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ARGUS VACUUM

V560 ARGUS ATEX/IECEx Exia CERTIFIED & INDUSTRIAL VACUUM SWITCH

These switches have been designed to suit applications where vacuums are to be sensed. The Argus provides very competitively priced, lightweight and durable instrumentation.

VACUUM

FEATURES

- 316 stainless steel or PPS engineering polymer switchcase to IP66/IP67 standards.
- Internal adjustment scale.
- Settings from -2 mbar to -950 bar.
- Single or dual microswitch option.
- SIL 2 - IEC 61508 proven reliability
- Wetted parts NACE MR-01-75 compliant.
- ATEX/IECEx Intrinsically Safe
  CE Ex II 1G Exia IIC T6...T2
  T6...T5 T amb -50 to +78˚C
  T5...T2 T amb -50 to +93˚C

VACUUM RANGES

ADJUSTMENT RANGE mbar	ADJUSTMENT RANGE "wg	MAX WORKING PRESSURE (bar) DIAPHRAGM MAT		DEADBAND FIXED mbar DIAPHRAGM MAT.		DIAPHRAGM CODE	SPRING CODE
		Min	Max	NITRILE	VITON		
-150 TO -950	80 - 380	-1	+7	<80	<100	01SB	T
-50 TO -500	20 - 200	-1	+7	<40	<60	03SB	T
-15 TO -50	6 - 20	-0.35	+0.35	<5	<7	08SB	R
-2 TO -38	1 - 15	-0.35	+0.35	<4	<6	08SB	T

SPECIFICATION

Temperature Limitations :
Diaphragm codes : 01SB,03SB + 08SB
Viton : -20 to +150°C
Nitrile : -30 to +100°C

Wetted parts : Diaphragm codes 01SB, 03SB & 08SB
316 Stainless steel.
Process connections : Diaphragm codes 01SB & 03SB - 1/4" or 1/2" BSP.P or NPT female.
Diaphragm code 08SB compression fittings
or threaded as table overleaf.

PART NUMBER BREAKDOWN - V560

OPTIONS

A = Exe JUNCTION BOX (6 TERMINALS)
B = Exe JUNCTION BOX (HIGH AMB. TEMP)
F = BRACKET FOR PPS HOUSING FOR 01SB
S = BRACKET FOR ST.ST HOUSING FOR 01SB
Y = BRACKET FOR HOUSING FOR 02SB
W = BRACKET FOR HOUSING FOR 08SB
E = PIPE MOUNTING BRACKET FOR 01SB
Z = PIPE MOUNTING BRACKET FOR 02SB
T = PIPE MOUNTING BRACKET FOR 08SB
R = MONITORING RESISTORS
IF MORE THAN ONE OPTION IS REQUIRED IT SHOULD BE WRITTEN AFTER THE PART NUMBER

MICROSWITCH
1 = 1x SPDT INDUSTRIAL & Exia
8 = 2 x SPDT FLYING LEAD INDUSTRIAL & Exia

SPRING CODE
PLEASE REFER TO RANGE TABLE

MOUNTED
V_56 = VACUUM

DIAPHRAGM MATERIAL
A = NITRILE
B = VITON - STD

V S 5 6 1 S P R 1 1 / B T 0 1 S B 5 / S F

CERTIFICATION
I = ATEX/IECEx Exia
S = INDUSTRIAL

LENGTH OF CABLE
0 = DINPLUG, M20 FEMALE OR M19 MALE
1 = 1 METRE ETC
X = CABLE LENGTH OVER 9 METRES

DIAPHRAGM CODE
REFER TO RANGE TABLE

WETTED PARTS
S = ST. ST

CASE MATERIAL
P = PPS (ENGINEERING POLYMER)
S = 316 STAINLESS STEEL

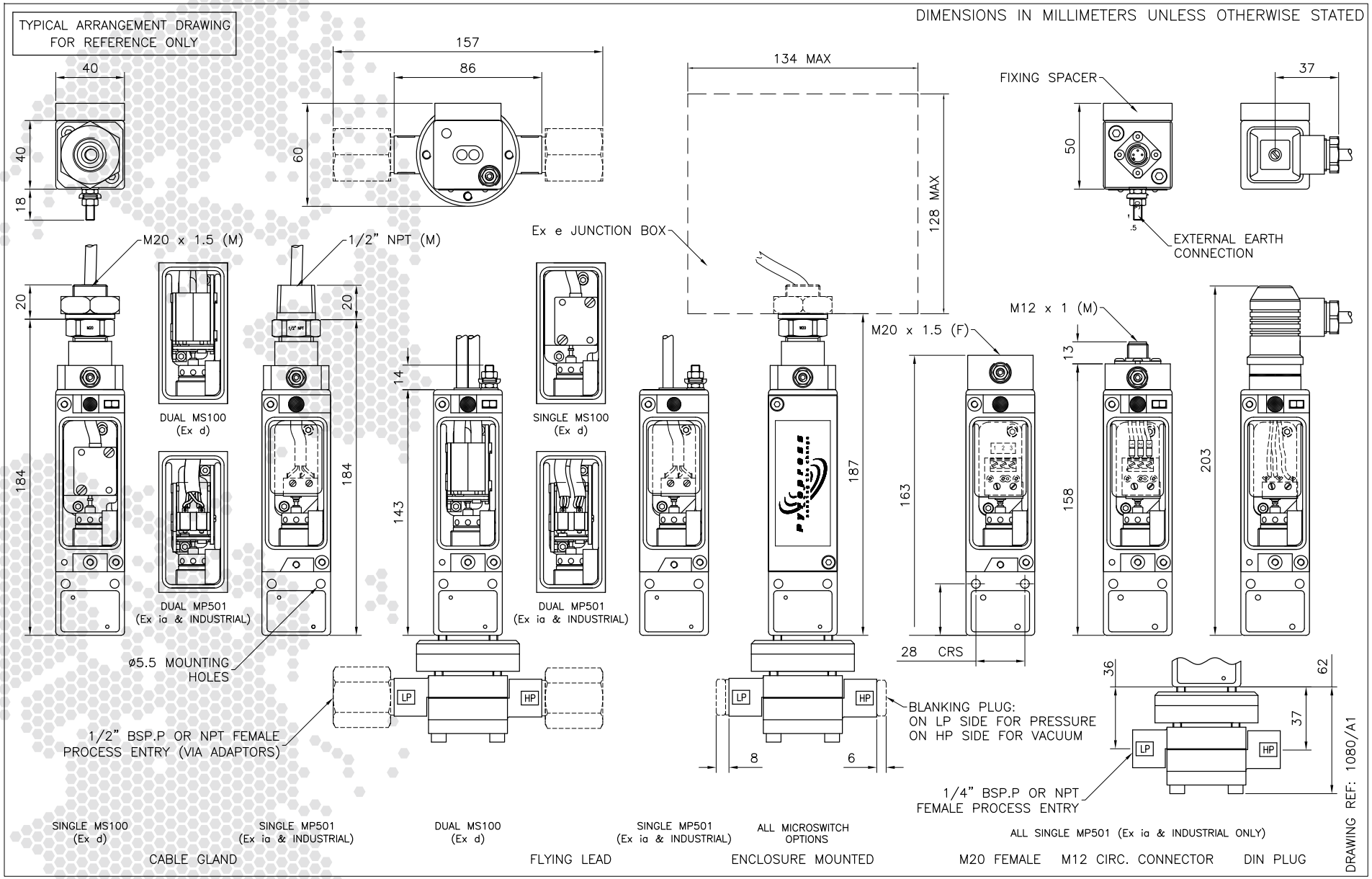
PROCESS CONNECTIONS
DIAPHRAGM CODES 01SB, 02SB & 03SB
5 = 1/4" BSP.P - V
6 = 1/4" NPT
B = 1/2" BSP.P
D = 1/2" NPT

ELECTRICAL CONNECTION
A = 1 OR 2, 3 CORE CABLE
R = M20 MALE ST. STEEL*
P = DIN EN 175301-803-A PLUG & SOCKET (WAS DIN 43650)
T = M20 FEMALE
L = M12x1 CIRULAR CONNECTOR
S = 1/2" NPT MALE ST. STEEL
*CONNECTION TO BE USED FOR Exe JUNCTION BOX

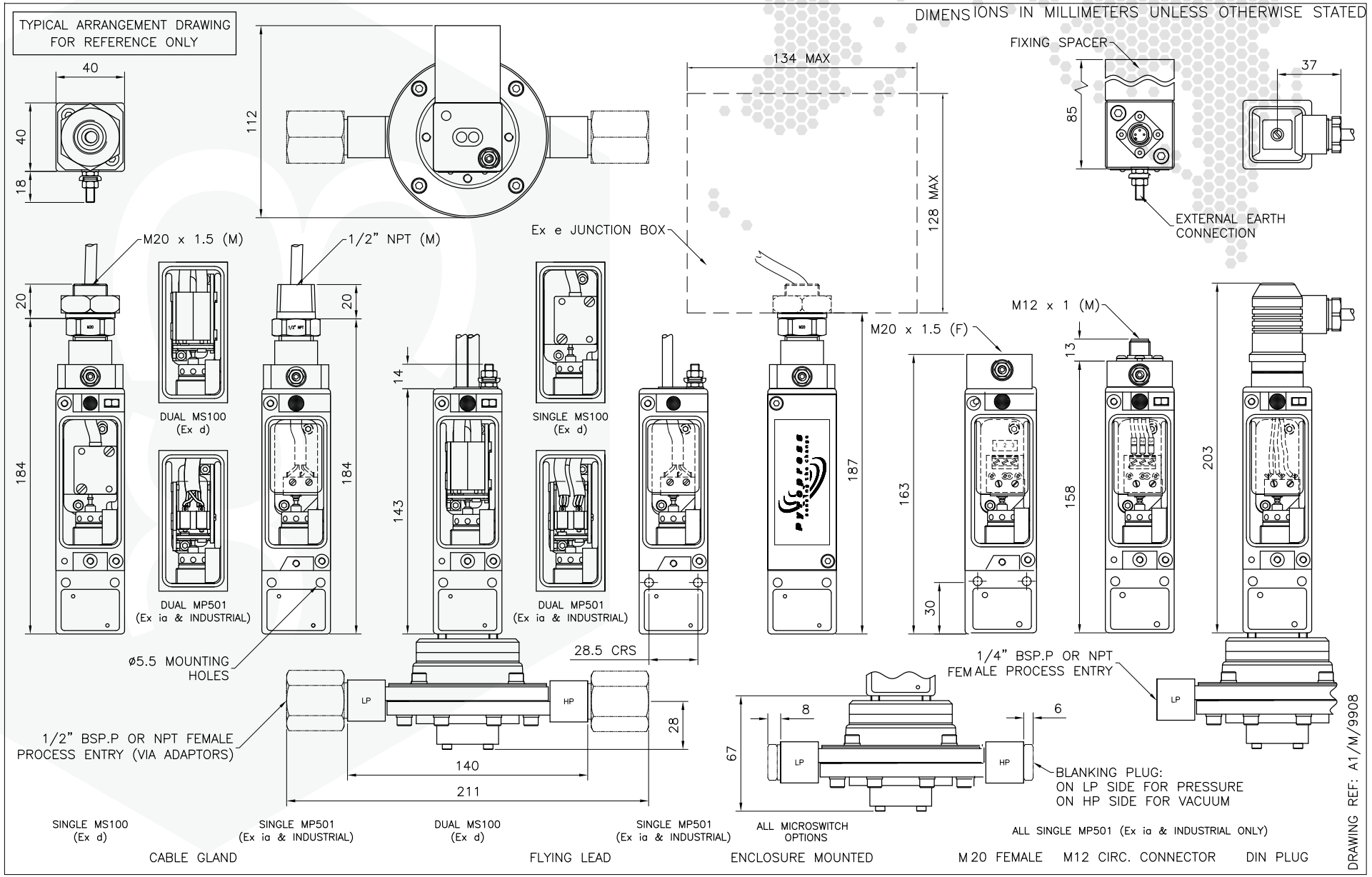
PROCESS CONNECTIONS
DIAPHRAGM CODE 08SB

5 = 1/4" O/D TUBE POSI. ELBOW VAC
9 = SPECIAL
B = 6mm O/D TUBE VAC
D = 8mm O/D TUBE VAC
F = 10mm O/D TUBE VAC
H = 12mm O/D TUBE VAC
K = 1/4" BSP.P FEMALE STRAIGHT VAC
M = 1/4" BSP.T FEMALE STRAIGHT VAC
P = 1/4" BSP.P MALE STRAIGHT VAC
R = 1/4" NPT FEMALE STRAIGHT VAC
T = 1/4" NPT MALE STRAIGHT VAC
V = 1/2" NPT FEMALE STRAIGHT VAC

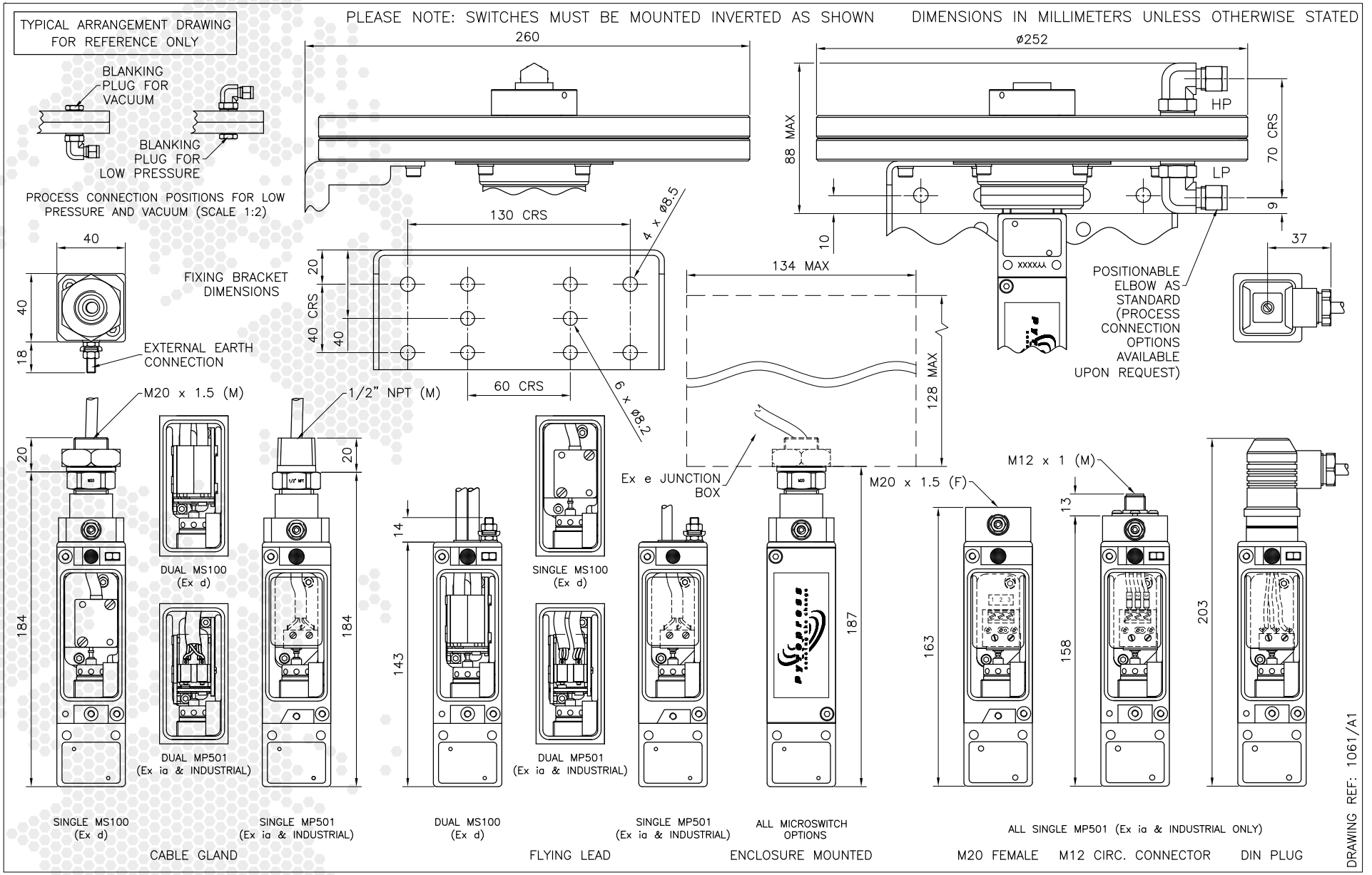
TYPE V560 ARGUS VACUUM SWITCH (DIAPHRAGM CODE 01SB)



TYPE V560 ARGUS VACUUM SWITCH (DIAPHRAGM CODE 03SB)



TYPE D560 ARGUS VACUUM SWITCH (DIAPHRAGM CODE 08SB)



ARGUS ATEX/IECEx Exia & INDUSTRIAL SWITCHES

INTRODUCTION

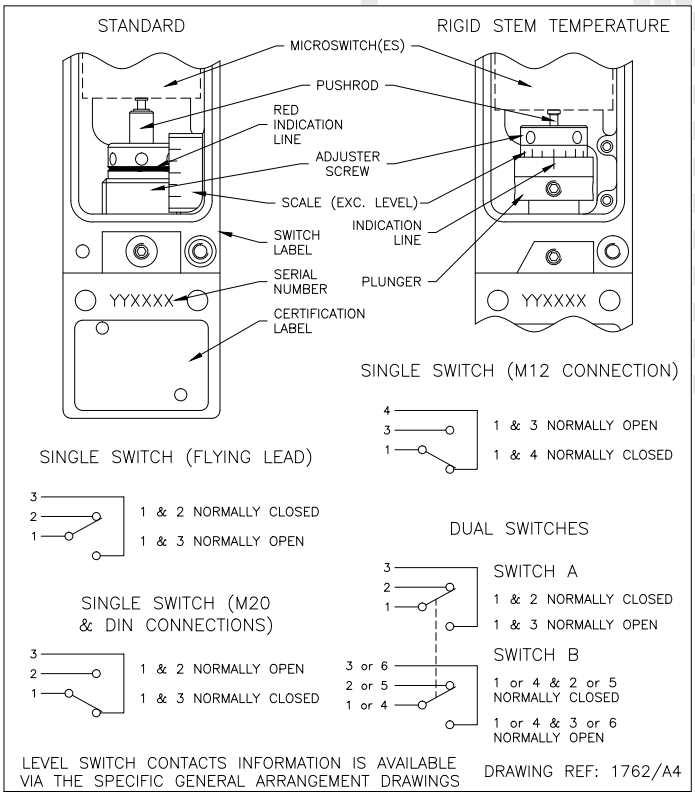
The Argus pressure, differential pressure, temperature, level and flow switches are designed for use in environments where explosive gases and extremes of both high and low ambient temperature can be present (e.g. gas fields, oil rigs and chemical plants etc.) They have been ATEX & IECEx certified suitable for CAT 1 CE Ex II1G Exia IIC Ga environments.
These switches are manufactured from either PPS (engineering polymer) or high quality investment cast 316 stainless steel, both offering a robust construction and protection to IP66/IP67 for use within heavily polluted industrial and marine environments. Declaration available for SIL2 - IEC61508 proven reliability.

CALIBRATION

The design features a simple form of calibration adjustment against a scale block. This allows users to either order units with a specific setting, or stock a mid range setting and then adjust to suit the application.

On removal of the adjustment cover the adjusting screw can be turned with a Tommy bar. The setting is read from the centre of the red indicating ring against the internal scale plate. Rotation to the left will increase the set point and to the right decrease the set point. The adjustment mechanism incorporates a friction device to ensure set point will not change under vibration conditions.

(For ultra low pressure, vacuum and differential pressure switches the switchcase in inverted. Set point adjustment will be opposite to that shown above



TECHNICAL SPECIFICATION

Switchcase and covers: 316 Stainless steel or PPS (Polyphenylene Sulphide) + stainless steel fibres engineering polymer.

Environmental Protection: Switches have been tested and certified by an external test house to IP66/ IP67 in accordance with EN 60529:1992+A2:2013 and IEC 60529:1989:A1:1999+A2:2013.

Vibration and shock parameters: Switches have been tested and certified by an external test house to BS EN 60068-2-6 : 1995 (test Fc vibration) and BS EN 60068-2-27 : 1987 (test Ea shock).

Microswitch: 1 or 2 SPDT (dual switches mechanically linked to give DPDT).

Microswitch rating: 5 Amps @ 250 VAC resistive, 2 Amps @ 250 VAC inductive.
5 Amps @ 30VDC resistive, 2 Amps @ 30 VDC inductive.

Accuracy: +/-1% at 20°C.

ELECTRICAL CONNECTION EXIA AND INDUSTRIAL

Plug & Socket: DIN EN 175301-803-A (was DIN 43650) Plug and socket suitable for unarmoured cable up to 1.5mm2. Cable OD between 4.5mm and 11mm (PG11).
M20 x 1.5 ISO female: 3 terminals suitable for cables upto 1.5mm2.
M12 x 1 Circular socket: 3 contacts, A-coded plug to IEC61076-2-101.
Flying lead: 1 metre of 3 core, for single switch (6.8mm diameter) or 7 core, for dual switches (9.2mm diameter) Silicone insulated flying lead with M20 x 1.5 ISO or 1/2" NPT male threaded conduit gland (part number code R & S) or one, for single switch 1 metre of 3 core cable or two, for dual switches 1 metre of 3 core cable supplied with no thread (part number code A). Longer lead lengths can be requested and a range of junction boxes can be supplied fitted and wired to the switch. The standard Exe box has an ambient temperature range of -40 to +55°C. Higher temperatures can be catered for.

CERTIFICATION: ALL SWITCHES ARE CE MARKED IN ACCORDANCE WITH EU DIRECTIVES

Exia Intrinsically Safe: ATEX 2014/34/EU marked CE Ex II 1G Exia IIC T6...T2 Ga, T6...T5 T amb -50 to +78°C, T5...T2 T amb -50 to +93°C

Special conditions for safe use. During live maintenance, adjustment or servicing of the equipment the aluminium parts may be exposed. Care should be taken to avoid the risk of ignition from incendive impact or abrasion sparks. The DIN plug cover is made of non-conductive plastic material. Care shall be taken to aviod electostatic discharge during maintenance, adjustment or servicing. Clean only with a damp cloth.

Industrial: 2014/35/EU (Low voltage directive).

TEMPERATURE LIMITATIONS

Pressure, Vacuum and Differential Pressure.

Process temperature: Diaphragm actuated unless otherwise stated -30 to +100°C (Nitrile) or -20 to +150°C (Viton). Piston actuated -30 to +100°C (Nitrile) or -20 to +150°C (Viton) or -40 to +150°C (PTFE) -35 to +100°C (EPDM).

Ambient temperature: -40 to +85°C (-50°C & +125°C options – refer to sales office).
Storage temperature: -40 to +85°C (For temperature, level and flow switches please refer to specific pages).
Certification temperature: (Exia only) T6...T5 T amb -50 to +78°C, T5...T2 T amb -50 to +93°C. Please refer to ATEX & IECEx certificate showing permitted process temperature in relation to temperature class.

Continuous development may result in changes to specification without prior notice

ABOUT PYROPRESS

Our products are designed to work in demanding and hazardous environments which require fast and cost effective solutions in instrumentation and control.
Pyropress control sensors provide safe and reliable electrical switching of alarm or control circuits in response to changes in temperature, pressure, differential pressure, vacuum, flow and level conditions.

QUALITY

To support the design of state of the art products the company has invested heavily in the latest CNC technology.

We are able to produce our own components to a high degree of accuracy assuring a reliable and consistent quality product.