

## TWM SERIES HEAVY DUTY TRAILING WIRE FLOW SWITCH

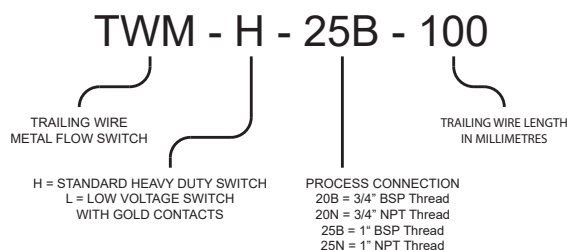
### FEATURES

- Unique trailing wire sensor
- 0 to 500V AC 15 Amp S.P.D.T switch standard
- Gold Contact Low Wetting Current model available
- High impact billet aluminium housing
- 316 Stainless steel process connection
- 3/4" & 1" models available with BSP or NPT threads
- Suitable for harsh mining applications
- 400 Bar 5800 psi pressure rated
- Manual override built in
- Seal-less magnetic drive
- Fully adjustable
- Easily serviceable

The TWM 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 50 mm (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.

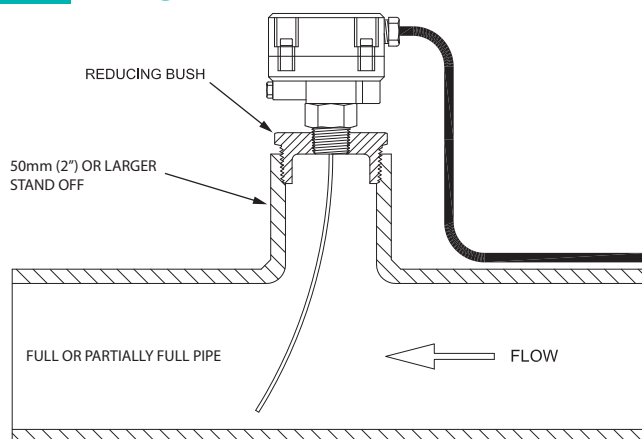


### ORDERING



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



TYPICAL DEAD LEG STAND OFF PREVENTS SOLIDS REACHING THE SWITCH BODY

### OUTLINE

The TWM trailing wire flow switch is supplied with a 316 stainless steel process connection and is available in 3/4" or 1" with BSP or NPT threads. The switch housing is machined from solid billet Aluminium.

A 500V Single Pole Double Throw (S.P.D.T) microswitch for general control circuit applications is supplied as standard with the TWM. In addition a low voltage low wetting current model is available for signalling applications.

A unique feature of the TWM 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 TWM 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 TWM will depend on many variables such as turbulence, liquid viscosity and the 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-2>

# TWM DATA

## OPERATING LIMITS

TWM	Limits
Maximum operating pressure (Static or dynamic) at ambient temperature.	400 Bars (5800 PSI)
Minimum burst pressure at ambient temperature	800 Bars (11600 PSI)
Maximum operating temperature (Liquid)	80°C (176°F)
Minimum operating temperature (Liquid)	-60°C (-76°F)
Ingress protection rating (Waterproof rating)	IP67

## ELECTRICAL DATA

### ELECTRICAL LIMITS FOR THE STANDARD H SWITCH

The TWM flow switch houses a S.P.D.T (Single Pole Double Throw) switch. The standard H switch is suitable for all general control circuit applications up to 500VAC. It is ideal for the control of pump starters, relay logic circuits, and for the direct control of contactors and timers.

#### IMPORTANT

The standard H switch can operate at ANY voltage from 5 to 500VAC. It can be used to directly control pump motors up to 375 Watts (0.5HP) at 240VAC. For larger motors always use an interposing contactor or relay between the flow switch and the motor.

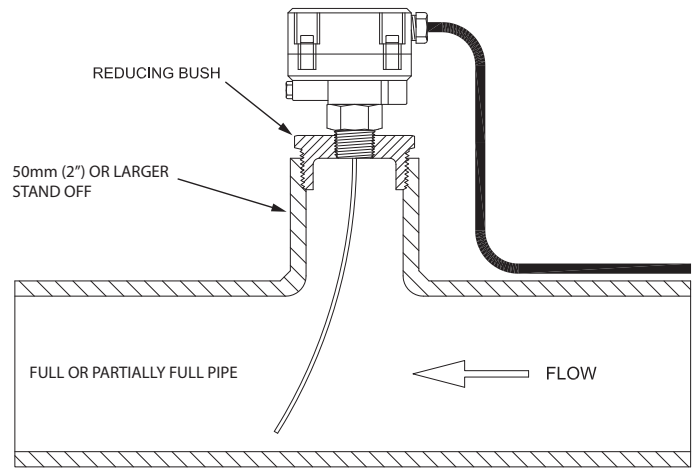
RATED VOLTAGE	NON INDUCTIVE LOADS				INDUCTIVE LOADS			
	RESISTIVE LOAD		LAMP LOAD		INDUCTIVE LOAD		MOTOR LOAD	
	NO	NC	NO	NC	NO	NC	NO	NC
125 VAC	15A	3A	1.5A		15A	5A	2.5A	
250 VAC	15A	2.5A	1.25A		15A	3A	1.5A	
500 VAC	10A	1.5A	0.75A		6A	1.5A	0.75	
8 VDC	15A	3A	1.5A		15A	5A	2.5A	
14 VDC	15A	3A	1.5A		10A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

Maximum Switched Voltage	500VAC
Maximum Switched Current	15A
Minimum Switched Voltage	5VDC
Minimum Switched Current	160mA

### ELECTRICAL LIMITS FOR THE LOW VOLTAGE "L" MODEL

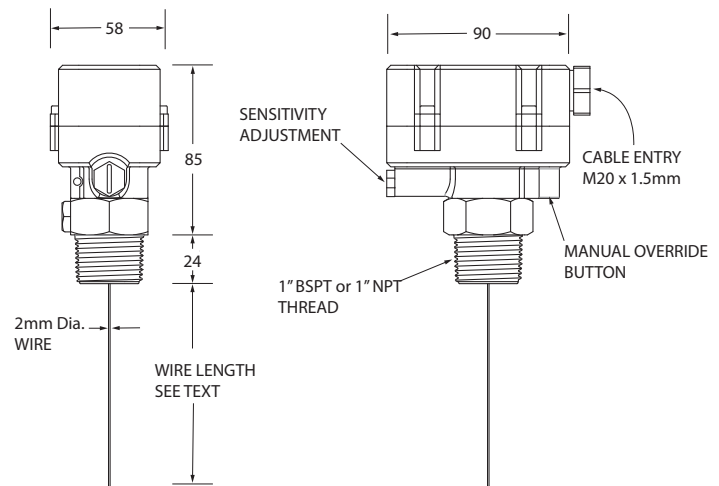
In addition to the standard switch, a S.P.D.T. low voltage low wetting current model with gold contacts, designated "L" is also available for Ex and signalling applications.

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



TYPICAL DEAD LEG STAND OFF PREVENTS SOLIDS REACHING THE SWITCH BODY

## DIMENSIONS



### SPARE PARTS

The TWM trailing wire flow switches are very simple to service, and most components are available as spare part kits.

### HAZARDOUS APPLICATIONS

The TWM-L trailing wire flow switch can be used in hazardous areas. The flow 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 TWM-L 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 TWM 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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