



Discrete I/O Modules (Output)

RSTi discrete output modules are available for a wide range of applications requiring DC voltages (5 VDC, 24 VDC, 48 VDC) and AC voltages (12 VAC, 125 VAC). The modules are available in 4, 8 or 16 point density to optimize panel space. Relay output modules are also available. The ST-2792 has an added feature of manual/automatic override.

	ST-2742	ST-2744	ST-2748	ST-2852
Product Name	2 points, Relay Output, 2 Amps	4 points, Relay Output, 2 Amps	8 points, Relay Output, 2 Amps	2 points, 12 to 125 VAC Output, 0.5 Amps
Lifecycle Status	Active	Active	Active	Active
Module Type	Digital Outputs	Digital Outputs	Digital Outputs	Digital Outputs
Output Range	5~28.8 VDC @ 2.0A Resistive 48 VDC @ 0.8A Resistive 110 VDC @ 0.5A Resistive 250 VAC @ 2.0A Resistive	5~28.8 VDC @ 2.0A Resistive 48 VDC @ 0.8A Resistive 110 VDC @ 0.5A Resistive 250 VAC @ 2.0A Resistive	5~28.8 VDC @ 2.0A Resistive 48 VDC @ 0.8A Resistive 110 VDC @ 0.5A Resistive 250 VAC @ 2.0A Resistive	15~132 VAC 47 to 63Hz
Number of Points	2	4	8	2
Points per Common	1	4	8	2
Diagnostic Supported				
Protection				
ON Voltage/OFF Voltage				
Load Current per Point	2A @ 5~28.8 VDC 0.8A @ 48 VDC 0.5A @ 110 VDC 2A @ 250 VAC	2A @ 5~28.8 VDC 0.8A @ 48 VDC 0.5A @ 110 VDC 2A @ 250 VAC	2A @ 5~28.8 VDC 0.8A @ 48 VDC 0.5A @ 110 VDC 2A @ 250 VAC	0.5 Amp
Output Inrush Current				40 Amp for 16 mSec. or 4 Amp for 30 Sec.
Response Time (ms)	OFF to ON : Max. 10ms ON to OFF: Max. 10ms	OFF to ON: Max. 10ms ON to OFF: Max. 10ms	OFF to ON: Max. 10ms ON to OFF: Max. 10ms	OFF to ON: Max. 3ms ON to OFF: Max. 1/2 Cycle plus 3ms
Polarity				
Field Power Requirement	24 VDC, 240 VAC	No Connection with Field Power Field Power passes through to the next module	No Connection with Field Power Field Power passes through to the next module	120 VAC nominal Voltage Range: 12~125 VAC
Power Dissipation				
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	65 mA @ 5.0 VDC Maximum	130 mA @ 5.0 VDC Maximum	150 mA @ 5.0 VDC Maximum	35 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 24 x 70	99 x 12 x 70



Analog I/O Modules (Output)

RSTi analog output modules are available in a wide range of voltage and current signals. Specialty analog modules are also available for manual over-ride and 0 to 1 Amp analog out.

	ST-4112	ST-4114	ST-4212	ST-4214
Product Name	2 channels Current Output, 0 to 20 mA, 12bit	4 channels Current Output, 0 to 20 mA, 12bit	2 channels Current Output, 4 to 20 mA, 12bit	4 channels Current Output, 4 to 20 mA, 12bit
Lifecycle Status	Active	Active	Active	Active
Module Type	Analog Output	Analog Output	Analog Output	Analog Output
Output Range	0 to 20 mA	0 to 20 mA	4 to 20 mA	4 to 20 mA
Number of Points	2	4	2	4
Points per Common	2	4	2	4
Resolution	12 bits : 4.88uA/Bit	12 bits : 4.88uA/Bit	12 bits : 3.9uA/Bit	12 bits : 3.9uA/Bit
Accuracy	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C (100uA~20 mA) ±0.25% Full Scale @ 25°C(0uA~100uA) ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C
Update Rate	2msec for all channels	4msec for all channels	2msec for all channels	4msec for all channels
Maximum Output Load	Max. 500 Ω	Max. 500 Ω	Max. 500 Ω	Max. 500 Ω
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	60 mA @ 5.0 VDC Maximum	60 mA @ 5.0 VDC Maximum	60 mA @ 5.0 VDC Maximum	60 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70



Analog I/O Modules (Output)

RSTi analog output modules are available in a wide range of voltage and current signals. Specialty analog modules are also available for manual over-ride and 0 to 1 Amp analog out.

	ST-4274	ST-4422	ST-4424	ST-4474
Product Name	4 channels Current Output, 4 to 20 mA, 12bit (Connector Style)	2 channels Voltage Output, 0 to 10 VDC, 12bit	4 channels Voltage Output, 0 to 10 VDC, 12bit	4 channels Current Output, 0 to 10 VDC, 12bit (Connector Style)
Lifecycle Status	Active	Active	Active	Active
Module Type	Analog Output	Analog Output	Analog Output	Analog Output
Output Range	4 to 20 mA	0 to 10 VDC	0 to 10 VDC	0 to 10 VDC
Number of Points	4	2	4	4
Points per Common	4	2	4	4
Resolution	12 bits : 3.91uA/Bit	12 bits : 2.44mV/Bit	12 bits : 2.44mV/Bit	12 bits : 2.44mV/Bit
Accuracy	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C
Update Rate	1.2msec for all channels	2msec for all channels	4msec for all channels	1.2msec for all channels
Maximum Output Load	Max. 500 Ω	Min. 5 kΩ	Min. 2 kΩ	Min. 2 kΩ
Connector Type	Requires Sensor Connect 3M Mini-Clamp Plug, 37104 Series AWG#20~22 available	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Requires Sensor Connect 3M Mini-Clamp Plug, 37104 Series AWG#20~22 available
Internal Power Used (5 VDC loading)	40 mA @ 5.0 VDC Maximum	155 mA @ 5.0 VDC Maximum	60 mA @ 5.0 VDC Maximum	60 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70



Analog I/O Modules (Output)

RSTi analog output modules are available in a wide range of voltage and current signals. Specialty analog modules are also available for manual over-ride and 0 to 1 Amp analog out.

	ST-4491	ST-4522	ST-4622	ST-4911
Product Name	1 channels Voltage Output, 0 to 10 VDC, 12bit. (Manual Override or Automatic Operation)	2 channels Voltage Output, -10 to +10 VDC, 12bit	2 channels Voltage Output, 0 to 5 VDC, 12bit	1 channels Voltage Output, 0 to 1 Amp, 12bit.
Lifecycle Status	Active	Active	Active	Active
Module Type	Analog Output	Analog Output	Analog Output	Analog Output
Output Range	0 to 10 VDC	-10 to +10 VDC	0 to 5 VDC	0 to 1 Amp
Number of Points	1	2	2	1
Points per Common	1	2	2	1
Resolution	12 bits : 2.44mV/Bit	12 bits : 4.88mV/Bit	12 bits : 1.22mV/Bit	12 bits : 2.44 mA/Bit
Accuracy	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C
Update Rate	1.2msec for all channels	2msec for all channels	2msec for all channels	1msec for all channels
Maximum Output Load	Min. 2 kΩ	Min. 5 kΩ	Min. 5 kΩ	13 Ω, ±5%
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	60 mA @ 5.0 VDC Maximum	155 mA @ 5.0 VDC Maximum	155 mA @ 5.0 VDC Maximum	60 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70



RTD Modules

RSTi RTD input modules 2 and 3 wire sensors. The modules also support diagnostics.

RTD Input Types

- PT100, PT200, PT500, PT1000, PT50
- JPT100, JPT200, JPT500, JPT1000, JPT50
- NI100, NI200, NI500, NI000
- NI120, NI1000LG
- CU10

Resistance Input

- 100 mΩ/bit, 10 mΩ/bit, 20 mΩ/bit, 50 mΩ/bit

	ST-3702	ST-3704	ST-3708
Product Name	2 Channels, RTD Input (2 and 3 Wire)	4 Channels, RTD Input (3 Wire) Connector Style	8 Channels, RTD Input (3 Wire) Connector Style
Lifecycle Status	Active	Active	Active
Module Type	Temperature Sensing	Temperature Sensing	Temperature Sensing
Range	PT50, PT100, PT200, PT500, PT1000, JPT100, JPT200, JPT500, JPT1000, NI100, NI200, NI500, NI1000, NI120, CU10, Resistance 100 mΩ/Bit, Resistance 10 mΩ/Bit, Resistance 20 mΩ/Bit	PT100, PT200, PT500, PT1000, PT50 JPT100, JPT200, JPT500, JPT1000, JPT50 NI100, NI200, NI500, NI000 NI120, NI1000LG Resistance Input 100 mΩ/bit, 10 mΩ/bit, 20 mΩ/bit, 50 mΩ/bit	PT100, PT200, PT500, PT1000, PT50 JPT100, JPT200, JPT500, JPT1000, JPT50 NI100, NI200, NI500, NI1000 NI120, NI1000LG Resistance Input 100 mΩ/bit, 10 mΩ/bit, 20 mΩ/bit, 50 mΩ/bit
Number of Points	2	4	8
Points per Common	2	4	8
Diagnostic Supported	Open Channel	Open Channel Over Range	Open Channel Over Range
Resolution	0.1°C / 10 mΩ	±0.1°C/ F, 10 mΩ	±0.1°C/ F, 10 mΩ
Accuracy	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.3% Full Scale @ 25°C ±0.5% Full Scale @ 0°C, 60°C	±0.3% Full Scale @ 25°C ±0.5% Full Scale @ 0°C, 60°C
Update Rate	200msec for all channels	30msec per channel	30msec per channel
Internal Power Used (5 VDC loading)	70 mA @ 5.0 VDC Maximum	100 mA @ 5.0 VDC Maximum	100 mA @ 5.0 VDC Maximum
Connector Type	Spring Clamp Terminal Block	Requires connector type Hirose, HIF3BA-20D-2.54C	Requires connector type Hirose, HIF3BA-20D-2.54C
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70



Thermocouple Modules

RSTi Thermocouple/mV input modules support a wide range of thermocouple sensors. The modules also support diagnostics and Cold Junction Compensation.

Thermocouple Inputs

- Type K/J/T/B/R/S/E/N/L/U/C/D

mV Input

- 10uV/bit, 1uV/bit, 2uV/bit

	ST-3802	ST-3804	ST-3808
Product Name	2 Channels, Thermocouple Input/mV	4 Channels, Thermocouple Input/mV (External CJC support)	8 Channels, Thermocouple Input/mV (External CJC support)
Lifecycle Status	Active	Active	Active
Module Type	Temperature Sensing	Temperature Sensing	Temperature Sensing
Range	Type K/J/T/B/R/S/E/N/L/U/C/D mV Input 10uV/Bit, 1uV/Bit, 2uV/Bit	Type K/J/T/B/R/S/E/N/L/U/C/D mV Input 10uV/bit, 1uV/bit, 2uV/bit	Type K/J/T/B/R/S/E/N/L/U/C/D mV Input 10uV/bit, 1uV/bit, 2uV/bit
Number of Points	2	4	8
Points per Common	2	4	8
Diagnostic Supported	Open Channel	Open Channel Over Range	Open Channel Over Range
Resolution	0.1°C / 10mΩ	0.1°C / °F, 10uV	±0.1°C / F, 1uV
Accuracy	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C
Update Rate	200msec for all channels	30msec per channel	30msec per channel
Internal Power Used (5 VDC loading)	70 mA @ 5.0 VDC Maximum	120 mA @ 5.0 VDC Maximum	140 mA @ 5.0 VDC Maximum
Connector Type	Spring Clamp Terminal Block	Requires connector type Hirose, HIF3BA-20D-2.54C	Requires connector type Hirose, HIF3BA-20D-2.54C
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70



Serial Communications Modules

RSTi serial communications modules enable serial devices, such as bar code readers, scales and printers, to connect to the network interface.

	ST-5211	ST-5212	ST-5221
Product Name	1 Channel Serial RS-232	2 Channel Serial RS-232	1 Channel Serial RS-422
Lifecycle Status	Active	Active	Active
Module Type	Serial Communications	Serial Communications	Serial Communications
Protocol Supported	ASCII, Tx/D, Rx/D, Full Duplex	ASCII, Tx/D, Rx/D, Full Duplex	ASCII, Tx/D, Rx/D, Full Duplex
Interface Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Baud Rate	300 to 115,200 bps	300 to 115,200 bps	300 to 115,200 bps
I/O Data Size	6 Bytes In/6 Bytes Out Buffer: Rx/D 1024 Bytes; Tx/D 256 Bytes	12 Bytes In/12 Bytes Out Buffer: Rx/D 1024 Bytes; Tx/D 256 Bytes	6 Bytes In/6 Bytes Out Buffer: Rx/D 1024 Bytes; Tx/D 256 Bytes
Internal Power Used (5 VDC loading)	95 mA @ 5.0 VDC Maximum	110 mA @ 5.0 VDC Maximum	155 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70



Serial Communications Modules

RSTi serial communications modules enable serial devices, such as bar code readers, scales and printers, to connect to the network interface.

	ST-5231	ST-5232
Product Name	1 Channel Serial RS-485	2 Channel Serial RS-485
Lifecycle Status	Active	Active
Module Type	Serial Communications	Serial Communications
Protocol Supported	ASCII, TxD, RxD, Full Duplex	ASCII, TxD, RxD, Full Duplex
Interface Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Baud Rate	300 to 115,200 bps	300 to 115,200 bps
I/O Data Size	6 Bytes In/6 Bytes Out Buffer: RxD 1024 Bytes; TxD 256 Bytes	12 Bytes In/12 Bytes Out Buffer: RxD 1024 Bytes; TxD 256 Bytes
Internal Power Used (5 VDC loading)	110 mA @ 5.0 VDC Maximum	155 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70