


## LOW - MEDIUM - HIGH TEMPERATURE

Black anodised aluminium switchcase and covers to IP65 standards.

Temperature Settings from -10 to 250°C.

Dual microswitch

ATEX Certified  
 CE  II2G Exd IIC  
 T6 Tamb -50 to +71°C  
 T5 Tamb -50 to +86°C  
 T4 Tamb -50 to +96°C

## TF169 & TF170 TROJAN ATEX EExd CERTIFIED TEMPERATURE SWITCH



The standard range represents the basic models to cover temperature application spanning -40 to +230°C. The TF169 is supplied fitted with a screwed thermowell, the TF170 has no thermowell but is supplied with a screwed stem. For specification and introduction to the Trojan range refer to pages 96 & 97.

ADJUSTMENT RANGE (°C)	MAXIMUM TEMPERATURE (°C)	DEADBAND-FIXED (°C)	TEMPERATURE CODE	THERMOWELL "U" DIMENSIONS IN MM
- 10 TO + 40	100	<4	LT	38, 45, 50, 60*
0 TO 50	100	<4	LT	75*, 100, 125,
25 TO 75	125	<4	MT	150, 175, 200,
50 TO 100	150	<4	MT	225, 250, 300,
75 TO 125	175	<8	MT	350, 400, 600,
100 TO 150	200	<8	MT	660, 800, 1000,
125 TO 175	200	<8	MT	& 1200
150 TO 200	250	<12	HT	* STANDARD
175 TO 225	280	<12	HT	LENGTHS
200 TO 250	280	<12	HT	

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


**Thermowell and stem material :** 316 Stainless steel  
**Max working pressure :** 35 Bar standard, 420 Bar high pressure

**Repeatability :** +/-1.5% of range (at operating temperature up to 40°C)  
**Temperature limitations :** Ambient : -30 to +85°C, Storage : -60 to +80°C  
**Calibration rate :** 2°C per minute rate of change



# TROJAN ATEX EExd SWITCHES

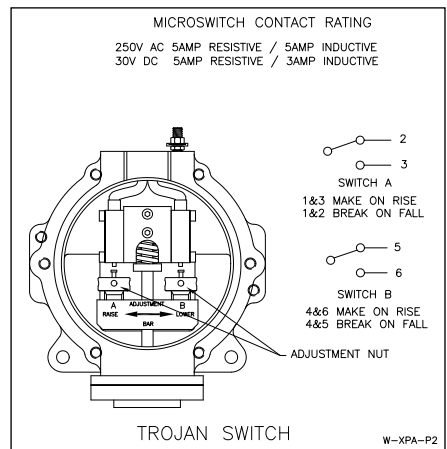
## INTRODUCTION

The Trojan **pressure, temperature and flow** switches are designed for use in environments where explosive gases, dusts 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 2 CE  II2GD Exd IIC T6, T5 & T4 and have an ATEX Exe IIC terminal housing.

These switches are manufactured from black anodised aluminium offering a robust construction and protection to IP65 for use within heavily polluted industrial and marine environments. These instruments can be adjusted with the power on and the switch in operation. Switches must be installed in accordance with BS EN 60079-14.

## CALIBRATION

On removal of the adjustment cover both operating points can be changed. This can be carried out with the power on and the instrument in operation. To change the setting the adjuster screw for the relative microswitch can be rotated with a 3mm diameter pin. 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. These switches can either be supplied set to customers specific requirements or set to a mid range point and then adjusted to suit the application with the use of an external indicating device.



When we are requested to supply switches set at a specific point we can guarantee setting accuracy of less than 2%.

## SPECIFICATIONS

**Switchcase and covers** : Black anodised aluminium with glass reinforced polyester junction box.

**Environmental Protection** : IP65

**Temperature Limitations :** Pressure switch.

**Ambient :** This is limited by the EExe junction box -40 to +55°C for the standard and +90°C for the special high temperature version.

**Process :** Diaphragm actuated -20 to +150°C Viton.

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

**Storage :** -60 to +80°C

(For temperature and flow switches please refer to specific pages)

**Certification :** All switches are CE certified and marked in accordance with the following EU directives

EExd : 94/9/EC ATEX coded CE Ex II2GD EExd IIC for CAT 2 (Zone 1) areas

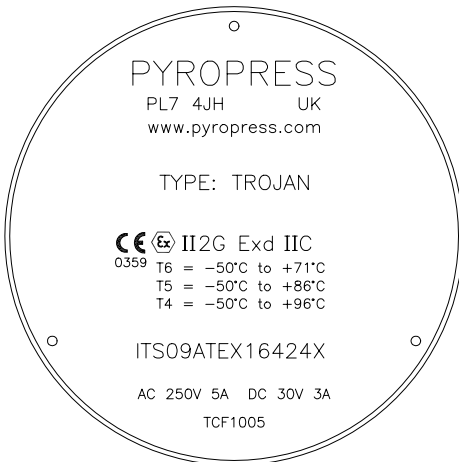
**Accuracy :** 1% at 20°C, Setting accuracy 2%

**Microswitch :** 2 x SPCO/SPDT independently adjustable

**Microswitch rating :** 5 Amps @ 250 VAC resistive and inductive

5 Amps @ 30VDC resistive, 3 Amps @ 30 VDC inductive

**Electrical Connection :** Via Exe certified junction box with 3 x M20 x 1.5 ISO entries and 2 x Exe certified blanking plugs



STANDARD LABEL



The Pyropress Engineering Company Ltd.  
Bell Close, Newnham Industrial Estate,  
Plympton, Plymouth. Devon PL7 4JH England.  
Tel: +44 (0)1752 339866  
Fax: +44 (0)1752 336681  
E-mail: sales@pyropress.com  
Website: www.pyropress.com  
Revision: D 04/10