

## 3600 Series

### Electronic Pressure Switch

- ▶ Exceptional Stability Through Sputtered Thin Film Technology
- ▶ No Moving Parts – Highly Resistant to Shock and Vibration
- ▶ Ideal for Off-Highway, Mobile, Medical Gas and Demanding Industrial Applications
- ▶ Long Cycle Life
- ▶ Fully Hermetically Sealed

Built using our proven thin film sensing technology, 3600 Series solid-state pressure switches offer exceptional stability with all welded stainless steel housings to handle rough environments. The 3600 provides very accurate set points with easily customized dead-bands when required. Offered as an ideal alternative to mechanical switches, the 3600 can support highly cyclical and broad frequency response applications. The fully hermetic welded sensing area enables compatibility with a host of liquids and gases. The 3600 modular design feature allows various pressure ports and electrical connections. Switch set & reset points and time delays can be factory programmed per customer specification, and modified in the field with a USB field-programmable interface tool (sold separately).



### Specifications

Performance	
Long Term Drift	<0.2% FS/YR
Switch Point Resolution	0.1% FS
Switch Point Accuracy (25°C)	±0.5%
Thermal Error	±1.8% FS max.
Compensated Temperatures	-40°F to +221°F (-40°C to +105°C)
Operating Temperatures	-40°F to +221°F (-40°C to +105°C)
Fatigue Life	Designed for more than 100 M cycles
Mechanical Configuration	
Pressure Port	See under "Pressure Ports" section
Wetted Parts	17-4 PH Stainless Steel
Electrical Connection	See under "Electrical Connector" section
Enclosure	IP67 (IP65 for electrical code B)
Vibration	BSEN 60068-2-6 (FC) BSEN 60068-2-64 (FH)
Shock	BSEN 60068-2-27 (Ea)
Approvals	CE, PED, RoHS
Weight	1.23 to 1.9 ounce (35 to 53 grams)
Electrical Parameters	
Switch Rating	700 mA Low Side Switch, 1000 mA High Side Switch
Supply Voltage	6 - 40 Volts (<8 mA without load)

### EMC Specifications

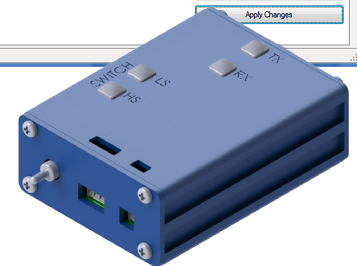
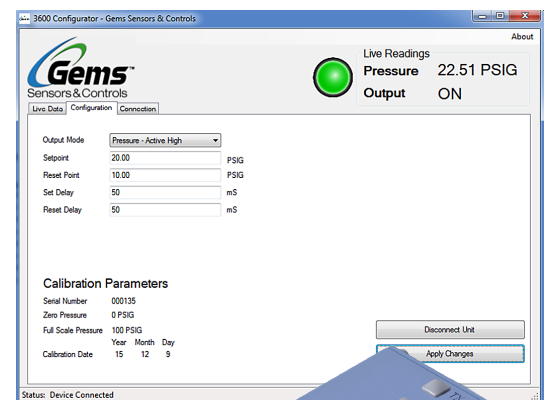
Emissions Tests: EN61326-1:2006 and EN61326-2-3:2006

Test Standard	Test
EN55011:2009 + A1	Radiated Emissions

Immunity Tests: EN61326-1:2006 and EN61326-2-3:2006

Test Standard	Test
EN61000-4-2:2009	Electrostatic Discharge
EN61000-4-3:2006 + A2	Radiated Immunity
EN61000-4-4:2012	Fast Burst Transients
EN61000-4-6:2009	Conducted RF Immunity

### 3600 Series Communications Interface – Optional Accessory



The Programming Interface is an easy-to-use configuration tool that allows you to view and modify the following variables for the 3600 Series pressure switches:

- Set and Reset Points
- Deadbands
- Time-on and Time-off Delays
- Switching Modes

The Communications Interface connects to your PC via an included USB cable, and allows modification of the switch parameters without the need for a calibrated pressure source. The interface is supplied with the mating cables for electrical connector options B, E, & 8, and software on a USB stick.

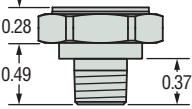
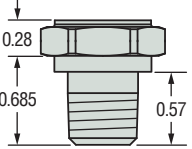
Part Number: 564555

Pressure Capability

Pressure Range PSI (Bar)	Proof Pressure (x Full Scale)	Burst Pressure (x Full Scale)
100-300 (7-25)	3.00 x FS	40 x FS
500-1,500 (40-100)		20 x FS
2,000-6,000 (160-400)		10 x FS
7,500-9,000 (600)		
10,000 (700)		> 60,000 PSI (4,000 bar)
15,000 (1,000)	2.50 x FS	

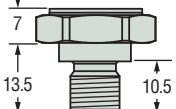
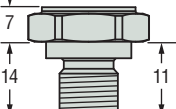
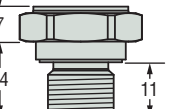
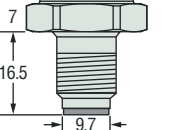
Pressure Ports

SAE

	1/8"-27 NPT	1/4"-18 NPT
Dimensions in Inches		
Fitting Code	08	02
Torque	2-3 TFFT*	2-3 TFFT*

\*NPT Threads 2-3 turns from finger tight (TFFT). Wrench tighten 2-3 turns.

Metric

	G1/8" External	G1/4" External	G1/4" A Integral Face Seal	M12x1.5 HP Metal Washer Seal
Dimensions in MM				
Fitting Code	0S	01	05	2T
Torque	16.2-18.4 ft-lb 22-25 NM	22.1- 25.8 ft-lb 30-35 NM	22.1- 25.8 ft-lb 30-35 NM	22.1- 25.8 ft-lb 30-35 NM

General Notes:

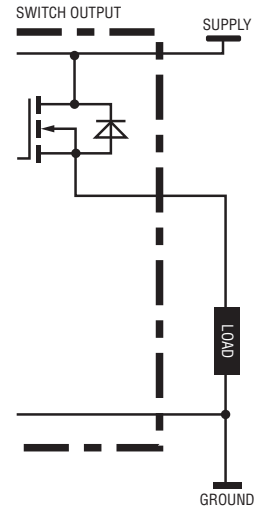
1. Electrical Connector Housing diameter is 19mm (0.748")
2. Hex is 22mm (0.886") Across Flats (A/F) for deep socket mounting
3. For other pressure connections, consult factory.

## Electrical Connector

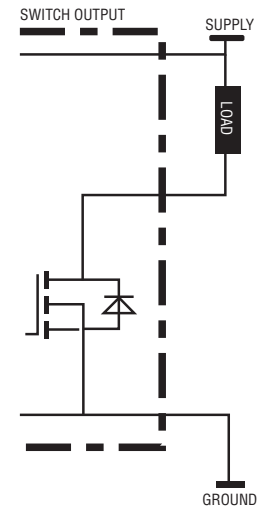
	DIN 9.4 mm	M12 x 1P	Deutsch DT04-4P
	<b>Code B</b>	<b>Code E</b>	<b>Code 8</b>
<b>Pin #</b>			
<b>1</b>	Digital Comms.	$V_{supply}$	Ground
<b>2</b>	$V_{supply}$	Digital Comms.	$V_{supply}$
<b>3</b>	Switch Output	Ground	Switch Output
<b>4</b>	Ground	Switch Output	Digital Comms.

## Wiring Diagrams

### High Side Switch (Current Sourcing)

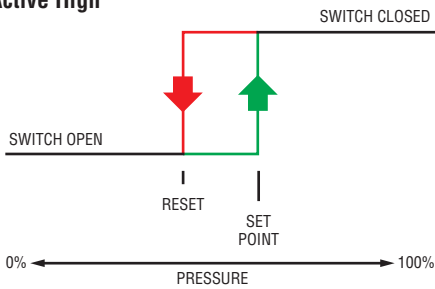


### Low Side Switch (Current Sinking)

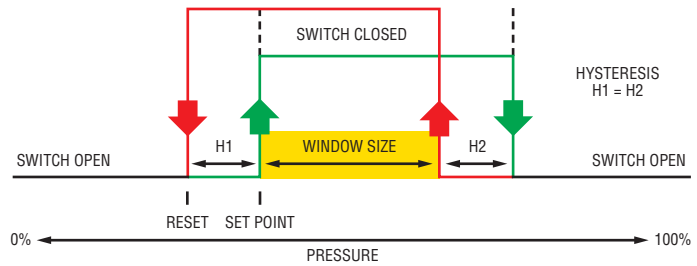


## Switching Modes

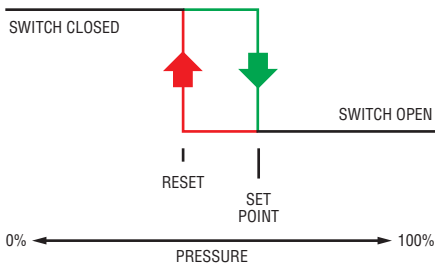
### Active High



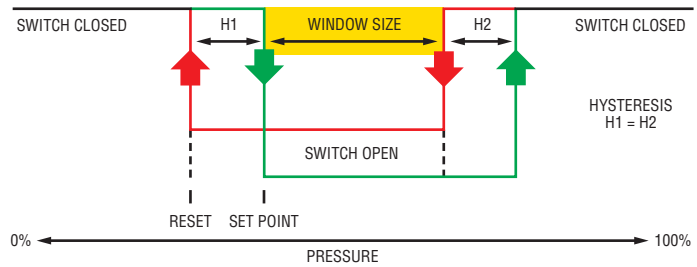
### Active Window



### Active Low



### Inactive Window



Accessories

Part Number	Description	For Use on Elect. Code #
557230	MINI DIN Mating Connector, Strain Relief (with drive screw & gasket)	B
557703-01M0	M12 Cord Set – 1 Meter (Red 1, Green 2, Blue 3, Yellow 4)	E
557703-03M0	M12 Cord Set – 3 Meters (Red 1, Green 2, Blue 3, Yellow 4)	E
557703-04M0	M12 Cord Set – 4 Meters (Red 1, Green 2, Blue 3, Yellow 4)	E
557703-05M0	M12 Cord Set – 5 Meters (Red 1, Green 2, Blue 3, Yellow 4)	E
	Recommended Mating Parts (Deutsch p/n: Housing Plug DT064S-P012; Wedge W4S-P012; Sockets 4X 0462-201-1631)	8
224153	Deutsch Cord Set 3' Long (18 AWG PVC Cable – Black 1, Red 2, Green 3, White 4)	8
564555	3600 Series Communications Interface	ALL

How to Order

Step 1: Select Hardware Configuration

Use the **bold** characters below to complete the main hardware product code for ordering.

Series **3600** **Y** **600P** **G** **01** **8** **0** - **XXXXXX**

Output  
**W** - Low Side (Ground Switched)  
**Y** - High Side (Supply Switched)

Pressure Range – psi  
**100P** - 0-100 psiG      **25CP** - 0-2,500 psiG  
**150P** - 0-150 psiG      **40CP** - 0-4,000 psiG  
**300P** - 0-300 psiG      **60CP** - 0-6,000 psiS  
**600P** - 0-600 psiG      **10KP** - 0-10,000 psiS  
**900P** - 0-900 psiG      **15KP** - 0-15,000 psiS<sup>1</sup>  
**15CP** - 0-1,500 psiG

Pressure Range - bar  
**0007** - 0-7 barG      **0160** - 0-160 barS  
**0010** - 0-10 barG      **0250** - 0-250 barS  
**0016** - 0-16 barG      **0400** - 0-400 barS  
**0025** - 0-25 barG      **0600** - 0-600 barS  
**0040** - 0-40 barG      **1000** - 0-1,000 barS  
**0060** - 0-60 barG  
**0100** - 0-100 barG

Pressure Datum  
**G** - Gauge  
**V** - Compound<sup>2</sup>

Switch Configuration (See Below)  
**R** - Restrictor  
**0** - No Restrictor

Electrical Connection  
**B** - Industrial DIN 9.4 mm  
**E** - M12 x 1  
**8** - Deutsch DT04-4P

Pressure Port  
**01** - G1/4" External  
**02** - 1/4"-18 NPT  
**05** - G1/4" A Integral Face Seal  
**08** - 1/8"-27 NPT  
**0S** - G1/8"-27 External  
**2T** - M12x1.5 HP Metal Washer Seal

Notes:  
 1. Range 15,000 psi (1,000 bar) available with -2T pressure port only.  
 2. Compound Ranges coded as follows.  
 000PV = -15 to 0 psiG  
 015PV = -15 to 15 psiG  
 0001V = -1 to 1 barG etc.

Step 2: Specify Switch Configuration (See previous page for switching mode overview)

Use the **bold** characters below, and your own specified values to complete the switch setting product code.

Switching Mode **XX** **XXXXX**<sup>3</sup> **XXXXX**<sup>3</sup> **XXXXX**<sup>3</sup>

Set Point  
 Specify Set Point in PSI or Bar. Value must fall within the Pressure Range selected above.  
**Example:** 240psi or 39bar

Reset Point  
 Specify Reset Point in PSI or Bar. Value must fall within the Pressure Range selected above.  
**Example:** 125psi or 70bar

Window Size  
 Specify window size in PSI or Bar or zero for non window mode  
**Example:** 10psi or 0bar

Part Number Addendum

The parameters you define here for switch settings will be converted at the factory to a unique 6-digit identifier appended to the hardware code above. This completed Part Number will be used on paperwork from Gems, and for future reorders.

Notes:  
 1. Switches will be programmed with a default 50mS switching delay. Contact factory for other settings (0-30,000mS)  
 2. The above detailed switching parameters will be assigned a 6-digit part number suffix at the factory to define a unique customer configuration.  
 3. Use as few or as many characters needed to specify pressure value and measuring type (psi or bar).