

DIFFERENTIAL PRESSURE, LOW PRESSURE & VACUUM

316 stainless steel or PPS engineering polymer switchcase to IP67 standards.

Calibrated adjustment scale.

Settings from 2 mBar to 12 Bar

Single or dual microswitch option.

Wetted parts NACE MR-01-75 compliant.

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 I.S. Option

CE  II1G Exia IIC T6

T6 Tamb -50 to +78°C

T5 Tamb -50 to +93°C

T4 Tamb -50 to +128°C

D560, D590, P560 & V560 ARGUS ATEX Exd, Exia & INDUSTRIAL DIFFERENTIAL PRESSURE SWITCH, LOW PRESSURE AND VACUUM SWITCH



(For resistor certification please refer to page 67)

These switches have been designed to suit applications where differential pressures are to be sensed. The Argus provides very competitively priced, lightweight and durable instrumentation. For specification and introduction to the Argus switch range refer to pages 66 and 67.

D560 DIFFERENTIAL PRESSURE, LOW PRESSURE AND VACUUM RANGES

△ 3.5 BAR OPTION AVAILABLE

ADJUSTMENT RANGE (BAR) *MBAR	ADJUSTMENT RANGE (PSI) * "WG	MAX WORKING PRESSURE (BAR) DIAPHRAGM MAT		DEADBAND FIXED (BAR) *MBAR DIAPHRAGM MAT.		DIAPHRAGM CODE	SPRING CODE
		One side	Equalised	NITRILE	VITON		
2.5 - 8.0	15 - 115	14	28	<1.5	<2.0	01N	B
1.4 - 5.4	20 - 80	14	28	<0.4	<0.5	01N	R
0.2 - 2.2	3 - 30	14	28	<0.18	<0.25	01N	T
0.1 - 1.1	2 - 16	7	10	*<80	*<100	03N	B
*50 - 500	*20 - 200	7	10	*<40	*<60	03N	T
*15 - 50	*6 - 20	0.35	0.5 △	*<5	*<7	08N	R
*2 - 38	*1 - 15	0.35	0.5 △	*<4	*<6	08N	T

D590 HIGH STATIC DIFFERENTIAL PRESSURE RANGES

STAINLESS STEEL SWITCHCASE ONLY

ADJUSTMENT RANGE (BAR)	ADJUSTMENT RANGE (PSI)	MAX WORKING PRESSURE (BAR)	DEADBAND-FIXED (BAR) VITON ONLY	DIAPHRAGM CODE	SPRING CODE
2 - 12	30 - 180	140	<1.5	25N	B

For detailed drawing of diaphragm code 01N please refer to page 79

For detailed drawing of diaphragm code 02N & 03N please refer to drawing on page 80

For detailed drawing of diaphragm code 08N please refer to page 81

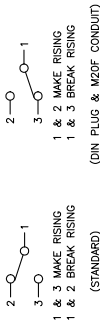
For detailed drawing of piston code 25N please refer to drawing on page 82

TYPE D560 ARGUS, DIFFERENTIAL PRESSURE, LOW PRESSURE & VACUUM SWITCH (DIAPHRAGM CODES 02N 03N)

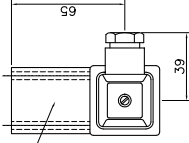
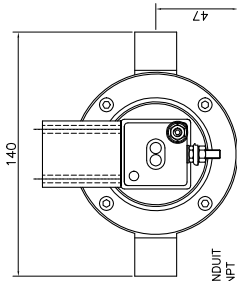
TYPICAL ARRANGEMENT DRAWING FOR REFERENCE ONLY

DIFFERENTIAL PRESSURE: PIPE TO BOTH ENTRIES
 LOW PRESSURE: PIPE TO HP. VENTED PLUG IN LP
 VACUUM: PIPE TO LP. VENTED PLUG IN HP

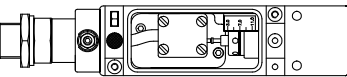
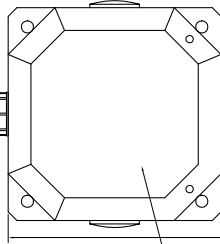
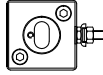
MICROSWITCH CONTACTS



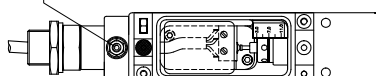
(DIMENSIONS IN MILLIMETRES)



FIXING SPACER



201



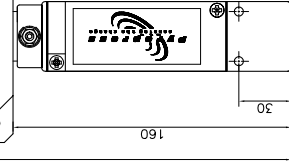
EXTERNAL EARTH CONNECTION

143

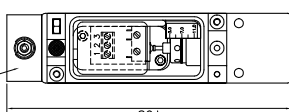


Exe TERMINAL BOX

282

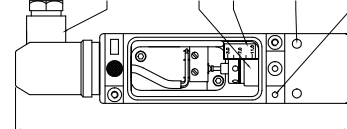


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M20 FEMALE CONDUIT

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ELECTRICAL CONDUIT
 PG. 11 SUITABLE
 FOR O/D. 6-9
 CABLE 1.5mm²

ADJUSTER SCREW

OPTIONAL ADJUSTMENT SCALE

MOUNTING HOLES SUITABLE FOR MS FASTENINGS

TOMMY BAR

ELECTRICAL CONDUIT
 M20 or 1/2" NPT

LOW PRESSURE
 1/2" BSP or NPT
 FEMALE ENTRY

HIGH PRESSURE
 1/2" BSP or NPT
 FEMALE ENTRY

SINGLE MS100
 (Exd)

DOUBLE MS100
 (Exd, Exia &
 INDUSTRIAL)

SINGLE V4
 (Exia &
 INDUSTRIAL)

DOUBLE MS100
 (Exd, Exia &
 INDUSTRIAL)

SINGLE V4
 (Exia &
 INDUSTRIAL)

SINGLE MS100 (Exd)
 DOUBLE MS100 (Exd, Exia &
 INDUSTRIAL)
 SINGLE V4 (Exia & INDUSTRIAL)

SINGLE V4
 (Exia &
 INDUSTRIAL)

SINGLE V4
 (Exia &
 INDUSTRIAL)

SINGLE V4
 (Exia &
 INDUSTRIAL)

CABLE GLAND

FLYING LEAD

ENCLOSURE MOUNTED

M20 CONDUIT

DIN PLUG

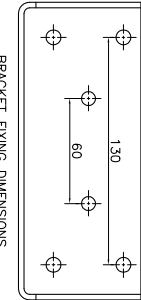
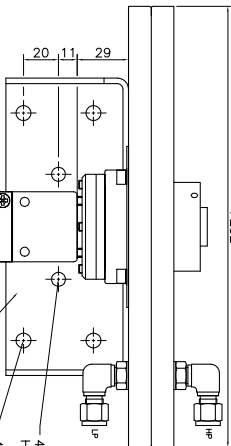
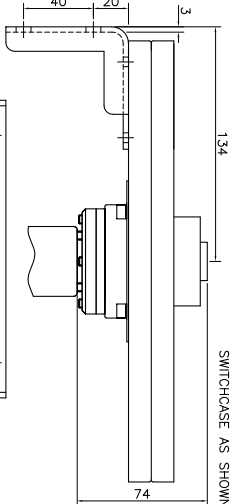
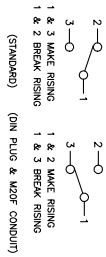
TYPE D560 ARGUS DIFFERENTIAL PRESSURE, LOW PRESSURE & VACUUM SWITCH (DIAPHRAGM CODES 08N)

TYPICAL ARRANGEMENT DRAWING
FOR REFERENCE ONLY

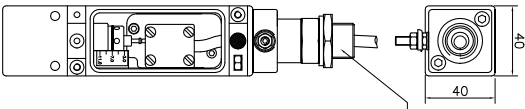
NOTE: PLATES TO BE MOUNTED
HORIZONTALLY AND ABOVE THE
SWITCHCASE AS SHOWN

(DIMENSIONS IN MILLIMETRES)

MICROSWITCH CONTACTS

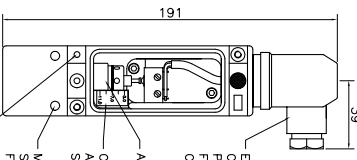
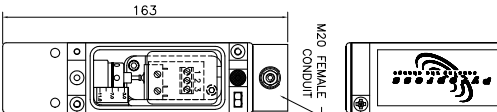
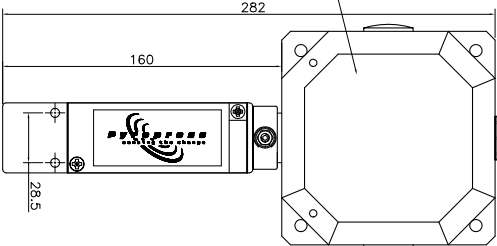
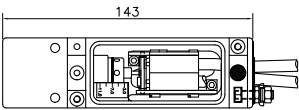
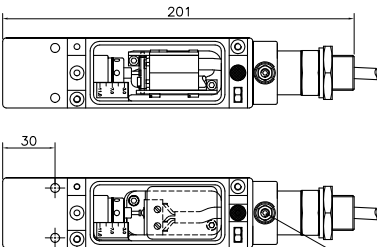


ELECTRICAL CONDUIT
M20 or 1/2" NPT



EXTERNAL EARTH
CONNECTION

EYE TERMINAL BOX



ELECTRICAL
CONDUIT
PG 11 SUITABLE
FOR 0/0, 6-9
CABLE 1.5mm²

ADJUSTER SCREW
OPTIONAL
SCALE
ADJUSTMENT

MOUNTING HOLES
SUITABLE FOR M5
FASTENINGS

TOMMY BAR

SINGLE M5100
(Exd)

DOUBLE M5100
(Exd, Exia &
INDUSTRIAL)

SINGLE V4
(Exia &
INDUSTRIAL)

DOUBLE M5100
(Exd, Exia &
INDUSTRIAL)

SINGLE M5100 (Exd)
SINGLE V4 (Exia &
INDUSTRIAL)

SINGLE M5100 (Exd)
DOUBLE M5100 (Exd, Exia &
INDUSTRIAL)
SINGLE V4 (Exia &
INDUSTRIAL)

SINGLE V4
(Exia &
INDUSTRIAL)

SINGLE V4
(Exia &
INDUSTRIAL)

CABLE GLAND

FLYING LEAD

ENCLOSURE MOUNTED

M20 CONDUIT

DIN PLUG

ARGUS ATEX Exd, Exia & INDUSTRIAL SWITCHES

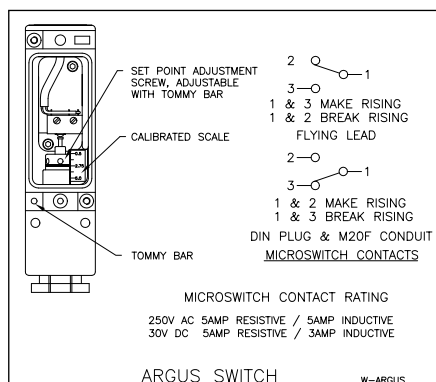
INTRODUCTION

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.

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 calibrated 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 -50 to +90°C (Nitrile) or -20 to +150°C (Viton). Piston actuated -40 to +120°C (Nitrile) or -20 to +150°C (Viton).

Storage unless otherwise stated : -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 and 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 upto 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 0.75mm² 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 0.75mm² silicon 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 and marked in accordance with the following EU directives

Exd Flameproof : 94/9/EC ATEX 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 safe 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) 94/9/EC ATEX coded CE Ex II1G Exia IIC T6 Ta -50°C to +78°C, T5 Ta +93°C, T4 Ta +128°C

Exia Intrinsically Safe (with resistors) 94/9/EC ATEX coded CE Ex II1G Exia IIC T5 Ta -50°C to +72°C, T4 Ta +122°C

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

Industrial : 2006/95/EC (Low voltage directive)

Accuracy : +/-1% at 20°C



Exd

Exia

Exia

○ PYROPRESS
TCF1020 PLYMOUTH ENGLAND IP67
Type: ARGUS

CE Ex II2G Exd IIC

0359 T6 Tamb -50°C to +71°C
T5 Tamb -50°C to +86°C
T4 Tamb -50°C to +96°C

EPSILON 07 ATEX 2319X ○
AC 250V 5A DC 30V 5A

○ PYROPRESS
Type: ARGUS

CE Ex II1G Exia IIC

0359 T6 Tamb -50°C to +78°C
T5 Tamb -50°C to +93°C
T4 Tamb -50°C to +128°C

EPSILON 07 ATEX 2258X

Ui:28v Ii:93mA Ci:0nF Li:0mH Pi:0.65W

MAXIMUM COMBINED INPUT FOR ○
SINGLE AND DUAL SWITCH APPLICATIONS

○ PYROPRESS
Type: ARGUS/R

CE Ex II1G Exia IIC

0359

T5 Tamb -50°C to +72°C
T4 Tamb -50°C to +122°C

EPSILON 07 ATEX 2258X ○

Ui:28v Ii:93mA Ci:0nF Li:0mH Pi:0.65W

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