

# 725Ex Multifunction Process Calibrator

CSA: IS Class I; Div 1;  
Groups B-D T = 171 °C  
AEx ia IIB, T = 171 °C  
Ta = -10 °C... +55 °C

## Entity Parameters:

### Input Entity Parameters:

All Inputs: J1-J2, J3-J4, J5-J6, J7-J8:  
U<sub>i</sub> = 30 V, I<sub>i</sub> = 100 mA  
P<sub>i</sub> = 750 mW, L<sub>i</sub> = 0 mH

J1-J2: C<sub>i</sub> = 0.01 uF

J3-J4: C<sub>i</sub> = 0 uF

J5-J6: C<sub>i</sub> = 0.01 uF

J7-J8: C<sub>i</sub> = 0 uF

## Entity Parameters:

J1-J2: U<sub>o</sub> = 13.7 V, I<sub>o</sub> = 96.5 mA, P<sub>o</sub> = 331 mW

J3-J4: U<sub>o</sub> = 13.6 V, I<sub>o</sub> = 25.2 mA, P<sub>o</sub> = 86 mW

J5-J6: U<sub>o</sub> = 13.7 V, I<sub>o</sub> = 26 mA, P<sub>o</sub> = 90 mW

J7-J8: U<sub>o</sub> = 13.7 V, I<sub>o</sub> = 76 mA, P<sub>o</sub> = 261 mW

| Terminals | Co (uF) |            |            | Lo (mH) |            |            |
|-----------|---------|------------|------------|---------|------------|------------|
|           | Grp B   | IIB, Grp C | IIA, Grp D | Grp B   | IIB, Grp C | IIA, Grp D |
| J1-J2     | 1.0     | 5.0        | 18.1       | 4.0     | 16.0       | 32.0       |
| J3-J4     | 1.0     | 5.2        | 18.6       | 50.0    | 200.0      | 400.0      |
| J5-J6     | 1.0     | 5.0        | 18.1       | 50.0    | 200.0      | 400.0      |
| J7-J8     | 1.0     | 5.0        | 18.1       | 6.1     | 22.0       | 45.0       |

## NOTES:

- Connections to an Intrinsically Safe Apparatus/Associated Apparatus/Loop must be in accordance with notes 2 thru 5.
- Intrinsic Safety Entity Concept: The Intrinsic Safety Entity Concept allows the interconnection of two or more Approved Intrinsically Safe devices or Associated Apparatus with entity parameters not specifically examined in combination as a system when:  
U<sub>o</sub> or V<sub>oc</sub> or V<sub>t</sub> ≤ V<sub>max</sub> or U<sub>i</sub>  
I<sub>o</sub> or I<sub>sc</sub> or I<sub>t</sub> ≤ I<sub>max</sub> or I<sub>i</sub>  
C<sub>a</sub> or C<sub>o</sub> ≥ C<sub>i</sub> + C<sub>cable</sub>  
L<sub>a</sub> or L<sub>o</sub> ≥ L<sub>i</sub> + L<sub>cable</sub>  
P<sub>o</sub> ≤ P<sub>i</sub>
- Installation must be in accordance with Article 500 or Article 505 of the NEC (ANSI/NFPA70) and ANSI/ISA RP12.6 or equivalent. Installation in Canada should be in accordance with the Canadian Electrical Code, CSA C22.1, Part I.
- The Fluke 725Ex Multifunction Process Calibrator may only be connected to terminals with compatible entity parameters except as indicated in Note 2 and must not be connected to internal circuitry of Associated Apparatus or Intrinsically Safe Apparatus. Failure to comply with this rule violates approval.
- Applying more than 30 V or 100 mA to the input terminals invalidates the Calibrator's Ex Approval and may damage the unit. Immediately remove the unit from the Ex hazardous area and contact a Fluke Service Center. Control equipment connected to the Associated Apparatus must not use or generate more than 250 Vrms or V dc.
- Examples of a simple apparatus are switch, TC, RTD and connector.
- Refer to the 725Ex Users Manual for additional safety information.
- No revision to this drawing is permitted without approval from CSA and SIR.

UNCLASSIFIED AREA OR AREAS  
CLASSIFIED AS ZONE 0 OR CLASS I,  
DIV 1, GROUPS B, C, D

THE CONNECTIONS SHOWN FOR J1-J6  
JACKS CAN BE USED SIMULTANEOUSLY  
WITH ANY CONNECTION SHOWN FOR J7-J8  
JACKS

**ONLY CONNECTIONS SPECIFIED ON  
THIS DRAWING ARE ALLOWED. OTHER  
CONNECTIONS MAY INVALIDATE INTRINSIC  
SAFETY**

