ARGUS MEDIUM / HIGH PRESSURE

P510, P520, P530 & P540 ARGUS ATEX Exd, Exia CERTIFIED & INDUSTRIAL PRESSURE SWITCH

This range of switches features a unique switchcase option injection moulded from a PPS engineering polymer. Reliable and proven design concepts from our established range of switches have also been incorporated. This provides a very competitively priced, lightweight and durable sensor.

PRESSURE

FEATURES

- 316 stainless steel or PPS engineering polymer switchcase to IP67 standards.
- Internal adjustment scale.
- Settings from 0.2 to 800 Bar.
- Single or dual microswitch option.
- SIL 2 - IEC 61508 proven reliability
- ATEX Flameproof Option
  CE II2G Exd IIC T6
  T6 Tamb -50 to +71˚C
  T5 Tamb -50 to +86˚C
  T4 Tamb -50 to +96˚C
- ATEX Intrinsically Safe Option
  CE II1G Exia IIC T6
  T6 Tamb -50 to +78˚C
  T5 Tamb -50 to +93˚C
  T4 Tamb -50 to +128˚C

P510 & P520 MEDIUM PRESSURE RANGES

1. With dual microswitches minimum set point is 0.4 bar.
2. With dual microswitches minimum set point is 4.0 bar.

ADJUSTMENT RANGE (BAR)	ADJUSTMENT RANGE (PSI)	MAX WORKING PRESSURE (BAR) DIAPHRAGM MAT		DEADBAND-FIXED (BAR) DIAPHRAGM MAT.		DIAPHRAGM CODE	SPRING CODE
		NITRILE	VITON	NITRILE	VITON		
[1] 0.2 - 8.2	5 - 115	32	40	<0.6	<0.8	1	T
[2] 3.0 - 11.0	45 - 145	32	40	<0.5	<1.0	1	R
6.0 - 22	90 - 320	32	40	<1.4	<2.2	1	B

P530 & P540 HIGH PRESSURE RANGES

3. Please note 1/4" process connections only on these ranges.
With 1/2" process connection max. pressure is reduced to 700 bar.

ADJUSTMENT RANGE (BAR)	ADJUSTMENT RANGE (PSI)	MAX WORKING PRESSURE (BAR)	DEADBAND FIXED (BAR)	PISTON CODE	SPRING CODE
0.8 - 16.8	12 - 232	700	<1.5	S6	T
4 - 20	60 - 300	700	<2.0	S6	R
15 - 55	220 - 800	700	<5.5	S3	R
20 - 120	300 - 1700	700	<12	S3	B
40 - 200	600 - 2900	700	<20	S2	B
[3] 100 - 450	1500 - 6500	1000	<45	S1	B
[3] 200 - 800	2900 - 11600	1000	<80	S7	B

PART NUMBER BREAKDOWN - MEDIUM PRESSURE

MICROSWITCH
1 = 1x SPDT INDUSTRIAL & Exia FLYING LEAD
5 = 1x SPDT FLYING LEAD Exd
6 = 2x SPDT FLYING LEAD Exd, Exia & INDUSTRIAL

MOUNTED
51 = CASE/CONDUIT MOUNTING
52 = STEM MOUNTED PROCESS CONNECTION

SPRING CODE
PLEASE REFER TO RANGE TABLE

DIAPHRAGM MATERIAL
A = NITRILE
B = VITON - STD

OPTIONS
O = NONE
A = Exe JUNCTION BOX (6 TERMINALS)
B = Exe JUNCTION BOX (HIGH AMB. TEMP)
C = Exe JUNCTION BOX (HIGH AMBIENT TEMP) & 2" PIPE BRACKET
P = PIPE MOUNTING BRACKET 2"
R = MONITORING RESISTORS

IF MORE THAN ONE OPTION IS REQUIRED IT SHOULD BE WRITTEN AFTER THE PART NUMBER

P F 5 1 5 F P R 5 1 / B R 1 0 N 1 / S 6 O

CERTIFICATION
PF = ATEX Exd
PI = ATEX Exia
PS = INDUSTRIAL

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

LENGTH OF CABLE
0 = PLUG & SOCKET OR M20 FEMALE
1 = 1 METRE ETC
X = CABLE LENGTH OVER 9 METRES

PROCESS CONNECTIONS
P_51 FEMALE
10N = STANDARD
P_52 MALE
22N = 1/2" BSP.P
24N = 1/2" NPT

WETTED PARTS
M = MONEL
S = ST. ST.

PROCESS CONNECTIONS P_51
FEMALE
1 = 1/4" BSP.P
2 = 1/4" NPT
6 = 1/2" NPT
MALE
FOR P_52 USE 1

ELECTRICAL CONNECTION
A = 1 or 2, 3 CORE CABLES
R = M20 MALE ST. STEEL*
T = M20 FEMALE (INDUSTRIAL & IS)
P = DIN 43650 PLUG & SOCKET (IS & IND)
S = 1/2" NPT MALE ST. STEEL

*CONNECTION TO BE USED FOR Exe JUNCTION BOX

DIAPHRAGM CODE
PLEASE REFER TO RANGE TABLE

PART NUMBER BREAKDOWN - HIGH PRESSURE

MICROSWITCH
1 = 1x SPDT INDUSTRIAL & Exia FLYING LEAD
5 = 1x SPDT FLYING LEAD Exd
6 = 2x SPDT FLYING LEAD Exd, Exia & INDUSTRIAL

MOUNTING
53 = CASE/CONDUIT MOUNTING
54 = STEM MOUNTED PROCESS CONNECTION

SPRING CODE
PLEASE REFER TO RANGE TABLE

SEAL MATERIAL
A = NITRILE
B = VITON - STD
D = PTFE*
E = EPDM*
*NOT AVAILABLE WITH PISTON CODE S7.

OPTIONS
O = NONE
A = Exe JUNCTION BOX (6 TERMINALS)
B = Exe JUNCTION BOX (HIGH AMB. TEMP)
C = Exe JUNCTION BOX (HIGH AMBIENT TEMP) & 2" PIPE BRACKET
P = PIPE MOUNTING BRACKET 2")
R = MONITORING RESISTORS

IF MORE THAN ONE OPTION IS REQUIRED IT SHOULD BE WRITTEN AFTER THE PART

P F 5 3 5 F P R 5 1 / B R 3 2 N 3 / S 6 O

CERTIFICATION
PF = ATEX Exd
PI = ATEX Exia
PS = INDUSTRIAL

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

LENGTH OF CABLE
0 = PLUG & SOCKET OR M20 FEMALE
1 = 1 METRE ETC
X = CABLE LENGTH OVER 9 METRES

PROCESS CONNECTIONS
P_53 FEMALE
31N3 = 1/4" BSP.P
32N3 = 1/4" NPT
33N3 = 1/2" BSP.P
34N3 = 1/2" NPT

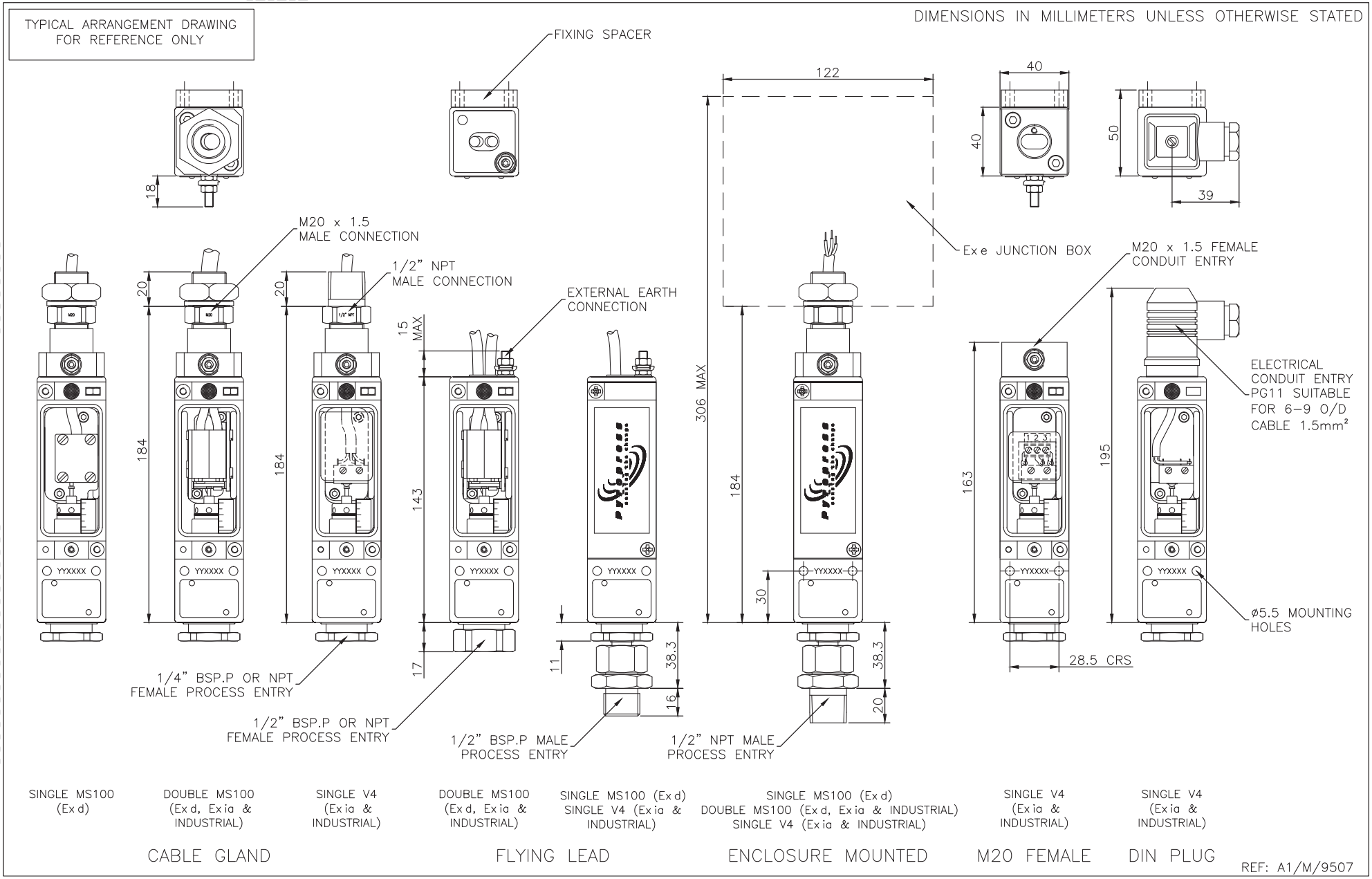
P_54 MALE
41N3 = 1/2" BSP.P
42N3 = 1/2" NPT

PISTON CODE
PLEASE REFER TO RANGE TABLE

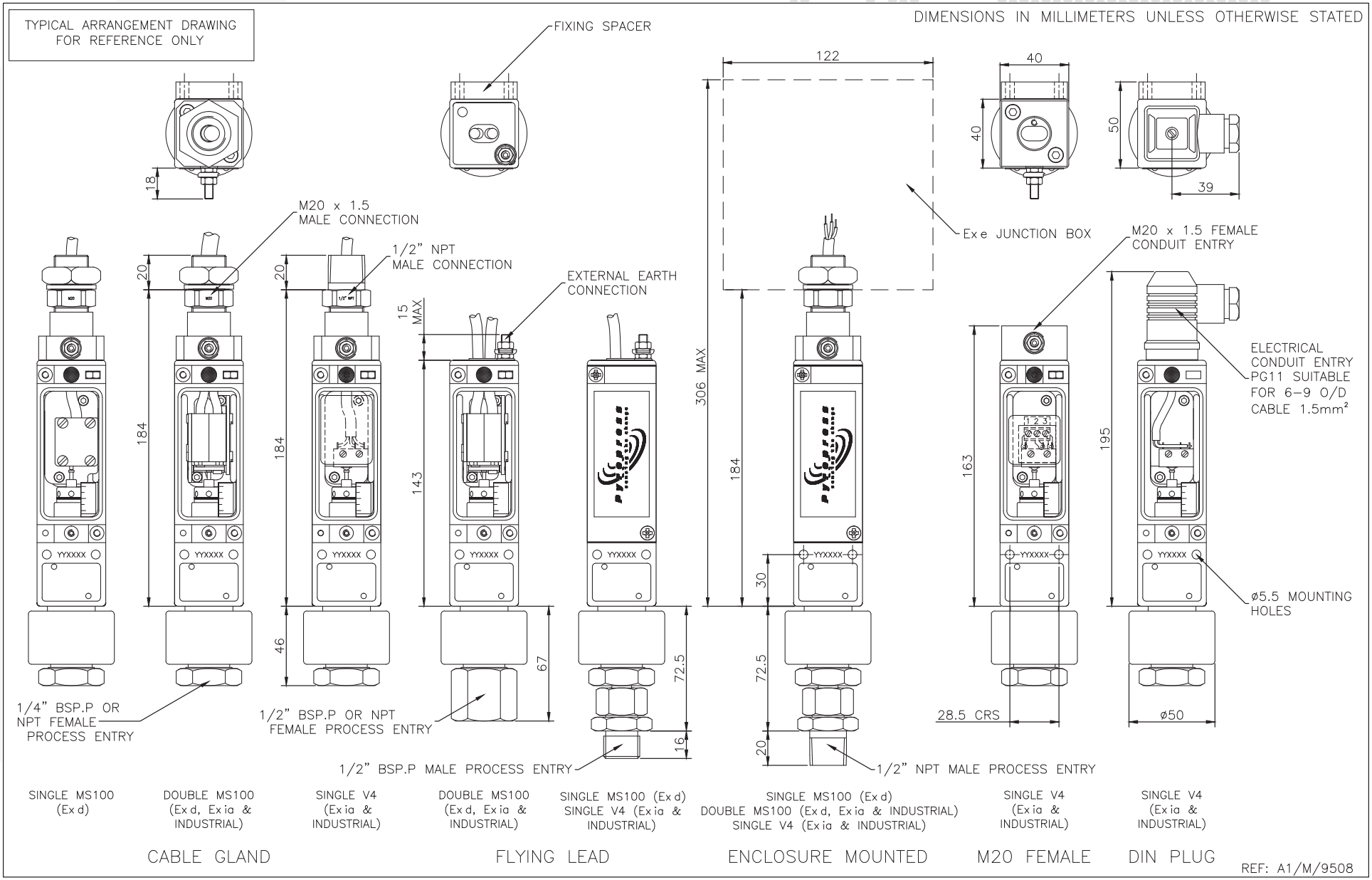
ELECTRICAL CONNECTION
A = 1 or 2, 3 CORE CABLES
R = M20 MALE ST. STEEL*
T = M20 FEMALE (INDUSTRIAL & IS)
P = DIN 43650 PLUG & SOCKET (IS & IND)
S = 1/2" NPT MALE ST. STEEL

*CONNECTION TO BE USED FOR Exe JUNCTION BOX

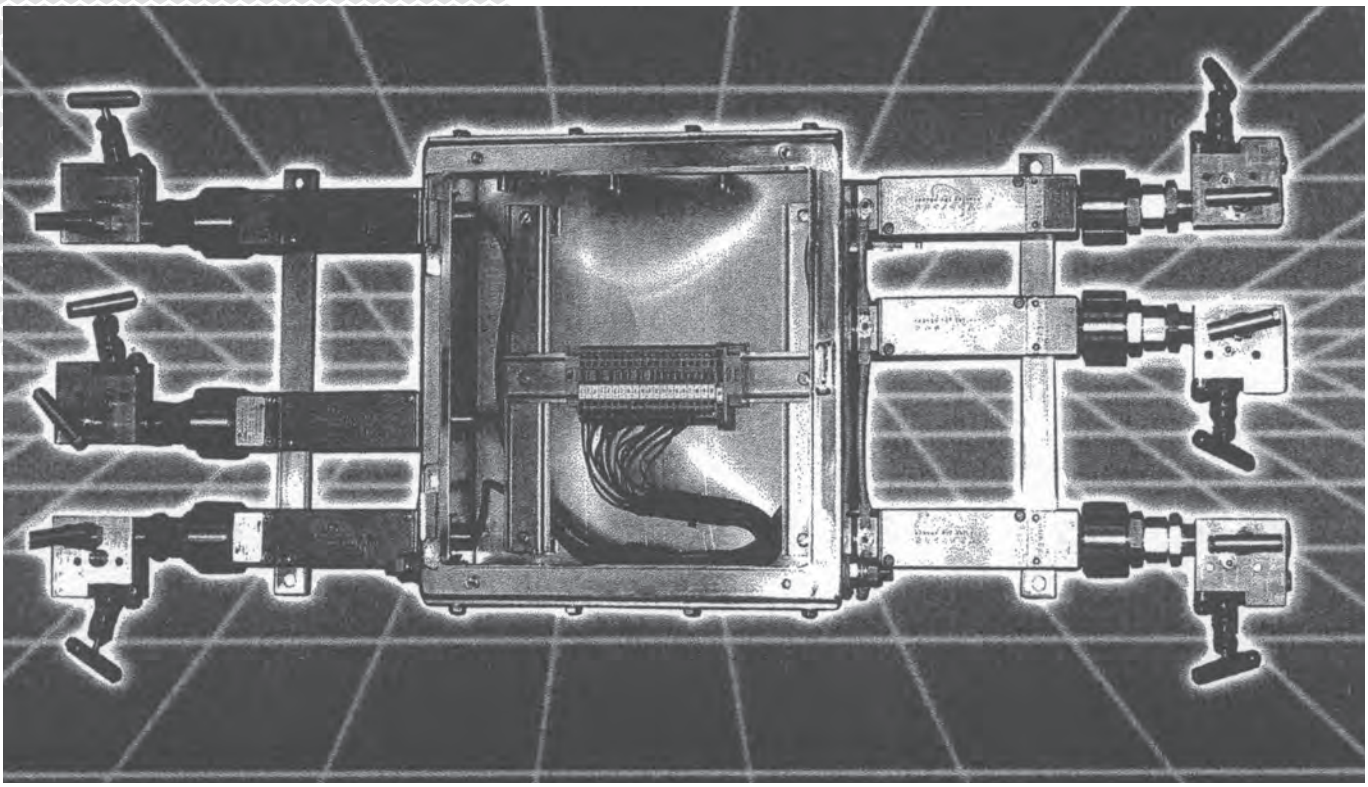
TYPE P510 & P520 ARGUS MEDIUM PRESSURE SWITCH



TYPE P530 & P540 ARGUS HIGH PRESSURE SWITCH



ARGUS SWITCH AND JUNCTION BOX ASSEMBLY



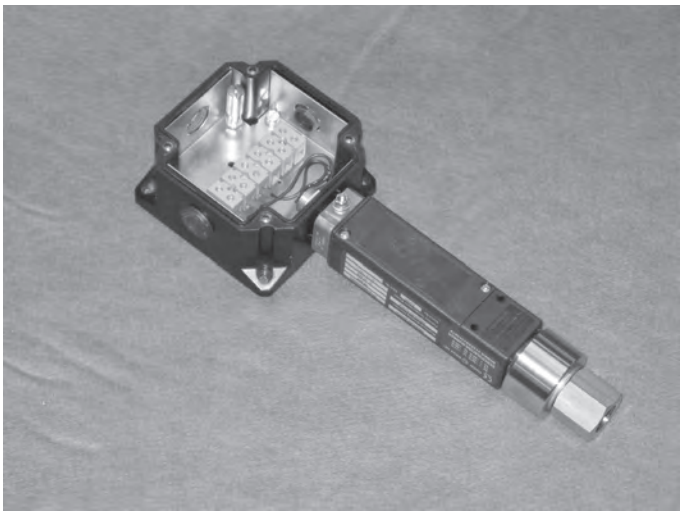
We have extensive experience gained over 50 years of supplying most sectors of industry and believe these custom asssemblies can assist cost saving. A recent example of this was an approach made to us by a leading company from the fire protection sector. They had previously been mounting 6 switches on a bulkhead and individually wiring each switch back to an Exe enclosure via armoured cable and certified cable glands.

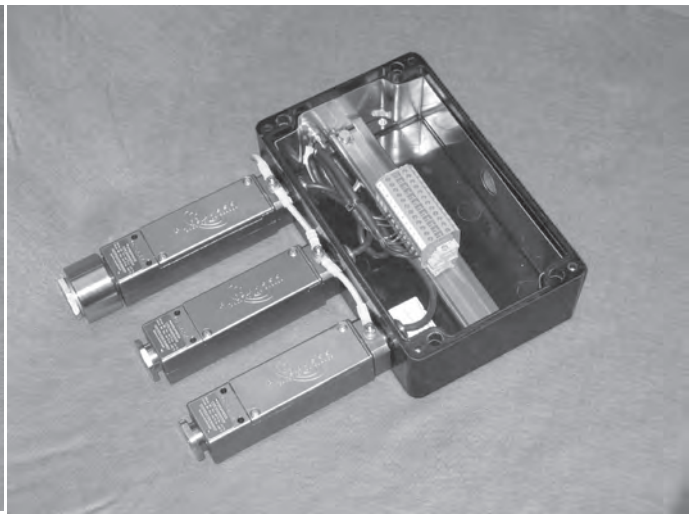
Our solution, which can be seen above, was to supply a stainless steel EExe junction box fitted with 6 x Exd pressure switches. We incorporated manifold valves and supplied a complete wired assembly. This was bolted to a bulkhead and the process connections attached. The concept saved them considerable time as the pressure switches did not require to be individually mounted and wired.

In addition, a single order was placed, when normally separate orders for switches, junction boxes and manifold valves would have been required. Our customer and their inspection authority were so impressed with the initial system that we received an order for 80 sets.

Our experienced engineers work closely with our customers enabling us to maintain our position as a leader in the control and instrumentation field. This close relationship has resulted in switch ranges such as the Argus as well as an expanding range of instrumentation products. We are in a position to offer a full range of switches, indicators and transmitters for industrial or hazardous area applications no matter how arduous.

ARGUS SWITCH AND JUNCTION BOX ASSEMBLY





The Argus range of pressure, temperature, differential pressure, level and flow switches manufactured by Pyropress are now available with EExd and EExia ATEX certification. There is also an industrial version enabling one range of switches to be used for all applications.

Pyropress are offering switch, transmitter and junction box assemblies suited for hazardous area and industrial applications. They are custom designed and are delivered fully assembled and wired. We can also incorporate gauges and manifold valves and additional terminals for other instrumentation.

The Argus range is available with a non corrosive robust PPS (engineering polymer) case or 316 stainless steel, both being certified to IP67 standards of protection. The can be used for high and low ambient temperature between -50 and +128°C. Full details of the complete range can be found in our control sensors booklet or on our website www.pyropress.com.

In keeping with our long standing customer oriented philosophy, the entire organisation constantly strives to improve the effectiveness of our service. Computerised order processing and communication systems plus large stocks of standard and special parts, and a highly skilled workforce ensure that your orders receive prompt attention from initial quotation through to shipment.

A full procurement and project management services ensures a complete turnkey package of equipment and services which can be sought from a single source rather than incurring costs and inconvenience of multiple suppliers.

ARGUS ATEX Exd, Exia & INDUSTRIAL SWITCHES

INTRODUCTION

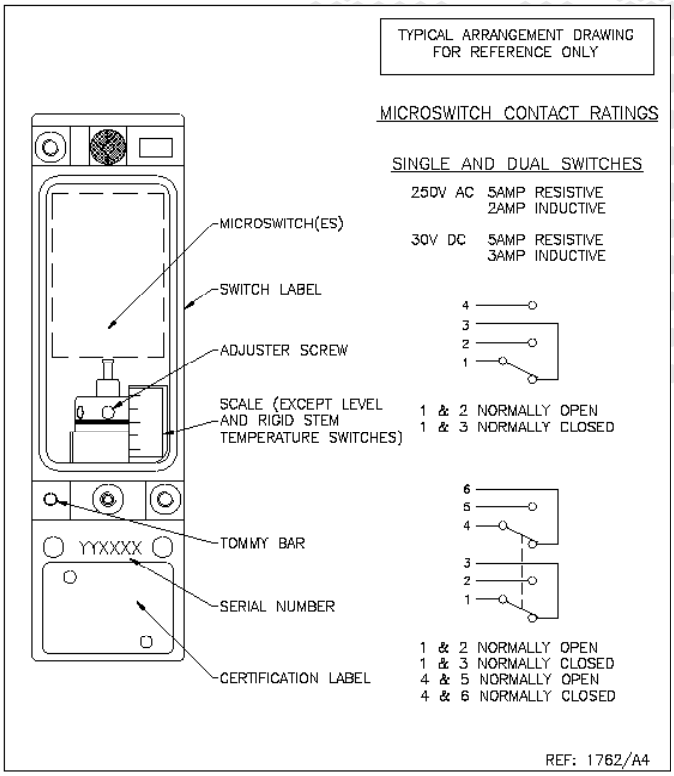
The Argus pressure, differential pressure, temperature, level and flow switches are designed for use in environments where explosive gases and extremes of both high and low ambient temperature can be present (e.g. Gas fields, Oil rigs and Chemical plants etc.) They have been ATEX certified for CAT 1 CE Ex II1G Exia IIC T6,T5 & T4 and CAT 2 CE Ex II2G Exd IIC T6,T5 & T4.

These switches are manufactured from either PPS (engineering polymer) or high quality investment cast 316 stainless steel both offer a robust construction and protection to IP67 for use within heavily polluted industrial and marine environments. These instruments can be adjusted with the power on and the switch in operation. 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. This can be set safely with the switch supply live.

On removal of the adjustment cover the adjusting screw can be turned with the small Tommy bar supplied. 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.



TECHNICAL SPECIFICATION

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

Environmental Protection: Switches have been tested and certified by an external test house to IP67 in accordance with BS EN 60529 : 1992.

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).

Temperature Limitations: Pressure, Vacuum and Differential Pressure.

Ambient: See Exd, Exia or industrial specification on the opposite page.

Process: Diaphragm actuated unless otherwise stated -30 to +110°C (Nitrile) or -20 to +150°C (Viton). Piston actuated -30 to +120°C (Nitrile) or -20 to +150°C (Viton) or -50 to +150°C (PTFE) -30 to +125°C (EPDM).

Storage: -60 to +86°C (For temperature, level and flow switches please refer to specific pages).

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, 3 Amps @ 30 VDC inductive.

INDUSTRIAL AND EXIA DIN PLUG AND SOCKET OR M20 X 1.5 ISO FEMALE

Ambient temp: -40 to +86°C (+125°C special – refer to sales office).

Electrical Connection: DIN 43650 plug and socket suitable for unarmoured cable up to 1.5mm2. Cable OD between 6 and 9mm (PG11) or M20 x 1.5 ISO female.

EXD & EXIA FLYING LEAD CONNECTION

Ambient temp: -50 to +86°C (128°C on Exia – refer to sales office).

Electrical Connection:
Exd – 1 metre of 3 or 6 core 0.75mm2 silicon insulated flying lead via stainless steel ½" NPT or M20 x 1.5 ISO male threaded conduit gland (part no code R & S) or 1 metre of 6.0mm dia 3 core x 0.75mm^2 silicon insulated cable (part no code A). Longer lead lengths can be specified and a range of Exe certified junction boxes can be supplied fitted and wired direct to the switch. The standard Exe box has an ambient temperature range of –40 to +55°C. Higher temperature can be catered for.

Exia - 1 metre of 6.0mm dia 3 core x 0.75mm^2 silicone insulated cable via stainless steel ½" NPT or M20 x 1.5 ISO male threaded conduit gland (part no code R & S) or supplied with no thread (part no code A).

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

Exd Flameproof: ATEX 2014/34/EU coded CE Ex II2G Exd IIC T6 Ta -50 to +71°C,T5 Ta +86°C, T4 Ta +96°C. (Switches to be installed in accordance with EN60079-14). Special conditions for save use. The permanently attached cable associated with the apparatus shall be terminated in accordance with EN60079-14. Appropriate overload protection must be provided during installation. (to be ignored if junction box is fitted).

Exia Intrinsically Safe (without resistors) ATEX 2014/34/EU coded CE Ex II1G Exia IIC T6 Ta –50°C to +78°C, T5 Ta +93°C, T4 Ta +128°C.

Special conditions for save use. (Category 1, Zone 0) Aluminium may only be used when the ignition hazard assessment shows that there is no risk of ignition from incendive, impact or abrasion sparks.

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

Accuracy: +/-1% at 20°C.

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, fluid, flow and level conditions.

HISPACONTROL HC
INSTRUMENTACION INDUSTRIAL
HISPACONTROL S.L.
Pº Delicias 65 Bis
28045 Madrid
Tel. 915 308 552
hc@hispacontrol.com
www.hispacontrol.com

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 a accuracy assuring a reliable and consistent quality product.