100mV voltage input	(Pt100 / Pt1000 / JPt100 / Ni100 / Ni1000 / LG-Ni1000 / Cu50 / Cu100) 0~300Ω or 0~3000Ω
Wiring 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	

Single-End Encoder Module



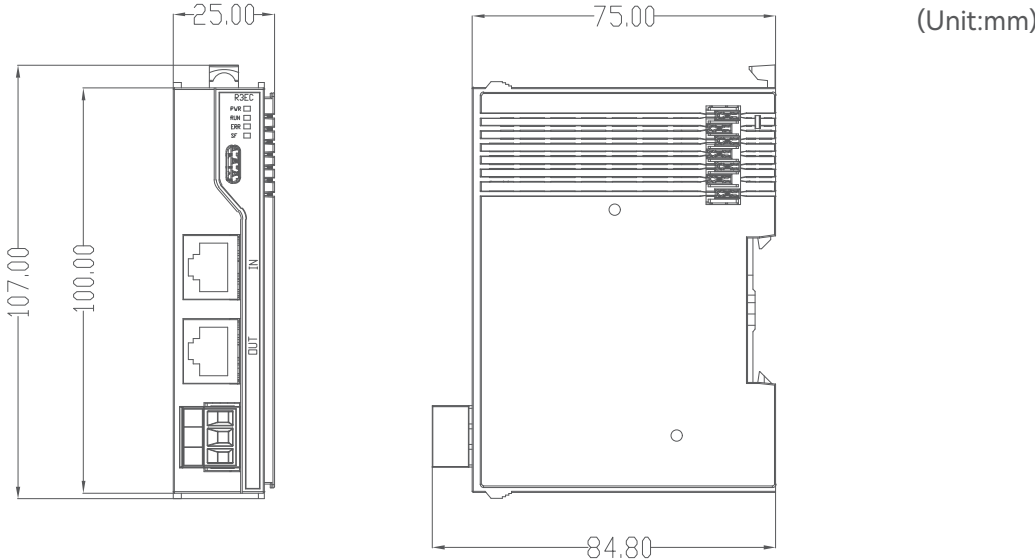
Model		R3-E0200-S*	R3-E0200-D*
Specifications			
Input pins		2	
Input Connection Method		Inline Large Bore Push-In	
Input Type		5V single-ended encoder signal input single-end ABZ (multiple 1 / 2 / 4), pulse+direction, or CW / CCW	5V differential / single-ended encoder signal inputs single-end ABZ (multiple 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	
Others	Installation	Standard DIN rai	
	Certification	CE	

Serial port module

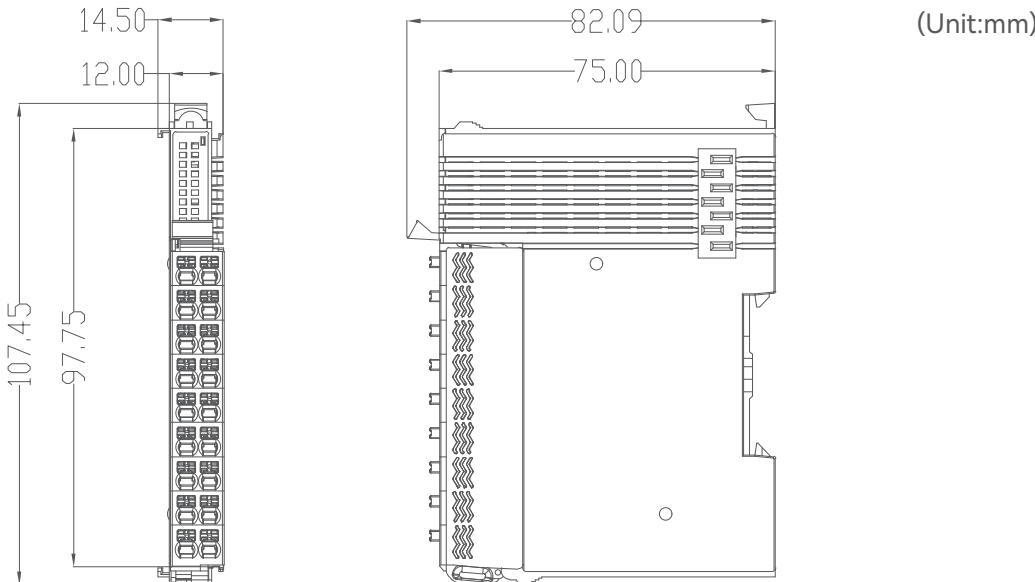


Dimension

R3EC/R3PN*/R3EIP*

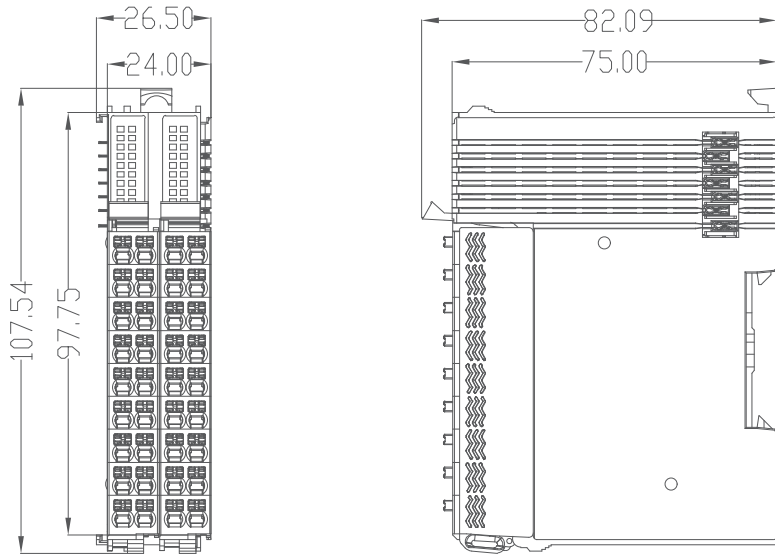


R3-1600 / R3-0016-N / R3-0016-P / R3-0808-N / R3-A0400-IV / R3-A0004-IV / R3-T0400-TC / R3-T0400-TR / R3-E0200-S* / R3-PS02A* / RS-RS02-485 / RS-RS02-COM



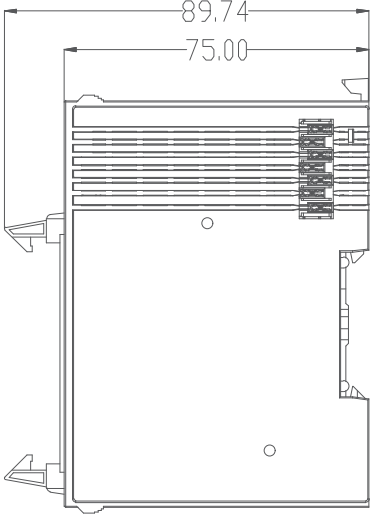
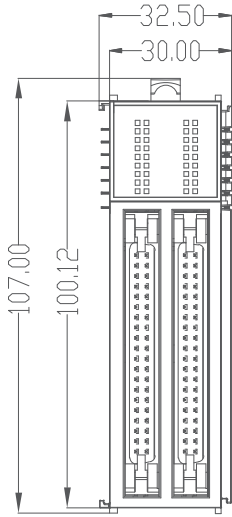
Specifications		Model	R3-RS02-485	R3-RS02-COM
Input pins			2	
Input Connection Method			Inline Large Bore Push-In	
Communication port			RS485	RS232 / RS485 / RS422
Protocols			Modbus RTU Master / Slave and protocol-free	
Baudrate			4800 / 9600 / 19200 / 38400 / 57600 / 115200 bit/s	
Byte Size			7 bit / 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	

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



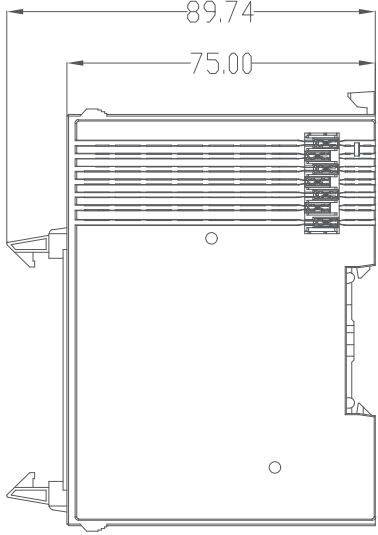
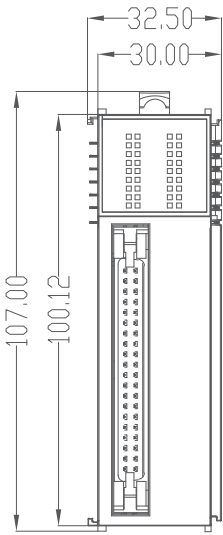
(Unit:mm)

R3-3232-N-1*



(Unit:mm)

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



(Unit:mm)



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