

## C25 SERIES INLINE FLOW SWITCHES

High performance 25mm inline flow switches with advanced features make the C25 an ideal choice for many system designers.

### FEATURES

- BRASS OR STAINLESS STEEL BODY
- ALL POSITION MOUNTING
- DIESEL AND OIL MODELS AVAILABLE
- CHOICE OF 2 ELECTRICAL MODULES
- CHOICE OF 3 SWITCHING RANGES
- 1" BSP or 1" NPT THREADS
- VERY LOW HEAD LOSS
- FULLY SERVICEABLE
- WEATHERPROOF

*The C25 inline flow switches are versatile magnetically actuated normally off flow switches that switch on in response to a selectable flow. They are ideal for a multitude of clean liquid applications including pressure boosting and for the direct control of pumps or fans. They are available with bodies made from lead free brass or 316 stainless steel.*

*The C25 flow switches can be supplied with reed switch contacts for relay or PLC control or with a built in 40 Amp solid state switch for the direct control of single phase motors up to 3kW 4HP.*

### CONSTRUCTION

The C25 flow switch consists of a sealed electrical switching module that saddles a one-piece metal body. The self contained electrical modules fitted to the flow switches is easily removed without disturbing pipework, and can be reversed or rotated independently of the switch body. Within the metal body of the flow switch a free fitting magnetically suspended piston actuates the switch as soon as flow starts.

### SWITCHING POINT

Switching point and sensitivity to flow depends on liquid velocity, viscosity and piston clearance. To give users as wide a choice as possible, three pistons are available to suit the C25 flow switches. The three pistons allow the choice of a high, low or intermediate range of switching thresholds.

Piston Markings 1=A 2=B 3=C	Switching Point on a Slowly Rising Flow in Litres per Minute	Switching Point on a Slowly Reducing Flow in Litres per Minute	Electrical Response Time in Seconds
A	1.0	0.6	0.1
B	4.0	3.2	0.1
C	8.0	5.5	0.1

**Note:** The data shown in the table above refers to water at ambient temperature as the test medium. Increasing fluid viscosity will decrease the flow rate required to actuate the switch. Decreasing the fluid viscosity will proportionally increase the switch on flow rate.



### APPLICATIONS

The C25 flow switches can be used in many clean liquids, including fresh water, sea water, and diesel fuel. The stainless steel models can tolerate many chemical solutions including acids and alkalis. The switches can also be used in compressed air or gas systems.

### INSTALLATION

The C25 flow switches can be positioned in any orientation in pipework. In vertical piping, flow can be either upward or downward through the switch with very little difference in flow sensitivity. The C25 flow switch is suitable for use with hot or cold liquids up to 90°C. Systems can be steam sterilized at 100°C for short periods without damaging the switch.

### HAZARDOUS APPLICATIONS

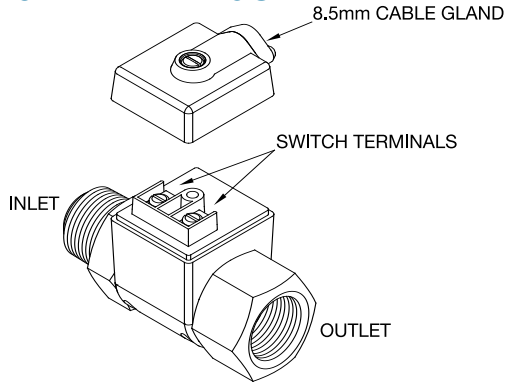
The C25-B flow switch with an inbuilt dry contact reed switch can be used in hazardous areas. The switches are classed as simple devices as they do not contain components capable of storing or producing an electric charge. As simple devices the switches can be used in hazardous applications provided they are isolated by an intrinsically safe barrier, a Zener barrier. The model C25-R flow switch is not suited to such applications, and will only operate in AC circuits.



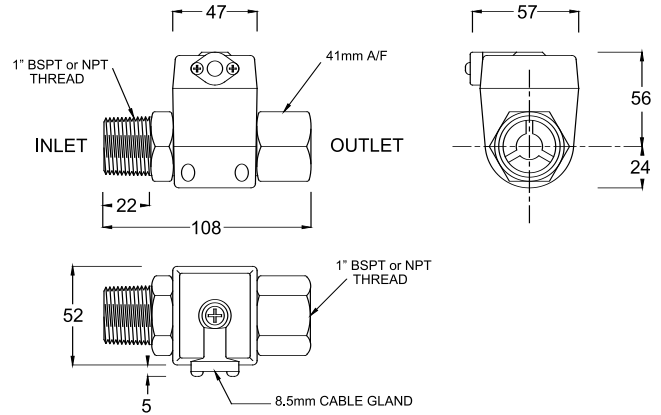
**AUSTRALIAN MADE**

# TECHNICAL DATA

## GENERAL LAYOUT



## DIMENSIONS



## ELECTRICAL APPLICATIONS

All C25 flow switches are single pole single throw normally open switches that switch on in response to flow.

The model C25-B is suitable for PLC use, data logging, telemetry systems, relay logic circuits, or any light duty control application in either AC or DC circuits. It is rated at 0 to 240V AC at 40Watts maximum switched power.

The model C25-R is suitable for AC use only, and can directly control any AC motor load up to 3kW 4HP. The C25-R will not operate in DC circuits or in circuits that draw less than 10mA.

## ENVIRONMENT

Maximum Liquid Temperature	90°C, 100°C for short periods
Minimum Liquid Temperature	-20°C
Max. Liquid Pressure, Brass Body	100 Bars (1450 PSI)
Max. Liquid Pressure, Stainless Body	100 Bars (1450 PSI)
Ingress Protection Rating	IP56

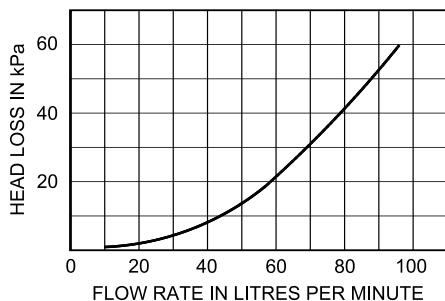
## ELECTRICAL DATA

Electrical Module	Module Type	Contact Configuration	Switched Power Maximum	Switched Voltage Maximum	Switched Current Resistive AC (rms)	Inductive Loads (Power Factor 0.4)	Typical Application
B	Dry contact reed switch	S.P.S.T Normally Open	40Watts	240V AC 200V DC	1 Amp Maximum	Not Suitable	PLC telemetry and relay logic circuits
R	Solid state switch	S.P.S.T Normally Open	3kW 4HP	5 to 240V AC	10mA Minimum 40 Amps Maximum	40 Amps at 240V	AC control circuits and motor control

**Note:** The switched power of the C25-R module given above refers to a switch operating in a water pipe system at ambient temperature. The solid state switch built into the C25-R can tolerate locked rotor motor currents to 40 Amps continuous.

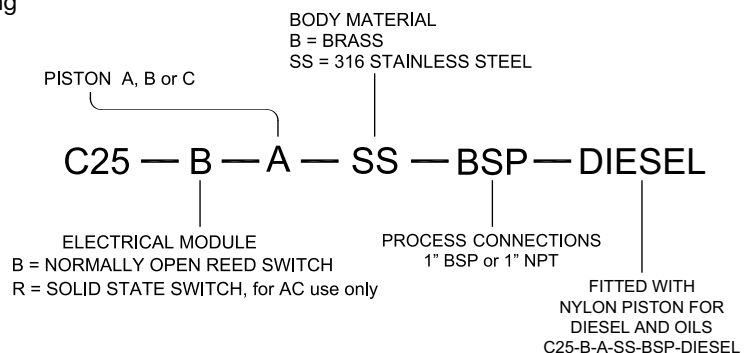
## HEAD LOSS

Table based on test results from water only, see switching point data for other fluids.



Head loss, or pressure drop measured between the inlet and outlet of a C25 flow switch and expressed as a function of an increasing flow.

## ORDERING



MADE IN AUSTRALIA BY

**KELCO Engineering Pty Ltd**

ABN 20 002 834 844

Head office and factory

9/9 Powells Road Brookvale 2100 NSW Australia

Phone: +61 2 9905 6425 Fax: +61 2 9905 6420

Email: sales@kelco.com.au Web: www.kelco.com.au

©2008 Kelco Engineering Pty Ltd

**PLEASE NOTE:** Kelco Engineering Pty Ltd reserves the right to change the specification of this product without notice. Kelco Engineering Pty Ltd accepts no liability for personal injury or economic loss as a consequence of the use of this product. All rights reserved copyright Kelco Engineering Pty Ltd © 2008.