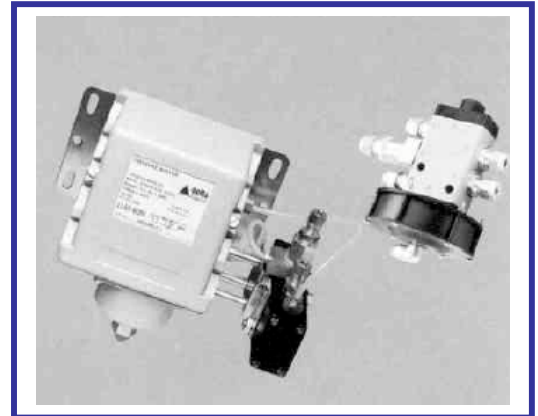


Pneumatic Switching

PNEUMATIC
ISSUE D

- Available on 200, 230 (pressure), 300 (differential pressure) and 700 (temperature) Performance series.
- Signal / pilot pressure range 0.2 to 7 bar (3 to 100 psi).
- 5/2 valve for increases flow capacity - Optional.
- ATEX option for use in hazardous areas.



Performance characteristics

Enclosure

- IP54, NEMA 3 (dust and rain) Protection

Wetted parts options

- See specific models for options.

Standard ratings – Refer to Table 6

- 5/2 spool valve 0.2 to 2.4 bar or 2.4 to 7 bar
- 1mm pneumatic microswitch, 0.2 to 7 bar.

Process connection

- Rc ¼ (BSP), ¼ NPT Internal, ½ NPT Internal & ½ NPT External.

Unit weight

- Additional 0.18kg – 2.4kg on top of additional instrument weight.

Accuracy

- See specific model leaflet for individual instrument vales.

Product applications

Suitable for a wide range of applications in many Industry sectors:

- Oil & Gas
- Chemical
- Petrochemical
- Refining
- Power
- Food Industry

How can we help you?

Delta Controls' range of reliable pressure and temperature measurement instruments can be customised to meet individual requirements. For technical advice or to discuss your application please contact us on +44 (0) 20 8939 3500

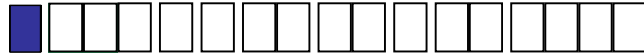
Enclosure

FINISH

Enclosure code W is finished in light grey epoxy resin paint. Enclosure A is natural finish.

NOTE: IP and NEMA coding relate to enclosures for electrical equipment. The ratings specified in this table are for guidance as to the degrees of protection afforded to the pneumatic microswitch and associated mechanical parts from incidental contact and from the environment. The enclosure is vented to allow exhaust air to vent to atmosphere.

TABLE 1



ENCLOSURES	Code
General Purpose weatherproof The basic enclosure is pressure die-cast in zinc alloy, offering weather protection not less than IP54, NEMA 3 (dust and rain).	W
Weatherproof for Aggressive Atmospheres Investment cast enclosure in austenitic stainless steel with weather protection not less than IP54, NEMA 3 (dust and rain).	A

ATEX NOTE: If this product is required for use as equipment in hazardous areas, it must be stated on the order to ensure it is labelled correctly. And / or select the correct code from Table 6



Models

For full specification see specific model leaflets.

NOTE: Other models not specified here may be available. For other applications contact our Technical Engineers.

TABLE 2



PRESSURE SWITCHES	Code
Bellows operated pressure switches	201
Diaphragm operated pressure switches with high overload capacity.	204
Diaphragm operated pressure switches with direct mounting flanged connections for fluids or processes likely to block conventional sensing elements.	208
Bourdon tube operated pressure switches	231

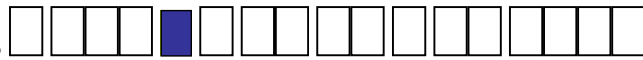
PRESSURE DIFFERENCE SWITCHES	Code
Diaphragm operated pressure difference switches	301 304 306

TEMPERATURE SWITCHES	Code
Vapour pressure temperature switches	721 731
Liquid expansion temperature switches	741 761
Gas filled temperature switches	771

Pneumatic Connection

See Technical specification for materials of Pneumatic Parts

TABLE 3

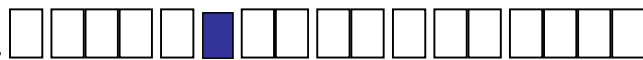


CONNECTION SIZE	AVAILABILITY		Code
	Enclosures Table 1	Switches Table 6	
4mm OD compression	W	XL, XM	E
¼ NPT INTERNAL	W,A	XJ, XK, XL, XM	F
¼ in. OD compression	W,A	XJ, XK	G
Rc ¼ -1/4 BSP tr INTERNAL to ISO 7/1	W,A	XJ, XK, XL, XM	H

Material of Wetted Parts

See specific model datasheet for details

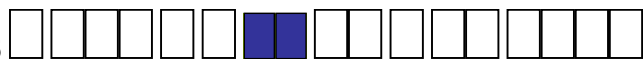
TABLE 4



Setting Ranges

See specific model datasheet for details

TABLE 5



Switching Options

Replace X with 1 of the following (See Table 1):

- **W** = when used in conjunction with a code "W" Weatherproof enclosure.
- **A** = when used in conjunction with a code "A" Weatherproof enclosure.
- **H** = when used in a hazardous location and in conjunction with a code "W" Weatherproof enclosure for ATEX.
- **R** = when used in a hazardous location and in conjunction with a code "A" Weatherproof enclosure for ATEX.

TABLE 6

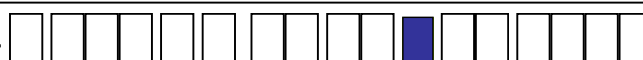


	Code
5/2 valve 0.2 to 2.4 bar (2.9 to 35 psi)	XJ
5/2 spool valve 2.4 to 7 bar (35 to 100 psi)	XK
1mm pneumatic microswitch, opens on falling process signal. 0.2 to 7 bar (2.9 to 100 psi).	XL
1mm pneumatic microswitch, opens on rising process signal. 0.2 to 7 bar (2.9 to 100 psi).	XM

Process Connection

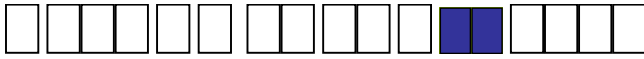
See specific model datasheet for details

TABLE 7



Options & Treatments

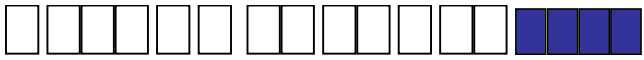
TABLE 8



See specific model datasheet for details

Special Engineering

TABLE 9



See specific model datasheet for details

FEATURE	Code
Consult Delta sales engineering for special requirements.	TBA

Performance Data

Fixed Switching Differential

Details on application.

CAUTION: Though the pneumatic microswitch has a snap action; if the process change is slow moving, supply air will exhaust to atmosphere as the pneumatic microswitch changes from open to closed or vice-versa.

Technical Specifications

ACCURACY – Refer to specific model datasheet for details.

NOTE: Accuracy specified applies at constant pilot pressure.

AMBIENT TEMPERATURE RANGE – +2 to 70° C (+35.6 to 158°F).

For use at lower temperatures, please consult our technical engineers

FLOW CAPACITIES - Pneumatic microswitch: **XL, XM** 7dm³ / min, at 1.4 bar (20.3 psi)
5/2 Spool Valve: **XJ and XK** 480dm³ / min, at 1.4 bar (20.3 psi)

MOUNTING POSITION / LOCATION / INSTALLATION – Vertical as shown in dimensions, taking care to avoid siting in locations that transmit excessive shock or vibration. For further advice contact our engineers

LEAK RATE – The design of the pneumatic microswitch will allow leakage of the signal medium to atmosphere. This is allowed to escape via a small hole in the bottom of the enclosure. In the closed position the leak rate is virtually zero. In the open position the leak rate will be less than 200 cm³ / min at 1.4 bar. If the process change is slow the leak rate will increase just prior to change over in either direction.

MATERIALS OF PNEUMATIC PARTS :-

Pneumatic microswitch XL and XM.

For enclosure W: Brass body, electroless nickel plated actuator, stainless steel ball, nitrile O ring seal.

For enclosure A: Electroless nickel plated body. Other parts as enclosure W

5/2 Spool valve XJ and XK.

Anodised diecast zinc alloy body and aluminium end covers, nitrile rubber seals.

NOTE: The externally mounted 5/2 spool valve is given additional treatments for use in aggressive atmospheres when specified in conjunction with enclosure A.

Internal Pipework: Nylon

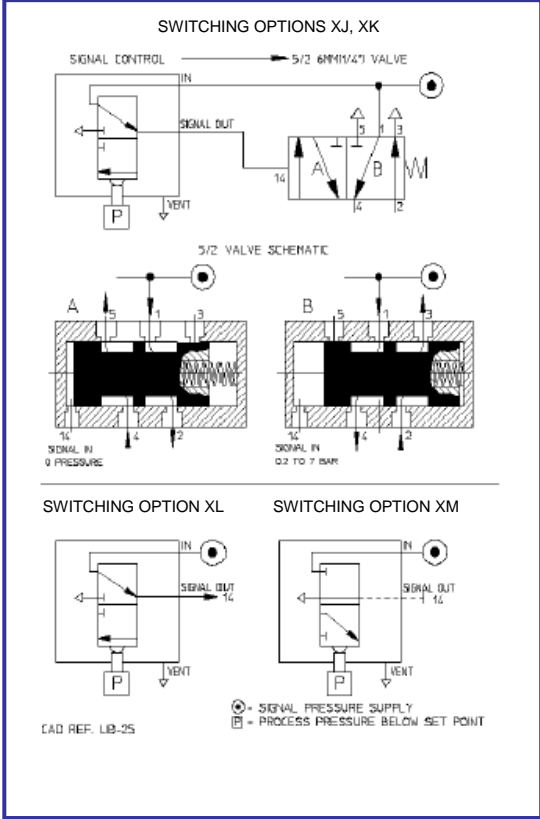
External Pipework: Switching options XJ, XK only. Nylon for enclosure W. Stainless steel for enclosure A.

Pneumatics Connections: Brass for enclosure W. Stainless steel for enclosure A

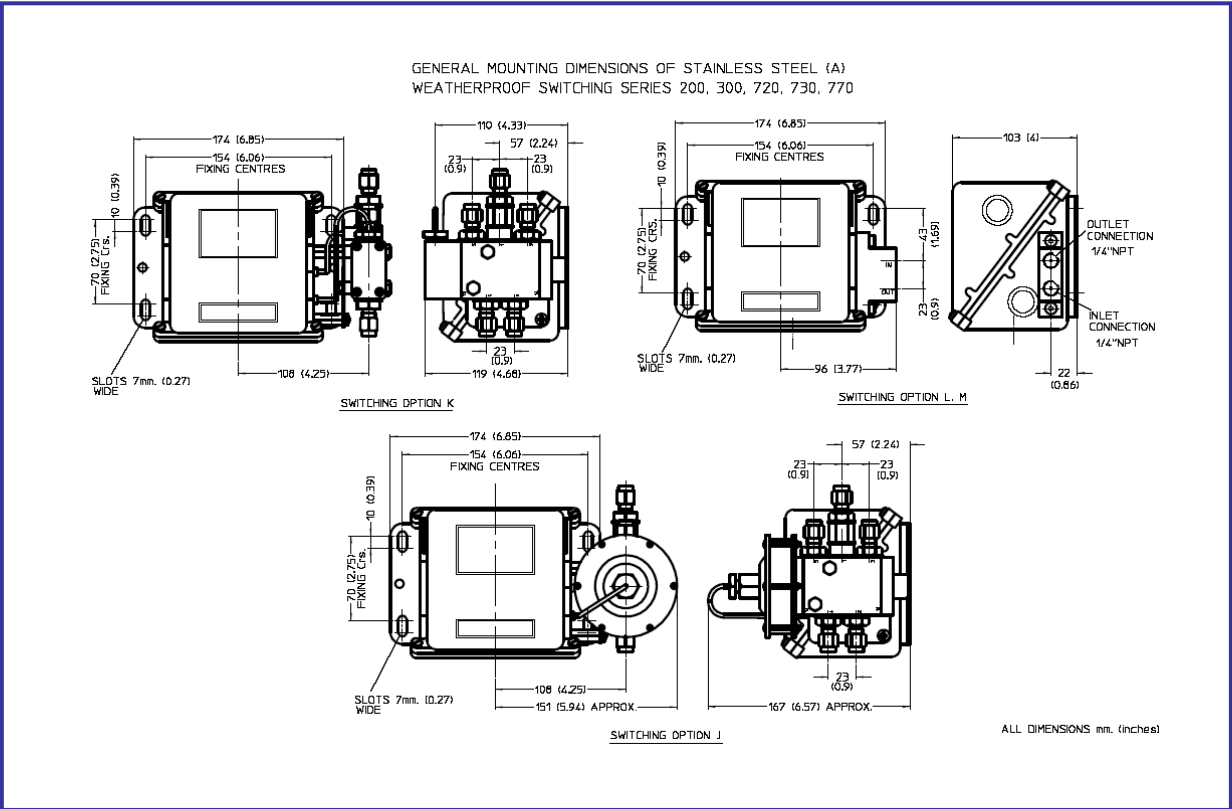
Unit Weights

Additional to specific model data		
Enclosure	Weights	Codes
W/A	1.1 / 2.4 kg	XJ / XK
A	0.18 / 0.4 kg	XL / XM

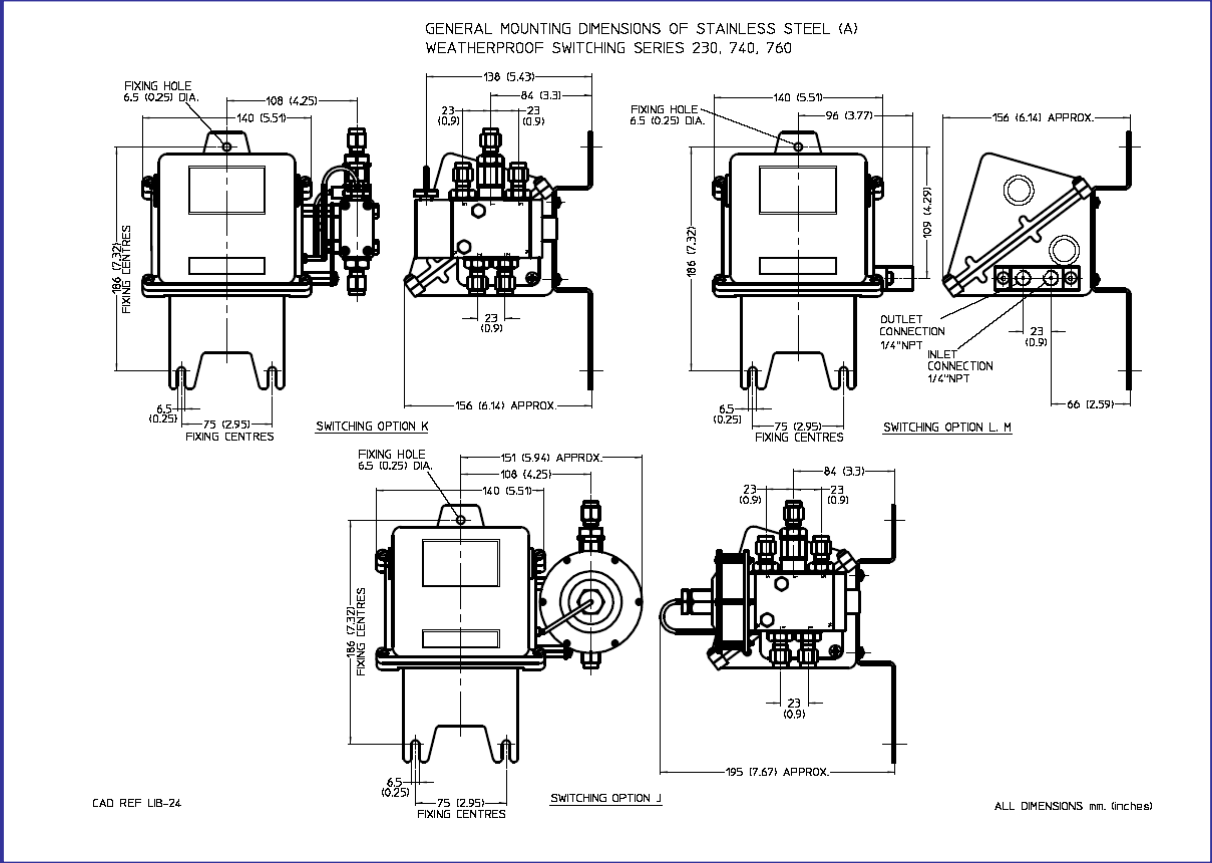
Signal Diagrams



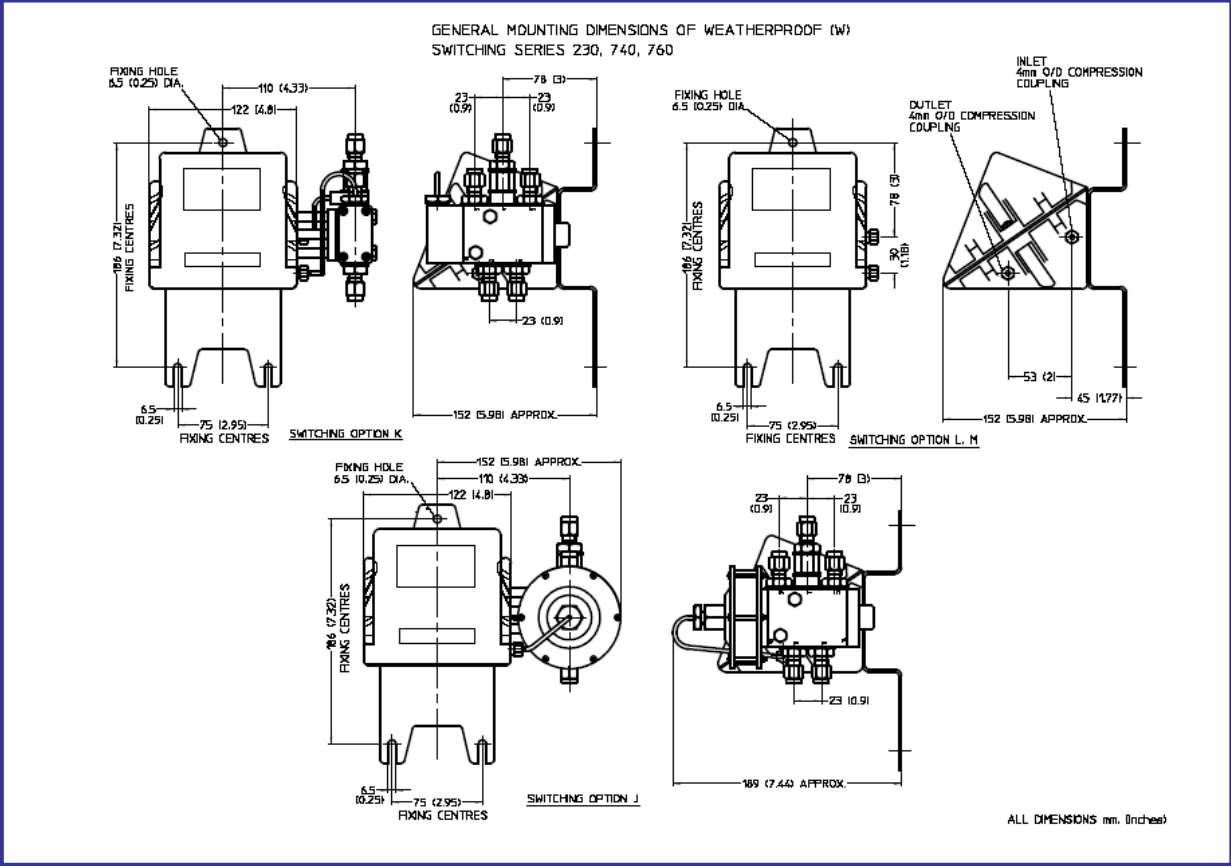
Dimensions



Dimensions



Dimensions



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