

# Scanivalve

## MODULE ACCESSORY CATALOG



Founded in 1955, Scanivalve Corp. is recognized as the world's leading supplier of Ethernet pressure and temperature measurement instrumentation. Scanivalve continues to provide accurate, reliable, and cost effective products for many industries world wide.





## Ordering Information

When placing an order or inquiring about a product in this catalog, please provide the **Part and Dash number** or the **Model Number** to the Scanivalve representative along with the quantity.

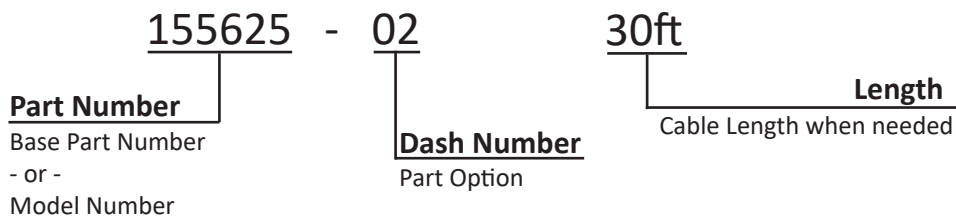
If a dash number is not shown in the part number, it is not needed.

If a part number includes “-xx”, please refer to the dash number descriptions for different dash numbers and options.

Some cabling requires a specified length at the time of order.

All accessories in this catalog may be subject to change at any time. Some details of shipped accessories may not match the photos shown in this catalog, such as color or design.

### Ordering Example:



If you have any questions, please contact us:

#### Scanivalve Headquarters

1722 N. Madson Street

Liberty Lake, WA 99019

Tel: 509-891-9970

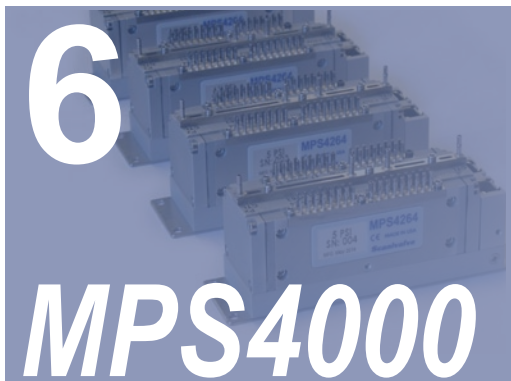
800-935-5151

Fax: 509-891-9481

e-mail: [scanco@scanivalve.com](mailto:scanco@scanivalve.com)

# Table of Contents

accessories grouped by module family or generation



**6**  
**MPS4000**



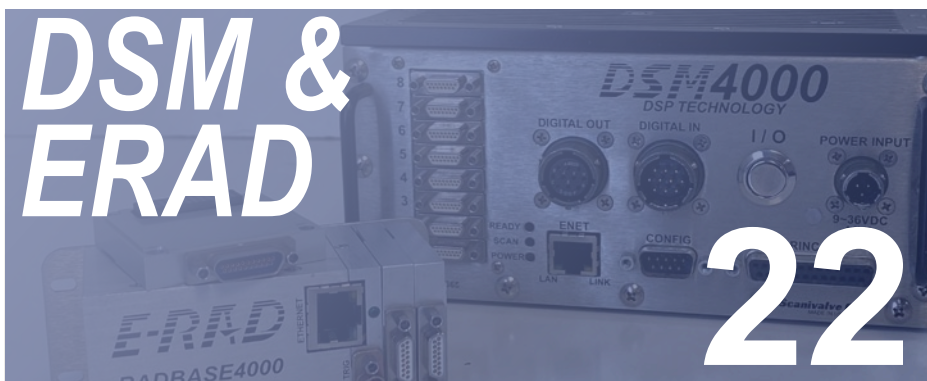
**DSA5000** **12**



**16** **DTS4050**



**20** **ECM4000**



**DSM & ERAD** **22**



**28** **PDM**



**Miscellaneous** **34**



**Legacy** **38**





# MPS4000

The Scanivalve MPS4000 series scanners are unique and versatile, multi-channel gas and air pressure scanners that can be used in a wide array of pressure measurement applications. These scanners are the perfect choice where space is limited, such as wind tunnel models, and where it is important to keep tubing length as short as possible. Significant improvements have been made in this next generation product with regard to accuracy and operation when used in dynamic temperature environments. This also makes the MPS an excellent choice for flight test, automotive, or other demanding applications.

Please see specified data sheet for detailed information.

There are two main branches of the MPS4000 series scanners - Ethernet Intelligent and Analog.

The Ethernet intelligent modules are labeled as the 4200 series. These modules allow for a simple power and Ethernet connection and output temperature compensated, Engineering Unit pressure data directly to a host computer. The MPS4200 also provides the following features:

- 16, 32, or 64 channel option
- Pressure ranges from 4" H<sub>2</sub>O to 100PSI
- Up to  $\pm 0.06\%$  full scale, long term accuracy
- Integral processor for direct Ethernet connection
- 24-bit AD Converters for high resolution
- Scan rates up to 2500Hz
- IEEE1588-2008v2 PTP Compatible
- Integral web server
- Dynamic zero correction for unmatched sensor stability
- Wide operating voltage (5-36Vdc)
- Several valve control configurations including valveless (for 16 and 32 channel versions) and pneumatic or electric valve (for 64 channel versions)

The analog modules are labeled as the 4100 series and are designed to be operated using a data acquisition system like the Scanivalve's DSM4000 or ERAD4000, or a third party data acquisition system. The analog version provides the following features:

- 64 channels
- On-board sensor excitation
- Up to 40kHz data output
- Direct legacy compatibility with Scanivalve's ZOC analog scanners
- Upgradable to the Ethernet Intelligent 4200 series

# MPS4000

## MPSTCU - Thermal Control Unit

The MPSTCU is a rugged aluminum enclosure within which a MPS4000 module (64 channel only) can be mounted inside. This enclosure is intended for use in situations in which thermal conditions are outside the operating range of a standard MPS module (0-70°C), or in applications where additional protection is needed for the module. This allows full operation in sub-zero temperatures. An optional Cooling Kit is available when the MPSTCU is to be used in higher temperature environments which may reach up to 125°C. With both the cooling kit and heater kit installed, the full operating temperature range of the MPS extends from -60°C to 125°C.

Thermal Control Units are most commonly used in flight test, wind tunnel, and engine test applications where temperatures tend to vary. Each MPSTCU is shipped with a mating pneumatic connector, spanner wrench, mating electrical connector, and mounting strap (PN 21425). Please see the MPSTCU Data Sheet for detailed information.



Single Pneumatic Connector  
70MPS - 0.063" Bulged Tubulations (standard)  
70MPS - 0.042" Bulged Tubulations (optional)

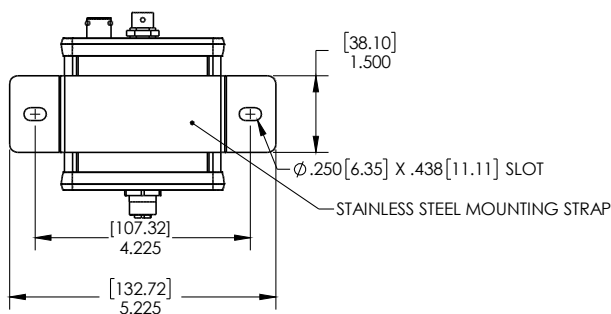
Power Indicator

IP57 Rated

Single Electrical Connector  
4200TCU - M12, A-Code, 17-pin, Pin  
4100TCU - PT06A-14-19S

OPTION	MODULE TYPE & PART NUMBER		
	MPS4264 NPx/CPx	MPS4264 EPx	MPS4164 CPx
Cooling Kit and Heater	<b>MPS4264TCU-1</b>	<b>MPSTCU EValve -1</b>	<b>MPS4164TCU-1</b>
Heater Only	<b>MPS4264TCU-2</b> <sup>2</sup>	<b>MPSTCU EValve -2</b> <sup>3</sup>	<b>MPS4164TCU-2</b>
No Heater / No Cooling Kit	<b>MPS4264TCU-3</b>	<b>MPSTCU EValve -3</b>	<b>MPS4164TCU-3</b> <sup>1</sup>

Superscript shown in photo above: 1 - top, 2 - middle, 3 - bottom



Breakout Box Dimensions (LxHxW): 3.99" x 1.82" x 3.19"

Breakout Box Weight: 0.40lbs (181.4g)

## MPSTCU Breakout Box

The MPSTCU Breakout Box allows users of the MPS4200TCU a simple means to connect Ethernet, trigger, and module/heater power to the MPSTCU. The MPSTCU Breakout Box power connector is compatible with Scanivalve PDM power supplies, while the Ethernet connector accepts a standard RJ-45 patch cable and the trigger input is a standard BNC connector.

The MPSTCU Breakout Box is housed in an aluminum enclosure and shipped with a mounting strap (PN 21433) and mating connectors for the power and BNC connection.

Single Electrical Connection  
M12, A-Code, 17-pin, Socket



Power Connector  
PT06A-8-3S

Trigger Connector  
BNC Coax

Ethernet Connector  
RJ45

PART NUMBER	MODEL
<b>21430-01</b>	MPSTCU Breakout Box

CALL - 1 (800) 935-5151

# MPS4000

Mounting Screws Included



Mounting Plate Included



MPS4264 Dummy



MPS4232 Dummy

## MPS Blanking Cover

The MPS Blanking Cover allows for the MPS to be removed from a test section and stored in a safe location, without having to unplumb tubing to the module's removable headers (Px input and Control). This accessory will cover all pneumatic connectors when the MPS is not in use but leaves ports open to atmosphere to prevent unexpected pressurization of the sensors.

All input and control headers can be removed from the MPS and the blanking cover installed over the pneumatic inputs. The cover can be installed if the mounting plate is attached to the side or the bottom of the module.

## MPS Plumbing Dummy

The aluminum MPS Plumbing Dummy eliminates downtime of an MPS4000 installation when a model shop would typically need to plumb a MPS into a model. The plumbing dummy can be used in place of the actual model until it is ready for installation.

- Exact dimensional size as actual MPS Scanner
- All mounting holes are the same, allowing for use of the mounting plate on the side or bottom
- Allows standard Px input and Control headers to be installed
- O-ring seal of the Px headers allows leak tests to be performed on the input plumbing (o-rings included)
- Input headers not included

PART NUMBER	USED FOR
20437-01	MPS4264 NPx or CPx
20437-02	MPS4264 EPx
20390-04	MPS4232 (pneumatic only)
21467-04	MPS4216 (pneumatic only)

PART NUMBER	DUMMY OF
20435-01	MPS4264 NPx or CPx
20435-02	MPS4264 EPx
20077-01	MPS4232
21457-01	MPS4216

## Input Header Kits

The MPS Header Kits allow users to quickly change tubing between modules or plumbing dummies. This can include the Px inputs or the CAL/REF/Control headers. Simply remove the screws from the header, remove the header and replace. This eliminates the need to change the physical plumbing to the module. Each kit includes the necessary screws to fasten the headers to the module or dummy. Other header options include angled inputs and calibration headers for valveless configurations.



Top: 20390-01  
Middle: 20080-01  
Bottom: 20075-01

20463-02

20463-01

OPTION	PART NUMBER	USED FOR	STYLE	TUBE SIZES (OD)	DASH NO. & DESCRIPTION
CAL/REF/CTL Header	20463-xx	MPS4x64	Standard	0.063"	-01 for NPx, -02 for CPx
Px Input Header(s)	20462-xx	MPS4x64	Standard	See Dash No.	-01 for 0.042", -02 for 0.031"
	20390-xx	MPS4232	Standard	See Dash No.	-01 for 0.042", -02 for 0.031"
	20075-xx	MPS4232	90°	See Dash No.	-01 for 0.042", -02 for 0.031"
	21467-xx	MPS4216	Standard	See Dash No.	-01 for 0.042", -02 for 0.031"
	21455-xx	MPS4216	90°	See Dash No.	-01 for 0.042", -02 for 0.031"
Calibration Headers	20080-01	MPS4232	Calibration	0.063"	For Valveless 32 Channel
	21460-01	MPS4216	Calibration	0.063"	For Valveless 16 Channel



# MPS4000

ES4008

Dimensions (LxHxW): 3.31" x 1.08" x 1.45"

Weight: 0.24lbs (108.9g)



Mini Ethernet Connections  
TE Connectivity PLG 8P8C Mini2

ES4004

Dimensions (LxHxW): 2.42" x 1.08" x 1.45"

Weight: 0.21lbs (95.2g)



Mini Power Connector  
TE Connectivity PLG 8P8C Mini1

RJ45 Uplink Ethernet Connector

## ES4000 Miniature Ethernet Switch

When space is critical, the ES4000 series miniature Ethernet switch is the perfect solution. This miniature switch allows Ethernet connectivity between multiple MPS modules and a host. The aluminum case provides a rugged, reliable package and allows the switch to operate in environments from 0 to 70°C.

By utilizing smaller profile mini-connectors (rather than the typical RJ45), the size of the ES switch is drastically reduced. All connectors, both power and Ethernet, are latching to provide reliable connections in high vibration environments. Multiple threaded mounting holes as well as its overall small size and lightweight structure make installation easy.

- Available in 4 or 8 port options
- Each switch has a single additional RJ45 port for a host connection
- Operating voltage from 9-36Vdc
- Mounting Plate included

PART NUMBER	MODEL
20450-01	ES4008
20350-01	ES4004

## MPSPDM4500 5-Port Power Supply

The MPSPDM4500 is a 5-port DC power supply that can supply power to up to 5 MPS4200 or ES4000 modules. This allows larger measurement systems with multiple devices to be powered with ease, whether on the workbench, in the wind tunnel, or during flight testing.

The rear of the power supply also provides a single BNC connector for external hardware triggering for any MPS4200s powered by the MPSPDM. A RS232 is also provided to establish a serial connection to the module connected to MPS Port #1 for serial communications. Other specifications include:

- Provides power for up to 5x MPS4200 or ES4000 modules
- Requires 90-240VAC / 50-60Hz Input
- 24VDC Outputs
- Rugged aluminum case
- Individual power switches for each module port
- MPSPDM to MPS/ES cables sold separately (see MPS4200 Cabling)

PART NUMBER	MODEL
20030-01	MPSPDM4500

For a single module DC power supply for the MPS or ES modules, please see the PDM1500.



Mini Power Connectors  
TE Connectivity PLG 8P8C Mini1

Module Power Switch



BNC Trigger Connector

RS232 Serial Connector  
(module port #1 only)

IEC AC Power Connector

Main Power Switch

PDM Dimensions (LxHxW): 5.02" x 2.20" x 6.13"

PDM Weight: 1.45lbs (657.7g)

CALL - 1 (800) 935-5151

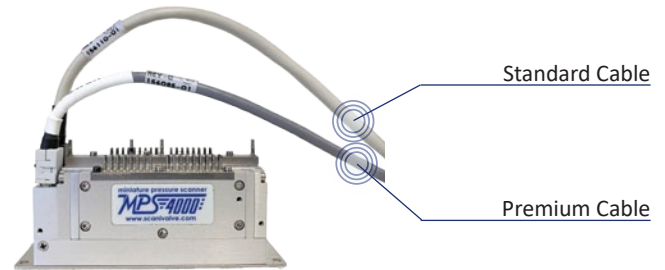
# MPS4000

## MPS4200 Cabling

Scanivalve offers multiple options for power and Ethernet cabling that allow connections to Scanivalve power supplies, host computers, ES switches, or flying leads cables.

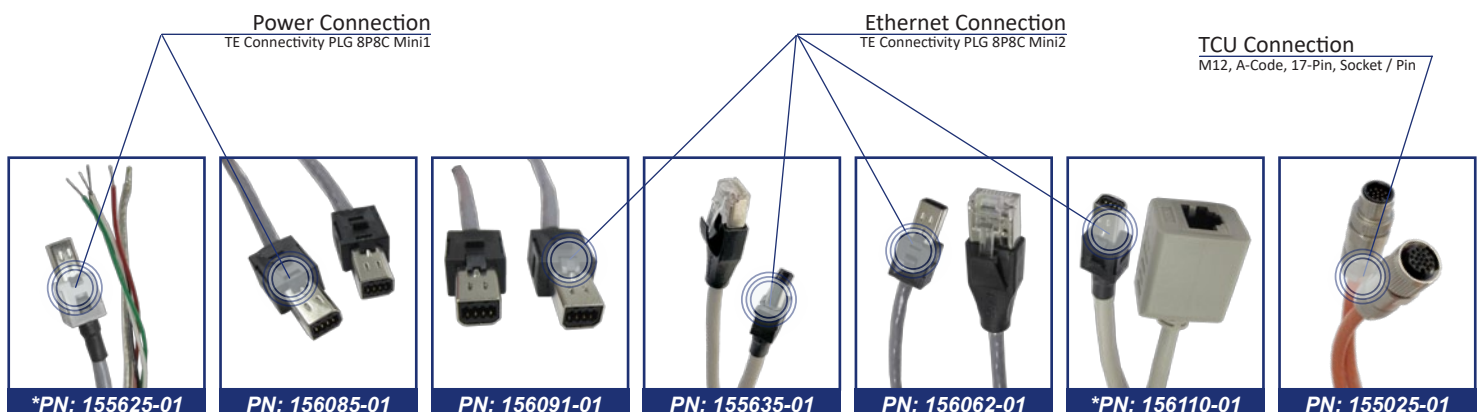
All power cables are made using a “premium” flexible, small diameter cable (0.160 inches / 4.1mm OD). This cable is protected by a PVC jacket which allows a maximum operating temperature of 105°C. Any Ethernet cable labeled with “Premium” also uses the same style cable. All other cables use a standard, quality cable. The MPSTCU cables use a flight test rated cable, protected by a PTFE jacket allowing for operation in a temperature range of -60°C to 200°C.

Most cables can be ordered at custom lengths that must be determined at the time of order. All cables will have a maximum length. Some cables only come in predetermined lengths. Note: Serial communications are not reliable beyond 30ft (50ft max).



OPTION	PART NUMBER	USED FOR	MAX LENGTH	DASH NO. & DESCRIPTION
Power Trigger Serial	156085-01	MPS/ES to MPSPDM4500	Up to 150ft	Carries power, serial, and trigger connections Specify Length
	156085-02	MPS/ES to flying leads	Up to 150ft	Carries power, serial, and trigger connections Specify Length
	155625-xx	MPS/ES to flying leads	See Description	Carries power and trigger only -01 for 3ft *, -02 for lengths up to 150ft
	155011-xx	MPS/ES to PDM1500/3200	Up to 150ft	5ft standard length or specify length -01 for power only -02 for power/trigger/serial
Ethernet	156091-01	MPS to ES	Up to 150ft	Premium Cable - specify length
	156062-01	MPS to Male RJ45	Up to 150ft	Premium Cable - specify length
	155635-xx	MPS to Male RJ45	See Description	Standard Cable -01 for 10ft, -02 for 25ft, -03 for 100ft
	156110-01	MPS to Female RJ45	3ft	Standard Cable Only *
4200TCU Cables	155025-01	MPSTCU to TCU Breakout Box	Up to 150ft	Carries MPS power, trigger, Ethernet, and heater power - specify length
	155025-02	MPSTCU to flying leads	Up to 150ft	Carries MPS power, trigger, Ethernet, and heater power - specify length

\* - 3ft cable shipped as a standard accessory with every MPS4264



# MPS4000

## MPS4100 Cabling

Scanivalve offers multiple options for analog cabling that allow connections to Scanivalve data acquisition systems or to third party acquisition systems.

Analog cables designed to be used from the MPS4100 to a DSM are made using flexible, small diameter cables (0.284 inches / 7.2 mm OD). This cable is protected by a PVC jacket which allows a maximum operating temperature of 80°C.

Analog cables designed to be used for the MPS4100 to an ERAD are made using a soft silicone, small diameter cable.

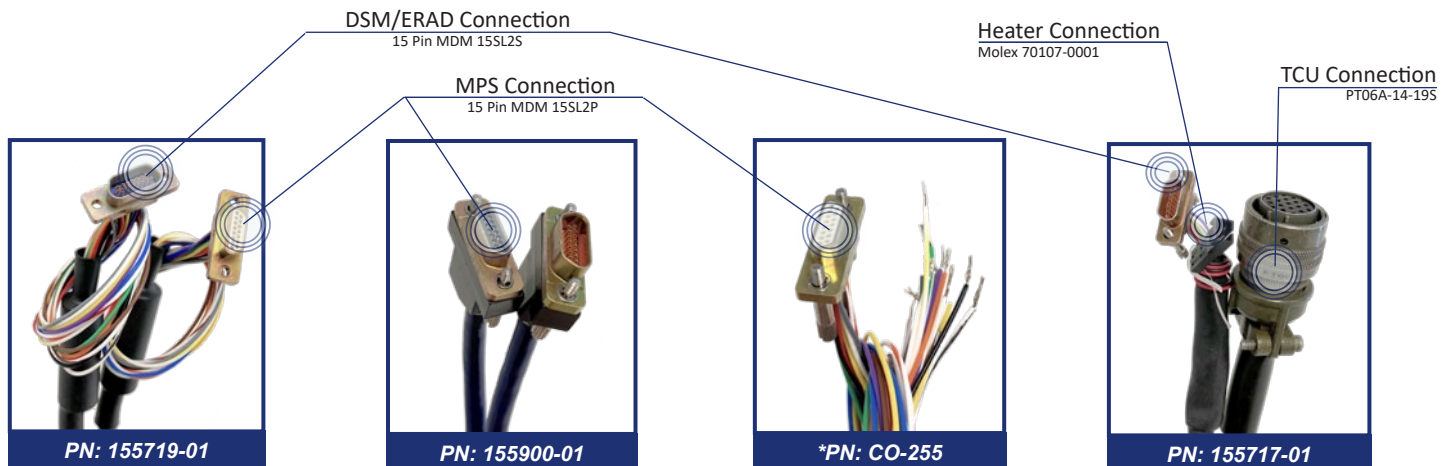
Standard MPSTCU cables use a flexible, small diameter cable (0.314 inches / 8.0mm OD). This cable is protected by a PVC jacket which allows a maximum operating temperature of 90°C. The TCU cable can also be manufactured using a flight test rated cable, protected by a PTFE jacket allowing for operation in a temperature range of -60°C to 200°C.

For use of the ID chip in the analog scanners, the cable length must be kept under 50ft. If the cable length extends beyond 50ft, the ID chip of the module cannot be read.

Note: the cables below can also be used for most ZOC and ZOCTCU to DSM/ERAD connections.

OPTION	PART NUMBER	USED FOR	MAX LENGTH	DASH NO. & DESCRIPTION
Analog	155719-xx	MPS to DSM	Up to 100ft	-01 for ≤ 50ft, -03 for > 50ft (no ID) -02 for extension cable Specify length
	155900-01	MPS to ERAD	Up to 15ft	Silicone Cable Specify length
	156144-01	Extension Cable	Up to 15ft	Silicone Cable Specify Length
	CO-255*	MPS to Flying leads	1.5ft	MDM to flying leads cable (low stock item)
Analog TCU Cables	155717-xx	MPSTCU to DSM	Up to 100ft	Standard Cable - Specify length Heater connection on DSM side -01 for ≤ 50ft, -04 for > 50ft (no ID)
				Flight Rated Cable - Specify length Heater connection on TCU side -02 for ≤ 50ft, -05 for > 50ft (no ID)
				Standard Cable - Specify length No heater connection -03 for ≤ 50ft, -06 for > 50ft (no ID)
	155929-01	MPSTCU to ERAD	Up to 15ft	Silicone Cable Heater connection on TCU side Specify Length

\* - Shipped as a standard accessory with every MPS4164 (unless installed in TCU)





# DSA5000

The Scanivalve DSA5000 series scanners are versatile and ruggedized 16-channel pressure scanners that can be used in a wide array of pressure measurement applications. Significant improvements have been made to the widely-known DSA pressure scanner series with regard to accuracy, operation, and configurability to meet the changing demands for pressure measurement. The DSA5000 series fits the needs for a diverse application spectrum including wind tunnels, flight test, educational, industrial, power, wind, steam and gas turbine engines, and many more.

Please see specified data sheet for detailed information.

The DSA5000 is a 16 channel, Ethernet intelligent pressure scanner. These modules are designed to be connected to power and Ethernet to stream engineering unit pressure data back to a host computer using many different protocols. Improving on the legacy DSA series that has been in production since 1995, the DSA5000 series now includes features such as:

- Scan rates up to 5000Hz (sample/channel/second)
- Pressure ranges from 4" H<sub>2</sub>O to 1000PSI
- Up to  $\pm 0.04\%$  full scale, long term accuracy
- IEEE1588-2008v2 PTP Compatible
- One discrete 24-bit A/D per pressure transducer, providing non-multiplexed, fully synchronous scanning
- One RTD per pressure transducer for faster temperature updates and better temperature compensation
- Wide operating voltage (9-36Vdc)
- Integrated solenoids for valve control, eliminating the need for external control pressure switching (gas only)
- 1GB Ethernet Connection
- Multi-drop architecture for multiple module system simplicity

Along with these common features, additional hardware, valve, and pneumatic configurations are also available:

- Gas or Liquid measurement configuration
- Standard TCP/SSEP or iDDS communications
- Quick-Disconnect (QD) input header (gas only)
- Optional Shock Mount (field changeable)
- Optional integrated heater to extend the operating temperature range to sub-zero temperatures
- Seven different valve configurations including true differential, absolute, dual range, individual reference, and more (gas only)
- Universal 5/16-24 female threads for all pneumatic inputs that can be fitted with multiple different fitting kits (tubulations, compression fittings, and more)

# DSA5000

## Shock Mount Kit

For pressure measurement applications where the DSA5000 may be subjected to a high shock or vibration environment, a Shock Mount Kit can be installed on the DSA5000. The shock mount kit can be added when ordering a DSA module and installed at the factory or purchased and installed in the field.

The shock mount kit comes with a 0.090" (2.29mm) mounting plate attached to the bottom. This base plate uses the same mounting footprint as the legacy DSA3218. It provides six (6) 0.250 x 0.438 (6.35mm x 11.11mm) slotted holes for mounting hardware.

The DSA5000 with the shock mount kit is tested to meet MIL-STD 810G, Category 24, Figure 514.6. Adding the shock mount will not change the IP67 rating.



Left - DSA3218  
Right - DSA5000 with Shock Mount

PART NUMBER	DESCRIPTION
21555-01	DSA5000 Shock Mount Kit

## Quick Disconnect Header

Quick Disconnect (QD) input headers can be purchased separately and used as spares or plumbing harnesses when the DSA5000 is manufactured with the QD input option (gas configurations only). This allows plumbing to be made to the test fixture and left plumbed to the input header in order to change between modules, or pre-plumb the article before the DSA5000 is installed in place.

Blank input headers for both the male and female side can be purchased to block off the DSA5000 input ports when not in use or being changed out or to block off the plumbing harness when a QD header is plumbed and not in use.

*Input fittings not included. Mounting hardware included. Not available for the all-media DSA5000.*



PART NUMBER	DESCRIPTION
21512-01	DSA5000 QD Header (Standard)
21512-02	DSA5000 QD Header (True Diff.)
21517-01	DSA5000 QD Dust Cap (Male)
21513-01	Blank Cap for QD Header (Female)



21517-01 Shown

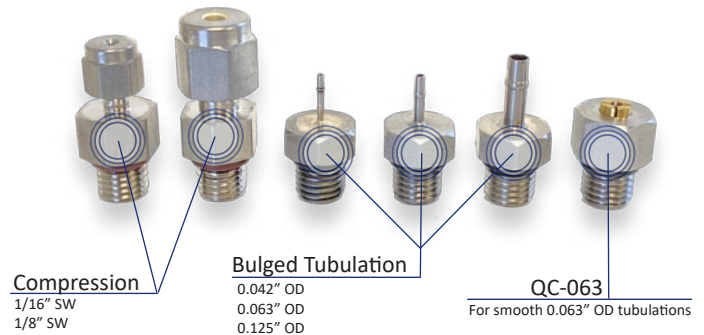
# DSA5000

## Input Fitting Kits

Scanivalve offers multiple options for the pneumatic inputs on the DSA5000. This includes the measurement ports (Px), Calibration and Reference ports (CAL & REF), and the purge and control pressure input ports (PRG & CTL SUPPLY).



All pneumatic inputs use a 5/16"x24 female thread matching the SAE J1926-1\* standard. Scanivalve offers several fitting kits that can be installed on the modules when manufactured or different kits can be purchased. This provides flexibility to change out input fittings on a module-wide or channel-to-channel basis.



FITTING TO	OPTION	SIZE	MATERIAL(s)	DSA TYPE	QTY	PART NO + DASH			
5/16x24 Male Thread w/ O-Ring	Bulged Tubulation	0.042" OD	Stainless Steel	All-Media Configuration	17	20009	-09		
				All Standard, Dual Range, Absolute, and True Differential Gas Configs	22		-03		
				Individual Reference Gas Config Only	36		-06		
		0.063" OD	Stainless Steel	All-Media Configuration	17		-08		
				All Standard, Dual Range, Absolute, and True Differential Gas Configs	22		-02		
				Individual Reference Gas Config Only	36		-05		
		0.125" OD	Stainless Steel	All-Media Configuration	17		-07		
				All Standard, Dual Range, Absolute, and True Differential Gas Configs	22		-01		
				Individual Reference Gas Config Only	36		-04		
		Compression Fitting	1/16"	Stainless Steel	All-Media Configuration		17	20008	-09
					All Standard, Dual Range, Absolute, and True Differential Gas Configs		22		-03
					Individual Reference Gas Config Only		36		-06
	1/8"			Stainless Steel	All-Media Configuration	17	-07		
					All Standard, Dual Range, Absolute, and True Differential Gas Configs	22	-01		
					Individual Reference Gas Config Only	36	-04		
	Brass		All-Media Configuration	17	-08				
			All Standard, Dual Range, Absolute, and True Differential Gas Configs	22	-02				
			Individual Reference Gas Config Only	36	-05				
	Other		QC-063	SS, Brass, Buna-N	All-Media Configuration	17	20010		-03
					All Standard, Dual Range, Absolute, and True Differential Gas Configs	22			-01
					Individual Reference Gas Config Only	36			-02

\*SAE J1926-1 is equivalent to ISO 11926-1 for 5/16"x24 o-ring sealing straight thread fittings.

# DSA5000

## DSA5000 Cabling

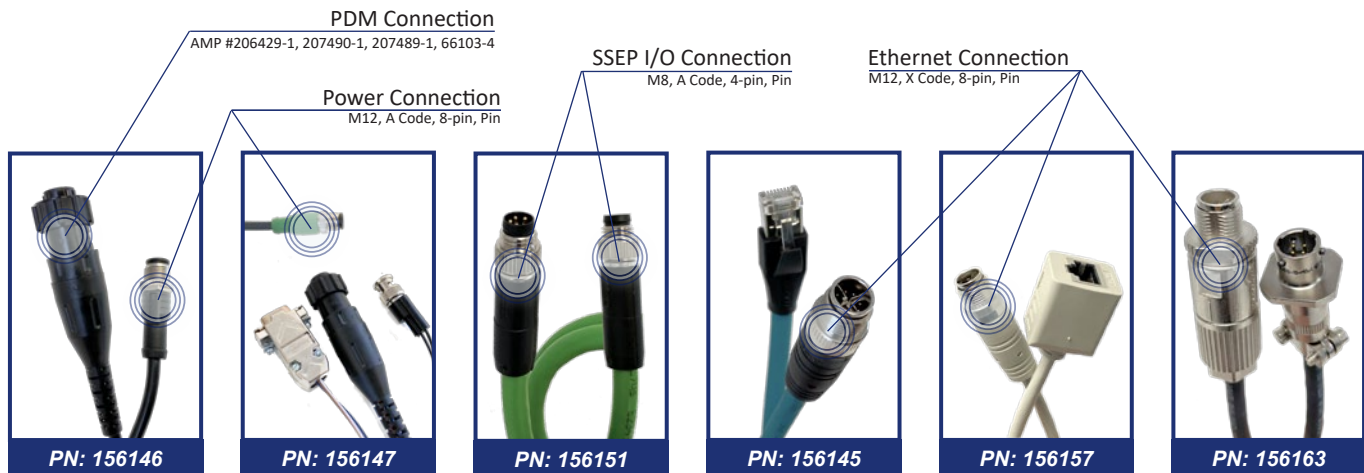
Scanivalve offers multiple options for power and Ethernet cabling that allow connections to Scanivalve power supplies, host computers, or flying leads cables.

Most cables can be ordered at custom lengths that must be determined at the time of order. All cables will have a maximum length. Some cables are only provided in predetermined lengths. Note: Serial communications are not reliable beyond 30ft (50ft max).

Most DSA5000 cables can be sourced from third-party distributors using the connector combinations below. Pre-made cables are typically available from these sources.



OPTION	PART NUMBER	USED FOR	LENGTH	DASH NO. & DESCRIPTION
Power Trigger Serial	<b>156147-xx</b>	DSA to PDM5000/RS232/BNC	Up to 100ft	Carries power, serial, and trigger connections -01 for standard 10ft cable -02 for custom length (please specify)
	<b>156146-xx</b>	DSA to PDM5000	Up to 100ft	Carries power only -01 for standard 10ft cable -02 for custom length (please specify)
	<b>156153-xx</b>	DSA to Legacy 3-Pin Power/ RS232/BNC Adaptor	Up to 100ft	Carries power, serial, and trigger connections -01 for standard 3ft cable -02 for custom length (please specify)
	<b>156152-xx</b>	DSA to Legacy 3-Pin Power Adaptor	Up to 100ft	Carries power only -01 for standard 1ft cable -02 for custom length (please specify)
Ethernet	<b>156145-xx</b>	DSA to RJ45 Male	Up to 100ft	-01 for standard 9ft cable -02 for custom length (please specify)
	<b>156151-xx</b>	DSA to DSA (I/O - SSEP)	Up to 100ft	-01 for standard 1.6ft cable -02 for custom length (please specify)
	<b>156157-01</b>	DSA to RJ45 Female	0.5ft	Custom lengths not available
	<b>156163-01</b>	DSA to 4-pin Mil Spec (3218/3207/3307)	1ft	Adaptor cable used to convert legacy DSA3200 4-pin Ethernet cable to DSA5000 Custom lengths not available





# DTS4050

The DTS4050, or Digital Temperature Scanner, is a multi-channel thermocouple scanner. It incorporates RAM, Integral Low Pass Filters, 22 bit A/D converters, and a microprocessor in a rugged, stand-alone module. It is ideal for use in turbine engine, diesel engine, and compressor test cells, as well as other industrial environments such as boiler and oven temperature monitoring. The DTS4050's electronics and hardware were specifically designed to endure punishing high EMI noise environments while still being able to provide accurate temperature engineering unit data.

The DTS4050 series can be ordered in different channel configurations: 16, 32, and 64. The integral processor allows for direct Ethernet connection and real-time use. These modules are designed to be connected to power and Ethernet to stream engineering unit temperature data back to a host computer using many different protocols. Other features include:

- One isothermal block per 16 channels provide for uniform temperature reference (UTR)
- NIST traceable thermocouple conversion table stored in flash memory
- Accepts E, J, K, N, R, S, T and B type thermocouples
- Engineering unit output in °C, °F, °K, °R and mVolts
- IEEE1588-2008v2 PTP Compatible
- One discrete 22-bit A/D per thermocouple input
- 1000 VDC channel-to-channel isolation
- 600 VDC input isolation
- 160dB, 0-60Hz common mode rejection
- 50-60Hz common mode noise rejection
- Open thermocouple tests can be performed via software command
- Accuracy of up to  $\pm 0.5^{\circ}\text{C}$  (limited thermocouple types)
- Ground terminal for each thermocouple input, providing different grounding scenarios - all configurable via software
- Integral low pass filter
- Drop-in replacement for legacy DTS3250s

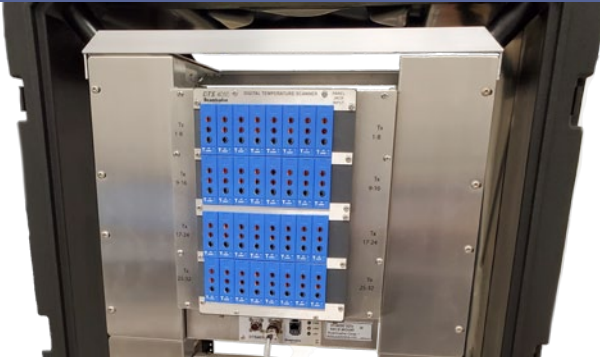
Along with these common features, additional DTS configurations are available:

- Panel Jack Inputs (for 16 and 32 channel variants only) which are assigned on a channel-to-channel basis
- Integrated heater, allowing for sub-zero temperature operations (16 and 32 channel variants only)
- 19" Rack mount option (32 and 64 channel variants only)

Please see specified data sheet for more information.



# DTS4050

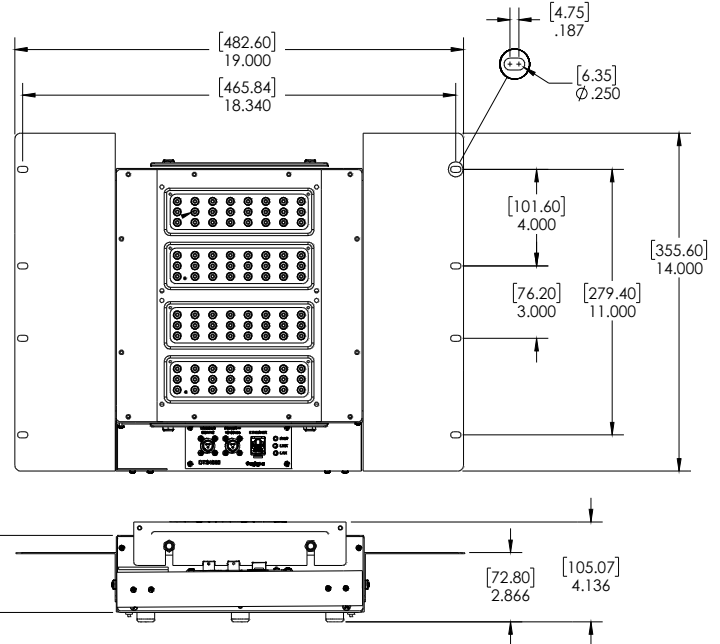


## DTS Rack Mount Kit

At time of order, the DTS4050 can be configured with a rack mount kit, allowing easy mounting into a 19" rack. The rack mount kit must be specified at time of order, along with the DTS4050. This rack mount kit is only available for 32 and 64 channel units. This kit is used for both standard screw terminal and panel jack inputs. The rack mount kit cannot be installed in the field.

The rack mount kit will extend the power, serial/trigger, and Ethernet connections to be front facing, allowing easy access to these connectors. The DTS can be mounted so the terminals are facing out or in.

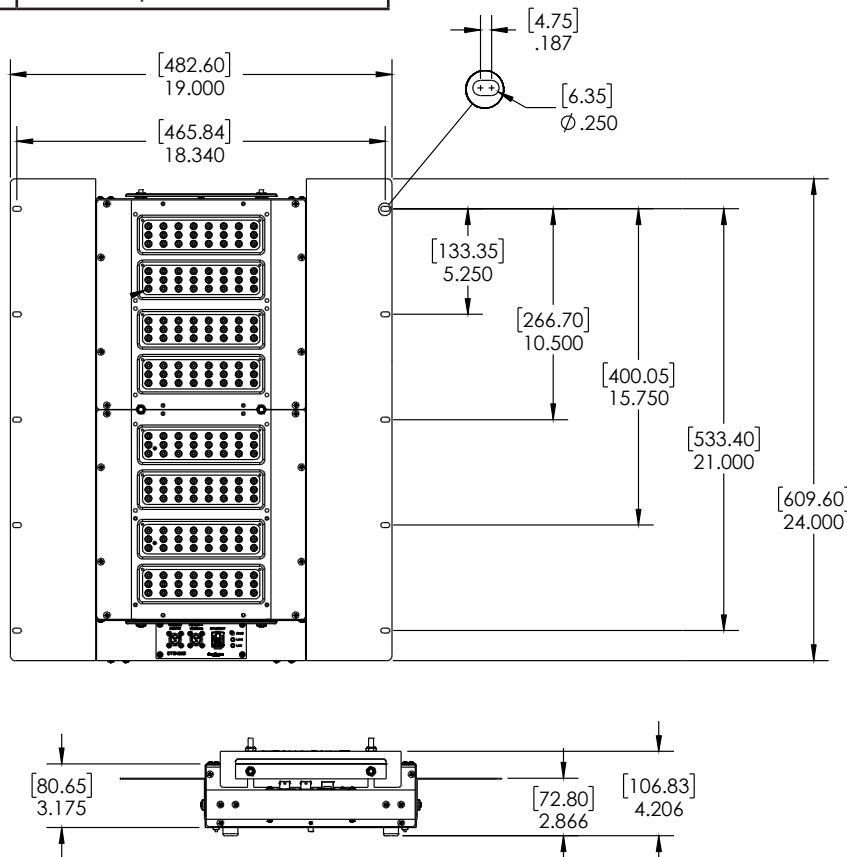
DTS4050/32Tx Rack Mount (lid removed)  
32Tx Variant: 16lbs (7.25kg)



PART NUMBER	DESCRIPTION
21195-03	DTS4050/64Tx Rack Mount Kit
21195-04	DTS4050/32Tx Rack Mount Kit

All Dimensions: Inches [mm]

DTS4050/64Tx Rack Mount  
(lid removed)  
64Tx Variant: 32lbs (14.5kg)

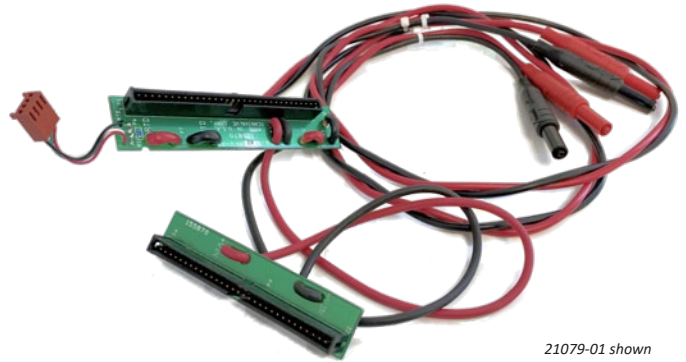


# DTS4050

## DTS Calibration Kit

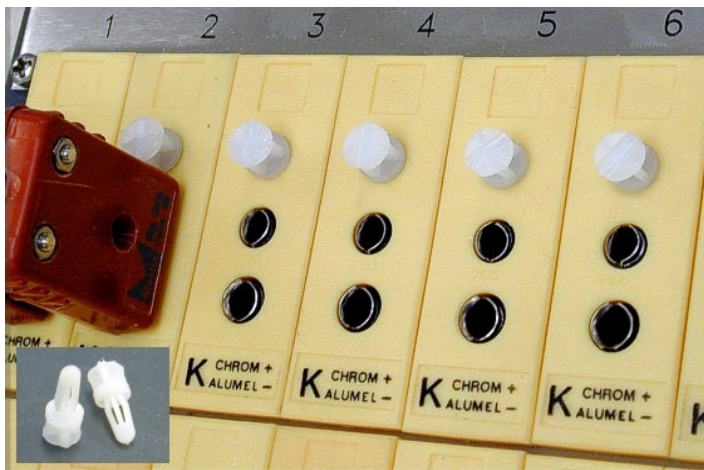
To maintain long-term accuracy and stability in the DTS4050, software titled “TempCal” can be downloaded and used to perform field calibrations and validations on all DTS4050 modules. To simplify the calibration/validation process of applying voltages to all channels equally, Calibration Harness kits can be purchased to buss a single voltage to all channels on a single UTR (16 channel total). A separate RTD input is provided on each harness to calibrate the RTD ADCs.

For detailed instructions on using the calibration harness, please see the Tempcal manual.



21079-01 shown

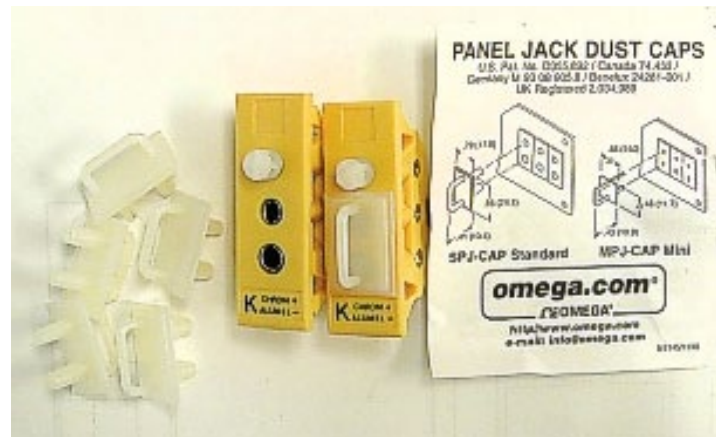
PART NUMBER	DESCRIPTION
21079-01	16 Channel Calibration Kit
21079-02	32 Channel Calibration Kit
21079-03	64 Channel Calibration Kit



PART NUMBER	DESCRIPTION
CO-861	Two hole dust cover (std only)
21078	Single ground plug

## Dust Hole Covers

Standard Panel Jack units do not have a isolated lid to the size and nature of the panel jacks. Dust hole covers are available to plug open or empty holes on the panel jacks to keep the inputs or unused ground terminal from dust and debris.



# DTS4050

## DTS4050 Cabling

While mating connectors are provided with each DTS to allow users to fabricate their own cables, Scanivalve offers multiple options for power, Ethernet, serial and trigger cabling for connections to Scanivalve power supplies, host computers, or flying leads cables.

Power cables are flexible, protected with a PVC Jacket rated for operation up to 105°C. The diameter of this cable is 0.234" OD.

Ethernet cables are shielded Cat5e and flexible, protected with a TPE Jacket rated for operation up to 75°C. The diameter of this cable is 0.237" OD.

Most cables can be ordered at custom lengths that must be determined at the time of order. All cables will have a maximum length. Some cables only come in predetermined sizes. Note: Serial communications are not reliable beyond 30ft (50ft max).



156100-01 shown

OPTION	PART NUMBER	USED FOR	LENGTH	DASH NO. & DESCRIPTION
Power	<b>155819-xx</b>	DTS to PDM	Up to 100ft	Power only For standard 10ft cable, use <b>-01</b> For custom lengths (specify), use <b>-05</b>
	<b>155819-02</b>	DTS to flying leads	Up to 100ft	Power only Specify length
Ethernet	<b>156100-01</b>	DTS Conec to RJ45	Up to 100ft	Rugged, twist-lock connector (Conec 17-101794) Specify length
	<b>156101-01</b>	DTS Conec to 4-pin Mil-Spec	1ft	Adaptor cable for use with legacy DTS3250 Ethernet cables to covert to DTS4050 rugged Conec connector
Serial/ Trigger	<b>155829-01</b>	DTS to RS232/Trigger leads	6ft	Provides RS232 serial connection and flying leads for external hardware triggering

PDM Mating Connection

AMP #206429-1, 207490-1, 207489-1, 66103-4

Serial Connection

JT01RE8-6S-SR

Power Connection

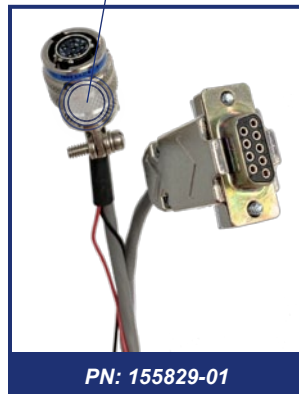
PT06A-8-3S-SR

Ethernet Connection

Conec 17-101794

Legacy Ethernet Connection

Bendix PT01A-8-4P-SR





# ECM4000

The ECM4000, or Ethernet Control Module, is a unique solution in which measurement system control is needed. With Scanivalve's experience creating custom systems for flight tests, steam turbine testing, and compressor research facilities, the ECM was designed to be the control center behind the operation of these types of systems. Providing digital outputs for controlling external solenoids, status lights, or actuators, pneumatic outputs for control pressure orchestration, and digital inputs for remote switching capabilities, the ECM can handle the most diverse and extensive applications.

The ECM4000 is a simple device with a wealth of features packed inside a small, rugged enclosure. These features allow the ECM to be the perfect complement to any Scanivalve intelligent measurement device or system, including the MPS, DSA, and DTS series. Some of the best features include:

- Dual-Core processor and Ethernet communications
- Integrated web server for settings and operations
- IEEE1588v2 PTP compatible
- 8 programmable digital outputs with multiple VDC output options
- 4 of the digital outputs can output a square waveform for external frame triggering of external devices, which can be synchronized to the ECM's PTP time
- 8 programmable digital inputs that can be used with momentary or latching switches
- 3 internal pneumatic solenoids
- 8 status LED's for digital output status or can be independently controlled
- Ability to write and run scripts that can perform sequences that include operating digital outputs, pneumatic outputs, and more
- Embedded TCP Client that can connect and communicate with other compatible TCP/IP over Telnet devices (includes most Scanivalve devices)
- Embedded 'Device Monitor' to monitor enabled Scanivalve devices and control the digital outputs based on their responses

Orchestrating complicated or high-channel count pressure or temperature measurement systems can now be handled with the integration of an ECM4000.

# ECM4000

## ECM4000 Cabling

While mating connectors are provided with each ECM to allow users to fabricate their own cables, Scanivalve offers multiple options for power, Ethernet, serial and trigger cabling for connections to Scanivalve power supplies, host computers, or flying leads cables.

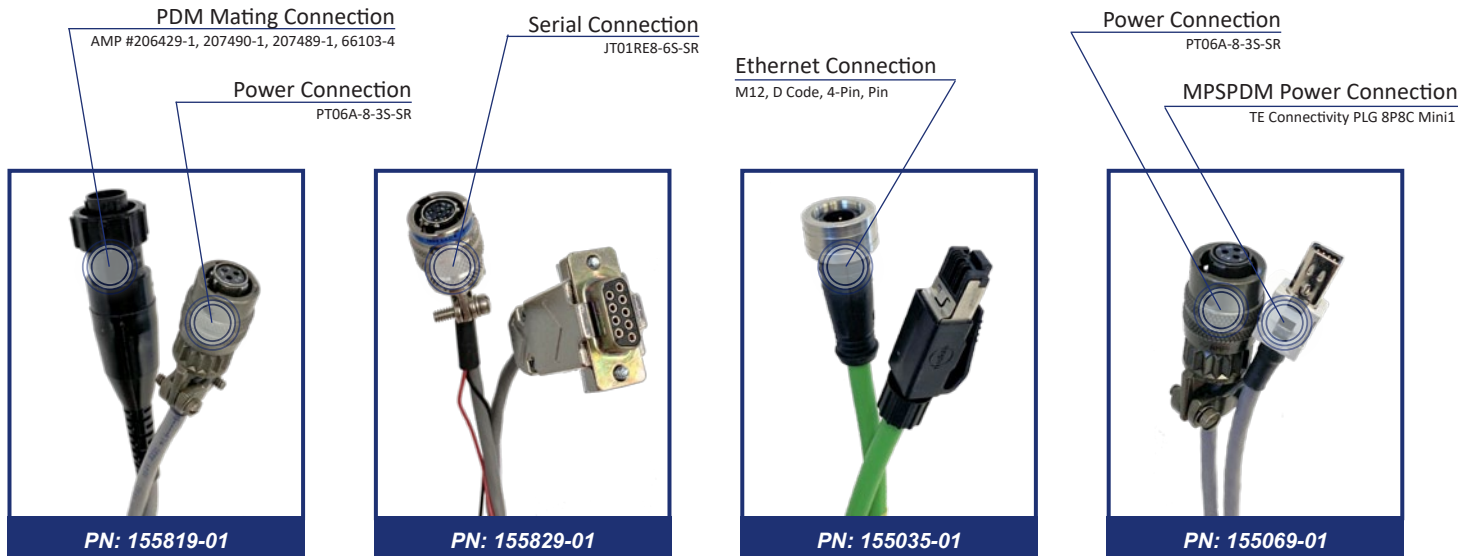
Standard power cables are flexible, protected with a PVC Jacket rated for operation up to 105°C. The diameter of this cable is 0.234" OD. The premium power cable uses the same PVC jacket but utilizes a smaller diameter cable at 0.166" OD (not intended for use with ECM with installed heater).

Ethernet cables are shielded Cat5e and flexible, protected with a TPU Jacket rated for operation up to 80°C. The diameter of this cable is 0.265" OD.

Most cables can be ordered at custom lengths that must be determined at the time of order. All cables will have a maximum length. Some cables only come in predetermined sizes. Note: Serial communications are not reliable beyond 30ft (50ft max).



OPTION	PART NUMBER	USED FOR	LENGTH	DASH NO. & DESCRIPTION
Power	<b>155819-xx</b>	ECM to PDM	Up to 100ft	Standard Cable - Power only For standard 10ft cable, use <b>-01</b> For custom lengths (specify), use <b>-05</b>
	<b>155819-02</b>	ECM to flying leads	Up to 100ft	Standard Cable - Power only Specify length
	<b>155069-01</b>	ECM (no heater) to MPSPDM4500	10ft	Premium Cable Only for use with non-heater ECM4000
Ethernet	<b>155035-xx</b>	ECM to Male RJ45	Up to 100ft	Standard Lengths <b>-01</b> for 6.5ft, <b>-02</b> for 16ft, <b>-03</b> for 32ft Custom Length (Specify) <b>-04</b> for ≤ 5ft, <b>-05</b> for ≤ 25ft, <b>-06</b> for ≤ 100ft
Serial/ Trigger	<b>155829-01</b>	ECM to RS232/Trigger leads	6ft	Provides RS232 serial connection and flying leads for external hardware triggering
Digital I/O	<b>155013-01</b>	ECM to DSMCPM	Up to 32ft	ECM digital output to DSMCPM for solenoid control - specify length





# DSM4000 & ERAD4000

The DSM4000 and ERAD4000 are Ethernet intelligent, data acquisition modules. These devices accept connections from Scanivalve analog pressure scanners (such as the ZOC and MPS4100 series) and perform the conversion of analog voltages from the analog scanners to an Engineering Unit pressure value. These devices control all communications and settings including data rate, EU conversion, module and system configuration, as well as merging all data from connected devices into a single data stream to a host computer. These devices are good for high-channel count applications in flight test, automotive, wind tunnel, and many more.

Please see specified data sheet for more information.  
22

The DSM and ERAD modules both provide the following features:

- DSP Technology
- 16-bit A/Ds
- Scan rates up to 625Hz (sample/channel/second)
- Accepts up to 8 MPS4100 or ZOC series analog pressure scanners (512 channels max)
- Ethernet 100BaseT communications through standard RJ45 connector
- Digital Input and Output capabilities
- TCP, UDP, and FTP data output
- All connected pressure scanner data are output in a single packet

The DSM4000 is a complete data acquisition system built in a rugged, stainless steel enclosure. It provides additional features such as:

- Optional ARINC429 data output
- RS232 port for serial communications (diagnostics only)
- 5 digital inputs and 5 digital outputs
- IEEE1588v2 PTP compatible
- Accepts multicast command structure

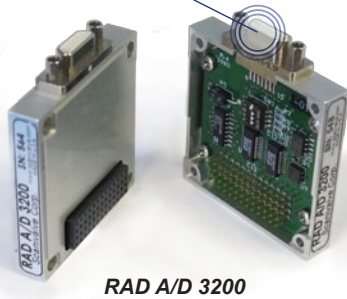
The ERAD4000 is a complete data acquisition system contained in a small footprint with modular characteristics. It provides additional features, such as:

- Modular A/D channel configurations (1 to 8 A/D cards)
- Optional RDS digital output card for 8 digital outputs (up to 8 can be installed)
- One digital input that can be used for external triggering

[WWW.SCANIVALVE.COM](http://WWW.SCANIVALVE.COM)

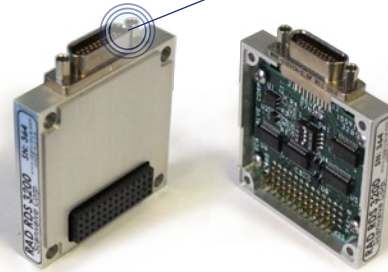
# DSM & ERAD

Analog Module Connection  
Canon 15-pin MDM15SLP2



RAD A/D 3200

Digital Output Connection  
Canon 21-pin MDM21SL1



RDS3200

## RADBASE Modules

The ERAD4000, or ERADBASE, is a module base that allows the user to add or remove A/D modules or digital output modules from the base as needed. This allows the ERAD to be configured specifically for testing needs and minimizing the size of the ERAD4000.

The RAD A/D 3200 modules are the module A/D portions of the system. Each RAD A/D is temperature compensated and includes a 16-bit A/D converter. This allows one connection to a Scanivalve analog pressure scanner, including the ZOC17, 22, 23, or 33, and the MPS4100 series. Up to eight A/D 3200 modules can be used on one ERAD4000 base (512 channels max).

The RDS3200 module is an eight channel digital output controller. This provides relays that can be software controlled by the ERAD base, which allows users to switch solenoid valves or other devices. The most popular use of the RDS3200 is to operate the Scanivalve MSCP solenoid control pack. Up to eight RDS3200s can be used on one ERAD4000 base.

Special captive screws are used to fasten the modules together and to the ERAD4000 base. Spare captive screws can be ordered if needed (PN 21142). Each module uses 2 each.

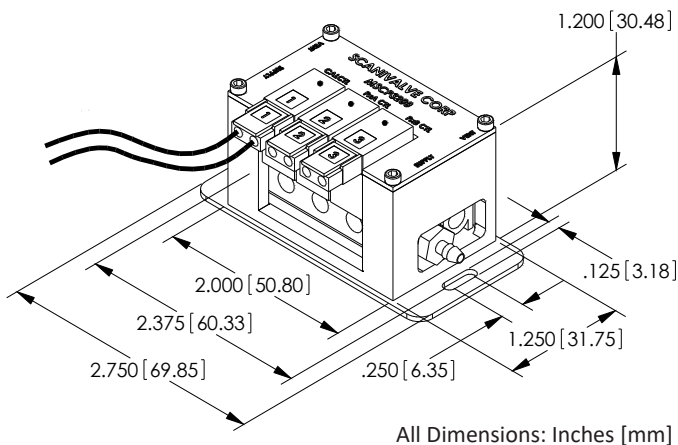
PART NUMBER	MODEL
21145	RDS3200
21140	RAD A/D 3200

## MSCP3200

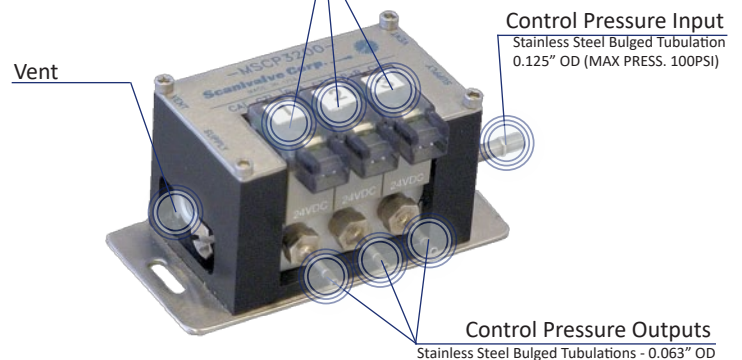
The MSCP3200, or Miniature Solenoid Control Pack, is a small manifold with a single pressure input and three discrete outputs controlled by solenoids. The MSCP pairs well with the ERAD4000 equipped with a RDS3200. This allows the ERAD4000's software to control the three solenoids, which are typically used to control the valve state of an external pressure scanner, such as the ZOC or MPS4100.

The three normally closed solenoids can also be controlled manually and require +24VDC @ 0.8W to operate. Flying lead cables (approximately 15") are supplied for each solenoid's electrical connection. Cables from the RDS to MSCP can be purchased separately.

PART NUMBER	MODEL
21225	MSCP3200



Three Controllable Solenoids  
+24VDC @ 0.8W per solenoid



# DSM & ERAD

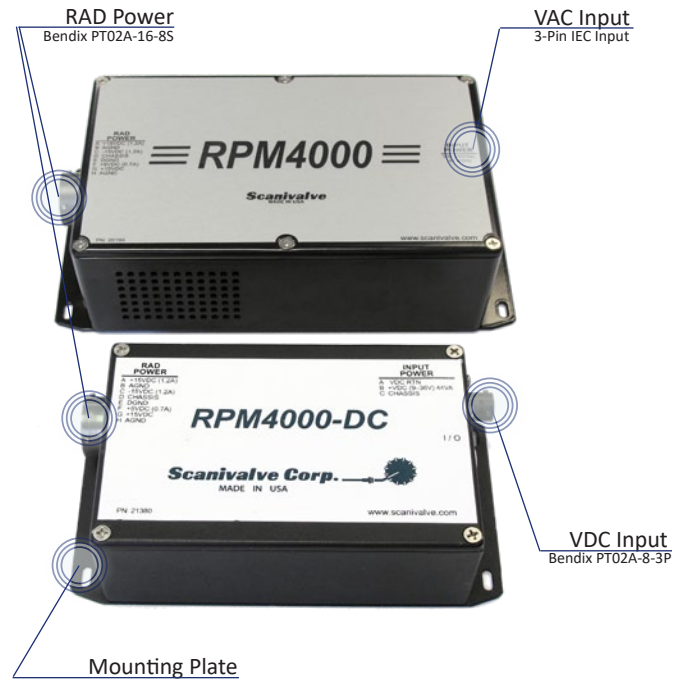
## RAD Power Modules

Scanivalve offers two special power supplies for the ERAD4000 as the RAD requires both 15VDC and 5VDC power. Both power supply options use the same RAD power connector, but accept a different input power types.

The RPM4000 is a AC to DC power supply for a single ERAD4000. This power supply requires 90-240VAC / 50-60Hz input and has a power switch to turn the power on/off.

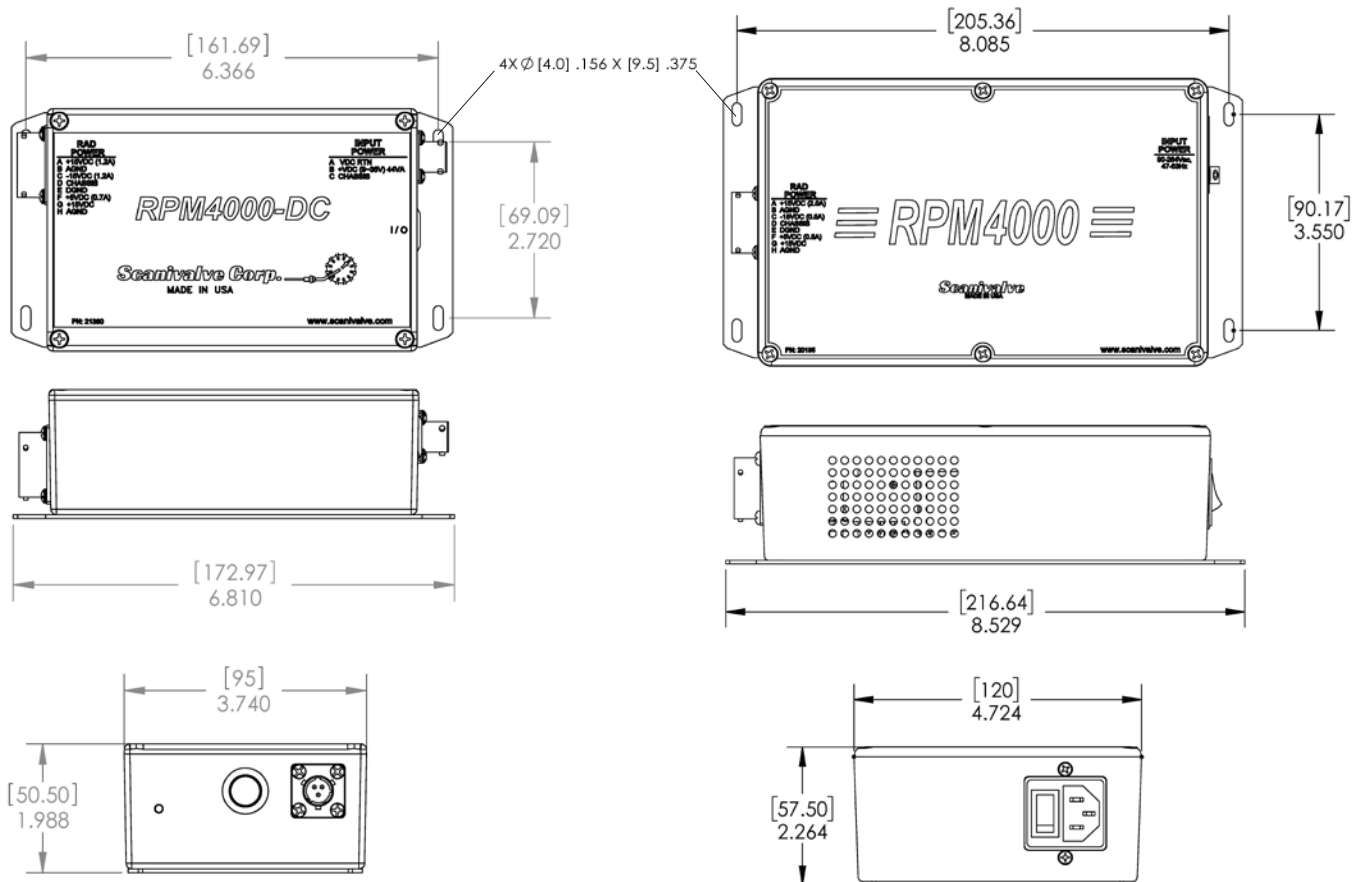
The RPM4000-DC is a DC to DC power for a single ERAD4000. This power supply requires 9-36VDC at 44VA. This allows the ERAD to be powered from the DC power in automotive and flight test applications.

The RPM to RAD power cable is sold separately.



PART NUMBER	MODEL
20195	RPM4000
21380	RPM4000-DC

All Dimensions: Inches [mm]





# DSM & ERAD

## DSMCPM

The DSM-CPM, or Remote Control Pressure Module, is a module that allows a single control pressure input to be directed to three discrete outputs controlled by solenoids. This is primarily used for orchestrating needed control pressure to pressure scanners such as the ZOC or MPS4100 series analog scanners. The DSMCPM pairs well with the DSM4000, ERAD4000 or ECM4000, which allows the device to control the solenoids via software.

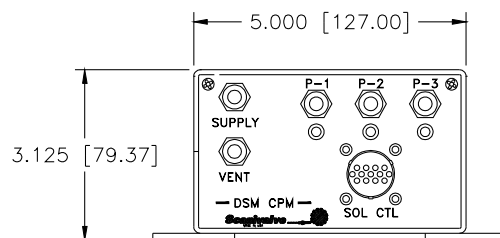
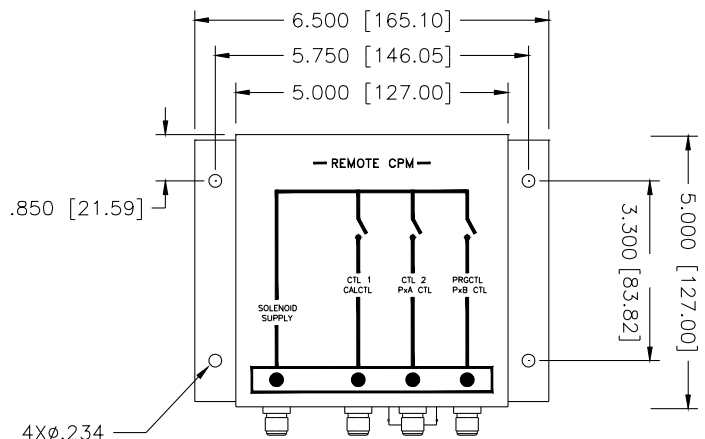
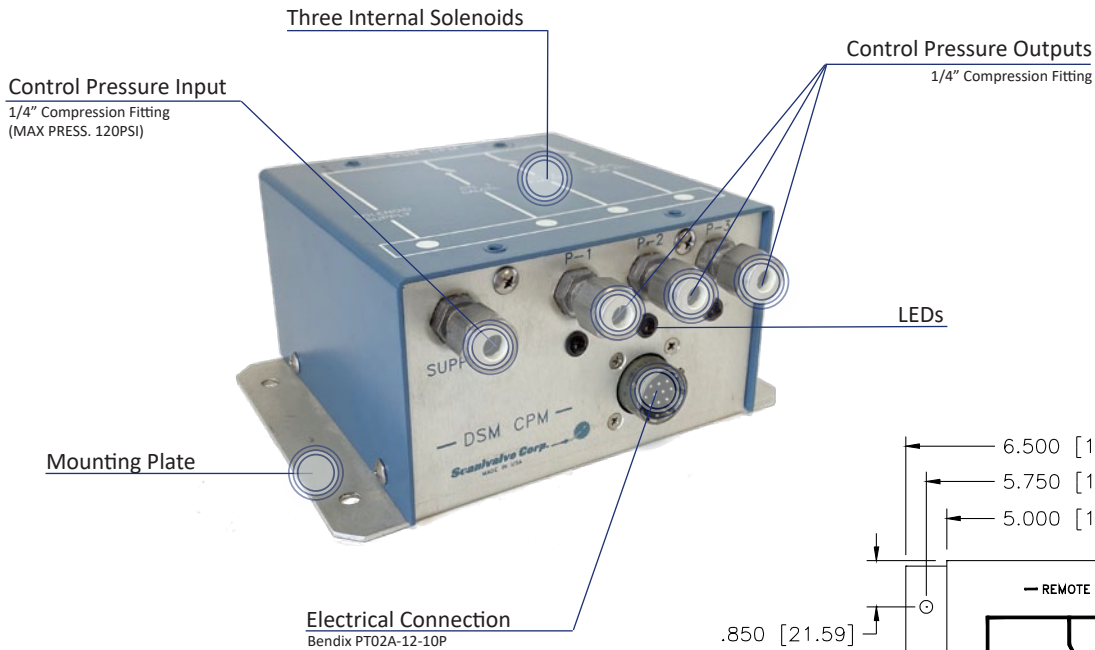
If the DSMCPM is connected to a DSM4000, the DSM will provide power to the solenoids. The power supplied to the DSMCPM is based on the DSM's power input.

The three normally closed solenoids can also be controlled manually and require +24VDC @ 0.8W to operate (optional +12VDC version available). Typical power supplies are 24VDC, however in applications in which the DSM is powered by a 12V source (such as automotive), the 12VDC DSMCPM and DSM4000 should be used.

The mating electrical connector is provided with each DSMCPM. Cables can be purchased separately to connect a DSMCPM to a DSM4000, RDS3200, ECM4000, ENETCPM\* or DSM3000-3400\*.

PART NUMBER	MODEL
20890-01	DSMCPM (24VDC)
20890-02	DSMCPM (12VDC)

\* - Discontinued



PIN OUT	
PIN	CONNECTION
A	+ SOLENOID 1
B	-- SOLENOID 1
C	+ SOLENOID 2
D	-- SOLENOID 2
E	+ SOLENOID 3
F	-- SOLENOID 3
G - K	Not Used

POWER RANGE	
VDC	RANGE
24V	21.6 to 26.4VDC
12V	10.8 to 13.2VDC

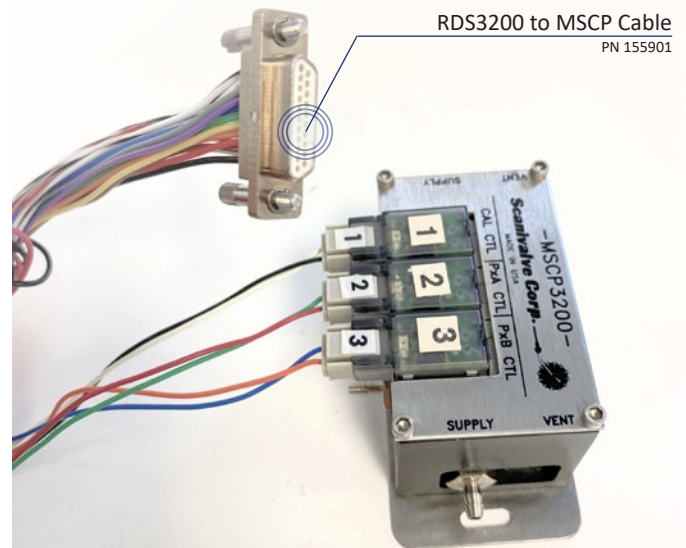
# DSM & ERAD

## DSM & ERAD Cabling

Cabling for ERAD, DSM, and other modules can be provided by Scanivalve. Both the ERAD and DSM's Ethernet connection is a standard RJ45 port which allows for the use of standard Cat5e or better RJ45 Ethernet cables.

Standard power cables for the DSM are flexible, protected with a PVC Jacket rated for operation up to 105°C. The diameter of this cable is 0.234" OD. Power cables for the ERAD are flexible, PVC cables rated for operation up to 75°C. The diameter of the cable depends on the length of the cable (see description).

Most cables can be ordered at custom lengths that must be determined at the time of order. All cables will have a maximum length. Some cables only come in predetermined sizes. Note: Serial communications are not reliable beyond 30ft (50ft max).



OPTION	PART NUMBER	USED FOR	LENGTH	DASH NO. & DESCRIPTION
Power	<b>155819-xx</b>	DSM to PDM	Up to 100ft	Standard Cable - Power only For standard 10ft cable, use <b>-01*</b> For custom lengths (specify), use <b>-05</b>
	<b>155819-02</b>	DSM to flying leads	Up to 100ft	Standard Cable - Power only Specify length
	<b>155909-xx</b>	ERAD to RPM	Up to 35ft	All cables provide flying leads for external trigger Use <b>-01</b> for 10ft, <b>-02</b> for 25ft (0.245" OD) Use <b>-03</b> for 35ft (0.376" OD)
Analog	For all Analog Cables used to connect a ZOC17, 22 <sup>†</sup> , 23 <sup>†</sup> , 33 <sup>†</sup> , MPS4100, ZOCTCU or MPSTCU, please see "MPS4100 Cabling."			
Serial	<b>156023-01</b>	ERAD to RS232	10 inches	Provides an RS232 DB9 connection for serial communications with ERAD. **
Digital I/O	<b>155913-01</b>	RDS3200 to DSMCPM	Up to 50ft	Provides flying leads in order to supply VDC to DSMCPM solenoids (RDS end) - Specify length
	<b>155901-01</b>	RDS3200 to MSCP3200	Up to 50ft	Provides flying leads in order to supply VDC to MSCP3200 solenoids (RDS end) - Specify length
	<b>155662-01</b>	DSM to DSMCPM	Up to 50ft	3ft standard, or specify length
	<b>155662-02</b>	DSM (digital out) to flying leads	Up to 50ft	DSM digital output cable with flying leads Specify length
	<b>156025-01</b>	DSM to dual DSMCPM	3ft	DSM digital output to two (2) DSMCPMs to control up to 5 external solenoids
	<b>155662-07</b>	DSM to MSCP3200	Up to 50ft	DSM digital output to MSCP3200 Specify length

\* - Each DSM4000 includes a PDM1500 with a 10ft cable

\*\* - This cable is shipped standard with each ERAD4000

† - Discontinued modules

# DSM & ERAD



[PAGE IS INTENTIONALLY BLANK]



# *PDM - Power Distribution Module*

Scanivalve offers several power DC power supply options for all pressure and temperature measurement devices. All Power Distribution Modules (PDM) accept an AC voltage input, provide power switches, and output proper DC voltage for most Scanivalve devices.

There are several different PDM series available. The PDM can be supplied as a single DC power supply for a single unit or a multi-module DC power supply. The PDM series can be used to power the following Scanivalve devices:

- DSA3000/3200/3300 series
- DSA-PTP series
- DSA5000 series
- MPS4200 and MPS4200TCU series
- DTS3250 and DTS4050 series
- DSM3000/3200/3400/4000 series
- ECM4000
- ENETCPM
- DSMCPM or MSCP3200 (*when DSM4000 is not used*)
- Other devices requiring +24VDC power

# PDM

## PDM1500

The PDM1500 is a single DC power supply for a single Scanivalve unit. It will supply +24VDC power to devices at up to 3.12A, 75W. It requires 90-264VAC 47-63Hz input power and provides a On/Off power switch to turn the supply on and off. The PDM1500 weighs approximately 12.16oz (345g).

The PDM1500 may ship standard with a cable. The cable supplied can be configured for a specific Scanivalve device, such as the DSA3000 series, DTS, ECM, MPS, DSM and more.

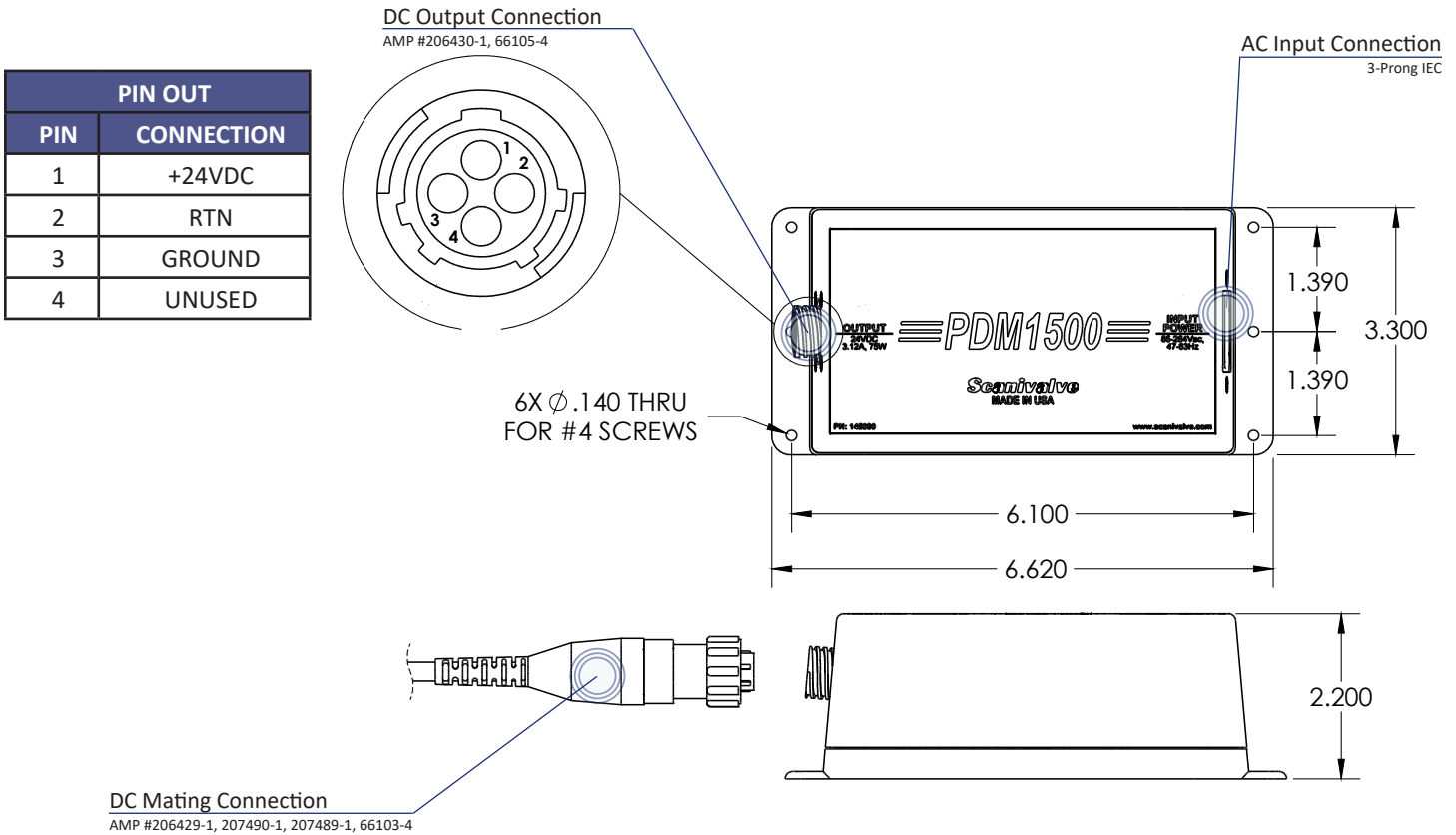
Longer or different cables can be purchased separately. These cables can be found in any of the module specific sections

*Note: A PDM1500 and cable are supplied as a standard accessory with the purchase of a DSM4000.*



145090-01 shown

PART NUMBER	DASH NUMBER	DESCRIPTION	INCLUDED CABLE PN
145090	01	PDM1500 with 10ft power cable for DSA3000/DTS/ECM/DSM and MPSTCU Breakout Box	155819-01 (10ft)
	05	PDM1500 with power only cable for MPS4200 (non-TCU)	155011-01 (5ft)
	07	PDM1500 with power/serial/trigger cable for MPS4200 (non-TCU)	155011-02 (5ft)



# PDM

## PDM5001

The PDM5001 is a single DC power supply for a single Scanivalve unit. It was primarily designed to work specifically with the new DSA5000 series pressure scanner.

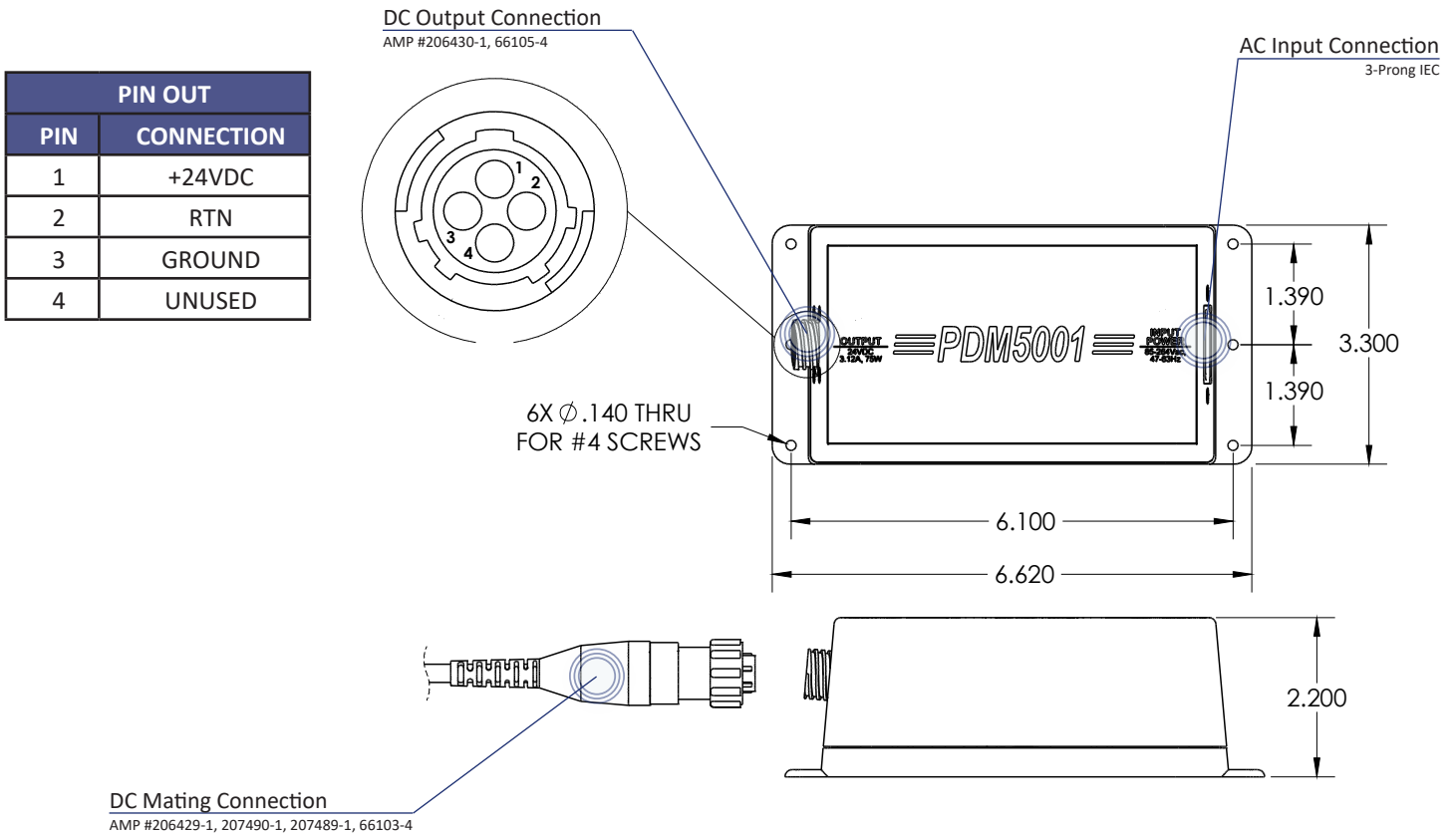
It will supply +24VDC power to devices at up to 3.12A, 75W. It requires 90-264VAC 47-63Hz input power and provides a On/Off power switch to turn the supply on and off. The PDM5001 weighs approximately 12.16oz (345g).

All cables to connect the PDM5001 to the DSA5000 are purchased separately. These cables can be found in DSA5000 section of this catalog.



21590 shown

PART NUMBER	DESCRIPTION
21590	PDM5001 (no cable)



All Dimensions: Inches [mm]

# PDM

## PDM5004

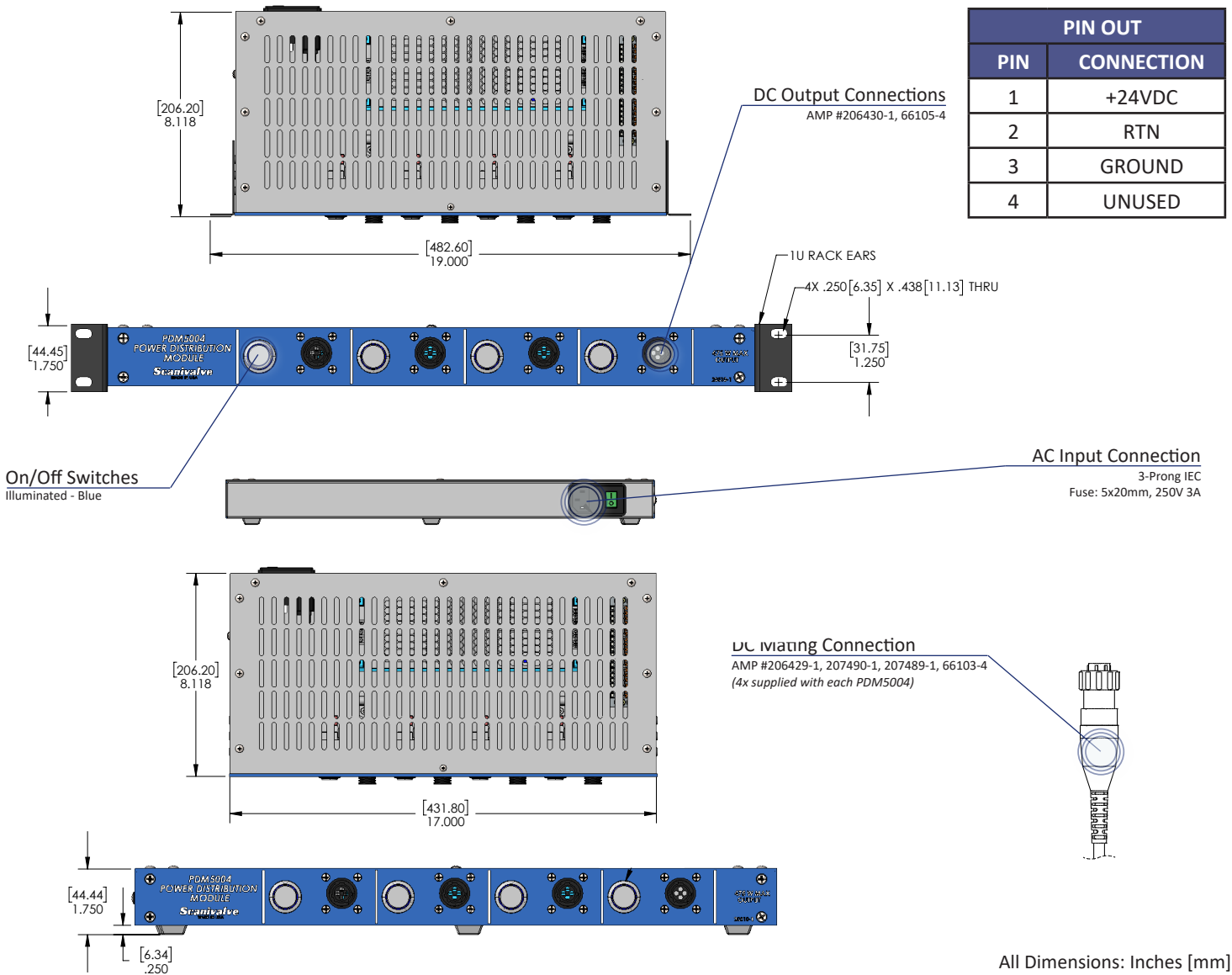
The PDM5004 is a 1U, four-port DC power supply for up to four Scanivalve devices. It will supply +24VDC power per port to devices at up to ~5A per port (or 475W total). Each port has an On/Off switch to control each output port. The ports and switches are all located on the front face of the unit.

The PDM requires 88-264VAC 47-63Hz input power and provides a On/Off power switch to turn the PDM5004 on and off. The PDM5004 weighs approximately 4.9lbs (2.22kg).

Each PDM5004 is supplied with 4 mating connectors (see below), rubber feet for desktop applications, and rack ears for 19" rack applications. Full cable assemblies are sold separately. Please see previous module sections for any cable that goes to PDM: DSA, DTS, ECM, MPS, DSM and more.



PART NUMBER	DESCRIPTION
20310-01	PDM5004



CALL - 1 (800) 935-5151

All Dimensions: Inches [mm]

# PDM

## PDM5016

The PDM5016 is a sixteen-port DC power supply in a 19" Rack Mount form factor (1U). It will supply +24VDC power per port to devices at up to 400W total (shared between all 16 ports).

The PDM requires 90-264VAC 47-63Hz input power and provides a On/Off power switch to turn the PDM5016 on and off. There is also an illuminated power switch on the front of the PDM to turn on all DC outputs. The PDM5016 weighs approximately 4.73lbs (2.15kg).

Full cable assemblies are sold separately. **The cable used with this power supply is unique as it does not use the traditional PDM DC connectors.** This PDM is designed to power DSA, DTS and ECM modules as long as the power requirements stay below 400W (typically no installed heaters). Each PDM5016 is shipped with 1U rack ears and rubber feet.



PART NUMBER	DESCRIPTION
20305-01	PDM5016
156142-01	10ft Power cable PDM16 to DSA, DTS or ECM module
156159-01	10ft Power cable PDM16 to DSA5000

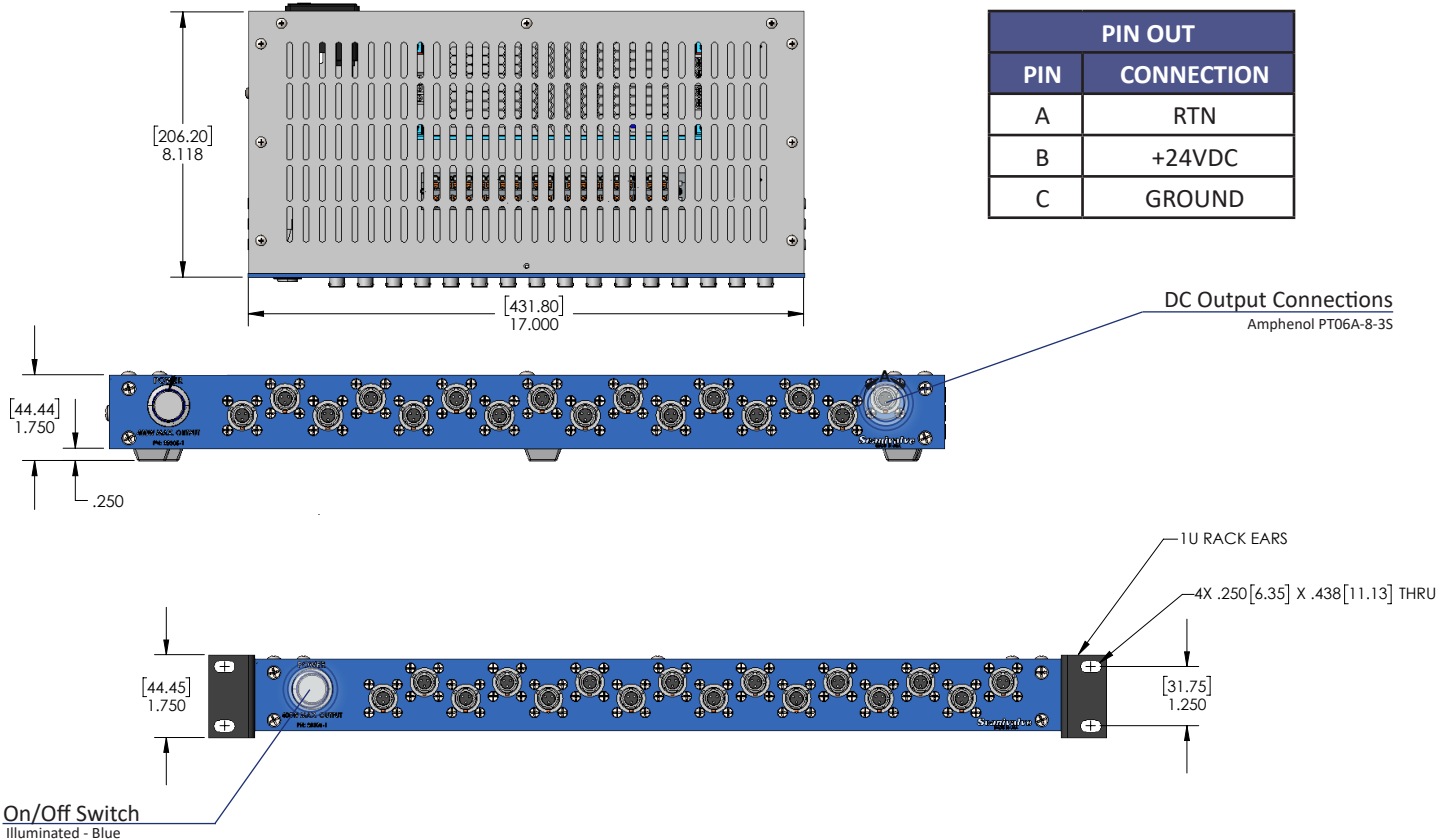
AC Input Connection  
3-Prong IEC  
Fuse: 5x20mm, 125V 10A



DC Mating Connection  
Amphenol PT06A-8-3P

PIN OUT	
PIN	CONNECTION
A	RTN
B	+24VDC
C	GROUND

DC Output Connections  
Amphenol PT06A-8-3S



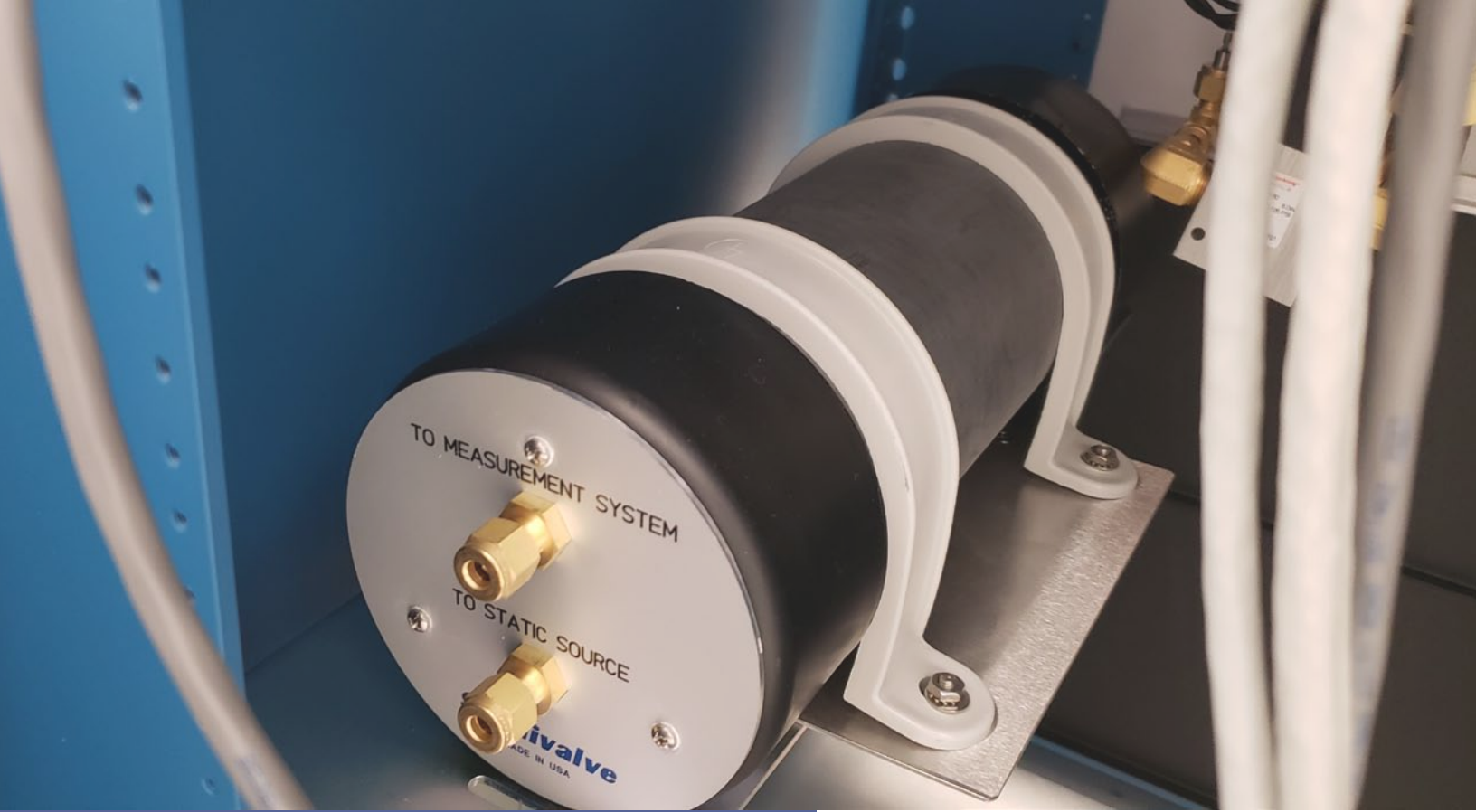
All Dimensions: Inches [mm]

WWW.SCANIVALVE.COM





[PAGE IS INTENTIONALLY BLANK]



# *Miscellaneous*

Scanivalve has several miscellaneous module and non-module specific accessories available. These items can be used with Scanivalve devices in pressure or temperature measurement applications.

# MISC

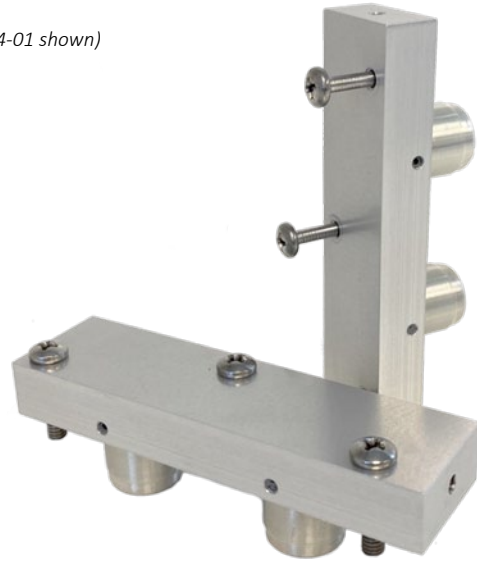
## DSA Liquid Dummy Pack

If sensor packs are not installed into positions on a DSA3207 or DSA3307 liquid pressure scanner base, the internal electronics become exposed. DSA3007 dummy sensor packs are available to plug, seal, and protect the electronics from any unnecessary exposure.

When a DSA liquid base is purchased, but not all sensor packs are filled, Scanivalve will install these sensor packs into the unfilled positions. These packs can be purchased separately if any sensor packs must be removed.

A different dummy sensor pack is required for the DSA3207 and DSA3307. They cannot be used interchangeably between models.

(20764-01 shown)



PART NUMBER	DESCRIPTION
20764-01	DSA3207 Dummy Sensor Pack
20764-02	DSA3307 Dummy Sensor Pack

## DSA3016 Pneumatic Blank

DSA3016 Pneumatic Blank, or dummy module, can be used to populate empty spaces in a DSAENC and can cap or plug any pneumatic plumbing, allowing the rest of the enclosure to remain operational when modules are removed.

If a DSA3016 module is removed for service or otherwise, the plumbing at the back of the module will be left open. When the plumbing is left open, there may be leaks or issues with applying pressure as it would leak into the ENCL. These dummy modules are designed to be installed the same as a DSA3016 module but plug any plumbing to allow the system to operate as usually. There are no electronics in the dummy module.

There are several different back block configurations. The dummy module must match the same configuration as the DSA3016 that it is replacing. Most configurations are shown below. If you are unsure which would work best, please let us know and we can assist.



DSA3016 TYPE	BACKBLOCK	REAR FITTING TYPE	PART NUMBER	DASH NUMBER
Front Access (input fittings on front panel)	4 Port	1/8" Compression	20240	01
	6 Port	1/8" Compression		03
Rear Access (Input fittings in rear)	8 Port	1/8" Compression		05
	24 Port	063 Tubulation		06
		1/16" Compression		02
	36 Port	063 Tubulation		04

## Static Bottle

The “Static Bottle” is the ideal solution for controlling and minimizing barometric reference pressure changes while taking pressure measurement data in small systems. When using low-pressure measurement differential systems, barometric pressure changes can directly affect the data quality. Normal Barometric pressure will normally change very slowly over the course of a day. Barometric pressure inside a facility can change quickly when an HVAC system cycles on or off, when doors open or close, or when fans turn on or off.

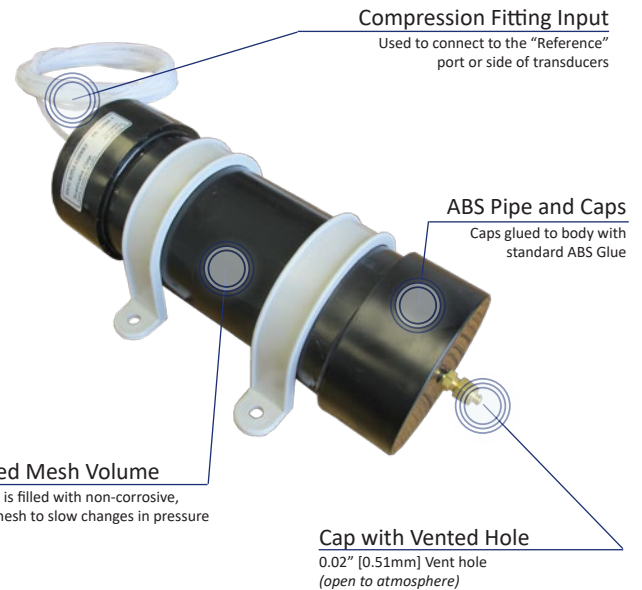
There are several things the user can do to control and minimize unexpected or abrupt Barometric changes:

- Place the pressure scanner or pressure transducer in a pneumatically benign location that is not near a fan, room doors, or air conditioning systems.
- Run a tube from the common reference port on the pressure sensor and route this tubing to a pneumatically benign location.

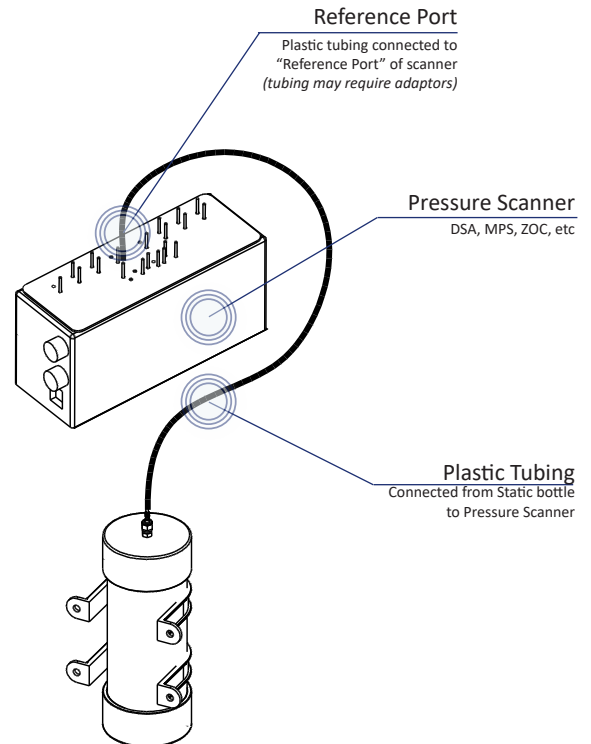
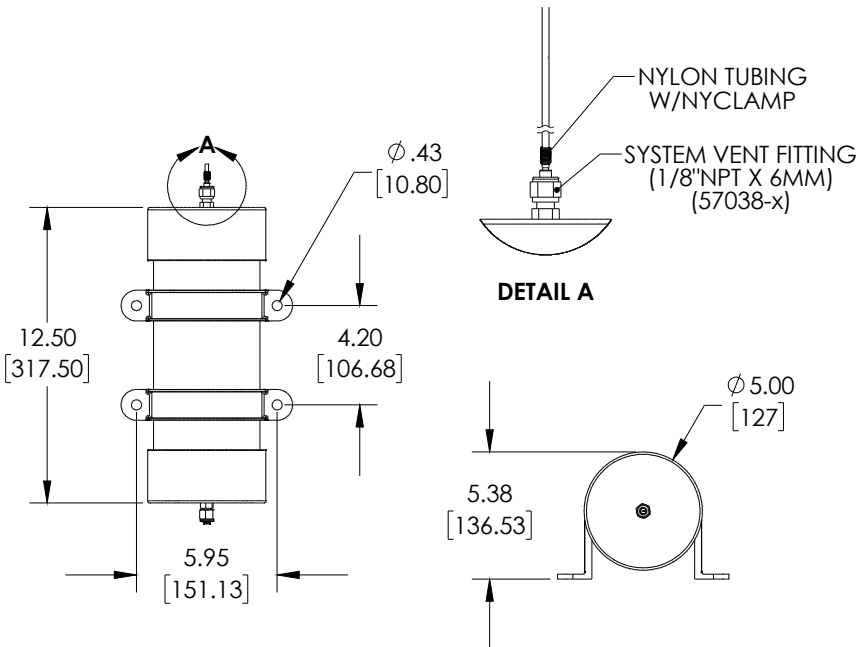
These are not always practical. A good solution would be to connect the reference input to a “Static Bottle” to minimize the potential for measurement errors.

For more information on low pressure reference discipline with the static bottle, a white paper can be found on the Scanivalve website.

The “Static Bottle” kit comes with a ABS static bottle, NYLN-125HW plastic tubing, mounting clamps, and tubing adaptors. Multiple modules can be connected to the same static bottle. For large pressure measurement systems, please see the “Static Basket.”



PART NUMBER	DESCRIPTION
16065	Static Bottle Kit



Weight: 2.62 lbs  
 All Dimensions: Inches [mm]  
 (All dimensions are approximate)

## Static Basket

The "Static Basket" is the ideal solution for controlling and minimizing barometric reference pressure changes while taking pressure measurement data in large systems. When using low-pressure measurement differential systems, barometric pressure changes can directly affect the data quality. Normal Barometric pressure will normally change very slowly over the course of a day. Barometric pressure inside a facility can change quickly when an HVAC system cycles on or off, when doors open or close, or when fans turn on or off.

There are several things the user can do to control and minimize unexpected or abrupt Barometric changes:

- Place the pressure scanner or pressure transducer in a pneumatically benign location that is not near a fan, room doors, or air conditioning systems.
- Run a tube from the common reference port on the pressure sensor and route this tubing to a pneumatically benign location.

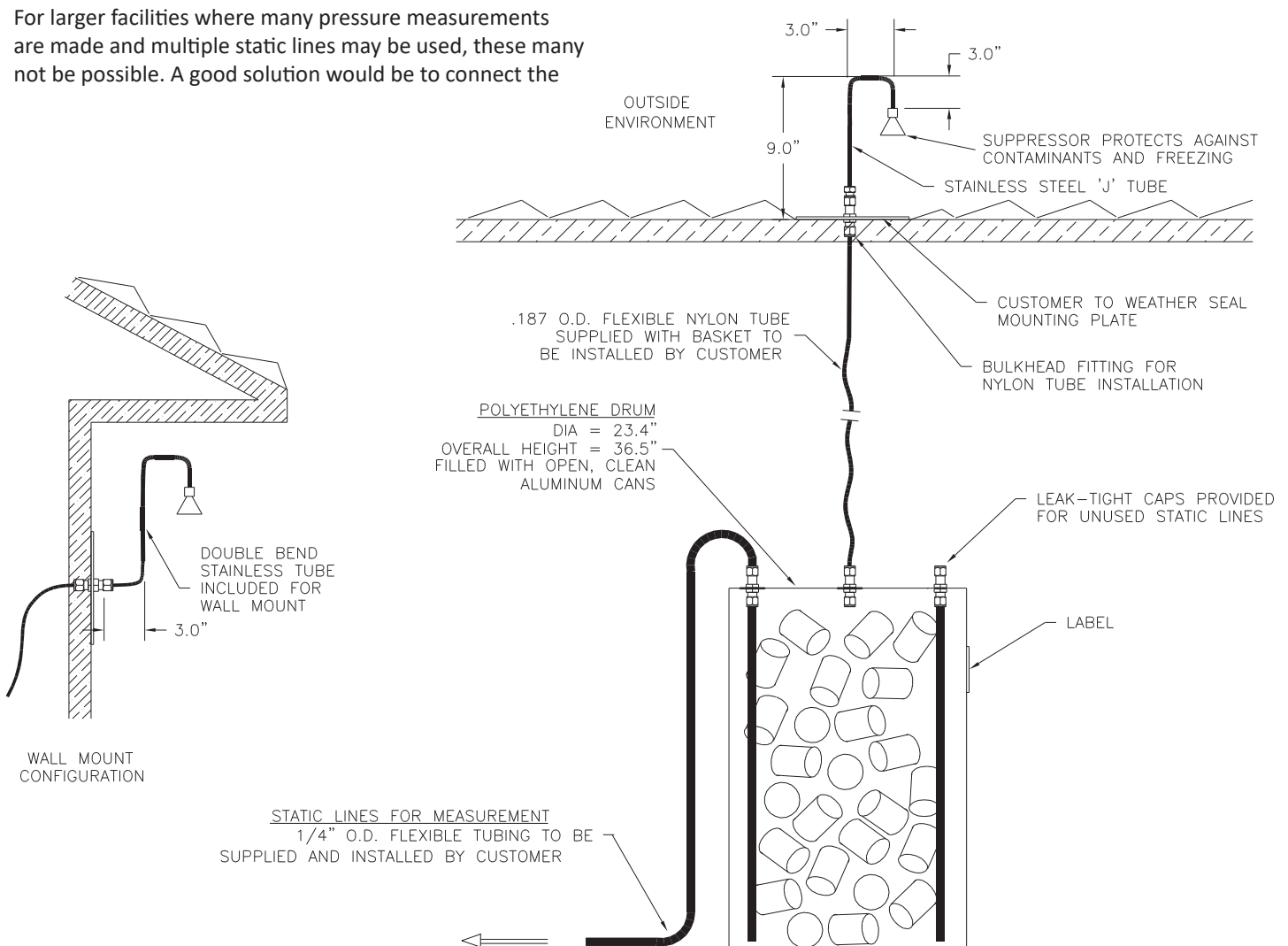
For larger facilities where many pressure measurements are made and multiple static lines may be used, these many not be possible. A good solution would be to connect the

reference inputs to a "Static Basket" to minimize the potential for measurement errors.

For more information on low pressure reference discipline with the static bottle, a white paper can be found on the Scanivalve website.

The "Static Basket" is roughly the same size as a 55 gallon barrel. Multiple modules can be connected to the same static bottle. For small pressure measurement systems, please see the "Static Bottle."

PART NUMBER	DESCRIPTION
20740	Static Basket Kit





# Legacy Products

Scanivalve has a catalog of legacy products that are no longer sold or in production. However, we continue support legacy Scanivalve users to the best of our abilities as products that become obsolete. Some of the supporting accessories for some legacy products can still be purchased through Scanivalve.

Some of the module families that are supported under this catalog include, but are not limited to:

- DSA-PTP series - Discontinued 2022 (gas)/2024 (liquid)
- DSA3200/3300 series - Discontinued 2018
- ENETCPM - Discontinued 2018
- DSM3000/3200 series - Discontinued 2005
- DSM3400 series - Discontinued 2012
- RAD3200 series - Discontinued 2010
- DTS3250 series - Discontinued 2014

If you are unsure about which accessories or cabling can be used with your module, please contact us with your model and serial number and we can assist you.

*NOTE: Accessories in this section may become obsolete or unsupported at any time.*

# Legacy

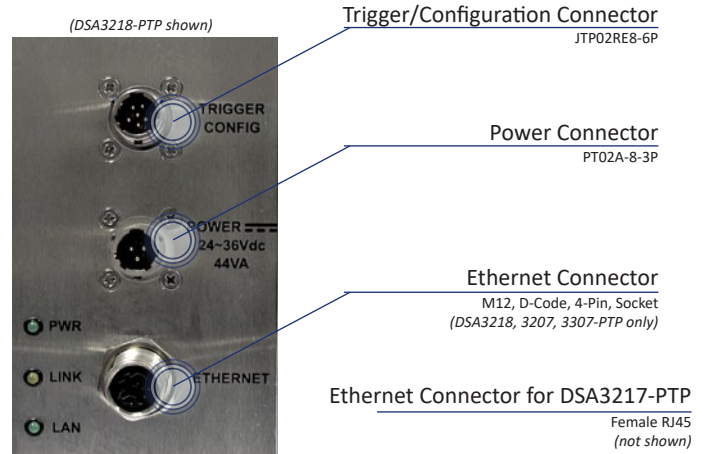
## DSA-PTP Series Cabling

The gas measurement DSA3217-PTP and DSA3218-PTP have been superseded by the DSA5000 pressure scanner in 2022, with the DSA3207-PTP and DSA3307-PTP superseded in 2024. However, cabling for these products is still supported.

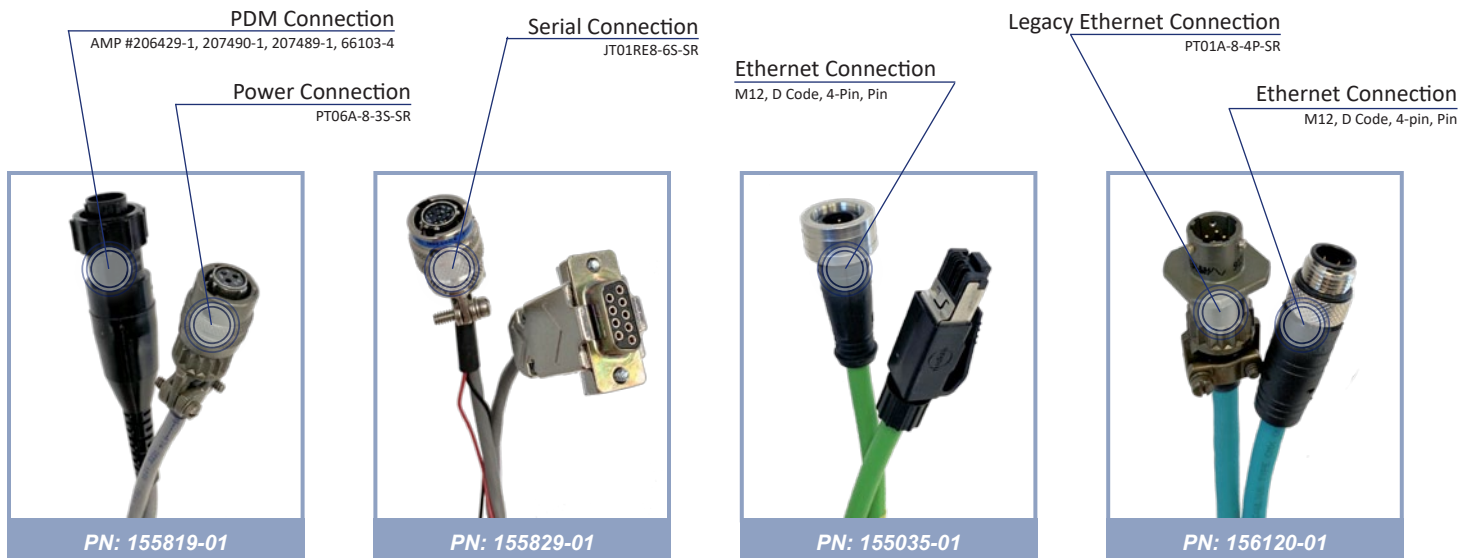
While mating connectors are provided with each DSA-PTP to allow users to fabricate their own cables, Scanivalve offers multiple options for power, Ethernet, serial and trigger cabling for connections to Scanivalve power supplies, host computers, or flying leads cables.

Standard power cables are flexible, protected with a PVC Jacket rated for operation up to 105°C. The diameter of this cable is 0.234" OD. Ethernet cables are shielded Cat5e and flexible, protected with a TPU Jacket rated for operation up to 80°C. The diameter of this cable is 0.265" OD.

Most cables can be ordered at custom lengths that must be determined at the time of order. All cables will have a maximum length. Some cables only come in predetermined sizes. Note: Serial communications are not reliable beyond 30ft (50ft max).



OPTION	PART NUMBER	USED FOR	LENGTH	DASH NO. & DESCRIPTION
Power	<b>155819-xx</b>	DSA to PDM	Up to 100ft	Standard Cable - Power only For standard 10ft cable, use <b>-01</b> For custom lengths, use <b>-05</b>
	<b>155819-02</b>	DSA to flying leads	Up to 100ft	Standard Cable - Power only
Ethernet	<b>155035-xx</b>	DSA-PTP to Male RJ45 (3218/3207/3307 only)	Up to 100ft	Standard Lengths <b>-01</b> for 6.5ft, <b>-02</b> for 16ft, <b>-03</b> for 32ft Custom Length (Specify) <b>-04</b> for ≤ 5ft, <b>-05</b> for ≤ 25ft, <b>-06</b> for ≤ 100ft
	<b>156120-01</b>	DSA-PTP to 4-Pin Mil-Spec (3218/3207/3307 only)	1ft	Adaptor cable for use with legacy DSA Ethernet cables to convert to DSA-PTP M12 connector.
Serial/ Trigger	<b>155829-01</b>	ECM to RS232/Trigger leads	6ft	Provides RS232 serial connection and flying leads for external hardware triggering



# Legacy

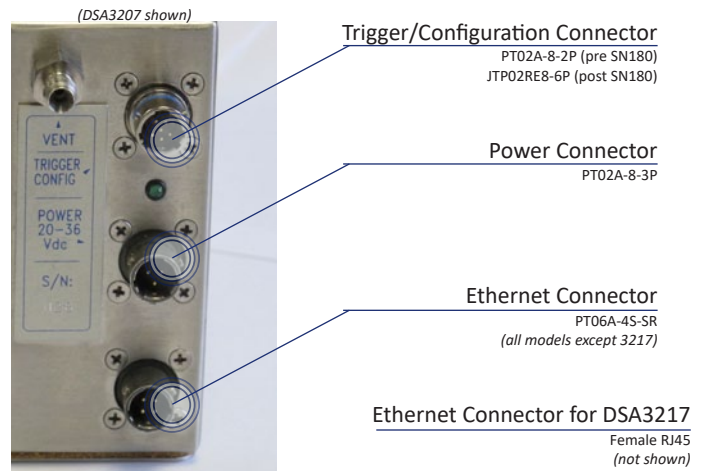
## DSA3200/3300 Series Cabling

The legacy DSA series was developed in 1995 and underwent several changes before being superseded by the DSA-PTP series in 2018.

While mating connectors were provided with each DSA to allow users to fabricate their own cables, Scanivalve offers multiple options for power, Ethernet, serial and trigger cabling for connections to Scanivalve power supplies, host computers, or flying leads cables.

Standard power cables are flexible, protected with a PVC Jacket rated for operation up to 105°C. The diameter of this cable is 0.234" OD.

Most cables can be ordered at custom lengths that must be determined at the time of order. All cables will have a maximum length. Some cables only come in predetermined sizes. Note: Serial communications are not reliable beyond 30ft (50ft max).



Note: DSA3000 series, and some DSA3200/3300 series were 10Base-2 and used a BNC connector of Ethernet connectivity. Standard 50ohm BNC cables can be used on these modules.

OPTION	PART NUMBER	USED FOR	LENGTH	DASH NO. & DESCRIPTION
Power	155819-xx	DSA to PDM	Up to 100ft	Standard Cable - Power only For standard 10ft cable, use <b>-01</b> For custom lengths, use <b>-05</b>
	155819-02	DSA to flying leads	Up to 100ft	Standard Cable - Power only
Ethernet	155820-xx	DSA to Male RJ45 Non-crossed	Up to 100ft	Custom Length (Specify) <b>-01</b> for ≤ 10ft, <b>-02</b> for ≤ 25ft, <b>-03</b> for ≤ 100ft
	155859-xx	DSA to Male RJ45 Crossed	Up to 100ft	Custom Length (Specify) <b>-01</b> for ≤ 10ft, <b>-02</b> for ≤ 25ft, <b>-03</b> for ≤ 100ft
Serial/ Trigger	155829-01	ECM to RS232/Trigger leads	6ft	Provides RS232 serial connection and flying leads for external hardware triggering

### PDM Connection

AMP #206429-1, 207490-1, 207489-1, 66103-4



### Serial Connection

JT01RE8-6S-SR



### Ethernet Connection

PT06A-8-4S-SR





# Legacy

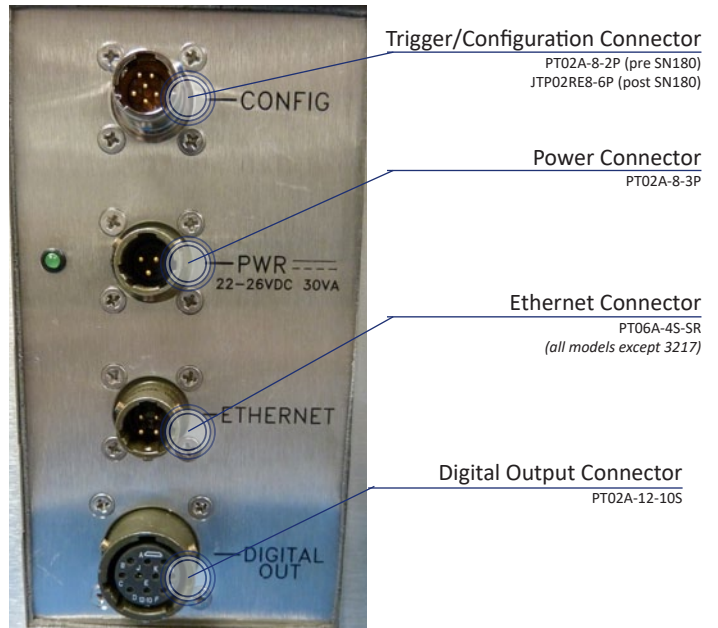
## ENETCPM Cabling

The ENETCPM was a Ethernet based control pressure modules that was superseded by the ECM4000 in 2019.

While mating connectors were provided with each ENETCPM to allow users to fabricate their own cables, Scanivalve offers multiple options for power, Ethernet, serial and trigger cabling for connections to Scanivalve power supplies, host computers, or flying leads cables.

Standard power cables are flexible, protected with a PVC Jacket rated for operation up to 105°C. The diameter of this cable is 0.234" OD.

Most cables can be ordered at custom lengths that must be determined at the time of order. All cables will have a maximum length. Some cables only come in predetermined sizes. Note: Serial communications are not reliable beyond 30ft (50ft max).



OPTION	PART NUMBER	USED FOR	LENGTH	DASH NO. & DESCRIPTION
Power	<b>155819-xx</b>	ENETCPM to PDM	Up to 100ft	Standard Cable - Power only For standard 10ft cable, use <b>-01</b> For custom lengths, use <b>-05</b>
	<b>155819-02</b>	ENETCPM to flying leads	Up to 100ft	Standard Cable - Power only
Ethernet	<b>155820-xx</b>	ENETCPM to Male RJ45 Non-crossed	Up to 100ft	Custom Length (Specify) <b>-01</b> for ≤ 10ft, <b>-02</b> for ≤ 25ft, <b>-03</b> for ≤ 100ft
	<b>155859-xx</b>	ENETCPM to Male RJ45 Crossed	Up to 100ft	Custom Length (Specify) <b>-01</b> for ≤ 10ft, <b>-02</b> for ≤ 25ft, <b>-03</b> for ≤ 100ft
Serial/ Trigger	<b>155829-01</b>	ENETCPM to RS232/Trigger leads	6ft	Provides RS232 serial connection and flying leads for external hardware triggering
Digital I/O	See "DSM Cabling", and reference PN 155662, 156025, or 155662			

### PDM Connection

AMP #206429-1, 207490-1, 207489-1, 66103-4

### Power Connection

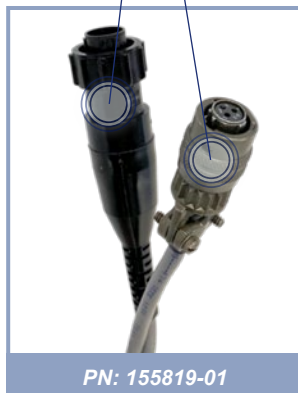
PT06A-8-3S-SR

### Serial Connection

JT01RE8-6S-SR

### Ethernet Connection

PT06A-8-4S-SR



# Legacy

## DTS3250

The DTS3250 was superseded by the DTS4050 in 2013. The DTS4050 was meant to be a drop-in replacement for the DTS3250. Many of the accessories available for the DTS3250 can be used with a DTS4050.

For accessories, see the DTS4050 section.

For cabling and connection information, see DSA3200/3300 section.

Please see the hardware and user manual for more information.



## DSM3200/3400

The DSM3000 series was superseded by the DSM4000 in 2012. Many accessories and cabling from the DSM4000 series can be used for legacy DSM modules.

For accessories and cabling, see the DSM4000 section.

Please see the hardware and user manual for more information.



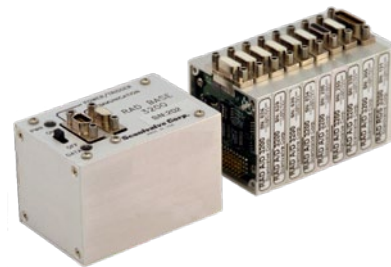
## RAD3200 (USB-RAD)

The RAD3200 series was superseded by the ERAD4000 in 2010. Some of the accessories and cabling from the ERAD4000 series can be used for legacy RAD modules.

For accessories and cabling, see the ERAD4000 section.

Accessories directly related to the USB connection are no longer available.

Please see the hardware and user manual for more information.



## ZOC22/23/33 & ZOCTCU

The ZOC22/23/33 scanners were discontinued in 2019 and superseded by the MPS4100 series.

For cabling and connections, see the MPS4100 Cabling section.

Note: The ZOC17 is still in production.

Note: Some ZOC modules may be in different configurations, such as APC or non-mixed. Please see the hardware and user manual for more information.





# Scanivalve's Industry Leading Pressure and Temperature Measurement Instrumentation



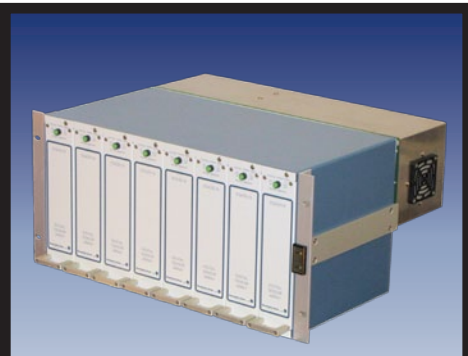
**Miniature Intelligent  
Pressure Measurement**



**Intelligent Gas and Liquid  
Pressure Measurement**



**Ethernet Controllable  
System Orchestration Module**



**Intelligent Rack Mounted  
Pressure Measurement**



**Application Specific  
Custom Measurement Systems**



**Miniature Analog  
Pressure Scanners**



**Ethernet Based Data  
Acquisition Systems**



**Multi-Range  
Pressure Calibrator**



**Intelligent 16, 32, and 64 Ch.  
Thermocouple Scanner**

**Scanivalve Headquarters**  
1722 N. Madson Street  
Liberty Lake, WA 99019  
Tel: 509-891-9970  
800-935-5151  
Fax: 509-891-9481  
e-mail: [scanco@scanivalve.com](mailto:scanco@scanivalve.com)

# Scanivalve

[www.scanivalve.com](http://www.scanivalve.com)

Printed in USA  
©2021, Scanivalve Corp.