

ConST 273 Digital Pressure Calibrator



DESCRIPTION

ConST273 is a microprocessor controlled, high precision instrument powered by an internal Li-ion battery or external DC 10V specified adapter. It can not only calibrate the pressure transducers and pressure switches, but has the function of sourcing 24V power and measuring electricity signals. All sensors in pressure calibrators are strictly aged and tested before assembly.

FEATURES

- › Pressure ranges to 36,000psi (2,500bar)
- › High pressure accuracy: 0.025%FS and 0.05%FS
- › Advanced temperature compensation
- › Measure mA or V with 0.02%RD + 0.003%FS accuracy
- › Power transmitters during test using 24V loop supply
- › HART Communication ability;
- › Big capacity data logger: total 1200 data.
- › Pressure triggering switch status can be set;
- › Pressure leak hunting & peak value record function;
- › Min/Max/Hold to capture changing measurements
- › Big LCD screen with blue backlight: dual lines with 6 digits
- › Self-protection ability for overpressure & overvoltage
- › Polymer Li-ion rechargeable battery is approved by CE

APPLICATIONS

- › Burst Disc testing
- › Precision pressure measurement
- › Pressure transmitters calibration
- › Pressure switch testing
- › Hydraulic leak testing
- › Pressure switch testing Wellhead monitoring

SPECIFICATION

› Model

CONST 273-02: 0.025% of full scale

CONST 273-05: 0.05% of full scale.

› Pressure types

Gauge pressure

Absolute pressure

Differential Pressure

› Ambient Environment

Operating temperature: -10°C to 50°C (14°F to 122°F)

Compensation temperature: -10°C to 50°C (14°F to 122°F)

Storage Temperature: -20°C to 70°C (-4°F to 158°F)

Relative humidity: < 95%

*0.025%FS accuracy guaranteed only over the ambient temperature range of 20°C to 26°C (68°F to 79°F)

› Media Compatibility

0~ 30psi: Clean dry non-corrosive gases.

50~36,000psi: media compatible with 316L SS.

› Pressure units:

Pa, kPa, MPa, kgf/cm², inH₂O, mmH₂O, inHg, mmHg, psi, mbar, bar, (In order to avoid the readings to overflow or too low to read, only some of pressure units are selected)

› Display

Description: Monochrome LCD with LED Backlight

Resolution: Dual lines, six digits per line.

› Communication

RS232 (DB9/F, environmentally sealed))

Baud rate: 1200, 2400, 4800, 9600

Data length: 8 bits

Stop bit: 2 bits

Address: from 1 to 112

› Data logger

Storage capacity: 30 files, 40 records per file

Mode: manual and automatic

Hour-record: record the data in every hour

Interval- record: set by users

› Power Supply

Battery: Rechargeable Li-ion polymer battery

Li-Battery working time: 40 hours

Rechargeable time: 4 hours.

External power: 110V/220V power adapter (10V DC)

› Over pressure warning:

120%

› Measure speed:

3.5 readings per second

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> Gauge Pressure^[1]

P/N	Range (psi)	Range (bar)	Media ^[2]	Accuracy (% FS)	Burst Pressure
V15	-15	-1.0	G	0.025 (0.05, 0.1, 0.2)	3 X
GP2	2	0.16	G	0.05 (0.1, 0.2)	3 X
GP5	5	0.35	G	0.025 (0.05, 0.1, 0.2)	3 X
GP10	10	0.7	G	0.025 (0.05, 0.1, 0.2)	3 X
GP15	15	1.0	G, L ^[3]	0.025 (0.05, 0.1, 0.2)	3 X
GP30	30	2.0	G, L ^[3]	0.025 (0.05, 0.1, 0.2)	3 X
GP50	50	3.5	G, L	0.025 (0.05, 0.1, 0.2)	3 X
GP100	100	7.0	G, L	0.025 (0.05, 0.1, 0.2)	3 X
GP300	300	20	G, L	0.025 (0.05, 0.1, 0.2)	3 X
GP500	500	35	G, L	0.025 (0.05, 0.1, 0.2)	3 X
GP1K	1000	70	G, L	0.025 (0.05, 0.1, 0.2)	3 X
GP3K	3000	200	G, L	0.025 (0.05, 0.1, 0.2)	3 X
GP5K	5000	350	G, L	0.025 (0.05, 0.1, 0.2)	3 X
GP10K	10000	700	G, L	0.025 (0.05, 0.1, 0.2)	2 X
GP15K	15000	1000	G, L	0.1 (0.2)	2 X
GP25K	25000	1600	G, L	0.1 (0.2)	1.5 X
GP30K	30000	2000	G, L	0.1 (0.2)	1.5 X
GP36K	36000	2500	G, L	0.1 (0.2)	1.5 X

Note:

[1]. Sealed gauge pressure for above 1000 psi

[2]. G=Gas, L=Liquid [3]. 0.025% FS for gas media only

> Absolute Pressure

P/N	Range (psi)	Range (bar)	Media	Accuracy (% FS)	Burst Pressure
AP5	5	0.35	G	0.1 (0.2)	3 X
AP10	10	0.7	G	0.1 (0.2)	3 X
AP15	15	1.0	G	0.1 (0.2)	3 X
AP30	30	2.0	G	0.1 (0.2)	3 X
AP50	50	3.5	G	0.1 (0.2)	3 X
AP100	100	7.0	G, L	0.1 (0.2)	3 X
AP300	300	20	G, L	0.1 (0.2)	3 X
AP500	500	35	G, L	0.1 (0.2)	3 X
AP1K	1000	70	G, L	0.1 (0.2)	3 X
AP3K	3000	200	G, L	0.1 (0.2)	3 X
AP5K	5000	350	G, L	0.1 (0.2)	3 X

> Differential

P/N	Range inH ₂ O	Range (mbar)	Media	Accuracy (% FS)	Burst Pressure
DP1	1	2.5	G	0.4	100 X
DP2	2	5.0	G	0.2	100 X
DP5	5	10	G	0.1	50 X
DP10	10	25	G	0.1	20 X
DP20	20	50	G	0.05	20 X
DP30	30	100	G	0.05	20 X

> Electrical Measurement and Source Accuracy

	Range	Accuracy
Voltage DC	±30.0000V	± (0.02%RD+0.003%FS)
Current DC	±30.0000mA	± (0.02%RD+0.003%FS)
DC 24V	24V±0.5V max:50mA Protect at: 120mA	
Switch [1]	Status OPEN/CLOSED	

Note:

[1]. 1-12V if switch has detective voltage

> Electrical Connections

Standard Ø4mm (0.156 inch) terminal

> Pressure Port

¼"NPT male thread (≤15,000psi)

½"NPT male thread (>15,000psi)

Ø4mm (0.156 inch) test hose for differential pressure

Other connections available per request

> Enclosure

Case material: Aluminum alloy

Wetted parts: 316L SS

Dimension: 120mm diameter X 46mm depth X 184mm height

Weight: 700 gram

> Accessories (included):

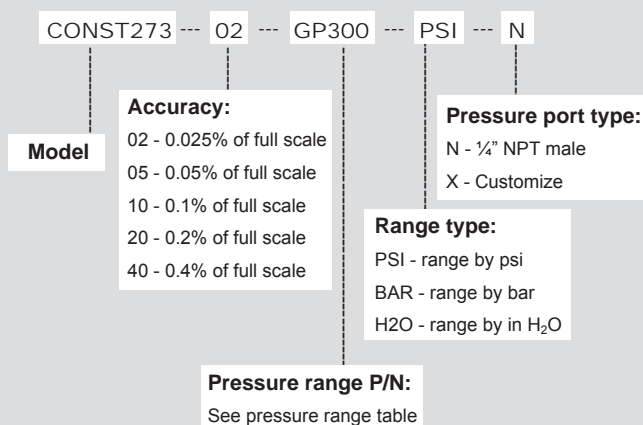
110V/220V external power adapter (DC 10V)

2 pieces 1.5 meters test leads

2 pieces Ø4 mm hose (for differential pressure gauge only)

ORDERING INFORMATION

> Model number:



OPTIONAL ACCESSORIES

Model #	Description
9702	Spare rechargeable Li-ion battery for ConST273
9814	Spare 110V/220V external power adapter (DC 10V)
9902	Carrying case for gauges (up to 4pcs ConST273)
9021	Spare 2 pieces test leads (1.5 meter) for ConST273
9050	USB to RS232 (DB9/M) adapter
9111	Calibration certificate from BIM