


Smart Positioner Series FTC-I FasTrak Compact

SAFETY MANUAL 9031
INSTRUCTIONS - INSTALLATION, USE AND MAINTENANCE
ADDITIONAL INSTRUCTIONS 4049(Ex)/IST




*Engineering
GREAT Solutions*


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STI S.r.l. has taken every care in collecting and verifying the documentation contained in this Instruction Manual. The information herein contained are reserved property of STI S.r.l.

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- The laptop used must be powered from battery or by a power supply unit in compliance with IEC 60950-1 with Maximum Output Voltage (U_m) \leq 30V.

Warning

 In case of “minimum ambient temperature” below -40°C, the optional FEEDBACK cannot be connected and the jumpers on the PCB FTCompact-PW, for internal circuit connection, must be removed by the User.

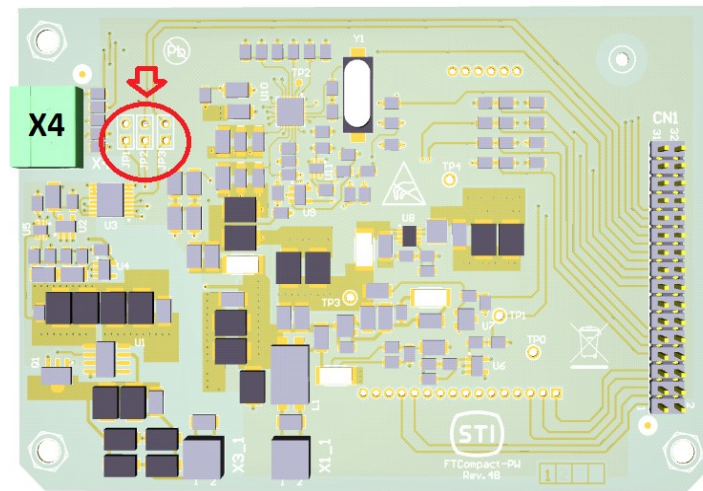




Figure 2 – FTC-I electric circuit

Warning

 Highlighted in the red circle are the jumpers (JP1, JP2 and JP3) that must be removed to exclude the feedback circuit when the minimum temperature can be below -40°C.

Important

 Positioners series FTC-lxxxxxx are designed and certified in conformity to the European Directive 2014/34/EU, and according to the International IECEx Scheme.

The Positioners shall be connected to 1 or 2 [Ex ia] or [Ex ib] Associated Apparatus (Diode Safety Barrier or Galvanic Isolator), in compliance with the maximum voltage (U_i), current (I_i) and power (P_i) values stated in the label (see "Rated characteristics"). In both cases the Positioner can be installed in Zone 1 (or Zone 2), but when the whole system has "ib" protection level, the Positioner shall not be used to modulate natural gas (CH_4). In case the system has "ic" protection level, the Positioner may be installed only in Zone 2 and, of course, it cannot be used to modulate natural gas (CH_4).

The Positioner shall be installed in compliance with EN IEC 60079-14 Standard (current Issue) and any inspection maintenance shall be carried out following the provisions of EN IEC 60079-17 Standard (current Issue); all Intrinsically Safe circuits shall be included in Descriptive System Documents (EN IEC 60079-14, art. 4.2 and EN IEC 60079-25, art. 4).

2 RATED CHARACTERISTICS

Rated Characteristics	
Input signal	4 ÷ 20 mA
Air supply pressure	2.5 ÷ 10 bar (7 bar max. when Methane is used)
Type of protection	Ex ia IIC TX (*) Gb
ATEX Code	II 2G
Safety Parameters (identical for both channels)	
Ui (maximum voltage)	30 Vdc
Ii (maximum current)	120 mA
Pi (maximum power)	650 mW
Li (internal inductance)	Negligible
Ci ((internal capacitance)	15 nF
Ambient temperature (Ta)	-55°C to +80°C (but limited to -40°C minimum when FEEDBACK circuit is connected)

(*) X = Temperature Class vs. T_{max} : 60°C = T5 ; 80°C = T4



Figure 3 – FTC-I Smart Positioner

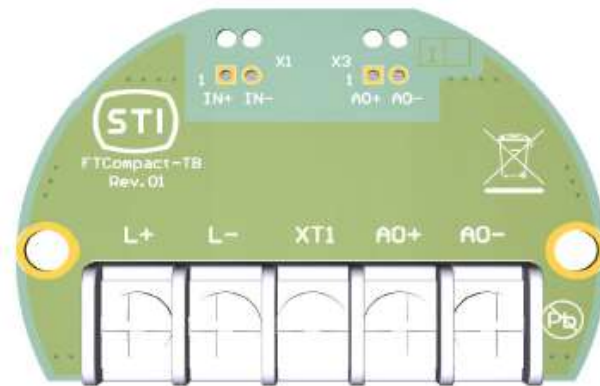



Figure 4 – FTC-I Terminal Board XT1

L+ & L-	Power connection (from Associated Apparatus)
AO+ & AO-	Optional Analogue Output (to Associated Apparatus)
Central terminal	Earth / Ground


3 COMMISSIONING

1. Before commissioning a safe electrical equipment, in a system or plant, the user shall check its compliance with the design data and its correct installation. An Initial Inspection shall be carried out by suitably qualified personnel, according to the requirements of the Standard EN IEC 60079-17 (current Issue).
2. Verify that any special conditions for safe use, detailed on the EU Type Examination Certificate or on the IECEx Certificate of Conformity, are complied with, paying special attention to the installation conditions, if any.
3. Check that the Positioner supplied is suitable for the specific hazardous area classification (Zone 1 or Zone 2, gas group IIA, IIB, or IIC, according to the System Protection Level).

<p>Warning</p> 	<p>The Device is NOT suitable neither for zone 0 nor for Locations with Combustible Dusts.</p>
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4. Verify that the temperature class, marked on the Positioner, is correct for the area classification, according to the actual ambient temperature.
5. Check that the Positioner is connected to the Associated Apparatus (1 per channel) provided for in the corresponding Descriptive System Document.

4 MAINTENANCE

<p>Warning</p> 	<p>The following instructions must be respected:</p> <ol style="list-style-type: none">1. Maintenance shall be carried out by suitably qualified personnel only, trained in the specific features of the equipment, and on the Intrinsic Safety technique, in compliance with the provisions of the Standard EN IEC 60079-19 (current Issue). The replacement of any part of the Positioner series FTC-I shall be done only with original parts supplied by STI S.r.l.2. Periodic Inspections shall be carried out, by suitably qualified personnel, in compliance with the provisions of the Standard EN IEC 60079-17 (current Issue).3. The replacement of any part of the Positioner series FTC-I shall be done with original parts supplied by STI S.r.l.4. The use of Positioners that have undergone work not authorized by STI S.r.l. absolves STI S.r.l. from all liability and invalidates the relative warranty.
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