



Staset®

Precision Sensors Division

Staset®

Three-In-One Pressure Device Switch, Gauge and Transducer



Backlit Rotating Display
Tamper Proof Switch Points
5 Year Warranty
UL Recognized, CE Marked
RoHS Compliant



OVERVIEW

Designed for semiconductor fabrication and OEM process equipment, Staset® combines the safety of a "tamper proof" switch, the output of a transducer and the convenience of a gauge in a reliable, cost effective 1 1/8" package.

Available with a backlit rotating display, choice of analog output, LED indication of switch contact state, Staset® is an ideal choice for accurate long-term protection of equipment and processes.

Staset® eliminates potential leak paths by reducing the number of fluid connections. Threshold protection is achieved with a tamper proof switch and deadband that can be factory set from 1% to 98% of full scale.

FEATURES

- Backlit display with 180° CW & 90° CCW rotation
- Tamper proof switch points (Deadband set to customer specification)
- 5 Million cycle life
- Optional 0-5VDC, 0.2-5.2VDC or 4-20mA analog output
- 316L SS wetted surfaces, 5Ra
- Status LED
- UL Recognized
- CE Marked

Three-In-One ... Switch, Gauge and Transducer



Safe, reliable threshold detection and control

Local display of system pressure

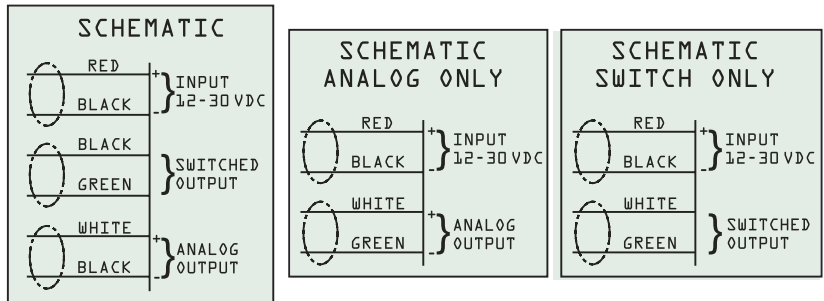
Remote communication of system pressure

Threshold detection and switching, remote communication, local display of system pressure and local indication of contact state with fewer leak paths.



MODEL CHART

Model	Type	Range/Unit	Proof Pressure	Burst Pressure
EAN15	Absolute	4 to 770 Torr (1 to 102 KPa)	45 psia	10000 psia
EAN30	Absolute	10 to 1500 Torr (2 to 205 KPa)	60 psia	10000 psia
EAN100	Absolute	1 to 99 psia (7 to 680 KPa)	200 psia	10000 psia
EAN300	Absolute	3 to 300 psia (0.02 to 2.06 MPa)	600 psia	10000 psia
EGN100	Gauge	1 to 99 psig (7 to 680 KPa)	0 to 200 psig	500 psig
EGN300	Gauge	3 to 300 psig (0.02 to 2.06 MPa)	0 to 600 psig	1500 psig



"Window" Mode

The window mode allows for the output to be in one state (open or closed) while inside a band, and change state outside the band. The higher and lower pressure set points must be defined, along with whether the switch is to be open or closed inside the band (deadband does not apply). For instance, a typical callout will be "switch closed between 50 psia and 20 psia."

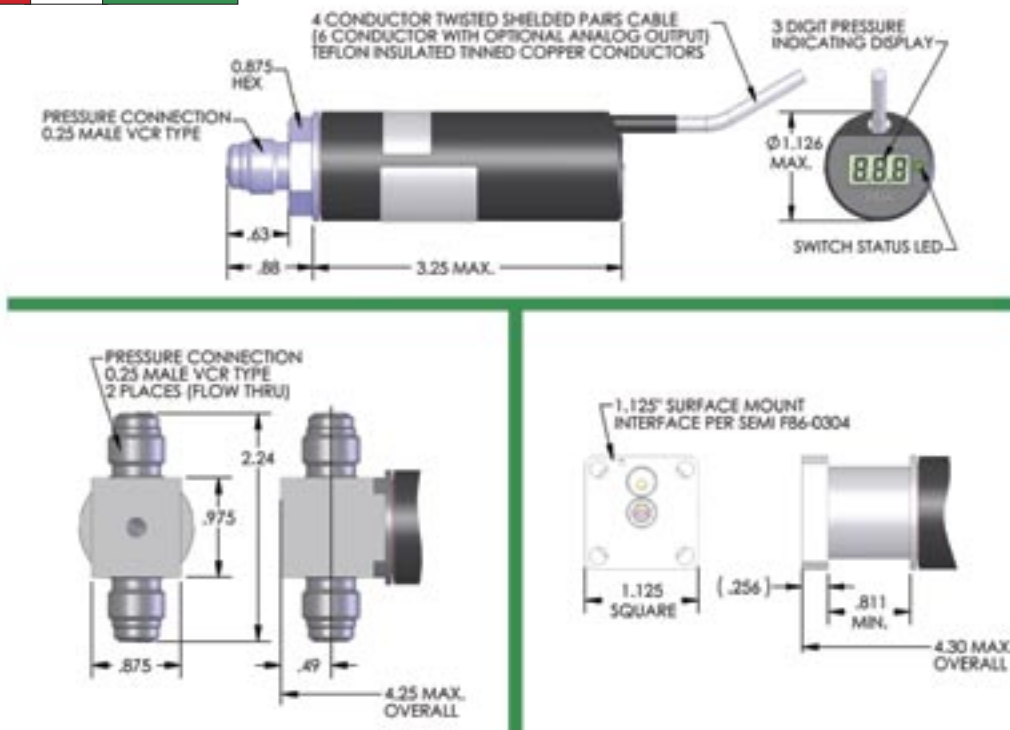
PRESSURE	OFF	or	ON
	ON	or	OFF
	OFF	or	ON

Compound Gauge Feature

For EAN100D Model, unit is programmed to display 15 psi vacuum to 85 psi pressure.

For EAN300 Model, unit is programmed to display 15 psi vacuum to 285 psi pressure.

The sealed gauge unit output varies with site atmospheric pressure. The analog output option is over the full scale range.



HOW TO SPECIFY

Create a part description by using the system below. The part description will follow this form.

EGN	100	D	C26	O25	P	FM	L	24	V1
Type	Setting Range	Display	Closing Pressure	Opening Pressure	Units	Pressure Connection	Electrical Connection	Lead Length	0-5 VDC Output

	CODE	DESCRIPTION	EGN	100	D	C26	O25	P	FM	L	24	A
Type	EAN	Absolute Pressure										
	EGN	Gauge Pressure										
Setting Range	15	See Model Chart										
	30											
	100											
	300											
Display	–	No LCD Display										
	D	LCD Display										
Closing Pressure (Increasing or Decreasing)												
Opening Pressure (Increasing or Decreasing)												
Units	P	PSI										
	T	Torr										
	K	Kpa or Mpa (depending on range)										
Pressure Connection	VM	1/4 Male End Seal type (standard)										
	FM	Flow-through type, / Male End Seal type, both ends										
	FF	Flow-through type, / Female End Seal type, both ends										
	SC	1 1/8" Surface Mount C Seal per SEMI F86 - 0304										
	SW	1 1/8" Surface Mount W Seal per SEMI F86 - 0304										
Electrical Connection	L	Free leads (standard)										
	C	Crimp-type connector (Amp MR Series Standard)										
Lead length (specify in inches - 24" is standard)												
Analog Output	–	No analog output										
	A	4-20 mA										
	V1	0-5 VDC										
	V2	0.2-5.2VDC										
Option WM		"Window" operating mode (Opening and Closing pressures become upper and lower limit of window; specify whether contact is closed inside or outside the window). See detailed description for example.										
Option CG		Compound gauge feature										

The specified example denotes a 100 psig Staset® switch with LCD display. The switch closes on increasing pressure at 26 psig and opens on decreasing pressure at 25 psig. The switch utilizes a flow through design with 1/4 male VCR type end connections with a 5 Ra finish. The electrical interface consists of 24" free leads. A 0-5VDC analog output is provided.



Precision Sensors will provide its customers with the highest quality, most cost effective and reliable solutions for the safeguarding of people, equipment and processes.

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SPECIFICATIONS

Pressure Sensor	Micromachined silicon piezoresistive strain gauge isolated from process media by a rugged 2 mil. 316L stainless steel diaphragm.
Construction	Wetted material – 316L stainless steel, pressure compartment welded leak tight to 1×10^{-9} cc/sec
Switch Output	Isolated SPST (Form A) solid-state relay, normally open or normally closed, factory set to pressure value referenced in model chart
Deadband	Factory set to any value from 1% to 98% full scale
Switching Response Time	30 ms max.
Switching Output Rating	0.25 amps AC or DC continuous, 0.4 amps peak, 50 V maximum
Switch Point Accuracy	0.4% full scale rms at $22 \pm 5^\circ\text{C}$. This includes: linearity, hysteresis, zero offset, span, and long term drift. Temperature coefficient (zero and span): 0.017% full scale/ $^\circ\text{C}$.
Switch Point Repeatability	0.25% full scale
Status LED	Indicates circuit condition – open or closed, and power on. Green indicates power on, circuit closed; red indicates power on, circuit open.
Temperature Range	Operating 0 to 50°C (32 to 122°F); Non-Operating -40 to 70°C (-40 to 158°F)
Internal Volume	0.5 cc for standard 1/4 End Seal type connection
Input Power	12 to 30 VDC, 25 mA minimum. Product is reverse polarity protected
Fail Safe	Upon power loss, contacts will default to the open state
Life	5 million cycles minimum
System Pressure Display	3 digit backlit LCD display of system pressure with 1% full scale accuracy from 0 to 50°C
Analog Outputs	4 to 20 mA analog output; 12 to 30 VDC loop input voltage; isolated, current sinking; load resistance 50 to 1000 ohms, 0 to 5 VDC and 0.2 to 5.2 VDC analog output proportional to listed pressure range within $\pm 1\%$ full scale from 0 to 50°C . 10K ohms minimum load impedance.

APPROVALS



UL recognized component under File #E179859.

CE marked, conforms to the LVD and EMC directives

Proof of performance data available upon request.