

TW SERIES TRAILING WIRE FLOW SWITCH

FOR ALL PIPE SIZES 50mm (2") AND LARGER

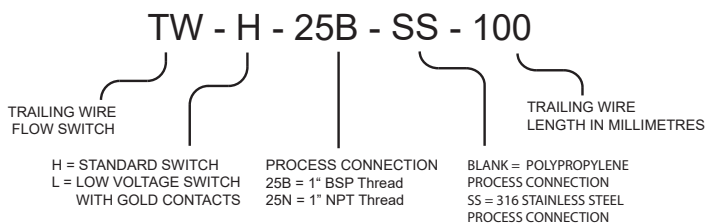
FEATURES

- Unique trailing wire sensor
- 0 to 500V AC 15 Amp S.P.D.T switch standard
- Gold Contact Low Voltage model available
- 1" BSP or NPT models available
- 316 Stainless or Polypropylene models
- Easily Serviceable
- 400 Bar 5800 psi rated models available
- Manual Override built in
- Seal-less magnetic drive
- Adjustable Sensitivity
- IP67 Weatherproof

The TW Series Trailing Wire Flow Switch uses a flexible stainless wire sensor rather than a conventional paddle to sense flow. They are suitable for sensing flow in open discharge applications or in pipes of any diameter from 50mm (2") upwards. The flexible stainless wire sensor offers major advantages over conventional paddles in applications where solids or semi solids are present, such as in sewage pumping. They are also suitable for use in slurry and mining applications and in many normal pumping situations where the flow velocity is high and conventional paddles are unsuitable.

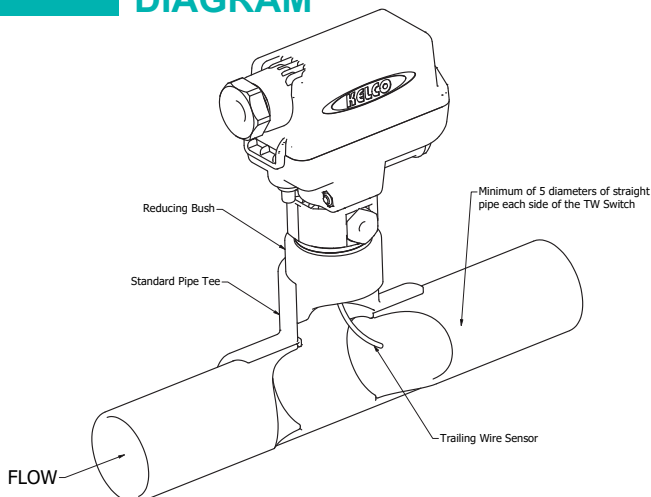


ORDERING



Wire length refers to the distance from the tip of the wire to the bottom end face of the process connection. **Available Wire Lengths: 50mm, 80mm, 100mm, 140mm, 160mm, 180mm, 200mm, 250mm, 300mm**

DIAGRAM



OUTLINE

The TW series trailing wire flow switch is supplied with a Polypropylene or 316 stainless steel process connection in 1" BSP or NPT. A Single Pole Double Throw (S.P.D.T) microswitch for general control circuit applications is supplied as standard with the TW series switch. In addition a low voltage low wetting current switch with gold contacts is available for signalling applications.

A unique feature of the TW flow switch is its built in manual override. Using the manual override allows the system to be manually started at any time by simply pressing the button. It also makes testing and commissioning of systems very simple.

The TW flow switch is available with wire sensors in various lengths from 50mm to 300mm (2" to 12"). The required wire length must be specified when ordering.

The flow rate required to actuate the TW flow switch will depend on many variables such as turbulence, liquid viscosity and the exact surface area of sensor wire exposed to the flow.

The optimum wire length for a specific application can be obtained using our online calculator. The calculator can be accessed at : -

<http://www.kelco.com.au/paddle-trimming-calculator>

OPERATING LIMITS

Please note: Maximum operating pressure of the Polypropylene process connection optioned TW switch must be linearly de-rated as operating temperature is increased so that at 60°C (140°F) the maximum permissible operating pressure for the switch does not exceed one Bar (15 psi) absolute.

ELECTRICAL DATA

Parameter	TW with Polypropylene process connection	TW with Stainless process connection
Maximum operating pressure (Static or Dynamic) at ambient temperature.	18 Bars (261 PSI)	400 Bars (5800 PSI)
Minimum burst pressure at ambient temperature.	45 Bars (652 PSI)	800 Bars (11800 PSI)
Maximum operating temperature.	60°C See note above	80°C (176°F)
Minimum operating temperature.	-20°C (-4°F)	-20°C (-4°F)
Ingress protection rating	IP67	IP67

The TW flow switch houses a S.P.D.T (Single Pole Double Throw) switch. The standard switch is suitable for all general control circuit applications up to 500V AC. It is ideal for the control of pump starters, relay logic circuits, and for the direct control of contactors and timers. **The standard switch can operate at ANY voltage from 5 to 500VAC.**

ELECTRICAL LIMITS FOR THE STANDARD SWITCH

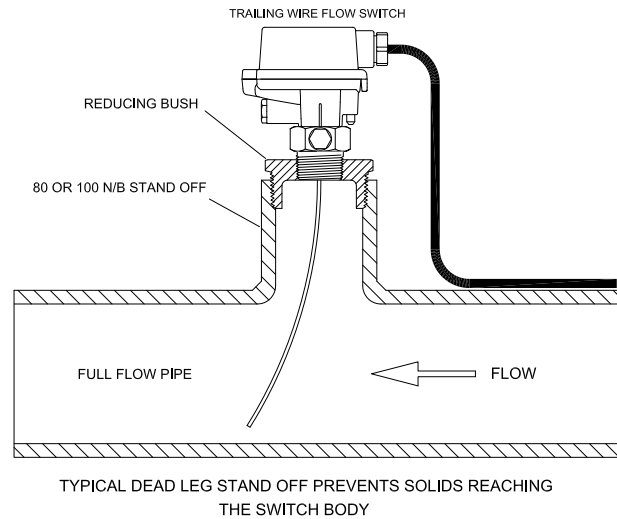
RATED VOLTAGE	NON INDUCTIVE LOADS				INDUCTIVE LOADS			
	RESISTIVE LOAD		LAMP LOAD		INDUCTIVE LOAD		MOTOR LOAD	
	NO	NC	NO	NC	NO	NC	NO	NC
125 VAC	15A		3A	1.5A	15A		5A	2.5A
250 VAC	15A		2.5A	1.25A	15A		3A	1.5A
500 VAC	10A		1.5A	0.75A	6A		1.5A	0.75
8 VDC	15A		3A	1.5A	15A		5A	2.5A
14 VDC	15A		3A	1.5A	10A		5A	2.5A
30 VDC	6A		3A	1.5A	5A		5A	2.5A
125 VDC	0.5A		0.5A	0.25A	0.05A		0.05A	0.05A
250 VDC	0.5A		0.5A	0.25A	0.03A		0.03A	0.03A

ELECTRICAL LIMITS FOR THE LOW VOLTAGE "L" MODEL

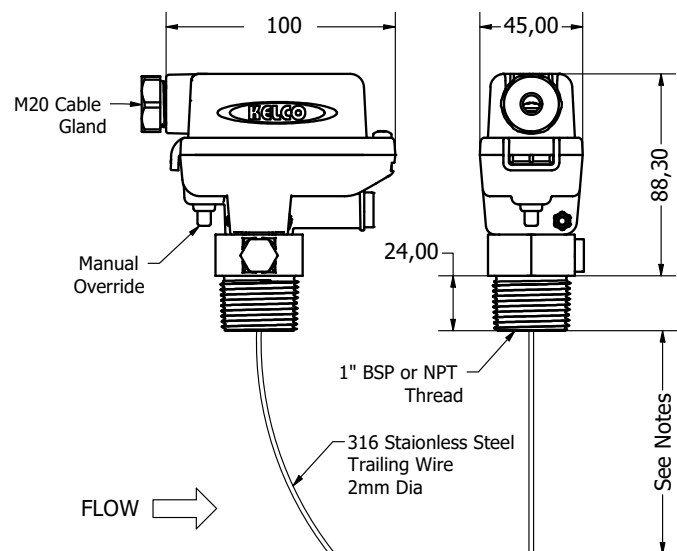
In addition to the standard switch, a S.P.D.T. low voltage low wetting current model with gold contacts, designated "L" is also available for low voltage and low wetting current signalling applications.

Maximum Switched Voltage	30VDC
Maximum Switched Current	26mA
Minimum Switched Voltage	5VDC
Minimum Switched Current	1mA

TYPICAL MOUNTING SCENARIO



DIMENSIONS



SPARE PARTS

The TW Series trailing wire flow switches are very simple to service, and most components are available in spare part kits.

HAZARDOUS APPLICATIONS

The TW Series trailing wire flow switch can be used in hazardous areas. Any variant of the TW Series Switch is classed as a simple device and does not contain components capable of storing or producing an electric charge. As a simple device the TW Series can be used in hazardous applications provided it is isolated by an intrinsically safe barrier, a zener barrier.

APPROVED STANDARDS

The high compliance single pole double throw switch used in the standard TW Series Flow Switch is approved to the following international standards: UL (File No. E32667), CSA (File No. LR21642) SEV (File No. S20/163), CE.

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