PRODUCT INFORMATION

NEW, UPGRADED SPEEDETEX® MODEL ESS SPEED SWITCH FOR OVERSPEED OR UNDERSPEED DETECTION

Torq's Speedetex® Model ESS Rotary Speed Responsive Switch with NEMA-4 enclosure has been upgraded to make it more user-friendly. Its controls are easier to set, with a new LCD display to precisely set speed and/or monitor actual shaft speed. The dual function tachometer/ speed switch, gives the user immediate feedback at the point of operation. A key feature of the switch is that it can be set without having to drive the unit. Input to the LCD display is made with four pushbuttons. Two of the pushbuttons increase or decrease setpoint speeds. Another controls overspeed or underspeed selection. The fourth pushbutton sets the LCD readout to setpoint adjustment or the tachometer function. The LCD display indicates output logic (ON or OFF). The terminal block is Euro design to simplify terminal connections. The unit's enlarged case makes it easier to install and precisely set controls.

Switch Operation:

This rugged, completely self-contained NEMA 4 switch is a rotary shaft speed detector and tachometer. It will electronically detect either underspeed or overspeed. This is accomplished by setpoint selection done directly thru pushbuttons and is displayed on the LCD readout. The actual shaft speed can be displayed on the LCD by a simple push of a button.

When the shaft speed on a piece of equipment exceeds or falls below the setpoint speed, change is immediately detected and output is provided via relay contacts to actuate motor contactors, audible alarms, warning lights, PLC's etc. Maximum response time is the time required to rotate 1/16 of a turn at the set speed for a standard unit, or 1/60 of a turn for the high response option, after the shaft passes through the set speed. The output condition is displayed as "ON" or "OFF". When "ON"

is displayed, the driven speed exceeds the overspeed setpoint, or is below the underspeed setpoint. The output relay is de-energized in this condition and the "Alarm" contact (N.C.), closed in the output relay. The ESS also falls into this condition under loss of power providing the logic that indicates "Alarm" under power failure to the ESS.
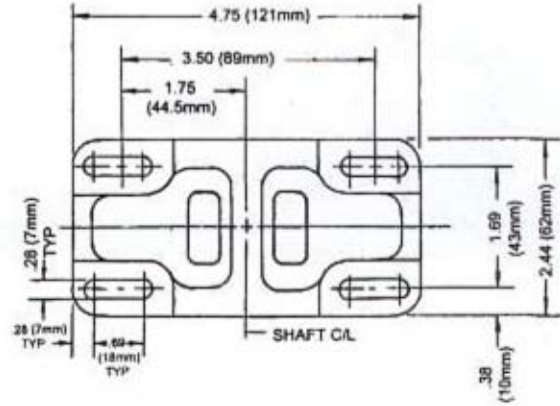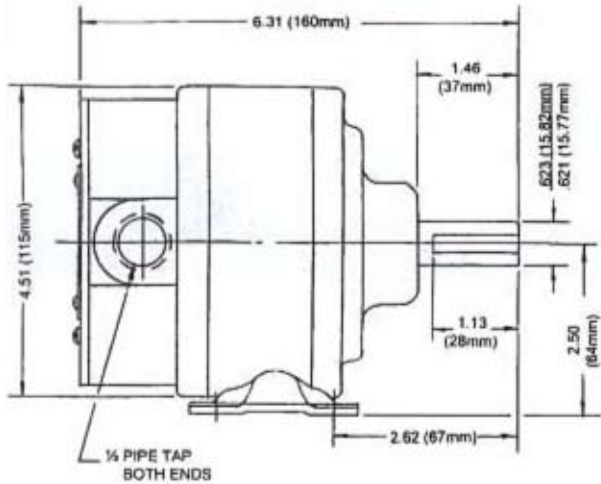
Rugged, Reliable, Versatile:
- Unique direct digital setpoint adjustment
- Built-in tachometer readout of speed
- Start up delay in underspeed mode
- Output state indicator alarm (output "ON" or "OFF")
- Cast aluminum and steel housing: NEMA-4
- 5/8" shaft with double race ball bearings
- Only one moving part
- Operates reliably in "hostile" environments
- Trouble-free solid-state circuitry
- Either AC input/output or DC input/output as specified
- Available with C-face flange or standard-foot mount
- Fast response (1/16 or 1/60 turn depending on model)
- Matching stub shafts and flex couplings available

Typical Applications For Speedetex® Switches:
- All types of conveyor systems
- Steel mills and foundries
- Mining equipment
- Saw mills
- Chemical processing
- Food processing
- Paper manufacturing
- Special machinery and OEM applications
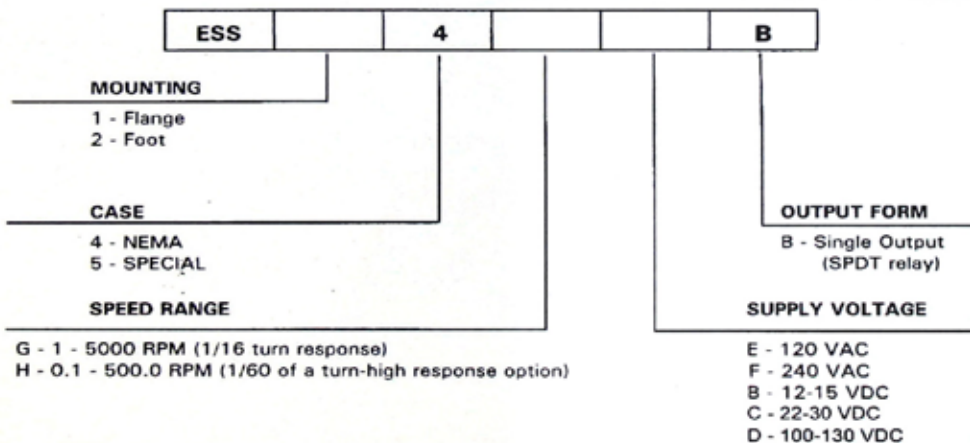- Power plants

Standard Foot Mount *

¼ PIPE TAP BOTH ENDS

*C-Face Flange Mount Also Available

Speedetex® Model ESS Rotary Speed Switch

Input Power - Options.....................................120 VAC and
240 VAC ±10% 50/60 HZ
12-15 VDC, 22-30 VDC and 100-130 VDC

Output Power ....Contact rating 10.0 AMPS
@ 250 VAC/30 VDC

Speed Ranges................ 1-5000 RPM (1/16 Turn Response)
0.1 to 500.0 RPM (1/60 Turn Response)

Prestart delay......... (underspeed mode) 8 sec (1-5000 RPM)
20 sec (.1-500 RPM)

Power failure protection......................Goes into alarm state
on power failure

Bearing life .... 10,000 hr. @ 5000 RPM
(Lower with radial side load)

Setpoint Stability..............................± 1.5% (1-5000 RPM),
± 3% (.1-500 RPM)
Nominal 32° F (0° C) to 105° F (41°C)

Setpoint Resolution.. 1 Digit

Setpoint Hystersis ....10% (1-5000 RPM)
20% (.1 - 500 RPM)

Operating Temp Range .... -22° F (-30° C) to 150° F (66° C)

Shaft Torque Required .... 4 Oz. In. (.0029 Kg Meter)

Continuous Running Speed................ 5000 RPM Maximum

Direction of Rotation ....Either - No effect

Radial Load............................ 50 Lbs. (22.7 Kg) Maximum

Case Construction ....NEMA 4

Shipping Weight ....4 Lbs. (1.8 Kg)

Special Options - Special shaft machining, diameters, mounting, finishes, supply voltage etc. Consult factory.

**To Order, Configure Speedetex®
Model Options from Nomenclature Below**

MOUNTING
1 - Flange
2 - Foot

CASE
4 - NEMA
5 - SPECIAL

SPEED RANGE
G - 1 - 5000 RPM (1/16 turn response)
H - 0.1 - 500.0 RPM (1/60 of a turn-high response option)

OUTPUT FORM
B - Single Output
(SPDT relay)

SUPPLY VOLTAGE
E - 120 VAC
F - 240 VAC
B - 12-15 VDC
C - 22-30 VDC
D - 100-130 VDC

Torq Corporation
32 West Monroe Street
Bedford, Ohio 44146
Tel: 800/899-5533
Fax: 800/883-5800
http://www.torq.com
Email: Info@torq.com