



PRODUCT INFORMATION

SERIAL BUS COMMUNICATION

ROSS System



ROSS CONTROLS

ROSS SERIAL BUS COMMUNICATIONS – KEY FEATURES

- A complete Serial Bus communication offering for all ISO valves
- Centralized and decentralized pneumatics and I/O configurations
- Communication module supports up to 63 I/O modules, 264 Inputs, and 264 Outputs
- Input modules accept signals from sensors, photo eyes, limits and other field input devices
- Output modules provide signals to remote solenoid valves and other field output devices
- UL, C-UL, and CE certified



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ROSS Serial Bus Communications

I/O - Centralized Configuration

A complete Serial Bus communication offering for all ISO valves. UL, C-UL and CE certifications (as marked) Centralized Serial Bus system. Pneumatics and I/O are in close proximity to one another. I/O density per module = 8.



I/O - Remote Configuration

A complete Serial Bus communication offering for all ISO valves.

UL, C-UL and CE certifications (as marked) Centralized Serial Bus system.

Pneumatics and I/O are in close proximity to one another. M23, 12-Pin output extension to remote valve island. I/O density per module = 8.



I/O - Compartmentalized Remote Configuration

A complete Serial Bus communication offering for all ISO valves. UL, C-UL and CE certifications (as marked).

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Components Selection Steps

1. Select Communication Interface Module

- 2. Select I/O Modules
- 3. Select Valve Driver Module
- 4. Select Terminating Base Module
- 5. Select Optional Power Component
- 6. Select Accessories

Serial Bus Product Compatibility

	DeviceNet™ Adapter RPSSCDM	ControlNet Adapter RPSSCCNA	EtherNet Adapter RPSSCENA	PROFIBUS Adapter RPSSCPBA
PLC-5™ with Network Port	IOD	NS	NS	NA
SLC 500 [™] with Network Port	IOD	NS	NS	NA
PLC-5 Processor via Network Module	IOD	NS	NS	3
1756 Logix™ Communication Interface	IOD	IOD	IOD	3
PanelView™ Terminal	NA	NA	NA	NA
RSLinx™ Software	NA	NA	NA	NA
1769-L20, -L30 Controller with 1761- NET Interface	NA	NS	NS	NA
1769-L32E, -35E	NA	NA	IOD	NA
1769-L32C, -35CR	NA	IOD	NA	NA
1769 CompactLogix™ Communication Interface	IOD	NA	NA	3*
SoftLogix5800 [™] Communication Interface	IOD	IOD	IOD	3*
PC with RSLinx Only	NS	NS	NS	NA
FlexLogic™ Communication Interface	IOD	IOD	IOD	3
IOD = I/O Data, NS = Not Supported, NA = Not Applicable 3 = Requires third party scanner module * Hilscher North America				

Communication Considerations

Serial Bus features are impacted by your network choice.

Network	Impact
DeviceNet™ RPSSCDM12A and RPSSCDM18PA	The RPSSCDM12A and RPSSCDM18PA provide two means of connecting a node of I/O to DeviceNet™. A total of 63 Serial Bus modules can be assembled on a single DeviceNet™ node. Expansion power supplies may be used to provide additional PointBus backplane current.
ControlNet™ RPSSCCNA	A total of 63 Serial Bus modules can be assembled on a single ControlNet™ node. Expansion power supplies may be used to provide additional PointBus backplane current. Up to 25 direct connections and 5 rack connections are allowed.
EtherNet/IP™ RPSSCENA	A total of 63 Serial Bus modules can be assembled on a single EtherNet / IP node. Expansion power supplies may be used to provide additional PointBus backplane current. Refer to the User Manual, Bulletin 601 (form #A10311) to determine the ratings for direct and rack connections allowed.
PROFIBUS DP™ RPSSCPBA	A total of 63 Serial Bus modules can be assembled on a single PROFIBUS node. Expansion power supplies may be used to provide additional PointBus backplane current.

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

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ROSS Serial Bus Communications

Communication Modules*

Network	Model Number	Voltage	
^{†§} DeviceNet [™] (M18 or M12)	RPSSCDM18PA (M18) or RPSSCDM12A (M12)	10 to 28.8 volts DC	
^{†§} ControlNet™	RPSSCCNA	10 to 28.8 volts DC	
^{†§} Ethernet I/P™	RPSSCENA	10 to 28.8 volts DC	
^{†§} Profibus-DP [®]	RPSSCPBA	10 to 28.8 volts DC	

* IP67 Certified.

[†] Reference the following Documents for Installation Instructions. DeviceNet[™] - A10313, A10311; ControlNet[™] - A10315. Ethernet I/P - A10316; Profibus-DP - A10314.

§ Requires a RPSST8M23A or RPSSV32A in all manifold assemblies. RPSSV32A is included in factory assembled manifolds and Serial Bus End Station Kits.

EDS and GSD files located at www.rosscontrols.com

C3 I/O Modules*

Can be used with RPSSTERM. See www.rosscontrols.com

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Ne	etwork	Model Number	Voltage	
t	8 Digital Inputs M12 (NPN Sinking - Requires PNP Sourcing Input Device)	RPSSN8M12A	10 to 28.8 volts DC	
t	8 Digital Inputs M12 (PNP Sourcing - Requires NPN Sinking Input Device)	RPSSP8M12A	10 to 28.8 volts DC	
t	8 Digital Inputs M8 (NPN Sinking - Requires PNP Sourcing Input Device)	RPSSN8M8A	10 to 28.8 volts DC	
t	8 Digital Inputs M8 (PNP Sourcing - Requires NPN Sinking Input Device)	RPSSP8M8A	10 to 28.8 volts DC	
t	8 Digital Inputs M23 12-Pin (PNP Sourcing - Requires NPN Sinking Input Device)	RPSSP8M23A	10 to 28.8 volts DC	
t	8 Digital Inputs M23 12-Pin (NPN Sinking - Requires PNP Sourcing Input Device)	RPSSN8M23A	10 to 28.8 volts DC	
+	8 Digital Outputs M12 (PNP Sourcing)	RPSST8M12A	10 to 28.8 volts DC	
+	8 Digital Outputs M8 (PNP Sourcing)	RPSST8M8A	10 to 28.8 volts DC	
ş	4 Digital Output, High Watt Relay M12 (PNP Sourcing) (2 Amp)	RPSTR4M12A	24 volts DC	
+#	8 Digital Outputs M23 (PNP Sourcing)	RPSST8M23A	10 to 28.8 volts DC	
ŧ	2 Analog Inputs Voltage (M12)	RPSSNAVM12A	0 to 10V ± 10V	
ŧ	2 Analog Inputs Current (M12)	RPSSNACM12A	4 to 20mA or 0 to 20mA	
	2 Analog Outputs Voltage (M12)	RPSSTAVM12A	0 to 10V ± 10V	
	2 Analog Outputs Current (M12)	RPSSTACM12A	4 to 20mA or 0 to 20mA	
* IP67 Certified. Reference the following Documents for Installation Instructions.				





RPSSN8M8A

ROSS Serial Bus Communications



RPSSV32A





Description	ISO Size	Model Number
32 Point Module	00, 0, 1, 2, & 3	RPSSV32A*†
24 Output Cable	utput Cable 00 & 0	
25 - 32 Output Cable	00 & 0	RPS5632P [†]
24 Output Cable	1, 2, & 3	RPS4024P [†]
 * Reference Document A103 See www.rosscontrols.com † Serial Bus Manifold assemi module (RPSSV32A) and c Series W66, Size 00 / Serie RPS5624P. Series W66, Size 00 / Serie RPS5624P + RPS5632P. 	12 for Installation Instruction blies and end station kits incl able. es W66, Size 0 24 output ma es W66, Size 0 32 output ma	s. ude a valve driver anifolds require a anifolds require a

Size 1, 2, & 3 manifolds require a RPS4024P, allowing 21 outputs.

Terminating Base Module

Description	Model Number		
Terminating Module	RPSSTERM		
Used as the last Terminating Module for a Stand Alone Serial Bus Assembly. A RPSST8M23A must be located in the Serial Bus assembly.			

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Power Extender Module

Description	Voltage	Model Number		
Field Power Module 24 volts DC RPSSSE24A				
A Power Extender Module must be used on every 12th Module in an Serial Bus assembly. See www.rosscontrols.com				
Reference Document A10317 and A10311 for configuration instructions.				
See www.rosscontrols.com				

Bus Extender Cable

Description	Voltage	Model Number		
1 Meter Cable*	24 volts DC	RPSSEXT1		
3 Meter Cable*	24 volts DC	RPSSEXT2		
* Requires a RPSSSE24A Power Extender Module. IP67 Certified.				
See www.rosscontrols.com				

Devicebus Terminating Resistor

Description	Model Number
DeviceNet™ M12 Type A	RP8BPA00MA
Profibus-DP M12 Type B	RP8BPA00MB

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.





RPSSEXT1



ROSS Serial Bus System

Communication Modules*

Network		Model Number	Voltage	
^{†§} DeviceNet [™] (M18 or M12)	RPSSCDM18PA (M18) or RPSSCDM12A (M12)		10 to 28.8 volts D0	
^{†§} ControlNet™	RPSS	CCNA	10 to 28.8 volts DC	
^{†§} Ethernet I/P™	RPSS	CENA	10 to 28.8 volts DC	
†§ Profibus-DP®	RPSS	СРВА	10 to 28.8 volts DC	
[†] Reference the following Document DeviceNet [™] - A10313, A10311; C Ethernet I/P - A10316; Profibus-DF [§] Requires a RPSST8M23A or RPS RPSSV32A is included in factory as EDS and GSD files located at www.	s for Inst ControlNe P - A1031 SV32A ir ssembled rosscont	allation Instructions. ht™ - A10315. I4. n all manifold assemblies. manifolds and Serial Bus B rols.com	End Station kits.	
General Environmental				
Operating Temperature		-4° to 140° F		
Storage Temperature		-40° to 185° F		
Relative Humidity 5 to 95% non-condensing				
Vibration	bration 5g @ 10 to 500Hz			
Protection Class	Operating 30g; Non-operating 50g		operating 50g	
Shock	IP 65/66/67			
Approvals		UL. C-UL. CE		



Maximum Size Layout

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Model Number	PointBus Current (mA)	Maximum I/O Modules with 24VDC Backplane Current at 75 mA each	Maximum I/O Modules with Expansion Power Supplies	Maximum Number of I/O Module Connections
RPSSCDM12A on DeviceNet™				
RPSSCDM18PA on DeviceNet™				
RPSSCCNA on ControlNet™	1000			5 rack and 20 direct
RPSSCENA on EtherNet/IP™			~~	20 total connections including rack and direct
RPSSCPBA on PROFIBUS		Op to 13	63	
RPSSSE24A Expansion Power	Horizontal mounting: 1A@5V DC for 1019.2V input; 1.3A @ 5V DC for 19.228.8V input Vertical mounting: 1A @ 5V DC for 1028.8V input			Not to exceed scanner capacity

Power Supply Distance Rating

Modules are placed to the right of the power supply. Each Serial Bus module can be placed in any of the slots to the right of the power supply until the usable backplane current of that supply has been exhausted. An adapter provides 1 A current to the PointBus. The RPSSSE24A provides up to 1.3 A and I/O modules require from 75 mA (typical for the digital and analog I/O modules) up to 90 mA or more.

PointBus Current Requirements

Model Number	PointBus Current Requirements
RPSSN8xxx	
RPSSP8xxx	75 mA
RPSST8xxx	
RPSSTR4MRA	90 mA
RPSSNACM12A	
RPSSTACM12A	
RPSSNAVM12A	75 mA
RPSSTAVM12A	
RPSSV32A	

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The Serial Bus family of I/O modules includes:

- Digital I/O Modules
- Analog I/O Modules
- Valve Driver Module



Digital DC Input Modules

	RPSSN8M8A RPSSN8M12A RPSSN8M23A	RPSSP8M8A RPSSP8M12A RPSSP8M23A
Number of Inputs	8 Sinking	8 Sourcing
Keyswitch Position	1	1
Voltage, On-State Input, Nom.	24 volts DC	24 volts DC
Voltage, On-State Input, Min.	10 volts DC	10 volts DC
Voltage, On-State Input, Max.	28.8 volts DC	28.8 volts DC
Input Delay Time, ON to OFF	0.5 ms Hardware + (065 ms selectable)*	0.5 ms Hardware + (065 ms selectable)*
Current, On-State Input, Min.	2 mA	2 mA
Current, On-State Input, Max.	5 mA	5 mA
Current, Off-State Input, Max.	1.5 mA	1.5 mA
PointBus Current (mA)	75	75
Power Dissipation, Max.	1.0 W @ 28.8 volts DC	1.0 W @ 28.8 volts DC
* Input ON-to-OFF dela the module.	y time is the time from a valid i	nput signal to recognition by

Digital DC Output Modules

	RPSST8M8A RPSST8M12A RPSST8M23A
Number of Outputs	8 sourcing
Keyswitch Position	1
Voltage, On-State Output, Nom.	24 volts DC
Voltage, On-State Output, Min.	10 volts DC
Voltage, On-State Output, Max.	28.8 volts DC
Output Current Rating, Max.	3.0 A per module, 1.0 A per channel
PointBus Current (mA)	75
Power Dissipation, Max.	1.2 W @ 28.8 volts DC

Relay Output Module

	RPSSTR4M12A	
Number of Outputs	4 Form A (N.O.) relays, isolated	
Keyswitch Position	7	
Output Delay Time, ON to OFF, Max.	26 ms*	
Contact Resistance, Initial	30 mΩ	
Current Leakage, Off-State Output, Max.	1.2 mA and bleed resistor thru snubber circuit @ 240 volts AC	
PointBus Current (mA)	90	
Power Dissipation, Max.	0.5 W	
*Time from valid output off signal to relay de-energization by module.		

Analog Input Modules

Analog Output Modules

Model Number	RPSSNACM12A	RPSSNAVM12A
Number of Inputs	2	2
Keyswitch Position	3	3
Input Signal Range	420 mA 020 mA	010V ±10V
Input Resolution, Bits	16 bits - over 21 mA 0.32 μA/cnt	15 bits plus sign 320 μV/cnt in unipolar or bipolar mode
Absolute Accuracy, Current Input	0.1% Full Scale @ 25°C* [†]	—
Absolute Accuracy, Voltage Input	_	0.1% Full Scale @ 25°C* [†]
Input Step Response, per Channel	70 ms @ Notch = 60 Hz (default) 80 ms @ Notch = 50 Hz 16 ms @ Notch = 250 Hz 8 ms @ Notch = 500 Hz	70 ms @ Notch = 60 Hz (default) 80 ms @ Notch = 50 Hz 16 ms @ Notch = 250 Hz 8 ms @ Notch = 500 Hz
Input Conversion Type	Delta Sigma	Delta Sigma
PointBus Current (mA)	75	75
Power Dissipation, Max.	0.6 W @ 28.8 volts DC	0.6 W @ 28.8 volts DC
* In al value offeret and	P	

Model Number	RPSSTACM12A	RPSSTAVM12A		
Number of Outputs	2	2		
Keyswitch Position	4	4		
Output Signal Range	420 mA 020 mA	010V ±10V		
Output Resolution, Bits	13 bits - over 21 mA 2.5 μA/cnt	14 bits (13 plus sign) 1.28 mV/cnt in unipolar or bipolar mode		
Absolute Accuracy, Current Output	0.1% Full Scale @ 25°C* [†]	_		
Absolute Accuracy, Voltage Output	_	0.1% Full Scale @ 25°C* [†]		
Step Response to 63% of FS,	24 µs	— Current Output		
Step Response to 63% of FS,	_	20 µs Voltage Output		
Output Conversion Rate	16 µs	20 µs		
PointBus Current (mA)	75	75		
Power Dissipation, Max.	1.0 W @ 28.8 volts DC	1.0 W @ 28.8 volts DC		
* Includes offset, gain, non-linearity and repeatability error terms.				
[†] Analog output modules support these configurable perometers and discussion				

Analog output modules support these configurable parameters and diagnostics: open-wire with LED and electronic reporting (RPSSTACM12A only); fault mode; idle mode; alarms; channel signal range and on-board scaling.

* Includes offset, gain, non-linearity and repeatability error terms.

Analog input modules support these configurable parameters and diagnostics: open-wire with LED and electronic reporting; four-alarm and annunciation set-points; calibration mode and electronic reporting; under- and over-range and electronic reporting; channel signal range and update rate and on-board scaling; filter-type; channel update rate.

Step 3 Select Valve Driver Module for ROSS Bus System

Valve Driver Module Specifications

Model Number	RPSSV32A
Outputs per Module	32, sourcing
Voltage Drop, On-State Output, Maximum	0.2 volts DC
Voltage, Off-State Output, Maximum	28.8 volts DC
Voltage, On-State Output, Maximum Minimum Nominal	28.8 volts DC 10 volts DC 24 volts DC
Output Current Rating	200 mA per channel, not to exceed 6.0 A per module
Output Surge Current, Maximum	0.5 A for 10 ms, repeatable every 3 seconds
Current Leakage, Off-State Output, Maximum	0.1 mA
Current, On-State Output Minimum	200 mA per channel
Output Delay Time OFF to ON, Maximum ¹	0.1 ms
Output Delay Time, ON to OFF, Maximum ¹	0.1 ms
External DC Power Supply Voltage Range	10 to 28.8 volts DC
External DC Power Supply Voltage Nominal	24 volts DC
1. OFF to ON or ON to OFF delay is time from a valid output energization or de-energization.	output "on" or "off" signal to



The RPSSV32A valve driver module provides an interface between the Serial Bus system and the valve assembly. This module will always be the last module on the Serial Bus. It controls 32 digital outputs at 24 volts DC. Depending on the valve selection, it can control up to 32 single solenoid valves or 16 double solenoid valves.

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

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Select the Appropriate Power Supply Unit

Serial Bus adapters have built-in PointBus power supplies. All Serial Bus modules are powered from the PointBus by either an adapter or expansion power supply.

Power Specifications

Model Number	Power Supply Input Voltage, Nom.	Operating Voltage Range	Field Side Power Requirements, Max.	Power Supply Inrush Current, Max.	Input Overvoltage Protection	Power Supply Interruption Protection	
RPSSCDM12A							
RPSSCDM18PA							
RPSSCCNA	24 valta DC	10 00 0 volto DC	24 volts DC	C A for 10 mg	Reverse polarity	Output voltage will stay	
RPSSCENA	24 VOIIS DC	1028.8 VOIIS DC	(+20% = 28.8VDC) @ 400 mA	@ 400 mA	6 A IOF TO MS	protected	input drops out for max load.
RPSSCPBA							
RPSSSE24A							
Power units are divided into two categories: • Communication adapters with built-in power supply (DC-DC)							

Expansion power supply

Expansion Power Unit

The RPSSSE24A expansion power unit passes 24 volts DC field power to the I/O modules to the right of it. This unit extends the backplane bus power and creates a new field voltage partition segment for driving field devices for up to 13 I/O modules. The expansion power unit separates field power from I/O modules to the left of the unit, effectively providing functional and logical partitioning for:

- Separating field power between input and output modules
- Separating field power to the analog and digital modules
- Grouping modules to perform a specific task or function

You can use multiple expansion power units with any of the communication adapters to assemble a full system. If you are using the RPSSCDM12A adapter, you may use a RPSSSE24A expansion power unit to add additional modules. For example, if you had a 36 module system with a RPSSCDM12A adapter, you would have at least two or more RPSSSE24A expansion power units to provide more PointBus current for modules to the right of the supply.

- · 24 volts DC to 5 volts DC converter
- 1.3A, 5 volts DC output (extend backplane power)
- Starts new voltage distribution
- Partitioning

RPSSSE24A Current Derating for Mounting



Model Number **RPSSSE24A** Note: In order to comply with CE Low Voltage Directives (LVD), you must use a Safety Extra Low **Power Supply Requirements** Voltage (SELV) or a Protected Extra Low Voltage (PELV) power supply to power this adapter Field Side Power Requirements 24 volts DC (+20% = 28.8 volts DC max.) @ 400 mA Inrush Current, Max. 6 A for 10 ms Input Overvoltage Protection Reverse polarity protected Power Supply Interruption Protection Output voltage will stay within specifications when input drops out for 10 ms at 10V with max. load Power Supply Input Voltage, Nom. 24 volts DC **Operating Voltage Range** 10...28.8 volts DC 9.8 W @ 28.8 volts DC Power Consumption, Max. Power Dissipation, Max. 3.0 W @ 28.8 volts DC 10.0 BTU/hr @ 28.8 volts DC Thermal Dissipation, Max. **Isolation Voltage** 1250 V rms Field Power Bus Supply Voltage, Nom. 12 volts DC or 24 volts DC Field Power Bus Supply Current, Max. 10 A

IMPORTANT NOTE: Please read carefully and thoroughly all of the CAUTIONS, WARNINGS on the inside back cover.

Power Distribution General Specifications

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Serial Bus Digital Input Module Cables

Model Number	For Using:	Recommended Rockwell Automation Patchcord (double-ended)	Recommended Rockwell Automation Male Cordset (single-ended)	
RPSSN8M12A	2 inputs per connector	879D-F4ACDM-x	879-C3AEDM4-5	
RPSSP8M12A	1 input per connector	889D-F4ACDM-x	889D-M4AC-y	
RPSSN8M8A	3-Pin Pico connectors	889P-F3ABPM-x	889P-M3AB-y	
RPSSP8M8A	4-Pin Pico connectors	889P-F4ABPM3-x		
RPSSN8M23A				
RPSSP8M23A	M23, 12-Pin	889M-F12AHMU-z	—	
RPSST8M23A				
x = length in meters (1, 2, 3, 5, and 10 standard)				
y = length in meters (2, 5, and 10 standard)				
z = length in meters (1, 2, and 3 standard)				
For more cables and cordsets, please refer to www.connector.com				

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Serial Bus Analog Inputs and Outputs

Model Number	For Using:	Recommended Cable
RPSSNAVM12A	1 input par connector	804507P20M020 (Shielded)*
RPSSNACM12A	r input per connector	
RPSSTAVM12A	1 output nex connector	
RPSSTACM12A	l'ouput per connector	
* Refer to www.connector.com		

Serial Bus Digital Output Module Cables

Model Number	For Using:	Recommended Rockwell Automation Patchcord (double-ended)	Recommended Rockwell Automation Male Cordset (single-ended)	
DDSCTOM10A	2 inputs per connector	879D-F4ACDM-x	879-C3AEDM4-5	
nr3310WIIZA	1 input per connector	889D-F4ACDM-x	889D-M4AC-y	
DDCCTOMOA	3-Pin Pico connectors	889P-F3ABPM-x	889P-M3AB-y	
RP3510WIOA	4-Pin Pico connectors	889P-F4ABPM3-x		
x = length in meters (1, 2, 3, 5, and 10 standard)				
y = length in meters (2, 5, and 10 standard)				
For more cables and cordsets, please refer to www.connector.com				

Serial Bus Relay Output Module Cables

Model Number	Recommended Rockwell Automation Patchcord (double-ended)	Recommended Rockwell Automation Male Cordset (single-ended)		
RPSSTR4M12A 889D-F4ACDM-x		889D-M4AC-y		
x = length in meters (1, 2, 3, 5, and 10 standard) y = length in meters (2, 5, and 10 standard) For more cables and cordsets, please refer to www.connector.com				

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Serial Bus DeviceNet[™] and Auxiliary Power Cables

Model Number	Network	Recommended Rockwell Automation Network Cable	Recommended Rockwell Automation Auxiliary Power Cables	
RPSSCDM12A RPSSCDM18PA	DeviceNet™	KwikLink Flat Media system standard drop cable: 1485K-PzF5-R5		
		Thin Round system standard drop cable: 1485R-PzN5-M5		
		Thick Round system standard drop cable: 1485C-PzN5-M5	Standard Cordect (single-anded)	
RPSSCCNA	ControlNet™	BNC to TNC Connector is required when using BNC Cordsets. See www.amphenolrf.com	Standard Patchcord (double-ended): 889N-F5AFC-y Standard Patchcord (double-ended): 889N-F4AFNC-x	
RPSSCENA	EtherNet/IP™	—		
RPSSCPBA	PROFIBUS DP	_	Standard Cordset (single-ended): 889N-F5AFC-y	
x = length in meters $(1, 2, y)$ y = length in feet $(6, 12, a)$ z = length in feet $(1, 2, 3, 4)$ For more cables and cords	3, and 6 standard) nd 20 standard) 4, 5, and 6 standard) sets, please refer to ww	v.connector.com		

Serial Bus Valve Driver Module Harness Assemblies

ISO Size	Model Number		
	1 to 24 Outputs	25 to 32 Outputs	
0 and Size 00	RPS5624P	RPS5632P	
1, 2, & 3	RPS4024P	RPS4032P	



Dimensions - inches (mm)								
Α	В	С	D	E	F			
4.0 (102)	1.8 (46)	1.9 (48)	2.0 (50)	0.87 (22)	0.43 (11)			

ROSS OPERATING VALVE, ROSS CONTROLS®, ROSS DECCO®, and AUTOMATIC VALVE INDUSTRIAL, collectively the "ROSS Group".

PRE-INSTALLATION or SERVICE

1. Before servicing a valve or other pneumatic component, be sure all sources of energy are turned off, the entire pneumatic system is shut down and exhausted, and all power sources are locked out (ref: OSHA 1910.147, EN 1037).

2. All ROSS Group Products, including service kits and parts, should be installed and/or serviced only by persons having training and experience with pneumatic equipment. Because any product can be tampered with and/or need servicing after installation, persons responsible for the safety of others or the care of equipment must check ROSS Group Products on a regular basis and perform all necessary maintenance to ensure safe operating conditions.

3. All applicable instructions should be read and complied with before using any fluid power system to prevent harm to persons or equipment. In addition, overhauled or serviced valves must be functionally tested prior to installation and use. If you have any questions, call your nearest ROSS Group location.

4. Each ROSS Group Product should be used within its specification limits. In addition, use only ROSS Group components to repair ROSS Group Products.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

FILTRATION and LUBRICATION

1. Dirt, scale, moisture, etc., are present in virtually every air system. Although some valves are more tolerant of these contaminants than others, best performance will be realized if a filter is installed to clean the air supply, thus preventing contaminants from interfering with the proper performance of the equipment. The ROSS Group recommends a filter with a 5-micron rating for normal applications.

2. All standard ROSS Group filters and lubricators with polycarbonate plastic bowls are designed for compressed air applications only. Use the metal bowl guard, where provided, to minimize danger from high pressure fragmentation in the event of bowl failure. Do not expose these products to certain fluids, such as alcohol or liquefied petroleum gas, as they can cause bowls to rupture, creating a combustible condition and hazardous leakage. Immediately replace crazed, cracked, or deteriorated bowls.

3. Only use lubricants which are compatible with materials used in the valves and other components in the system. Normally, compatible lubricants are petroleum base oils with oxidation inhibitors, an aniline

point between 180°F (82°C) and 220°F (104°C), and an ISO 32, or lighter, viscosity. Avoid oils with phosphate type additives which can harm polyurethane components, potentially leading to valve failure which risks personal injury, and/or damage to property.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

AVOID INTAKE/EXHAUST RESTRICTION

1. Do not restrict air flow in the supply line. To do so could reduce the pressure of the supply air below minimum requirements for the valve and thereby causing erratic action.

2. Do not restrict a valve's exhaust port as this can adversely affect its operation. Exhaust silencers must be resistant to clogging and must have flow capacities at least as great as the exhaust capacities of the valves. Contamination of the silencer can result in reduced flow and increased back pressure.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

SAFETY APPLICATIONS

1. Mechanical Power Presses and other potentially hazardous machinery using a pneumatically controlled clutch and brake mechanism must use a press control double valve with a monitoring device. A double valve without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All double valve installations involving hazardous applications should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.

2. Safety exhaust (dump) valves without a self-contained monitoring device should be used only in conjunction with a control system which assures monitoring of the valve. All safety exhaust valve installations should incorporate a monitoring system which inhibits further operation of the valve and machine in the event of a failure within the valve mechanism.

3. Per specifications and regulations, the ROSS L-O-X[®] and L-O-X[®] with EEZ-ON[®], N06 and N16 Series operation products are defined as energy isolation devices, NOT AS EMERGENCY STOP DEVICES.

WARNINGS: Failure to follow these instructions can result in personal injury and/or property damage.

STANDARD WARRANTY

All products sold by the ROSS Group are warranted for a one-year period [with the exception of Filters, Regulators and Lubricators ("FRLs") which are warranted for a period of seven (7) years] from the date of purchase. All products are, during their respective warranty periods,

warranted to be free of defects in material and workmanship. The ROSS Group's obligation under this warranty is limited to repair, replacement or refund of the purchase price paid for products which the ROSS Group has determined, in its sole discretion, are defective. All warranties become void if a product has been subject to misuse, misapplication, improper maintenance, modification or tampering. Products for which warranty protection is sought must be returned to the ROSS Group freight prepaid.

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