



"Your Direct Source for Condition Monitoring, Test & Measurement"

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Intrinsically-Safe Multifunction Process Calibrator 725Ex

Simply powerful intrinsically-safe calibration tool

The 725Ex Intrinsically-Safe Multifunction Process Calibrator is powerful yet easy-to-use. Combined with the 700PEX Pressure Modules, the calibrator is able to calibrate almost any process instrument likely to need service in an ex-hazardous area.

The device is a powerful, multifunction calibration solution that offers:

- Measure volts dc, mA, RTDs, thermocouples, frequency and ohms
- Source or simulate volts dc, mA, RTDs, thermocouples, frequency and ohms
- Two channel simultaneous source and measure capability for calibration of transmitters

- Power transmitters with internal loop supply
- Store frequently-used test setups for later use
- Pressure measurement to 3,000 psi/200 bar using any of the 8 intrinsically safe 700PEX Pressure Modules
- Pressure switch test function to capture set, reset and deadband values



Also available as a standard ,non-Ex' unit.

Ex-data:
Ex-designation:
Ⓜ II 1 G EEx ia IIB 171°C

EC-Certificate of conformity:
Kema 04 ATEX 1303 X

I.S. Class 1 Div. 1 Groups B-D, 171°C

Standard delivery:

- 725Ex
- Test leads
- Test clips
- one pair of stackable test leads
- NIST traceable calibration certificate
- batteries
- CD-ROM
- instruction manual

Accessories:

- Intrinsically-safe pressure module 700PEX (see page 58)
- factory calibration certificate
- DKD calibration

Technical data:

Maximum Voltage:	30V
Storage temperature:	-40°C to 71°C
Operating temperature:	10°C to 55°C
Relative humidity:	90 % (10 to 30°C); 75 % (30 to 40°C); 45 % (40 to 50°C); 35 % (50 to 55°C)
Dimensions (HxWxD):	200 x 96 x 47 mm
Weight:	650 g
Power supply:	4x AA, type approved
Operating time:	25 hours typical

Intrinsically-Safe Multifunction Process Calibrator 725Ex

Summary Specifications: (18°C to 28°C for one year)

Function Measure or Source	Range	Resolution	Accuracy	Notes
Voltage	0 to 100 mV	0.01 mV	0.02 % R _{dg} + 2 digits	Max. Load 1 mA
	0 to 10V (Source)	0.001 V		
	0 to 30V (Measure)	0.001 V		
mA	0 to 24	0.001 mA	0.02 % R _{dg} + 2 digits	Max. Load 500 Ω @ 20 mA
mV (TC terminals)	-10.00 mV to +75.00 mV	0.01 mV	± (0.025 % or range + 1 digits)	
Resistance	15 Ω to 3200 Ω (Source)	0.1 Ω to 1 Ω	0.10 Ω to 1.0 Ω	
	0 Ω to 3200 Ω (Measure)	0.1 Ω to 1 Ω	0.10 Ω to 1.0 Ω	
Frequency	2.0 to 1000.0 CPM	0.1 CPM	± (0.05 % + 1 digit)	For frequency source wave- form is 5V p-p squarewave, -0.1V offset
	1 to 1000 Hz	1 Hz	± (0.05 % + 1 digit)	
	1 to 10.0 kHz	0.1 kHz	± (0.05 - 0.25 % + 1 digit)	
Loop supply	12V	N/A	10 %	
Temperature coefficient: -10°C to 18°C, 28°C to 55°C, ±0.005% of range per °C				

Thermocouple accuracy specifications:

RTD Type	Range	Accuracy	
		Measure (4 wire)	Source
Ni 120	-80°C to 260°C	0.2°C	0.2°C
Pt 100 - 385	-200°C to 800°C	0.33°C	0.33°C
Pt 100 - 3926	-200°C to 630°C	0.3°C	0.3°C
Pt 100 - 3916	-200°C to 630°C	0.3°C	0.3°C
Pt 200 - 385	-200°C to 250°C	0.2°C	0.2°C
	250°C to 630°C	0.8°C	0.8°C
Pt 500 - 385	-200°C to 500°C	0.3°C	0.3°C
	500°C to 630°C	0.4°C	0.4°C
Pt 1000 - 385	-200°C to 100°C	0.2°C	0.2°C
	100°C to 630°C	0.2°C	0.2°C
Resolution			
RTD		0.1°C, 0.1°F	

Features:

Simultaneous Function Capability	Channel A	Channel B
24.000 mA DC	M	M or S
24.000 mA DC with loop supply	M	
100.00 mV DC		M or S
30.000 V DC Measure	M	
20.000 V DC Measure		M or S
10.000 V DC Source		
Source: 15 to 3200 Ω, Measure: 0 to 3200 Ω		M or S
Thermocouple J, K, E, R, S, B, L, U, N		M or S
RTD Ni120; Pt100 (392); Pt100 (JIS); Pt100, 200, 500, 1000 (385)		M or S
Pressure (using 700PEX modules)	M	M used as S
Frequency; Squarewave, 1 CPM to 10 kHz; fixed amplitude 5V p-p		M or S
M = Measure S = Source / Simulate		

Thermocouple accuracy specifications:

Thermocouple	Measure or	source
J	-200 to 0°C	1.0°C
	0 to 1200°C	0.7°C
K	-200 to 0°C	1.2°C
	0 to 1370°C	0.8°C
T	-200 to 0°C	1.2°C
	0 to 400°C	0.8°C
E	-200 to 0°C	0.9°C
	0 to 950°C	0.7°C
R	-20 to 0°C	2.5°C
	0 to 500°C	1.8°C
	500 to 1750°C	1.4°C
S	-20 to 0°C	2.5°C
	0 to 500°C	1.8°C
	500 to 1750°C	1.5°C
B	600 to 800°C	2.2°C
	800 to 1000°C	1.8°C
	1000 to 1800°C	1.4°C
L	-200 to 0°C	0.85°C
	0 to 900°C	0.7°C
U	-200 to 0°C	1.1°C
	0 to 400°C	0.75°C
N	200 to 0°C	1.5°C
	0 to 1300°C	0.9°C
Resolution		
J, K, T, E, L, N, U		0.1°C, 0.1°F
B, R, S		1°C, 1°F

Notes

Accuracy specifications include 0.2°C cold junction uncertainty.

RELIABILITY DIRECT, INC.

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