RSTi Slice I/O

The new RSTi I/O system is PROFINET enabled and ideal for distributed control applications. The compact, granular "build as you go" design of the RSTi enables the user to optimize the design of the system and therefore minimize cost.

The RSTi is also Network Independent with over 10 different bus interfaces available such as PROFIBUS, Modbus (serial and Ethernet), EthernetIP, EtherCAT, CANopen, and CCLink. The RSTi is supported by over 80 discrete, analog, motion and specialty I/O modules to address simple to complex applications.

Benefits of RSTi

- Network Independence: OEMs and System Integrators can standardize on their I/O layout without worrying about the controller it is connected to.
- Reduced Development Time: Panels can be fabricated in advance, independent of the control system, by simply changing out the network/bus interface without impact to wiring.
- Reduced Installation Cost: Distributed I/O networks reduce installation and wiring cost.
- Lower Cost Per Point: The RSTi can be configured to meet application needs. The granular design reduces panel space and module cost.
- "Build as You Go": Expansion is simple; just slide in a RSTi I/O module without impacting the wiring back to the main control panel.
- System Simplification: The distributed nature of the RSTi greatly reduces the time to dis-assemble and re-assemble a machine, therefore reducing machine commissioning.

The RSTi is ideal for distributed I/O systems with as a few 4 I/O per location or hundreds of I/O.

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Publication Reference Chart

GFK-2745	RSTi I/O User Manual
GFK-2746	RSTi Network Adapter Manual

Network Interfaces

RSTi offers a wide range of network interfaces for Ethernet, Fieldbuses and serial networks. The network independence of the RSTi enables to user to be flexible on system layouts.

	STXPNS001	STXPBS001	STXDNS001	STXCAN001	STXMBS001
Product Name	**Slave Network Interface**	**Slave Network Interface**	**Slave Network Interface**	**Slave Network Interface**	**Slave Network Interface**
Lifecycle Status	Active	Active	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	PROFINET Ethernet	PROFIBUS V1	DeviceNet	CANopen	Modbus RS-232
Protocol Supported	PROFINET RT	Freeze mode Sync mode Auto baud rate Fail safe mode	I/O Slave Message (Group 2 only slave) Poll command. Bit_strobe command Cyclic command, COS command		RTU and ASCII
Features	Line or Star topology Built-in Ethernet Switch				
Baud Rate	100Mbps	9.6K to 12Mbps	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	10KBps to 1Mbps	1200 to 115.2Kbps
I/O Data Size	Total: Inputs 128bytes/ Outputs 128bytes	Total: Inputs 128bytes/ Outputs 128bytes	Total: Inputs 252bytes/ Outputs 252bytes Max. Discrete I/O: 2016 Inputs/2016 Outputs Max. Analog I/O: 126 Inputs/126 Outputs	Total: Inputs 64 bytes/ Outputs 64 bytes	Total: Inputs 252bytes/ Outputs 252bytes
LEDs	Module Status Network Status I/O Status Port 1 Link Activity Port 2 Link Activity Field Power Status	Module Status Network Status Expansion Module Status Field Power Status	Module Status Network Status Expansion Module Status Field Power Status	Module Status Network Status Expansion Module Status Field Power Status	Module Status Transmit Data Received Data Expansion Module Status Field Power Status
Diagnostic Supported	Yes	Yes	Yes	Yes	Yes
Maximum Bus Length	100 meters between nodes	100 meters to 1.2Km depending on baud rate	Up to 500 meters depending on baud rate		15 meters
Maximum Number of Nodes Supported	Limited by the IP address	100	64	99	1
Number of Expansion I/O Supported	32	32	32	32	32
Interface Connector Type	Two RJ-45 with built-in switch	DB 9 connector (RS-485)	5 pin connector	5 pin connector	DB 9 connector (RS-232)
Configuration Tool	Proficy Machine Edition or GSDML	GSM File	EDS File	EDS File	I/O Guide Pro
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Power Dissipation	115 mA typical @ 24 VDC	60 mA typical @ 24 VDC	300 mA typical	100 mA typical @ 24 VDC	70 mA typical @ 24 VDC
Internal Power Used (5 VDC loading)	1.5 A @ Maximum 5 VDC	1.5 A @ Maximum 5 VDC	1.2 A @ Maximum 5 VDC	1.5 A @ Maximum 5 VDC	1.5 A @ Maximum 5 VDC
Dimensions (H x W x D) in mm	99 x 45 x 70	99 x 45 x 70	99 x 42 x 70	99 x 42 x 70	99 x 45 x 70

Network Interfaces

RSTi offers a wide range of network interfaces for Ethernet, Fieldbuses and serial networks. The network independence of the RSTi enables to user to be flexible on system layouts.

	STXMBS002	STXECT001	STXEIP001	STXMBE001
Product Name	**Slave Network Interface**	**Slave Network Interface**	**Slave Network Interface**	**Slave Network Interface**
Lifecycle Status	Active	Target Release July 2013	Target Release July 2013	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	Modbus RS-485	EtherCAT Ethernet	Ethernet/IP Ethernet	Modbus TCP Ethernet
Protocol Supported	RTU and ASCII	EtherCAT	16 IO message connections 64 CIP connections 64 Explicit message connections	8 Modbus/TCP, 4 HTTP, BOOTP, TBD
Features	Built-in Ethernet Switch			
Baud Rate	1200 to 115.2Kbps	100Mbps	10/100Mbps	10/100Mbps
I/O Data Size	Total: Inputs 252bytes/ Outputs 252bytes	Total: Inputs 252bytes/ Outputs 252bytes	Total: Inputs 252bytes/ Outputs 252bytes	Total: Inputs 252bytes/ Outputs 252bytes
LEDs	Module Status Transmit Data Received Data Expansion Module Status Field Power Status	Module Status Network Status Expansion Module Status Field Power Status	Module Status Network Status I/O Status Link Activity Field Power Status	Module Status Network Status I/O Status Link Activity Field Power Status
Diagnostic Supported	Yes	Yes	Yes	Yes
Maximum Bus Length	1200 meters	100 meters between EtherCAT nodes	100 meters between nodes	100 meters between nodes
Maximum Number of Nodes Supported	64	65,535	Limited by the IP address	Limited by the IP address
Number of Expansion I/O Supported	32	32	32	32
Interface Connector Type	DB 9 connector (RS-485)	Two RJ-45 with built-in switch	One RJ-45	One RJ-45
Configuration Tool	I/O Guide Pro	I/O Guide Pro	EDS File	I/O Guide Pro
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (16 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Power Dissipation	70 mA typical @ 24 VDC	100 mA typical @ 24 VDC	60 mA typical @ 24 VDC	60 mA typical @ 24 VDC
Internal Power Used (5 VDC loading)	1.5 A @ Maximum 5 VDC	1.5 A @ Maximum 5 VDC	1.5 A @ Maximum 5 VDC	1.5 A @ Maximum 5 VDC
Dimensions (H x W x D) in mm	99 x 45 x 70	99 x 54.2 x 70	99 x 45 x 70	99 x 45 x 70

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXPBS032	STXPBS132	STXPBS232
Product Name	**Slave Network Interface with 32 Positive Logic Inputs Built-in**	**Slave Network Interface with 32 Negative Logic Inputs Built-in**	**Slave Network Interface with 32 Sink Outputs Built-in**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	PROFIBUS V1	PROFIBUS V1	PROFIBUS V1
Protocol Supported	Freeze mode, Sync mode, Auto baudrate, Fail safe mode	Freeze mode, Sync mode, Auto baudrate, Fail safe mode	Freeze mode, Sync mode Auto baudrate, Fail safe mode
Features	PROFIBUS DP Network Slave has built-in 32 Positive Logic Inputs with expansion support	PROFIBUS DP Network Slave has built-in 32 Negative Logic Inputs with expansion support	PROFIBUS DP Network Slave has built-in 32 Sink Outputs with expansion support
Baud Rate	9.6K to 12Mbps	9.6K to 12Mbps	9.6K to 12Mbps
I/O Data Size	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	100 meters to 1.2Km depending on baud rate	100 meters to 1.2Km depending on baud rate	100 meters to 1.2Km depending on baud rate
Maximum Number of Nodes Supported	100	100	100
Number of Expansion I/O Supported	8	8	8
Number of Points	32	32	32
System Power Requirement	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type	32 Point 24 VDC Positive Logic	32 Point 24 VDC Negative Logic	
Input Voltage Range	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	
Input Impedance	~5.4K ohms	~5.4K ohms	
Input Signal Delay	< 0.5msec	< 0.5msec	
Response Time (ms)			< 0.3msec
Trigger Voltage	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC	
Points per Common	32	32	32
Output Type			32 Point 24 VDC Negative Logic
Output Range			Nominal 0 VDC; 11 to 28.8 VDC
Protection			Short protection, Over Temperature Protection, Over Current Limit
Minimum Output Load			
Load Current per Point			0.5 Amps per point
Output Inrush Current			
Polarity			Sink
Configuration Tool	GSM File	GSM File	GSM File
Interface Connector Type	DB 9 connector (RS-485)	DB 9 connector (RS-485)	DB 9 connector (RS-485)
Power Dissipation	50 mA typical @ 24 VDC	50 mA typical @ 24 VDC	50 mA typical @ 24 VDC
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	400 mA @ Maximum 5 VDC	400 mA @ Maximum 5 VDC	400 mA @ Maximum 5 VDC
Dimensions (H x W x D) in mm	99 x 83 x 70	99 x 83 x 70	99 x 83 x 70

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXPBS332	STXPBS016	STXPBS116
Product Name	**Slave Network Interface with 32 Source Outputs Built-in**	**Slave Network Interface with 16 Relay Outputs**	**Slave Network Interface with 16 Isolated Relay Outputs**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	PROFIBUS V1	PROFIBUS V1	PROFIBUS V1
Protocol Supported	Freeze mode, Sync mode, Auto baudrate, Fail safe mode	Freeze mode, Sync mode, Auto baudrate, Fail safe mode	Freeze mode, Sync mode, Auto baudrate, Fail safe mode
Features	PROFIBUS DP Network Slave has built-in 32 Source Outputs with expansion support	PROFIBUS DP Network Slave has built-in 16 Relay Outputs with expansion support	PROFIBUS DP Network Slave has built-in 16 Isolated Relay Outputs with expansion support
Baud Rate	9.6K to 12Mbps	9.6K to 12Mbps	9.6K to 12Mbps
I/O Data Size	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out	Total: Inputs 32bytes/Outputs 32bytes; Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	100 meters to 1.2Km depending on baud rate	100 meters to 1.2Km depending on baud rate	100 meters to 1.2Km depending on baud rate
Maximum Number of Nodes Supported	100	100	100
Number of Expansion I/O Supported	8	8	8
Number of Points	32	16	16
System Power Requirement	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type			
Input Voltage Range			
Input Impedance			
Input Signal Delay			
Response Time (ms)	< 0.3msec	10msec	10msec
Trigger Voltage			
Points per Common	32	4	1
Output Type	32 Point 24 VDC Positive Logic	16 Point Relay	16 Isolated Relay
Output Range	Nominal 24 VDC; 11 to 28.8 VDC	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC
Protection	Short protection, Over Temperature Protection, Over Current Limit		
Minimum Output Load		100 micro Amps, 100 millivolts VDC per point	100 micro Amps, 100 millivolts VDC per point
Load Current per Point	0.5 Amps per point	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC
Output Inrush Current			
Polarity	Source		
Configuration Tool	GSM File	GSM File	GSM File
Interface Connector Type	DB 9 connector (RS-485)	DB 9 connector (RS-485)	DB 9 connector (RS-485)
Power Dissipation	50 mA typical @ 24 VDC	50 mA typical @ 24 VDC	50 mA typical @ 24 VDC
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	400 mA @ Maximum 5 VDC	400 mA @ Maximum 5 VDC	400 mA @ Maximum 5 VDC
Dimensions (H x W x D) in mm	99 x 83 x 70	99 x 83 x 70	99 x 83 x 70

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXPBS432	STXPBS532	STXPBS824
Product Name	**Slave Network Interface with 16 Positive Logic Inputs and 16 Source Outputs**	**Slave Network Interface with 16 Negative Logic Inputs and 16 Sink Outputs**	**Slave Network Interface with 16 Positive Logic Inputs and 16 Relay Outputs**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	PROFIBUS V1	PROFIBUS V1	PROFIBUS V1
Protocol Supported	Freeze mode, Sync mode, Auto baudrate, Fail safe mode	Freeze mode, Sync mode, Auto baudrate, Fail safe mode	Freeze mode, Sync mode, Auto baudrate, Fail safe mode
Features			
Baud Rate	9.6K to 12Mbps	9.6K to 12Mbps	9.6K to 12Mbps
I/O Data Size	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	100 meters to 1.2Km depending on baud rate	100 meters to 1.2Km depending on baud rate	100 meters to 1.2Km depending on baud rate
Maximum Number of Nodes Supported	100	100	100
Number of Expansion I/O Supported	8	8	8
Number of Points	16 In/16 Out	16 In/16 Out	16 In/16 Out
System Power Requirement	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type	16 Point 24 VDC Positive Logic	16 Point 24 VDC Negative Logic	16 Point 24 VDC Positive Logic
Input Voltage Range	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Impedance	~5.4K ohms	~5.4K ohms	~5.4K ohms
Input Signal Delay	< 0.5msec	< 0.5msec	< 0.5msec
Response Time (ms)	< 0.3msec	< 0.3msec	10msec
Trigger Voltage	ON State: 9 VDC OFF State: 5 VDC	ON State: 9 VDC OFF State: 5 VDC	ON State: 9 VDC OFF State: 5 VDC
Points per Common	32	32	16 for Inputs and 4 for Outputs
Output Type	16 Point 24 VDC Positive Logic	16 Point 24 VDC Negative Logic	16 Point Relay
Output Range	Nominal 24 VDC; 11 to 28.8 VDC	Nominal 24 VDC; 11 to 28.8 VDC	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC
Protection	Short protection, Over Temperature Protection, Over Current Limit	Short protection, Over Temperature Protection, Over Current Limit	
Minimum Output Load			100 micro Amps, 100 millivolts VDC per point
Load Current per Point	0.5 Amps per point	0.5 Amps per point	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC
Output Inrush Current			
Polarity	Source	Sink	
Configuration Tool	GSM File	GSM File	GSM File
Interface Connector Type	DB 9 connector (RS-485)	DB 9 connector (RS-485)	DB 9 connector (RS-485)
Power Dissipation	50 mA typical @ 24 VDC	50 mA typical @ 24 VDC	50 mA typical @ 24 VDC
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	400 mA @ Maximum 5 VDC	400 mA @ Maximum 5 VDC	400 mA @ Maximum 5 VDC
Dimensions (H x W x D) in mm	99 x 83 x 70	99 x 83 x 70	99 x 83 x 70

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXPBS924	STXPBS825	STXPBS925
Product Name	**Slave Network Interface with 16 Negative Logic Inputs and 16 Relay Outputs**	**Slave Network Interface with 16 Positive Logic Inputs and 16 Isolated Relay Outputs**	**Slave Network Interface with 16 Negative Logic Inputs and 16 Isolated Relay Outputs**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	PROFIBUS V1	PROFIBUS V1	PROFIBUS V1
Protocol Supported	Freeze mode, Sync mode, Auto baudrate, Fail safe mode	Freeze mode, Sync mode, Auto baudrate, Fail safe mode	Freeze mode, Sync mode, Auto baudrate, Fail safe mode
Features			
Baud Rate	9.6K to 12Mbps	9.6K to 12Mbps	9.6K to 12Mbps
I/O Data Size	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out	Total: Inputs 36 bytes/Outputs 36 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/32 bytes Out for expansion modules); Discrete I/O: Maximum Discrete I/O: 256 inputs/ 256 outputs; Analog I/O: 16 Channels In/ 16 Channels Out
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	100 meters to 1.2Km depending on baud rate	100 meters to 1.2Km depending on baud rate	100 meters to 1.2Km depending on baud rate
Maximum Number of Nodes Supported	100	100	100
Number of Expansion I/O Supported	8	8	8
Number of Points	16 In/16 Out	16 In/16 Out	16 In/16 Out
System Power Requirement	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type	16 Point 24 VDC Negative Logic	16 Point 24 VDC Positive Logic	16 Point 24 VDC Negative Logic
Input Voltage Range	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Impedance	~5.4K ohms	~5.4K ohms	~5.4K ohms
Input Signal Delay	< 0.5msec	< 0.5msec	< 0.5msec
Response Time (ms)	10msec	10msec	10msec
Trigger Voltage	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC
Points per Common	16 for Inputs and 1 for Outputs	16 for Inputs and 1 for Outputs	16 for Inputs and 1 for Outputs
Output Type	16 Point Relay	16 Point Isolated Relay	16 Point Isolated Relay
Output Range	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC
Protection			
Minimum Output Load	100 micro Amps, 100 millivolts VDC per point	100 micro Amps, 100 millivolts VDC per point	100 micro Amps, 100 millivolts VDC per point
Load Current per Point	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC
Output Inrush Current			
Polarity			
Configuration Tool	GSM File	GSM File	GSM File
Interface Connector Type	DB 9 connector (RS-485)	DB 9 connector (RS-485)	DB 9 connector (RS-485)
Power Dissipation	50 mA typical @ 24 VDC	50 mA typical @ 24 VDC	50 mA typical @ 24 VDC
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	400 mA @ Maximum 5 VDC	400 mA @ Maximum 5 VDC	400 mA @ Maximum 5 VDC
Dimensions (H x W x D) in mm	99 x 83 x 70	99 x 83 x 70	99 x 83 x 70

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXDNS032	STXDNS132	STXDNC032
Product Name	**Slave Network Interface with 32 Positive Logic Inputs Built-in**	**Slave Network Interface with 32 Negative Logic Inputs Built-in**	**Slave Network Interface with 32 Positive Logic Inputs Built-in**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	DeviceNet	DeviceNet	DeviceNet
Protocol Supported	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command"
Features			
Baud Rate	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)
I/O Data Size	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)	Total: Inputs 4 bytes/Outputs 4 bytes
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate
Maximum Number of Nodes Supported	64	64	64
Number of Expansion I/O Supported	10	10	None Supported
Number of Points	32 In	32 In	32
System Power Requirement	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (11 VDC to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type	32 Point 24 VDC Positive Logic	32 Point 24 VDC Negative Logic	32 Point 24 VDC Positive Logic
Input Voltage Range	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Impedance	~5.4K ohms	~5.4K ohms	~5.4K ohms
Input Signal Delay	< 0.5msec	< 0.5msec	< 0.5msec
Response Time (ms)			
Trigger Voltage	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5VD
Points per Common	16 for Inputs and 1 for Outputs	16 for Inputs and 1 for Outputs	16
Output Type			
Output Range			
Protection			
Minimum Output Load			
Load Current per Point			
Output Inrush Current			
Polarity			
Configuration Tool	EDS File	EDS File	EDS File
Interface Connector Type	5 pin connector	5 pin connector	5 pin connector
Power Dissipation	110 mA typical	110 mA typical	80 mA typical
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Connector Type
Internal Power Used (5 VDC loading)	600 mA @ Maximum 5 VDC	600 mA @ Maximum 5 VDC	Not Applicable
Dimensions (H x W x D) in mm	99 x 83 x 70	99 x 83 x 70	80 x 35 x 55

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXDNC132	STXDNS232	STXDNS332
Product Name	**Slave Network Interface with 32 Negative Logic Inputs Built-in**	**Slave Network Interface with 32 Sink Outputs Built-in**	**Slave Network Interface with 32 Source Outputs Built-in**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	DeviceNet	DeviceNet	DeviceNet
Protocol Supported	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command
Features			
Baud Rate	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)
I/O Data Size	Total: Inputs 4 bytes/Outputs 4 bytes	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate
Maximum Number of Nodes Supported	64	64	64
Number of Expansion I/O Supported	None Supported	10	10
Number of Points	32	32	32
System Power Requirement	24 VDC (11 VDC to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type	32 Point 24 VDC Negative Logic		
Input Voltage Range	24 VDC (11 VDC to 28.8 VDC)		
Input Impedance	~5.4K ohms		
Input Signal Delay	< 0.5msec		
Response Time (ms)		< 0.3msec	< 0.3msec
Trigger Voltage	ON State: 9 VDC, OFF State: 5 VDC		
Points per Common	16	32	32
Output Type		32 Point 24 VDC Negative Logic	32 Point 24 VDC Positive Logic
Output Range		Nominal 0 VDC; 11 to 28.8 VDC	Nominal 24 VDC; 11 to 28.8 VDC
Protection		Short protection, Over Temperature Protection, Over Current Limit	Short protection, Over Temperature Protection, Over Current Limit
Minimum Output Load			
Load Current per Point		0.5 Amps per point	0.5 Amps per point
Output Inrush Current			
Polarity		Sink	Source
Configuration Tool	EDS File	EDS File	EDS File
Interface Connector Type	5 pin connector	5 pin connector	5 pin connector
Power Dissipation	80 mA typical	110 mA typical	110 mA typical
Connector Type	Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	Not Applicable	600 mA @ Maximum 5 VDC	600 mA @ Maximum 5 VDC
Dimensions (H x W x D) in mm	80 x 35 x 55	99 x 83 x 70	99 x 83 x 70

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXDNC232	STXDNC332	STXDNS016
Product Name	**Slave Network Interface with 32 Sink Outputs**	**Slave Network Interface with 32 Source Outputs**	**Slave Network Interface with 16 Relay Outputs**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	DeviceNet	DeviceNet	DeviceNet
Protocol Supported	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command"
Features			
Baud Rate	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)
I/O Data Size	Total: Inputs 4 bytes/Outputs 4 bytes	Total: Inputs 4 bytes/Outputs 4 bytes	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate
Maximum Number of Nodes Supported	64	64	64
Number of Expansion I/O Supported	None Supported	None Supported	10
Number of Points	32	32	16
System Power Requirement	24 VDC (11 VDC to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (11 VDC to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type			
Input Voltage Range			
Input Impedance			
Input Signal Delay			
Response Time (ms)	< 0.3msec	< 0.3msec	10msec
Trigger Voltage			
Points per Common	16	16	
Output Type	32 Point 24 VDC Negative Logic	32 Point 24 VDC Positive Logic	16 Point Relay
Output Range	Nominal 24 VDC; 11 to 28.8 VDC	Nominal 24 VDC; 11 to 28.8 VDC	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC
Protection	Short protection, Over Temperature Protection, Over Current Limit	Short protection, Over Temperature Protection, Over Current Limit	
Minimum Output Load			100 micro Amps, 100 millivolts VDC per point
Load Current per Point	0.5 Amps per point	0.5 Amps per point	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC
Output Inrush Current			
Polarity	Sink	Source	
Configuration Tool	EDS File	EDS File	EDS File
Interface Connector Type	5 pin connector	5 pin connector	5 pin connector
Power Dissipation	80 mA typical	80 mA typical	110 mA typical
Connector Type	Connector Type Hirose, HIF3A-40D-2.54R (ribbon cable), HIF2C-40D-2.54C (crimp con–nector), HIF2C-2226SCFA (crimp pin) or equal	Connector Type Hirose, HIF3A-40D-2.54R (ribbon cable), HIF2C-40D-2.54C (crimp con–nector), HIF2C-2226SCFA (crimp pin) or equal	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	Not Applicable	Not Applicable	600 mA @ Maximum 5 VDC
Dimensions (H x W x D) in mm	80 x 35 x 55	80 x 35 x 55	99 x 83 x 70

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXDNS116	STXDNS432	STXDNS532
Product Name	**Slave Network Interface with 16 Isolated Relay Outputs**	**Slave Network Interface with 16 Positive Logic Inputs and 16 Source Outputs**	**Slave Network Interface with 16 Negative Logic Inputs and 16 Sink Outputs**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	DeviceNet	DeviceNet	DeviceNet
Protocol Supported	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command"
Features			
Baud Rate	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)
I/O Data Size	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate
Maximum Number of Nodes Supported	64	64	64
Number of Expansion I/O Supported	10	10	10
Number of Points	16	16 In/ 16 Out	16 In/ 16 Out
System Power Requirement	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type		16 Point 24 VDC Positive Logic	16 Point 24 VDC Negative Logic
Input Voltage Range		24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Impedance		~5.4K ohms	~5.4K ohms
Input Signal Delay		< 0.5msec	< 0.5msec
Response Time (ms)	10msec	< 0.3msec	< 0.3msec
Trigger Voltage		ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC
Points per Common		32	32
Output Type	16 Point Isolated Relay	16 Point 24 VDC Positive Logic	16 Point 24 VDC Negative Logic
Output Range	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC	Nominal 24 VDC; 11 to 28.8 VDC	Nominal 24 VDC; 11 to 28.8 VDC
Protection		Short protection, Over Temperature Protection, Over Current Limit	Short protection, Over Temperature Protection, Over Current Limit
Minimum Output Load	100 micro Amps, 100 millivolts VDC per point		
Load Current per Point	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC	0.5 Amps per point	0.5 Amps per point
Output Inrush Current			
Polarity		Source	Sink
Configuration Tool	EDS File	EDS File	EDS File
Interface Connector Type	5 pin connector	5 pin connector	5 pin connector
Power Dissipation	110 mA typical	110 mA typical	110 mA typical
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	600 mA @ Maximum 5 VDC	600 mA @ Maximum 5 VDC	600 mA @ Maximum 5 VDC
Dimensions (H x W x D) in mm	99 x 83 x 70	99 x 83 x 70	99 x 83 x 70

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXDNC432	STXDNC532	STXDNC632
Product Name	**Slave Network Interface with 16 Positive Logic Inputs and 16 Source Outputs**	**Slave Network Interface with 16 Negative Logic Inputs and 16 Sink Outputs**	**Slave Network Interface with 16 Positive Logic Inputs and 16 Sink Outputs**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	DeviceNet	DeviceNet	DeviceNet
Protocol Supported	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command
Features			
Baud Rate	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)
I/O Data Size	Total: Inputs 4 bytes/Outputs 4 bytes	Total: Inputs 4 bytes/Outputs 4 bytes	Total: Inputs 4 bytes/Outputs 4 bytes
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate
Maximum Number of Nodes Supported	64	64	64
Number of Expansion I/O Supported	None Supported	None Supported	None Supported
Number of Points	16 In/ 16 Out	16 In/ 16 Out	16 In/ 16 Out
System Power Requirement	24 VDC (11 VDC to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (11 VDC to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (11 VDC to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type	16 Point 24 VDC Positive Logic	16 Point 24 VDC Negative Logic	16 Point 24 VDC Positive Logic
Input Voltage Range	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Impedance	~5.4K ohms	~5.4K ohms	~5.4K ohms
Input Signal Delay	< 0.5msec	< 0.5msec	< 0.5msec
Response Time (ms)	< 0.3msec	< 0.3msec	< 0.3msec
Trigger Voltage	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC
Points per Common	16	16	16
Output Type	16 Point 24 VDC Positive Logic	16 Point 24 VDC Negative Logic	16 Point 24 VDC Positive Logic
Output Range	Nominal 24 VDC; 11 to 28.8 VDC	Nominal 24 VDC; 11 to 28.8 VDC	Nominal 24 VDC; 11 to 28.8 VDC
Protection	Short protection, Over Temperature Protection, Over Current Limit	Short protection, Over Temperature Protection, Over Current Limit	Short protection, Over Temperature Protection, Over Current Limit
Minimum Output Load			
Load Current per Point	0.5 Amps per point	0.5 Amps per point	0.5 Amps per point
Output Inrush Current			
Polarity	Source	Sink	Sink
Configuration Tool	EDS File	EDS File	EDS File
Interface Connector Type	5 pin connector	5 pin connector	5 pin connector
Power Dissipation	80 mA typical	80 mA typical	80 mA typical
Connector Type	Connector Type Hirose, HIF3A-40D-2.54R (ribbon cable), HIF2C-40D-2.54C (crimp connector), HIF2C-2226SCFA (crimp pin) or equal	Connector Type Hirose, HIF3A-40D-2.54R (ribbon cable), HIF2C-40D-2.54C (crimp connector), HIF2C-2226SCFA (crimp pin) or equal	Connector Type Hirose, HIF3A-40D-2.54R (ribbon cable), HIF2C-40D-2.54C (crimp connector), HIF2C-2226SCFA (crimp pin) or equal
Internal Power Used (5 VDC loading)	Not Applicable	Not Applicable	Not Applicable
Dimensions (H x W x D) in mm	80 x 35 x 55	80 x 35 x 55	80 x 35 x 55

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXDNC732	STXDNS824	STXDNS924
Product Name	**Slave Network Interface with 16 Negative Logic Inputs and 16 Source Outputs**	**Slave Network Interface with 16 Positive Logic Inputs and 16 Relay Outputs**	**Slave Network Interface with 16 Negative Logic Inputs and 16 Relay Outputs**
Lifecycle Status	Active	Active	Active
Module Type	Slave Network Interface	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	DeviceNet	DeviceNet	DeviceNet
Protocol Supported	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command
Features			
Baud Rate	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)
I/O Data Size	Total: Inputs 4 bytes/Outputs 4 bytes	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes	Yes
Maximum Bus Length	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate
Maximum Number of Nodes Supported	64	64	64
Number of Expansion I/O Supported	None Supported	10	10
Number of Points	16 In/ 16 Out	16 In/ 16 Out	16 In/ 16 Out
System Power Requirement	24 VDC (11 VDC to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type	16 Point 24 VDC Negative Logic	16 Point 24 VDC Positive Logic	16 Point 24 VDC Negative Logic
Input Voltage Range	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Impedance	~5.4K ohms	~5.4K ohms	~5.4K ohms
Input Signal Delay	< 0.5msec	< 0.5msec	< 0.5msec
Response Time (ms)	< 0.3msec	10msec	10msec
Trigger Voltage	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC
Points per Common	16	16 for Inputs and 4 for Outputs	16 for Inputs and 1 for Outputs
Output Type	16 Point 24 VDC Negative Logic	16 Point Relay	16 Point Relay
Output Range	Nominal 24 VDC; 11 to 28.8 VDC	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC
Protection	Short protection, Over Temperature Protection, Over Current Limit		
Minimum Output Load		100 micro Amps, 100 millivolts VDC per point	100 micro Amps, 100 millivolts VDC per point
Load Current per Point	0.5 Amps per point	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC
Output Inrush Current			
Polarity	Source		
Configuration Tool	EDS File	EDS File	EDS File
Interface Connector Type	5 pin connector	5 pin connector	5 pin connector
Power Dissipation	80 mA typical	110 mA typical	110 mA typical
Connector Type	Connector Type Hirose, HIF3A-40D-2.54R (ribbon cable), HIF2C-40D-2.54C (crimp connector), HIF2C-2226SCFA (crimp pin) or equal	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	Not Applicable	600 mA @ Maximum 5 VDC	600 mA @ Maximum 5 VDC
Dimensions (H x W x D) in mm	80 x 35 x 55	99 x 83 x 70	99 x 83 x 70

Network Interfaces with Built-in I/O

The PROFIBUS and DeviceNet Network Interfaces are also available with built-in I/O to reduce cost and footprint. The network interfaces can be expanded and support all of the RSTi I/O types.

	STXDNS825	STXDNS925
Product Name	**Slave Network Interface with 16 Positive Logic Inputs and 16 Isolated Relay Outputs**	**Slave Network Interface with 16 Negative Logic Inputs and 16 Isolated Relay Outputs**
Lifecycle Status	Active	Active
Module Type	Slave Network Interface	Slave Network Interface
Field Busses/Device Networks	DeviceNet	DeviceNet
Protocol Supported	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command	I/O Slave Message (Group 2 only slave), Poll command. Bit_strobe command, Cyclic command, COS command
Features		
Baud Rate	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)	125K bits/s, 250Kbps, 500Kbps (Auto baud rate selection)
I/O Data Size	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)	Total: Inputs 36 bytes/Outputs 34 bytes total (4 bytes In/ 4 bytes Out for base module and 32 bytes In/30 bytes Out for expansion modules)
LEDs	Module Status, Network Status, I/O Status	Module Status, Network Status, I/O Status
Diagnostic Supported	Yes	Yes
Maximum Bus Length	Up to 500 meters depending on baud rate	Up to 500 meters depending on baud rate
Maximum Number of Nodes Supported	64	64
Number of Expansion I/O Supported	10	10
Number of Points	16 In/ 16 Out	16 In/ 16 Out
System Power Requirement	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection	24 VDC (19.2 to 28.8 VDC) with Current Limit, Reverse Polarity Protection
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Type	16 Point 24 VDC Positive Logic	16 Point 24 VDC Negative Logic
Input Voltage Range	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Input Impedance	~5.4K ohms	~5.4K ohms
Input Signal Delay	< 0.5msec	< 0.5msec
Response Time (ms)	10msec	10msec
Trigger Voltage	ON State: 9 VDC, OFF State: 5 VDC	ON State: 9 VDC, OFF State: 5 VDC
Points per Common	16 for Inputs and 1 for Outputs	16 for Inputs and 1 for Outputs
Output Type	16 Point Isolated Relay	16 Point Isolated Relay
Output Range	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC	5 to 28.8 VDC, 48 VDC, 110 VDC, 250 VAC
Protection		
Minimum Output Load	100 micro Amps, 100 millivolts VDC per point	100 micro Amps, 100 millivolts VDC per point
Load Current per Point	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC	2 Amps at 5 to 28.8 VDC, 0.8 Amps at 48 VDC, 0.5 Amps at 110 VDC, 2 Amps at 250 VAC
Output Inrush Current		
Polarity		
Configuration Tool	EDS File	EDS File
Interface Connector Type	5 pin connector	5 pin connector
Power Dissipation	110 mA typical	110 mA typical
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	600 mA @ Maximum 5 VDC	600 mA @ Maximum 5 VDC
Dimensions (H x W x D) in mm	99 x 83 x 70	99 x 83 x 70

Discrete I/O Modules (Input)

RSTi discrete input modules are available for a wide range of applications requiring DC voltages (5 VDC, 24 VDC, 48 VDC) and AC voltages (110 VAC, 220 VAC). The input modules are available in 4, 8 or 16 point density to optimize panel space.

	ST-1124	ST-1114	ST-1214	ST-1224	ST-1314
Product Name	**5 VDC Input, 4 points Negative Logic**	**5 VDC Input, 4 points Positive Logic**	**12/24 VDC Input, 4 points Positive Logic**	**12/24 VDC Input, 4 points Negative Logic**	**48 VDC Input, 4 points Positive Logic**
Lifecycle Status	Active	Active	Active	Active	Active
Module Type	Discrete Input	Discrete Input	Discrete Input	Discrete Input	Discrete Input
Input Voltage Range	5 VDC (4.5 VDC to 5.5 VDC)	5 VDC (4.5 VDC to 5.5 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (10.2 VDC to 28.8 VDC)	48 VDC (34 VDC to 60 VDC)
Number of Points	4	4	4	4	4
Points per Common	4	4	4	4	4
Input Impedance	~1.3K ohms	~1.3K ohms	~5.1K ohms	~5.1K ohms	~12K ohms
Input Signal Delay	< 0.5msec	< 0.5msec	3.0msec	3.0msec	3.0msec
Filtering Time	Typical 1.5 msec. (software filtering)	Typical 1.5 msec. (software filtering)	Typical 1.5 msec.	Typical 1.5 msec.	
Trigger Voltage	On State: 2.4 VDC to 5.5 VDC OFF State: 0.8 VDC	On State: 2.4 VDC to 5.5 VDC OFF State: 0.8 VDC	ON State: 10.2 to 28.8 VDC OFF State: 5 VDC	ON State: 10.2 to 28.8 VDC OFF State: 5 VDC	ON State: 48 VDC (34 VDC to 60 VDC) OFF State: 10 VDC
Maximum On State Current	4.5 mA per point at 5.5 VDC	4.5 mA per point at 5.5 VDC	6 mA per point at 28.8 VDC	6 mA per point at 28.8 VDC	4 mA per point at 48 VDC
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	35 mA @ 5.0 VDC Maximum	35 mA @ 5.0 VDC Maximum	35 mA @ 5.0 VDC Maximum	35 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 12 x 70	99 x 12 x 70	99 x 12 x 70

Discrete I/O Modules (Input)

RSTi discrete input modules are available for a wide range of applications requiring DC voltages (5 VDC, 24 VDC, 48 VDC) and AC voltages (110 VAC, 220 VAC). The input modules are available in 4, 8 or 16 point density to optimize panel space.

	ST-1324	ST-131F	ST-1218	ST-1228	ST-121F
Product Name	**48 VDC Input, 4 points Negative Logic**	**48 VDC Input, 16 points Positive Logic**	**12/24 VDC Input, 8 points Positive Logic**	**12/24 VDC Input, 8 points Negative Logic**	**12/24 VDC Input, 16 points Positive Logic**
Lifecycle Status	Active	Active	Active	Active	Active
Module Type	Discrete Input	Discrete Input	Discrete Input	Discrete Input	Discrete Input
Input Voltage Range	48 VDC (34 VDC to 60 VDC)	48 VDC (34 VDC to 60 VDC)	24 VDC (10.2 VDC to 28.8 VDC)	24 VDC (10.2 VDC to 28.8 VDC)	24 VDC (10.2 VDC to 28.8 VDC)
Number of Points	4	16	8	8	16
Points per Common	4	16	8	8	16
Input Impedance	~12K ohms	~12K ohms	~5.1K ohms	~5.1K ohms	~5.1K ohms
Input Signal Delay	3.0msec	3.0msec	3.0msec	3.0msec	3.0msec
Filtering Time		Typical 1.5 msec.	Typical 1.5 msec.	Typical 1.5 msec.	Typical 1.5 msec.
Trigger Voltage	ON State: 48 VDC (34 VDC to 60 VDC) OFF State: 10 VDC	ON State: 48 VDC (34 VDC to 60 VDC) OFF State: 10 VDC	ON State: 10.2 to 28.8 VDC OFF State: 5 VDC	ON State: 10.2 to 28.8 VDC OFF State: 5 VDC	ON State: 10.2 to 28.8 VDC OFF State: 5 VDC
Maximum On State Current	4 mA per point at 48 VDC	2.5 mA per point at 60 VDC	6 mA per point at 28.8 VDC	6 mA per point at 28.8 VDC	6 mA per point at 28.8 VDC
Connector Type	Spring Clamp Terminal Block	Connector Type Hirose, HIF3BA-20D-2.54DSA	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Connector Type Hirose, HIF3BA-20D-2.54DSA
Internal Power Used (5 VDC loading)	35 mA @ 5.0 VDC Maximum	45 mA @ 5.0 VDC Maximum	35 mA @ 5.0 VDC Maximum	35 mA @ 5.0 VDC Maximum	45 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	99 x 12 x 70

Discrete I/O Modules (Input)

RSTi discrete input modules are available for a wide range of applications requiring DC voltages (5 VDC, 24 VDC, 48 VDC) and AC voltages (110 VAC, 220 VAC). The input modules are available in 4, 8 or 16 point density to optimize panel space.

	ST-122F	ST-1804	ST-1904
Product Name	**12/24 VDC Input, 16 points Negative Logic**	**110 VAC Input, 4 points (47 to 63Hz)**	**240 VAC Input, 4 points (47 to 63Hz)**
Lifecycle Status	Active	Active	Active
Module Type	Discrete Input	Discrete Input	Discrete Input
Input Voltage Range	24 VDC (10.2 VDC to 28.8 VDC)	120 VAC (85 VAC to 132 VAC)	240 VAC (170 VAC to 264 VAC)
Number of Points	16	4	4
Points per Common	16	4	4
Input Impedance	~5.1K ohms	~11K ohms	~22K ohms
Input Signal Delay	3.0msec	10.0msec	10.0msec
Filtering Time	Typical 1.5 msec.		
Trigger Voltage	ON State: 10.2 to 28.8 VDC OFF State: 5 VDC	ON State: 85 VAC to 132 VAC OFF State: 60 VAC	ON State: 170 VAC to 264 VAC OFF State: 130 VAC
Maximum On State Current	6 mA per point at 28.8 VDC	8 mA per point at 132 VAC	12 mA per point at 264 VAC
Connector Type	Connector Type Hirose, HIF3BA-20D-2.54DSA	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	45 mA @ 5.0 VDC Maximum	35 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 12 x 70

Analog I/O Modules (Input)

RSTi analog input modules are available in a wide range of voltage and current signals. Analog input modules are available in 12 bit or 14 bit resolution.

	ST-3114	ST-3118	ST-3134	ST-3214	ST-3218
Product Name	**Analog 0 to 20 mA, 12bit Input, 4 channels**	**Analog 0 to 20 mA, 12bit Input, 8 channels**	**Analog 0 to 20 mA, 14bit Input, 4 channels**	**Analog 4 to 20 mA, 12bit Input, 4 channels**	**Analog 4 to 20 mA, 12bit Input, 8 channels**
Lifecycle Status	Active	Active	Active	Active	Active
Module Type	Analog Input	Analog Input	Analog Input	Analog Input	Analog Input
Range	0 to 20 mA Range	0 to 20 mA Range	0 to 20 mA Range	4 to 20 mA Range	4 to 20 mA Range
Number of Points	4	8	4	4	8
Points per Common	4	8	4	4	8
Diagnostic Supported				Open Wire if < 3 mA	
Update Rate	4msec/All channels	4msec/All channels	4msec/All channels	4msec/All channels	4msec/All channels
Resolution	12 bits: 4.88 microAmp/bit	12 bits: 4.88 microAmp/bit	14 bits: 1.22 microAmp/bit	12 bits: 3.9 microAmp/bit	12 bits: 3.9 microAmp/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	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C
Input Impedance	120 ohms	120 ohms	120 ohms	120 ohms	120 ohms
Internal Power Used (5 VDC loading)	165 mA @ 5.0 VDC Maximum	60 mA @ 5.0 VDC Maximum	165 mA @ 5.0 VDC Maximum	165 mA @ 5.0 VDC Maximum	60 mA @ 5.0 VDC Maximum
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
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	99 x 12 x 70

Analog I/O Modules (Input)

RSTi analog input modules are available in a wide range of voltage and current signals. Analog input modules are available in 12 bit or 14 bit resolution.

	ST-3234	ST-3274	ST-3424	ST-3428	ST-3444
Product Name	**Analog 4 to 20 mA, 14bit Input, 4 channels**	**Analog 4 to 20 mA, 12bit Input, 4 channels (connector type)**	**Analog 0 to 10 VDC, 12bit Input, 4 channels**	**Analog 0 to 10 VDC, 12bit Input, 8 channels**	**Analog 0 to 10 VDC, 14bit Input, 4 channels**
Lifecycle Status	Active	Active	Active	Active	Active
Module Type	Analog Input	Analog Input	Analog Input	Analog Input	Analog Input
Range	4 to 20 mA Range	4 to 20 mA Range	0 to 10 VDC	0 to 10 VDC	0 to 10 VDC
Number of Points	4	4	4	8	4
Points per Common	4	4	4	8	4
Diagnostic Supported	Open Wire if < 3 mA	Open Wire if < 3 mA			
Update Rate	4msec/All channels	4msec/All channels	4msec/All channels	4msec/All channels	4msec/All channels
Resolution	14 bits: 0.9 microAmp/bit	12 bits: 3.9 microAmp/bit	12 bits: 2.44 mV/bit	12 bits: 2.44 mV/bit	14 bits: 0.6 mV/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	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ 0°C, 60°C
Input Impedance	120 ohms	120 ohms	500K ohms	500K ohms	500K ohms
Internal Power Used (5 VDC loading)	165 mA @ 5.0 VDC Maximum	165 mA @ 5.0 VDC Maximum	165 mA @ 5.0 VDC Maximum	60 mA @ 5.0 VDC Maximum	170 mA @ 5.0 VDC Maximum
Connector Type	Spring Clamp Terminal Block	Requires Sensor Connect 3M Mini-Clamp Plug, 37104 Series	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
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	99 x 12 x 70

Analog I/O Modules (Input)

RSTi analog input modules are available in a wide range of voltage and current signals. Analog input modules are available in 12 bit or 14 bit resolution.

	ST-3524	ST-3544	ST-3624	ST-3644
Product Name	**Analog -10 to 10 VDC, 12bit Input, 4 channels**	**Analog -10 to 10 VDC, 14bit Input, 4 channels**	**Analog 0 to 5 VDC, 12bit Input, 4 channels**	**Analog 0 to 5 VDC, 14bit Input, 4 channels**
Lifecycle Status	Active	Active	Active	Active
Module Type	Analog Input	Analog Input	Analog Input	Analog Input
Range	-10 to 10 VDC	-10 to 10 VDC	0 to 5 VDC	0 to 5 VDC
Number of Points	4	4	4	4
Points per Common	4	4	4	4
Diagnostic Supported				
Update Rate	4msec/All channels	4msec/All channels	4msec/All channels	4msec/All channels
Resolution	12 bits: 4.8 mV/bit	14 bits: 1.2 mV/bit	12 bits: 1.22 mV/bit	14 bits: 0.3 mV/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
Input Impedance	500K ohms	500K ohms	500K ohms	500K ohms
Internal Power Used (5 VDC loading)	170 mA @ 5.0 VDC Maximum	170 mA @ 5.0 VDC Maximum	170 mA @ 5.0 VDC Maximum	170 mA @ 5.0 VDC Maximum
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
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

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-2114	ST-2124	ST-2314	ST-2324
Product Name	**5 VDC/20 mA TTL Inverting Output, 4 points**	**5 VDC, 4 Points, TTL Non-Inverting Output (Default: 0V)**	**4 points, 24 VDC Negative Logic, Output 0.5 Amps**	**4 points, 24 VDC Positive Logic, Output 0.5 Amps**
Lifecycle Status	Active	Active	Active	Active
Module Type	Digital Outputs	Digital Outputs	Digital Outputs	Digital Outputs
Output Range	5 VDC nominal, Min. 4.5 VDC to Max. 5.5 VDC	5 VDC nominal, Min. 4.5 VDC to Max. 5.5 VDC	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC
Number of Points	4	4	4	4
Points per Common	4	4	4	4
Diagnostic Supported				
Protection	Output Short-Circuit protection Field Power Over Voltage Protection (about 6.7 VDC) Field Power Reverse Voltage Protection	Output Short-Circuit protection Field Power Over Voltage Protection (about 6.7 VDC) Field Power Reverse Voltage Protection	Over Temperature shut down: Min. 150°C Over Current Limit : Min. 3.5A/Max. 7A Per Channel Short Circuit Protection ESD Protection: 16.5Kv	Over Temperature shut down: Min. 150°C Over Current Limit: Min. 3.5A/Max.7.5A Per Channel Short Circuit Protection ESD Protection: 5.0Kv
ON Voltage/OFF Voltage	Min. 4.8 VDC @ 5 VDC, 5 mA	Max. 0.3 VDC @ 0 VDC, 5 mA		
Load Current per Point	Max. 20 mA Per Channel Max. 80 mA All Common	Max. 20 mA Per Channel Max. 80 mA All Common	Max. 0.5A Per Channel Max. 2.0A All Common	Max. 0.5A Per Channel Max. 2.0A All Common
Output Inrush Current	40 mA For 10ms, Repeatable Every 1 Sec.	40 mA For 10ms, Repeatable Every 1 Sec.		
Response Time (ms)	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms	OFF to ON : Max. 0.3ms ON to OFF: Max. 0.3ms	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms
Polarity	TTL Inverting	TTL Non-Inverting	Negative Logic	Positive Logic
Field Power Requirement	5 VDC (4.5 VDC to 5.5 VDC)	5 VDC (4.5 VDC to 5.5 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Power Dissipation			5 mA @ 28.8 VDC Per Channel	5 mA @ 28.8 VDC Per Channel
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	50 mA @ 5.0 VDC Maximum	50 mA @ 5.0 VDC Maximum	45 mA @ 5.0 VDC Maximum	45 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

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-2414	ST-2424	ST-2514	ST-2524
Product Name	**4 points, 24 VDC Negative Logic, Output 0.5 Amps with Diagnostics**	**4 points, 24 VDC Positive Logic, Output 0.5 Amps with Diagnostics**	**4 points, 24 VDC Negative Logic, Output 2 Amps with Diagnostics**	**4 points, 24 VDC Positive Logic, Output 2 Amps with Diagnostics**
Lifecycle Status	Active	Active	Active	Active
Module Type	Digital Outputs	Digital Outputs	Digital Outputs	Digital Outputs
Output Range	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC
Number of Points	4	4	4	4
Points per Common	4	4	4	4
Diagnostic Supported	Point Fault Reported to Network Interface	Point Fault Reported to Network Interface	Point Fault Reported to Network Interface	Point Fault Reported to Network Interface
Protection	Over Temperature shut down: Min. 150°C Over Current Limit: Min. 3.5A/Max. 7A Per Channel Short Circuit Protection ESD Protection: 16.5Kv	Over Temperature shut down: Min. 150°C Over Current Limit: Min. 3.5A/Max.7.5A Per Channel Short Circuit Protection ESD Protection: 5.0Kv	Over Temperature shut down: Min. 150°C Over Current Limit: Min. 3.5A/Max. 7A Per Channel Short Circuit Protection ESD Protection: 16.5Kv	Over Temperature shut down: Min. 150°C Over Current Limit: Min. 6A/Max. 15A Per Channel Short Circuit Protection ESD Protection: 5.0Kv
ON Voltage/OFF Voltage				
Load Current per Point	Max. 0.5A Per Channel Max. 2.0A All Common	Max. 0.5A Per Channel Max. 2.0A All Common	Max. 2A Per Channel Max. 8A All Common	Max. 2A Per Channel Max. 8A All Common
Output Inrush Current				
Response Time (ms)	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms	OFF to ON : Max. 0.3ms ON to OFF: Max. 0.3ms
Polarity	Negative Logic	Positive Logic	Negative Logic	Positive Logic
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Power Dissipation	5 mA @ 28.8 VDC Per Channel	5 mA @ 28.8 VDC Per Channel	5 mA @ 28.8 VDC Per Channel	5 mA @ 28.8 VDC Per Channel
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	45 mA @ 5.0 VDC Maximum	45 mA @ 5.0 VDC Maximum	45 mA @ 5.0 VDC Maximum	45 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

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-2318	ST-2328	ST-221F	ST-222F
Product Name	**8 points, 24 VDC Negative Logic, Output 0.5 Amps**	**8 points, 24 VDC Positive Logic, Output 0.5 Amps**	**16 points, 24 VDC Negative Logic, Output 0.5 Amps (Connector Style)**	**16 points, 24 VDC Positive Logic, Output 0.5 Amps (Connector Style)**
Lifecycle Status	Active	Active	Active	Active
Module Type	Digital Outputs	Digital Outputs	Digital Outputs	Digital Outputs
Output Range	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC	24 VDC nominal, Min. 11 VDC to Max. 28.8 VDC
Number of Points	8	8	16	16
Points per Common	8	8	16	16
Diagnostic Supported				
Protection	Over Temperature shut down: Min. 150°C Over Current Limit: Min. 3.5A/Max. 7A Per Channel Short Circuit Protection ESD Protection: 16.5Kv	Over Temperature shut down: Min. 150°C Over Current Limit: Min. 3.5A/Max. 7A Per Channel Short Circuit Protection ESD Protection : 16.5Kv	Over Temperature shut down: Min. 150°C Over Current Limit: Min. 3.5A/Max. 7A Per Channel Short Circuit Protection ESD Protection : 16.5Kv	Over Temperature shut down: Min. 150°C Over Current Limit: Min. 3.5A/Max. 7A Per Channel Short Circuit Protection ESD Protection: 16.5Kv
ON Voltage/OFF Voltage				
Load Current per Point	Max. 0.5A Per Channel Max. 2.0A All Common	Max. 0.5A Per Channel Max. 2.0A All Common	Max. 0.5A Per Channel Max. 4.0A All Common	Max. 0.5A Per Channel Max. 4.0A All Common
Output Inrush Current				
Response Time (ms)	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms	OFF to ON: Max. 0.3ms ON to OFF: Max. 0.3ms
Polarity	Negative Logic	Positive Logic	Negative Logic	Positive Logic
Field Power Requirement	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Power Dissipation	5 mA @ 28.8 VDC Per Channel	5 mA @ 28.8 VDC Per Channel	3 mA @ 28.8 VDC Per Channel	3 mA @ 28.8 VDC Per Channel
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Connector Type Hirose, HIF3BA-20D-2.54DSA	Connector Type Hirose, HIF3BA-20D-2.54DSA
Internal Power Used (5 VDC loading)	60 mA @ 5.0 VDC Maximum	45 mA @ 5.0 VDC Maximum	80 mA @ 5.0 VDC Maximum	80 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

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 though to the next module	No Connection with Field Power Field Power passes though 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, TxD, RxD, Full Duplex	ASCII, TxD, RxD, Full Duplex	ASCII, TxD, RxD, 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: RxD 1024 Bytes; TxD 256 Bytes	12 Bytes In/12 Bytes Out Buffer: RxD 1024 Bytes; TxD 256 Bytes	6 Bytes In/6 Bytes Out Buffer: RxD 1024 Bytes; TxD 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

High Speed Counting

RSTi High Speed Counter modules interface to encoders and high speed pulse input devices. The RSTi offers a wide range of counting functions and control. SSI interface is also supported by the RSTi.

	ST-5101	ST-5111	ST-5112
Product Name	**1 Channel High Speed Counter, 5 VDC Input and 1 Output**	**1 Channel High Speed Counter, 24 VDC Input and 1 Output**	**2 Channel High Speed Counter, 24 VDC Inputs and 2 Outputs**
Lifecycle Status	Active	Active	Active
Module Type	High Speed Counter	High Speed Counter	High Speed Counter
Counter Operation			1-Input Mode - Up, Down 2-Input Mode - Up/Inhibit, Up/Reset, Down/ Inhibit, Down/Reset, Up/Down, Clock/Direction Encoder 1x, Encoder 2x, Encoder 4x
Count Rate	1.5Mhz	1.5Mhz	0~100KHz except Encoder 4x 0~50KHz, Encoder 4x
Counter Range			32 bit wide/channel
Input/Output Type	(1) 5 VDC Input / (1) 24 VDC (5 to 28.8 VDC) Output	(1) 24 VDC Input / (1) 24 VDC (5 to 28.8 VDC) Output	(2) 24 VDC Input / (2) 24 VDC Output 0.5 Amp
Protection			Short Protection
Off State Leakage Current	Max. 0.5 mA	Max. 0.5 mA	
Input Filters (Selectable)	Bypass / 1usec / 5usec / 10usec / 50usec / 100usec / 500usec / 1msec / 5msec / 10msec	Bypass / 1usec / 5usec / 10usec / 50usec / 100usec / 500usec / 1msec / 5msec / 10msec	
Selectable On/Off Output Presets	Force OFF/ON Greater Than Less Than Equal Overflow/Underflow PWM Output	Force OFF/ON Greater Than Less Than Equal Overflow/Underflow PWM Output	
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	80 mA @ 5.0 VDC Maximum	80 mA @ 5.0 VDC Maximum	160 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

High Speed Counting

RSTi High Speed Counter modules interface to encoders and high speed pulse input devices. The RSTi offers a wide range of counting functions and control. SSI interface is also supported by the RSTi.

	ST-5114	ST-5351
Product Name	**4 Channel High Speed Counter, 24 VDC Inputs and 2 Outputs**	**1 Channel SSI Interface. Gray Code or Natural Binary**
Lifecycle Status	Active	Active
Module Type	High Speed Counter	High Speed Counter
Counter Operation	1-Input Mode - Up, Down 2-Input Mode - Up/Inhibit, Up/Reset, Down/Inhibit, Down/Reset, Up/Down, Clock/Direction Encoder 1x, Encoder 2x, Encoder 4x	
Count Rate	0~50KHz except Encoder 4x 0~25KHz, Encoder 4x	62.5K, 100K, 125K, 250K, 500K, 1M, 2Mbps
Counter Range	32 bit wide/channel	Max. 30 bit
Input/Output Type	(4) 24 VDC Input / (2) 24 VDC Output 0.5 Amp	D+, D- RS422 Differential Input C+, C- RS422 Differential Output
Protection	Short Protection	
Off State Leakage Current		
Input Filters (Selectable)		
Selectable On/Off Output Presets		
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5VDC loading)	160 mA @ 5.0 VDC Maximum	150 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70

Motion Control

RSTi motion options include Pulse Width Modulation and Pulse Train outputs for simple motion applications. A wide range of control amplifiers is supported with the RSTi motion modules.

	ST-5422	ST-5442	ST-5444
Product Name	**2 Channels PWM Output, 1.5A/24 VDC, Source**	**2 Channels PWM Output, 0.5A/24 VDC, Source**	**4 Channels PWM Output, 0.5A/24 VDC, Source**
Lifecycle Status	Active	Active	Active
Module Type	Motion Control	Motion Control	Motion Control
Drive Type	PWM	PWM	PWM
Number of Axes	2	2	4
Diagnostic Supported	Short Protection	Short Protection	Short Protection
Encoder Support	No	No	No
Load Current per Point	1.5 Amp/Ch, 3 Amp/All Channel, short protection	0.5 Amp/Ch, 1 Amp/All Channel, short protection	0.5 Amp/Ch, 2 Amp/All Channel, short protection
Output Inrush Current	Max. 2 A, 100ms/Channel	Max. 1.5 A, 100ms/Channel	Max. 1.5 A, 100ms/Channel
Frequency	1~2500Hz±0.5%	1~2500Hz±0.5%	1~2500Hz±0.5%
Duty	0.0~100.0%±1.0(0.1%/1LSB), Ton>5us, Toff>5us	0.0~100.0%±1.0(0.1%/1LSB), Ton>5us, Toff>5us	0.0~100.0%±1.0(0.1%/1LSB), Ton>5us, Toff>5us
Field Power Requirement	24 VDC (18 VDC to 28.8 VDC)	24 VDC (18 VDC to 28.8 VDC)	24 VDC (18 VDC to 28.8 VDC)
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	150 mA @ 5.0 VDC Maximum	150 mA @ 5.0 VDC Maximum	150 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

Motion Control

RSTi motion options include Pulse Width Modulation and Pulse Train outputs for simple motion applications. A wide range of control amplifiers is supported with the RSTi motion modules.

	ST-5641	ST-5642	ST-5651
Product Name	**1 Channel Pulse and Direction Output, 0.5 A/24 VDC, Source**	**2 Channel Pulse and Direction Output, 0.5 A/24 VDC, Source**	**1 Channel Pulse and Direction Output, RS-422**
Lifecycle Status	Active	Active	Active
Module Type	Motion Control	Motion Control	Motion Control
Drive Type	Pulse Output	Pulse Output	Pulse Output
Number of Axes	1	2	1
Diagnostic Supported	Short Protection	Short Protection	
Encoder Support	No	No	No
Load Current per Point	0.5 Amp/Ch, 1 Amp/All Channel, short protection	0.5 Amp/Ch, 2 Amp/All Channel, short protection	Max. 10 Amps
Output Inrush Current			
Frequency	1~20,000Hz±0.5% Continuous Pulse Output Max. +1~+32767: Pulse Direction Output OFF Max. -1~-32767: Pulse Direction Output ON.	1~20,000Hz±0.5% Continuous Pulse Output Max. +1~+32767: Pulse Direction Output OFF Max. -1~-32767: Pulse Direction Output ON.	5~20,000Hz±1.0% Continuous Pulse Output Max. +1~+32767: Pulse Direction Output OFF Max. -1~-32767: Pulse Direction Output ON.
Duty	50%±3.0% Fixed, Ton>5us, Toff>5us	50%±3.0% Fixed, Ton>5us, Toff>5us	50%±0.1% Fixed,Ton>10ns, Toff>10ns
Field Power Requirement	24 VDC (18 VDC to 28.8 VDC)	24 VDC (18 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	150 mA @ 5.0 VDC Maximum	150 mA @ 5.0 VDC Maximum	150 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

Power Modules

The RSTi provides various power modules to reduce wiring and simplify installation. Modules that support Smart Module ID will require one of the addresses on the bus.

The ST-7241 and ST-7641 enable multiple voltages to be supported on the RSTi bus such as 120 VAC. All modules to the right of the module will be based on the supply voltage of the ST-7x41.

The ST-7111 and ST-7511 boost the 5 VDC on the backplane bus when module power requirement is exceeded. The ST-7x11 supplies 1.0 Amps of 5 VDC to the modules to the right of the ST-7x11.

	ST-7008	ST-7408	ST-7108	ST-7508
Product Name	**Shield Signal Module, 8 channels**	**Shield Signal Smart Module, 8 channels**	**Common for 0 Volts Module, 8 channels**	**Common for 0 Volts Smart Module, 8 channels**
Lifecycle Status	Active	Active	Active	Active
Module Type	Power Modules	Power Modules	Power Modules	Power Modules
Smart Module (Uses Module ID)	No	Yes	No	Yes
Load Current per Point	Max. 10 Amps	Max. 10 Amps	Max. 10 Amps	Max. 10 Amps
LEDs	No	1 Green/Red LED, Module Status	No	1 Green/Red LED, Module Status
Diagnostic Supported	No	No	No	No
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	None	Max. 18 mA @ 5 VDC	None	Max. 18 mA @ 5 VDC
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

Power Modules

The RSTi provides various power modules to reduce wiring and simplify installation. Modules that support Smart Module ID will require one of the addresses on the bus.

The ST-7241 and ST-7641 enable multiple voltages to be supported on the RSTi bus such as 120 VAC. All modules to the right of the module will be based on the supply voltage of the ST-7x41.

The ST-7111 and ST-7511 boost the 5 VDC on the backplane bus when module power requirement is exceeded. The ST-7x11 supplies 1.0 Amps of 5 VDC to the modules to the right of the ST-7x11.

	ST-7118	ST-7518	ST-7188	ST-7588
Product Name	**Common for 24 VDC Module, 8 channels**	**Common for 24 VDC Smart Module, 8 channels**	**Common for (4) 24 VDC Channels and (4) 0 VDC Channels**	**Common Smart Module for (4) 24 VDC Channels and (4) 0 VDC Channels**
Lifecycle Status	Active	Active	Active	Active
Module Type	Power Modules	Power Modules	Power Modules	Power Modules
Smart Module (Uses Module ID)	No	Yes	No	Yes
Load Current per Point	Max. 10 Amps	Max. 10 Amps	Max. 10 Amps	Max. 10 Amps
LEDs	No	1 Green/Red LED, Module Status	No	1 Green/Red LED, Module Status
Diagnostic Supported	No	No	No	No
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	None	Max. 18 mA @ 5 VDC	None	Max. 18 mA @ 5 VDC
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

Power Modules

The RSTi provides various power modules to reduce wiring and simplify installation. Modules that support Smart Module ID will require one of the addresses on the bus.

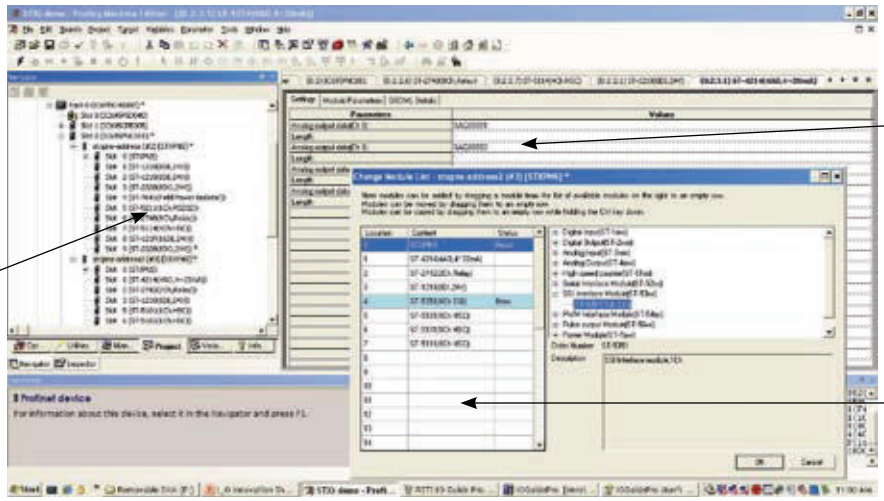
The ST-7241 and ST-7641 enable multiple voltages to be supported on the RSTi bus such as 120 VAC. All modules to the right of the module will be based on the supply voltage of the ST-7x41.

The ST-7111 and ST-7511 boost the 5 VDC on the backplane bus when module power requirement is exceeded. The ST-7x11 supplies 1.0 Amps of 5 VDC to the modules to the right of the ST-7x11.

	ST-7111	ST-7511	ST-7241	ST-7641
Product Name	**Bus Expansion Power Supply (Input 24 VDC, Output 1.0 Amp/5 VDC)**	**Bus Expansion Smart Power Supply (Input 24 VDC, Output 1.0 Amp/5 VDC)**	**Power Distribution (5 VDC, 24 VDC, 48 VDC, 110 VAC, 220 VAC)**	**Power Distribution Smart Module (5 VDC, 24 VDC, 48 VDC, 110 VAC, 220 VAC)**
Lifecycle Status	Active	Active	Active	Active
Module Type	Power Modules	Power Modules	Power Modules	Power Modules
Smart Module (Uses Module ID)	No	Yes	No	Yes
Load Current per Point	Max. 10 Amps	Max. 10 Amps	Max. 10 Amps	Max. 10 Amps
LEDs	Yes	1 Green/Red LED, Module Status	No	1 Green/Red LED, Module Status
Diagnostic Supported	No	No	No	No
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	1.0 Amp 5 VDC booster	Max. 14 mA @ 24 VDC	None	Max. 18 mA @ 5 VDC
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

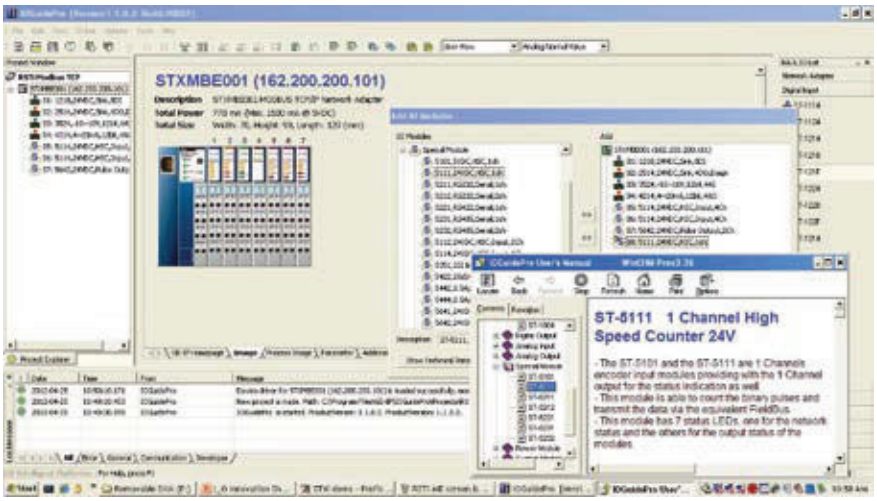
Powerful Configuration Tools

The RSTi is tightly integrated with the GE Intelligent Platforms Proficy Machine Edition. The user can easily select an I/O module and configure parameters. The configuration is stored in the folder and once download to the controller it is automatically loaded to the RSTi with a single point of connect.



IO Guide Pro - Third Party Configuration Tool

The IO Guide Pro enables integrators network independence. I/O systems can be easily configured using the various RSTi network interfaces. Changing from Ethernet IP to PROFIBUS is as simple as a mouse click without impacting the rest of the I/O configuration. The tool provides technical data, address mapping, product image and bus loading.



Network Interface	Configuration Tool
PROFINET	Integrated into Proficy Machine Edition and also a GSDML file is available for other platforms
PROFIBUS DP/V1	IO Guide Pro software tool and GSD file
DeviceNet	IO Guide Pro software tool and EDS file
Modbus TCP	IO Guide Pro software tool
Modbus Serial	IO Guide Pro software tool
EtherCAT	IO Guide Pro software tool
Ethernet IP	IO Guide Pro software tool and EDS file
CANOpen	IO Guide Pro software tool and EDS file
CC-Link	CSP file

Accessories

STXACC004	End Module, 7pcs (included with network interface)	Active
STXRTB009	Removable Terminal Block, 9pcs (included with modules)	Active
STXACC001	MARKER 100pcs (included with modules)	Active
STXACC002	BLANK MARKER 100pcs	Active

Expansion Cables

STXCBL005	0.5 meter expansion cable for ST-5725 and ST-5726	Active
STXCBL010	1.0 meter expansion cable for ST-5725 and ST-5726	Active
STXCBL030	3.0 meter expansion cable for ST-5725 and ST-5726	Active

Starter Kits

STXKITPNS001	PACSystems RSTi PROFINET Starter Kit, PROFINET RT Slave built-in switch, eight 24 VDC positive local inputs module, eight 24 VDC source outputs modules, four 4-20 mA current inputs module, two 4-20 mA current outputs module	Active

Examples of Typical Application

PROFINET Network Interface with (20) 24 VDC Positive Logic inputs, (12) 24 VDC Source outputs 2 Amps and (8) Relay outputs.

5 VDC RSTi Bus required (mA)	Qty	Part Number	Description
1500 mA of Provided	1	STXPNS001	PROFINET RT Network Adapter
35 mA x 3 = 105 mA	3	ST-1228	8 points, Negative Logic, Source Input module 12V/ 24 VDC
45 mA x 3 = 135 mA	3	ST-2624	4 points, Source, 24 VDC/ 2 A
150 mA	1	ST-2748	Isolated Relay Output 8 Points, 230 VAC/ 2 A
Total:	**5 VDC Current Required from Network Interface: 390 mA**		
	Total 1500 mA @ 5 VDC available from STXPNS001 PROFINET Network Adapter. Total I/O current requirement is 390 mA @ 5V. No 5 VDC booster required.		

PROFINET Network Interface with (40) 24 VDC inputs, (20) 24 VDC Outputs with ESCP protection, (20) Relay outputs also (6) 4 to 20 mA Analog Inputs, (3) Type J Thermocouple, (4) 4 to 20 mA Analog Outputs, (14) 120 VAC Inputs and (8) 120 VAC Outputs

1500 mA of Provided	1	STXPNS001	PROFINET RT Network Adapter
35 mA x 5 = 175 mA	5	ST-1228	8 points, Negative Logic, Source Input module 12V/ 24 VDC
60 mA x 3 = 180 mA	3	ST-2328	8 points output, Source, 24 VDC/ 0.5 A
150 mA x 3 = 450 mA	3	ST-2748	Isolated Relay Output 8 Points, 230 VAC/ 2 A
60 mA x 1 = 60 mA	1	ST-3218	Analog Input 8 Channels, 4~20 mA, 12 bit
120 mA x 1 = 120 mA	1	ST-3804	4 Channels, Thermocouple Connector Type
60 mA x 1 = 60 mA	1	ST-4214	Analog Out 4 Channels, 4~20 mA, 12 bit
18 mA x 1 = 18 mA	1	ST-7641*	Isolated Field Power Distribution 5, 24, 48, AC , 10 Amp with LED status
35 mA x 4 = 140 mA	4	ST-1804	4 points, 110 VAC (AC 85V ~ 132V) inputs
35 mA x 4 = 140 mA	4	ST-2852	Triac Output 2 points, 12V ~ 125 VAC/ 0.5 A
Total:	**5 VDC Current Required from Network Interface: 1343 mA** Modules occupy 23 of the 32 module addresses available		
	Total 1500 mA @ 5 VDC available from STXPNS001 PROFINET Network Adapter. Total I/O current requirement is 1343 mA @ 5V. No 5 VDC booster required.		

*ST-7641 is required for providing AC bus power to the ST-1804 and ST-2852. All bus power to the right of the ST-7641 will be AC.