

## KPSI TRANSDUCERS

### Accessories and Options

TE Connectivity offers an extensive line of accessories and options to augment the functionality of our KPSI Level and Pressure Transducers. These enhancements can be specified with the instrument's order or, in many cases, can be retrofitted in the field. Our Accessories and Options include an expedited shipping service, lifetime lightning protection, and a variety of pressure connections to suit almost any installation. Industry-leading performance and reliability, combined with short lead times, responsive, knowledgeable Customer Service personnel, and our ability to customize KPSI transducers to meet virtually any requirement give us our competitive advantage. For trouble-free, cost-effective level and pressure monitoring instrumentation, contact our Sales or Customer Service Team today.



**TABLE OF CONTENTS**

<b>Installation Hardware</b>	
Anti-Snag Cone	3
Cable Hanger	3
Mounting Clamp	4
Well Caps	4
Identification Tags	5
Cable Splice Kit	5
Lightning Surge Line Protector	5
Junction Box	6
<b>Replaceable and Interchangeable Nose Caps</b>	
Open-face Nose Cap	7
Ported Nose Cap	7
Stainless Steel Ported Nose Cap	7
Piezometer Nose Cap	8
Male NPT Nose Cap	8
3/4" Removable Ported Nose Cap	8
<b>Corrosion Protection</b>	
Body Clamp Anode	9
Nose Extension Anode	9
<b>Moisture Protection</b>	
Vent Filters	10
Aneroid Bellows	10
<b>Additional Accessories</b>	
Removable Cable Plug	11
Backshell for Removable Cable Option	11
Nose Weight	11
859 Removable Cable	12
<b>Digital Installation Hardware</b>	13
<b>Digital Displays</b>	13

## INSTALLATION HARDWARE

TE Connectivity offers an extensive array of hardware to facilitate the installation of KPSI Transducers into almost any application. Contact our Technical Support staff for assistance in selecting the hardware that may best suit your application or if you have unique requirements that may require a custom solution.

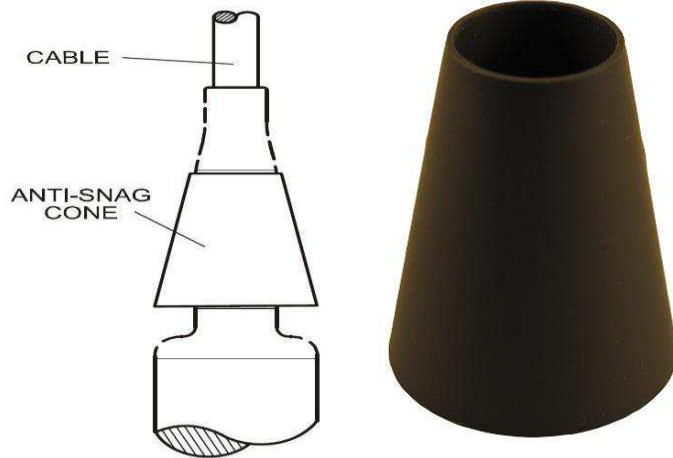
### ANTI-SNAG CONE

*Anti-Snag Cones are designed to fit over the cable end of either 1.0" or 0.75" diameter transducers to prevent the transducers from getting hung on obstacles when pulling the cable. The cones are constructed of PVC and come in separate sizes for the two diameters.*

**PN: 42-01-66181** Anti-Snag Cone for 1.0" diameter for use with molded cable seal.

**PN: 42-01-64134** Anti-Snag Cone for 1.0" diameter for use with gland cable seal

**PN: 42-01-64136** Anti-Snag Cone for 0.75" diameter for use with gland cable seal



### CABLE HANGER

*The Cable Hanger is used to suspend the transducers in the liquid media. The hanger slides onto the cable from the unterminated end and is easily positioned while pushing the ends of the hanger together. As the hanger expands from the weight of the transducer, it grips the cable by the sheath. The cable hanger is 6.0 in (15.3 cm) long and is constructed of 304 stainless steel. **The cable hanger is not recommended for cable lengths in excess of 500 ft. (150 m) as it does not take advantage of the Kevlar strength members in the cable.***

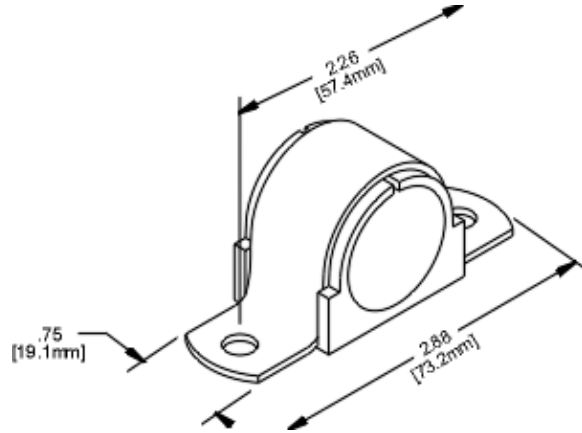
**PN: 12-90-0931+**



**MOUNTING CLAMP**

The Mounting Clamp is used to secure 1.0" diameter transducers to a bulkhead. The clamp consists of a 304 stainless steel bracket with a thermoplastic insert that holds the transducer housing.

**PN: 49-06-00PC**



**WELL CAPS**

Locking Well Caps enable transducers to be suspended within the well while providing security. The vented orange PVC caps are 2" or 4" ID and come with a 304 stainless steel dock (ring and threaded quick-link) to support a cable hanger. The dual-hinge locking lid uses a Buna-N/Nitril O-ring for a watertight seal. The black triangle warning label on the lid can be marked for well identification.

**PN: 861-2A** 2" vented locking well cap w/dock

**PN: 861-2B** 2" vented locking well cap

**PN: 861-2C** 2" well dock

**PN: 861-4A** 4" vented locking well cap w/dock

**PN: 861-4B** 4" vented locking well cap

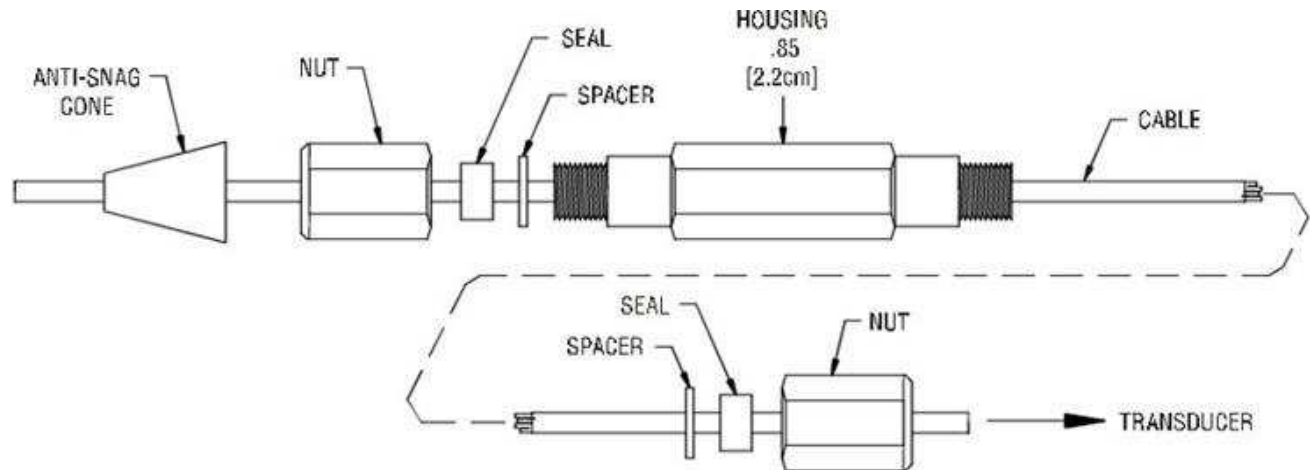
**PN: 861-4C** 4" well dock



**STAINLESS STEEL IDENTIFICATION TAGS**

Identification Tags are available to attach to the transducer cable to provide easy identification in the field. User-specified information is laser engraved onto the 1.0" square tag, which is constructed of 304 stainless steel.

**PN: 36-05-1540T79**



**CABLE SPLICE KIT**

The Cable Splice Kit provides a waterproof connection to extend or repair KPSI transducer submersible cables. In many cases, the cable splice kit is a more economical alternative for repairing damaged cable. The kit includes all necessary items to electrically connect and insulate the conductors, couple the vent tubes, and seal the 316 stainless steel housing to either polyurethane or ETFE cable. Assembly instructions are also included.

**PN: 830**

**Lightning Protection – Line Protector**

The line protector contains a gas discharge tube which crowbars up to 20,000 ampere currents to the ground. The tube remains in the crowbar state until the surge has passed, then automatically resets the line to normal operation without the need to reset a circuit breaker.

**PN: 50-02-2790** mA or VDC Output (2 protectors required for VDC outputs)

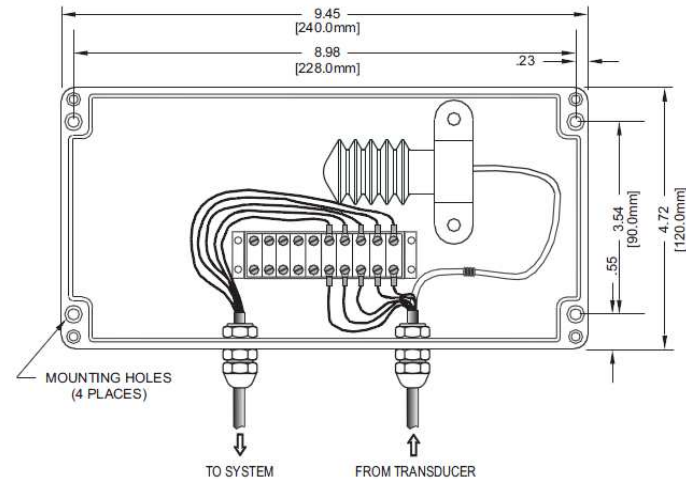
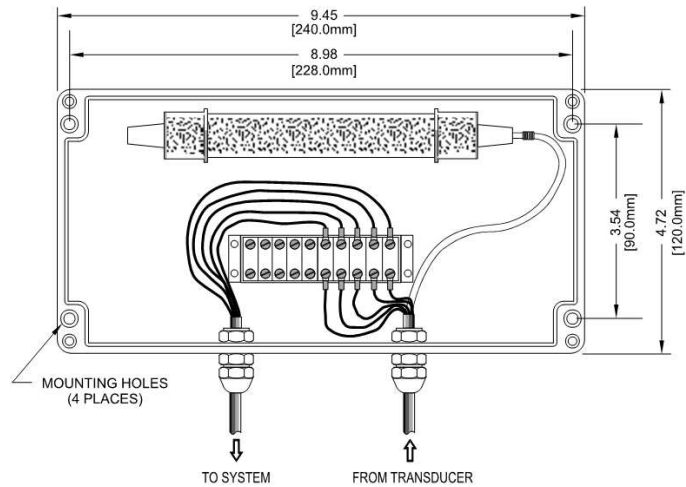


**JUNCTION BOX**

The Junction Box provides a water-resistant enclosure for electrically connecting the transducer cable to the users system via a terminal strip. The enclosure also provides convenient location for terminating the vent tube on vented gage transducers. The enclosure can be ordered with either a vent filter or an aneroid bellows. The enclosure is constructed of polycarbonate with a clear top incorporating a neoprene seal. The junction box is rated IP66 and measures 9.45" L x 6.30" W x 4.72" H. Mounting screws are provided.

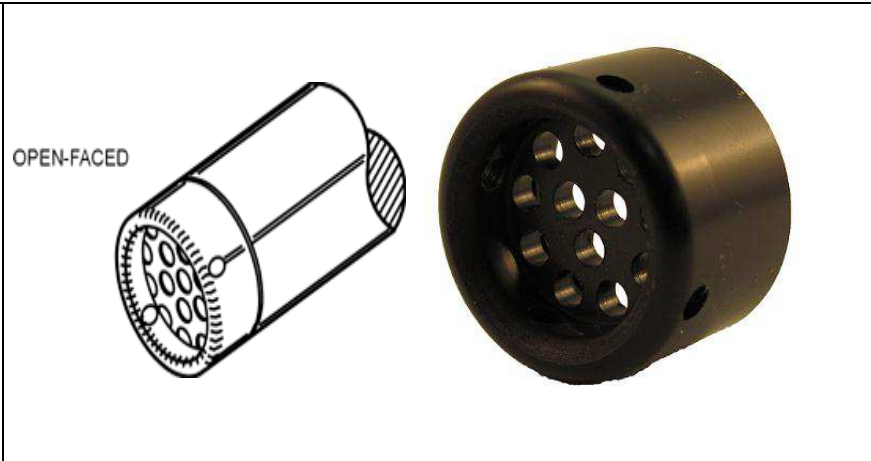
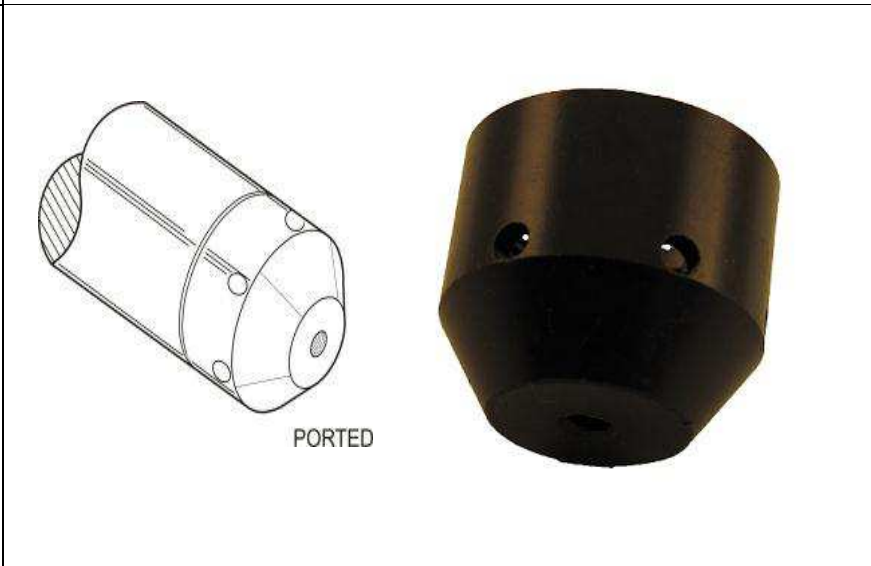
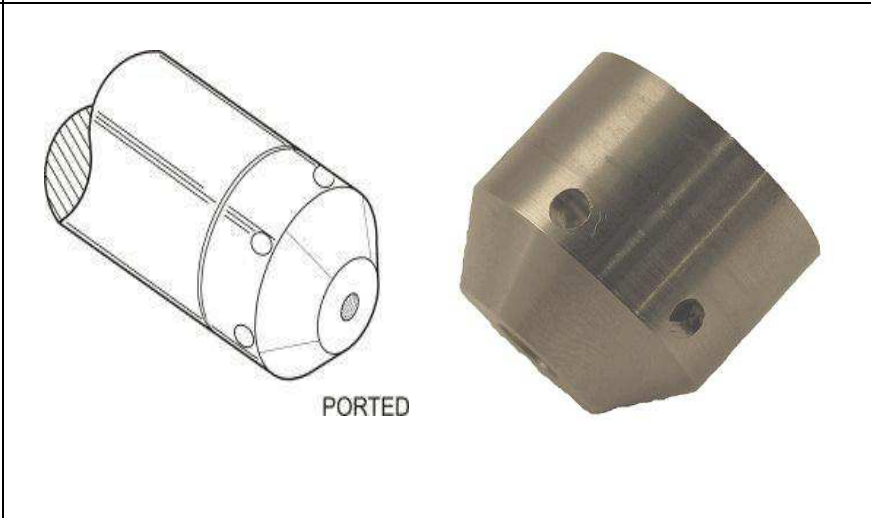
**PN: 840** Junction Box with Vent Filter

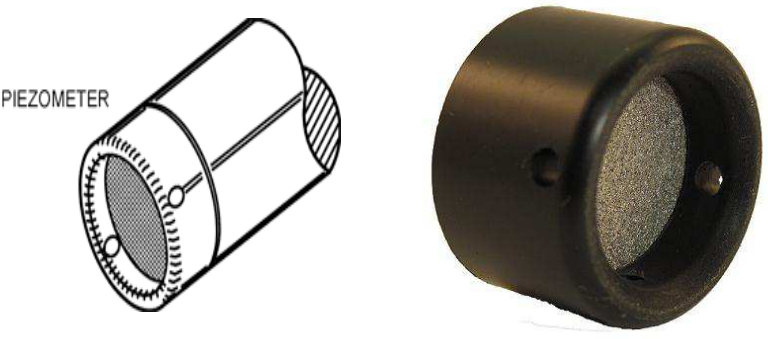
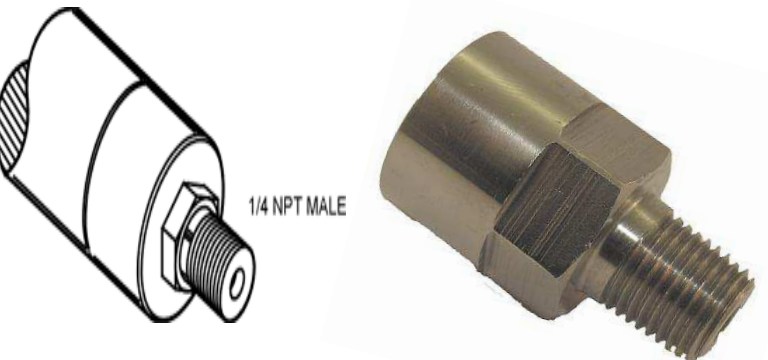
**PN: 845** Junction Box with Aneroid Bellows



**REPLACEABLE & INTERCHANGEABLE NOSE CAPS – 1” DIAMETER**

Transducers having 1.0" diameter housings are shipped with replaceable nose caps of the requested variety at no additional cost when ordered. The nose caps screw on to the front of the transducer housing via a 7/8"-20 UNEF thread with an O-ring seal. Spare or alternative nose caps may be ordered separately.

<p><b>OPEN-FACE NOSE CAP</b></p> <p>The <i>Open-face Nose Cap</i> offers the best resistance to clogging. This single-piece nose cap provides maximum exposure of the sensing diaphragm to the liquid media through a protective perforated screen on the front. The open-face nose cap is constructed from molded Delrin™</p> <p>PN: 42-30-6659</p>	
<p><b>PORTED NOSE CAP</b></p> <p>The <i>Ported Nose Cap</i> offers the best protection against damage to the sensing diaphragm. This single-piece nose cap allows the liquid media to enter through 6ea 1/8" holes around the outside and includes a #8-32 UNC-2B threaded hole on the front. The closed-face nose cap is constructed of molded Delrin™.</p> <p>PN: 42-01-1314A</p>	
<p><b>STAINLESS STEEL PORTED NOSE CAP</b></p> <p>The <i>Stainless Steel Ported Nose Cap</i> offers the best protection against damage to the sensing diaphragm. This single-piece nose cap allows the liquid media to enter through 6ea 1/8" holes around the outside and includes a #8-32 UNC-2B threaded hole on the front. The closed-face nose cap is constructed of 316 Stainless Steel</p> <p>PN: 42-01-64140</p>	

<p><b>PIEZOMETER NOSE CAP</b></p> <p>The <i>Piezometer Nose Cap</i> offers the best alternative for burying the transducer in the ground without risk to the sensing diaphragm. This two-piece nose cap allows the liquid media to enter through a permeable 40 micron centered stainless steel mesh filter at the front of the cap. The piezometer nose cap is constructed of Delrin™.</p> <p><b>PN: 42-30-6676S</b></p>	 <p>PIEZOMETER</p>
<p><b>MALE NPT PRESSURE NOSE CAP</b></p> <p>The <i>Male NPT Pressure Nose Cap</i> offers the best alternative for installing the transducer on a pipe. This single-piece nose cap incorporates a 1/4"-18 or a 1/2"-14 MNPT fitting on the front for connection. The male NPT nose cap is constructed of stainless steel or titanium, as required.</p> <p><b>PN: 42-01-64154</b> Stainless Steel 1/4"-18 MNPT Nose Cap  <b>PN: 42-01-64154T</b> Titanium 1/4"-18 MNPT Nose Cap  <b>PN: 42-02-64180</b> Stainless Steel 1/2"-14 MNPT Nose Cap  <b>PN: 42-02-64180T</b> Titanium 1/2"-14 Male NPT Nose Cap</p>	 <p>1/4 NPT MALE</p>

**REPLACEABLE & INTERCHANGEABLE NOSE CAPS – 3/4" DIAMETER**

Transducers having 0.75" diameter housings can be ordered with replaceable nose cap. Spare or alternative nose caps may be ordered separately

<p><b>Removable Ported Nose Cap (Delrin)</b></p> <p>The <i>Removable Ported Nose Cap</i> offers the best protection against damage to the sensing diaphragm. The closed-face nose cap is constructed of molded Delrin.</p> <p><b>PN: 42-01-66350</b></p>	
--	--



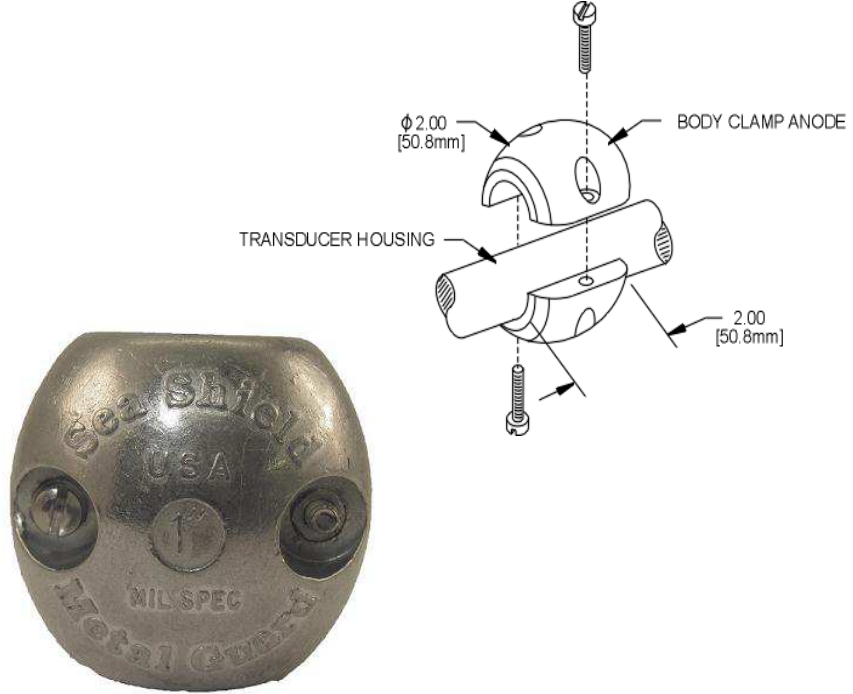
**CORROSION PROTECTION**

KPSI Transducers are available with optional wetted materials to maintain compatibility with a variety of caustic liquid media. Stainless steel or titanium construction, FKM seals, and polyurethane or PTFE cable permit the transducers to operate in most liquid environments. In the event galvanic corrosion is anticipated, we offer two self-sloughing sacrificial anodes that attach to 1.0" diameter transducers.

**BODY CLAMP ANODE**

The *Body Clamp Anode* is a 2.2 in (5.6 cm) diameter zinc sphere of which the two halves bolt on to the transducer housing. The anode weighs approximately 13 oz. (370 g).

PN: **820**



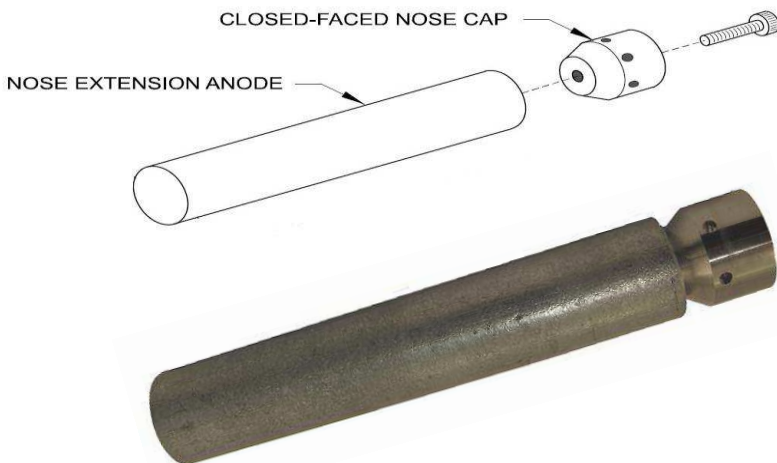
**NOSE EXTENSION ANODE**

The *Nose Extension Anode* is a zinc cylinder that attaches to a closed-face nose cap via an 8-32 threaded hole in the front of the nose cap. The anode is shipped with a stainless steel closed-face nose cap.

PN: **825** 1" dia. for 700 Series

PN: **826** ¾" dia. for KPSI 300DS only

PN: **42-00-66312** Replacement anode for PN 826



## MOISTURE PROTECTION

Two solutions are offered to provide protection against moisture incursion on transducers with vented gage reference pressure format. The choice of which solution to utilize depends on the ability to provide periodic maintenance and the accuracy required for level measurement.

### VENT FILTER

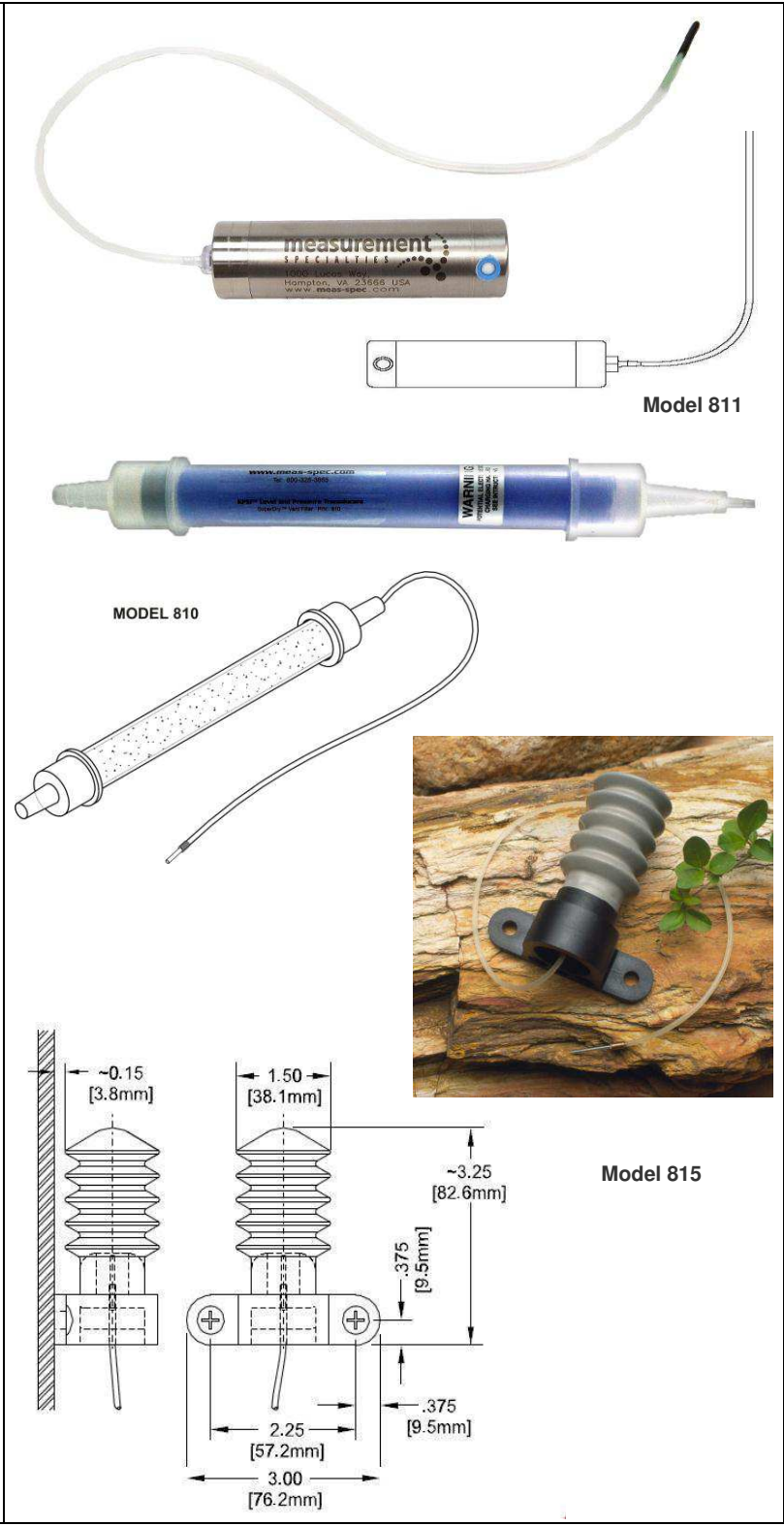
Vent Filters provide the highest accuracy capability and utilize indicating desiccant to prevent moisture from entering the vent tube and damaging transducers with vented gage reference pressure format. The desiccant will turn from blue to pink when exposed to moisture indicating the need for maintenance. All KPSI vented gage transducers are shipped with our SuperDry Vent Filter. This vent filter design prevents moisture from entering the vent tube for at least one year without maintenance, at no additional cost. The vent filters are 6.0 in (15.3 cm) long with a 0.75" diameter.

The KPSI 811 Stainless Steel Vent Filter is housed in a 316 stainless steel body containing desiccant to provide vent tube moisture protection for a minimum of five years without maintenance. A Gore-Tex filter plug provides the vent filter with atmospheric pressure reference. These vent filters are 2.75 inches (7.0 cm) long with a 0.75 inch (1.9 cm) diameter.

### ANEROID BELLOWS

The Aneroid Bellows is a maintenance-free alternative to desiccant filters for moisture protection on vented gage transducers. Made of flexible neoprene material attached to a polycarbonate mounting bracket, the bellows fluctuates with changes in atmospheric pressure maintaining a constant barometric reference. Note that the use of the bellows results in a closed reference pressure system subject to zero shift errors induced by changing temperatures of up to 0.003 psi/°C. The bellows is not recommended for use with accuracy requirements of  $\pm 0.25\%$  FS or better, nor for ranges  $< 2$  psi.

- PN: **810** SuperDry Vent Filter
- PN: **811** Stainless Steel Vent Filter
- PN: **815** Aneroid Bellows



Model 811

MODEL 810

Model 815

**ADDITIONAL ACCESSORIES**

**REMOVABLE CABLE PLUG**

While using our removable cable options it is possible to utilize one transducer at many sites while having cables permanently deployed at the locations. The removable cable plug provides watertight protection to the removable cable when the transducer is removed.

PN: **850-00800** Stainless Steel

PN: **850-00801** Titanium

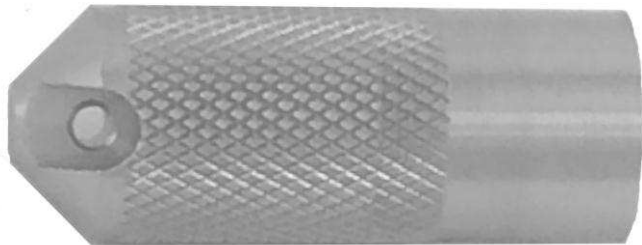


**BACKSHELL FOR REMOVABLE CABLE OPTION**

While using our removable cable options it is possible to utilize one transducer at many sites while having cables permanently deployed at the locations. The removable cable plug provides watertight protection to the removable cable when the transducer is removed.

PN: **852-00000** 316 Stainless Steel Backshell for Removable Cable Option

PN: **852-01000** Titanium Backshell for Removable Cable Option




**STAINLESS STEEL NOSE WEIGHT**

The KPSI Nose Weight provides an additional 16.5 ounces of weight to our transducers. Utilizing 3/4" OD, 316 Stainless Steel, and a non-fixed connection the Nose weight maintains a minimal profile to accommodate most applications.

PN: **827**



**859 REMOVABLE CABLE OPTION**

<p><b>859 REMOVABLE CABLE</b></p> <p>The 859 Removable Cable is a deployable field cable that allows for one transducer to be used at many sites while having cables permanently deployed at the various locations.</p> <p>PN: See Below Table</p>	
--	--

MODEL			REMOVABLE CABLE							
8	5	9								
↓	↓	↓	<b>MATERIAL</b>							
			S	Stainless Steel						
			T	Titanium						
			↓	<b>OUTPUT</b>						
			C	SDI-12						
			D	RS 485 w/SDI-12 protocol						
			↓	<b>ELECTRICAL CONNECTION</b>						
				0	Molded cable seal					
				A	Gland cable seal					
				↓	<b>CABLE TYPE</b>					
				1	Polyurethane					
				2	ETFE ( <b>Connection A Only</b> )					
				4	Armored ( <b>Connection O Only; 200 Feet Max</b> )					
				↓	<b>CABLE LENGTH</b>					
					#	#	#	(in feet)		
8	5	9								

**DIGITAL DISPLAYS**

Precision Digital Trident Digital Displays	
<b>Power: 85-265 VAC</b>	
PD765-6R0-00	Basic digital panel meter; no options
PD765-6R0-10	24 VDC Supply
PD765-6R2-00	2 relays
PD765-6R2-10	2 relays and 24 VDC supply
PD765-6R3-00	4-20 mA output
PD765-6R3-20	4-20 mA out + dual 24 VDC Supplies
PD765-6R5-10	2 relays + 4-20 mA output + 24 VDC supply
<b>Power: 12-36 VDC</b>	
PD765-7R0-00	Basic digital panel meter; no options
PD765-7R2-00	2 relays
PD765-7R3-00	4-20 mA output
PD765-7R5-00	2 relays + 4-20 mA output
PDA2801	Enclosure

**DIGITAL INSTALLATION HARDWARE**

<b>PN: 850-00855</b>	Technicians Communication Cable
<b>PN: 860-00100</b>	RS-485 to SDI-12 Convertor
<b>PN: 860-00300</b>	RS-485 to RS-232C Convertor

**NORTH AMERICA**

Measurement Specialties,  
a TE Connectivity Company  
1000 Lucas Way  
Hampton, VA 23666  
Tel: 1-800-745-8008  
Fax: 1-510-498-1578  
Sales: WL.Sales@te.com

[te.com/sensorsolutions](http://te.com/sensorsolutions)

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties (MEAS), American Sensor Technologies (AST), TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2016 TE Connectivity Ltd. family of companies All Rights Reserved.

**EUROPE**

Measurement Specialties (Europe), Ltd.,  
a TE Connectivity Company  
26 Rue des Dames  
78340 Les Clayes-sous-Bois, France  
Tel: +33 (0) 130 79 33 00  
Fax: +33 (0) 134 81 03 59  
Sales: customercare.lcsb@te.com

**ASIA**

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
No. 26 Langshan Road  
Shenzhen High-Tech Park (North)  
Nanshan District, Shenzhen 518057  
China  
Tel: +86 755 3330 5088  
Fax: +86 755 3330 5099  
Sales: customercare.shzn@te.com