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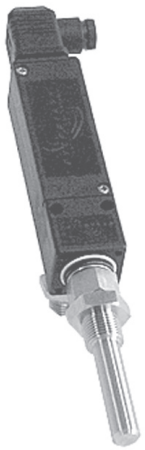
ARGUS

LOW - MEDIUM - HIGH TEMPERATURE

T510 & T520 ARGUS ATEX/IECEx, Exia CERTIFIED & INDUSTRIAL TEMPERATURE SWITCH

The standard range represents the basic models to cover temperature application spanning -10 to +240°C. The T510 is supplied fitted with a threaded thermowell, the T520 has no thermowell but is supplied with a threaded stem. Dual microswitch option is available for simultaneous switching.



TEMPERATURE RIGID

FEATURES

- 316 stainless steel or PPS engineering polymer switchcase to IP66/IP67 standards.
- internal adjustment scale.
- Settings from -10 to +240˚C
- Single or dual microswitch option.
- SIL 2 - IEC 61508 proven reliability
- 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
- Wetted parts NACE MR-01-75 option.

SPECIFICATION

Thermowell and stem material :
316 stainless steel
Max working pressure :
35 bar - standard
420 bar - high pressure

Thermowells can be provided flanged or screwed to suit the application. All exotic metals can be catered for. Material certificates and wake frequency vibration analysis calculations can be provided.

ADJUSTMENT RANGE (°C)	MAXIMUM TEMPERATURE (°C)	DEADBAND - FIXED WITH THERMOWELL (°C)	TEMPERATURE ELEMENT CODE	THERMOWELL "U" DIMENSIONS IN mm
-10 TO +30	80	<10	L1	38, 45, 50, 60*, 75*, 100, 125, 150, 175, 200, 225, 250, 300, 350, 400, 600, 660, 800, 1000 & 1200 *STANDARD LENGTHS ** H code available with stainless steel case only
20 TO 60	110	<10	M1	
50 TO 90	140	<10	M2	
80 TO 120	170	<10	M3	
110 TO 150	200	<10	M4	
140 TO 180	230	<10	H1**	
170 TO 210	260	<10	H2**	
200 TO 240	260	<10	H3**	

Repeatability : +/-1.5% of range (at ambient temperatures up to 40˚C)

Calibration rate : 2˚C per minute rate of change.

PART NUMBER BREAKDOWN

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

MOUNTING
51 = WITH THERMOWELL
52 = LESS THERMOWELL

"U" DIMENSION
REFER TO TABLE

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
D = EExe JUNCTION BOX (3 TERMINALS)
P = PIPE MOUNTING BRACKET 2"
IF MORE THAN ONE OPTION IS REQUIRED IT SHOULD BE WRITTEN AFTER THE PART NUMBER

T S 5 1 1 S P R 1 1 / 0 6 0 M 3 / P A 1 0

CERTIFICATION
TI = ATEX/IECEx EExia
TS = INDUSTRIAL

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

LENGTH OF CABLE
0 = DINPLUG, M20 FEMALE OR M12 MALE
1 = 1 METRE ETC
X = CABLE LENGTH OVER 9 METRES

TEMPERATURE ELEMENT CODE
REFER TO TABLE ABOVE

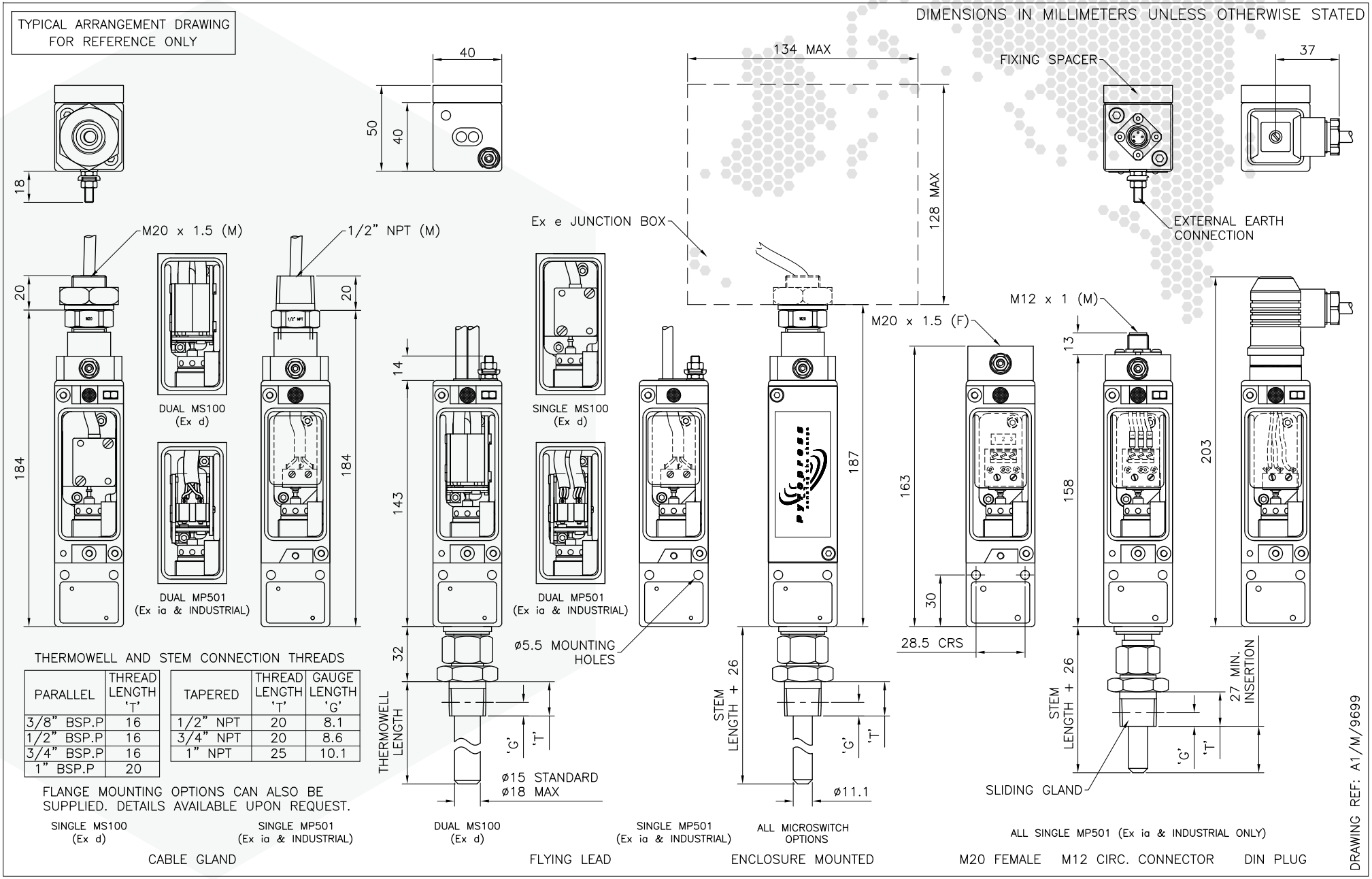
P = WITH THERMOWELL
S = LESS THERMOWELL

THERMOWELL STEM
1 = 316 ST. ST
4 = HIGH PRESS
0 = SPECIAL CONNECTION (FLANGED THERMOWELL OR BRACKET MOUNTED)
8 = SLIDING GLAND
9 = BRACKET MOUNTED

ELECTRICAL CONNECTION
A = 1 or 2, 3 CORE CABLES
R = M20 MALE ST. STEEL
P = DIN EN 175301-803-A PLUG & SOCKET (WAS DIN 43650)
T = M20 FEMALE
L = M12x1 CIRCULAR CONNECTOR
S = 1/2" NPT MALE ST. STEEL

PROCESS CONNECTION
A = 1/2" BSP.P
B = 1/2" NPT
C = 3/8" BSP.P
D = 3/4" BSP.P
E = 3/4" NPT
F = 1" BSP.P
G = 1" NPT
O = SPECIAL CONNECTION (FLANGED THERMOWELL OR BRACKET MOUNTED)

TYPE T510 & T520 ARGUS RIGID STEM TEMPERATURE SWITCH



ARGUS ATEX/IECEx Exia & INDUSTRIAL SWITCHES

INTRODUCTION

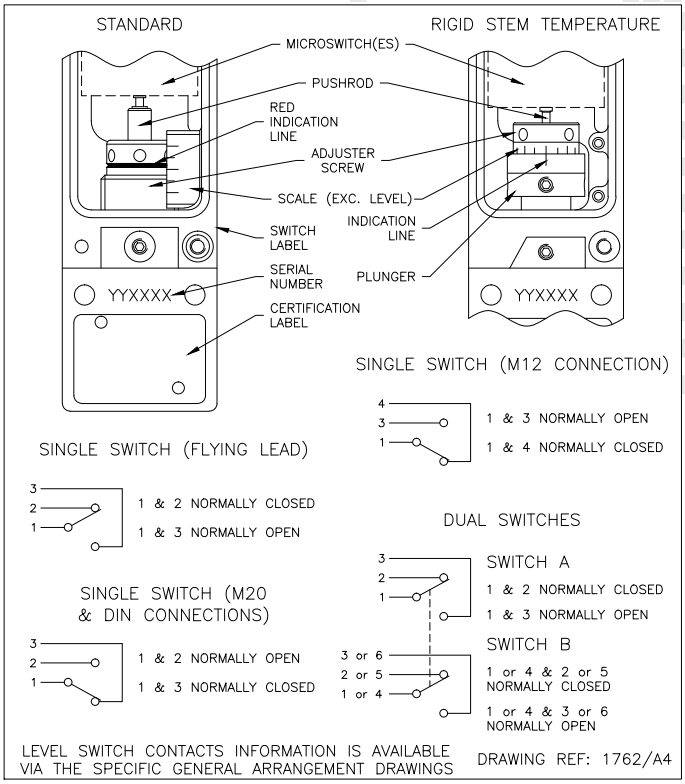
The Argus pressure, differential pressure, temperature, level and flow switches are designed for use in environments where explosive gases and extremes of both high and low ambient temperature can be present (e.g. gas fields, oil rigs and chemical plants etc.) They have been ATEX & IECEx certified suitable for CAT 1 CE Ex II1G Exia IIC 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 (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

Rigid stem switches.

Process temperature: -20°C to maximum shown on range table dependant on range selected.
Ambient temperature:
Ranges L1, M1, M2, M3 and M4: -40 to +85°C. Range H1: -40 to +80°C, Range H2 & H3: -40 to +75°C, (-50°C & +125°C options – refer to sales office).
Storage temperature: -20 to +85°C
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.

https://fluidic-ltd.co.uk
sales@fluidic-ltd.co.uk