



T214

Tinycal series portable
digital pressure gauge

T214

Portable digital pressure gauge from the Tynycal series



The T214 pressure gauge is a portable microprocessor-based instrument designed to indicate pressure and current (mA) values. The T214 is part of the new generation of calibrators and simulators in the Tynycal family developed by Gometrics for the calibration of process instruments.

The T214 has been designed to be used alternatively as a pressure gauge and as a milliammeter, by simply pressing a button on the instrument. This versatility allows it to calibrate electronic pressure transmitters by reading the generated pressure, as well as reading the 4-20 mA output signal of the transmitter.

Thanks to optimal adjustment and linearisation of the sensor, the T214 offers excellent accuracy and stability over time. The measurement uncertainty is 0.1% per year, suitable for a wide range of industrial applications.

The instrument has a built-in pressure sensor made of stainless steel, which gives it a long service life. Its mechanical design can withstand significant overpressure, twice its nominal range.

The front keypad, designed for one-handed operation, has quick access keys and offers the following functions:

- Change engineering units: bar, kPa, kgf/cm², mbar, psi, mmHg, mH₂O, cmH₂O, mmH₂O, atm

- Input signal selection: pressure, or pressure/current alternating.
- Auto-zero
- Blue LED backlighting

The reduced weight and size of the Tynycal series instruments allow for quick and efficient calibration operations both in the field and in the workshop. For desktop use, the instrument is equipped with an atrium stand that facilitates reading in an inclined position.

The T214 is equipped with rechargeable NiMH batteries with a long service life, avoiding the pollution caused by disposable batteries. The Gometrics T214 is a nationally manufactured product, which ensures local after-sales service. Its recalibration service and any repairs are guaranteed, ensuring a long life for the instrument.

The T214 comes with a set of cables for current measurement, a battery charger, a carrying case, an operating manual, two 1/8" metal-plastic seals, one 6 mm diameter tube adapter for ranges up to 17 bar, a factory calibration certificate (ENAC optional) and a 2-year warranty.



Available types

- Relative pressure
- Absolute pressure
- Differential pressure
- Vacuum
- Combined ranges (vacuum-pressure)

Applications

- Calibration of pressure gauges and transmitters
- Checking valves in hydraulic and pneumatic circuits, pressure switches
- Pressure switch and pressure alarm calibration

Advantages

- Versatility
- Accuracy
- Robust
- Ergonomic and easy to use
- Environmentally friendly
- Guaranteed technical support



Technical specifications

Signal	Pressure and current
Function	measurement
Pressure range	min 0-25 mbar max. 0-350 bar, with external sensor 1000 bar (see table)
Accuracy	0.10% FS and 0.05% FS
Pressure type	relative, differential, vacuum or absolute
Pressure accuracy	0.05% FS
Pressure uncertainty at 1 year	0.10% FS
Current range	±30 mA
Current uncertainty	0.025% of reading +2 µA
Resolution	4½ digits in pressure (see table) 1 µA/10 µA in current
Process connection	1/8" BSP M internal conical 60°
Operating temperature	0-50 °C
Temperature coefficient	0.02% FS/°C < t 1 bar 0.01% FS/°C ≥ t 1 bar

* Includes non-linearity, hysteresis, repeatability, thermal drift between 20 °C and 26 °C and stability at 1 year

Fluids	Compatible with stainless steel and Buna N for ranges ≥1 bar Air or inert gases for ranges <1 bar and differential pressure
Overpressure	2 times the range for differential pressure equal to the maximum static pressure
Maximum static pressure	(differential pressure only) see table
Display	10 mm backlit LCD
Batteries	Rechargeable NiMH
Power supply	230 V 50 Hz charger
Dimensions	83 x 152 x 33 mm
Weight	360 g
Warranty	3 years
Marking	CE
Certification	Standard factory calibration certificate standard factory (ENAC optional)
Autonomy	14 h

Items included

The T214 comes with a connection cable, battery charger, carrying bag, operating manual, factory calibration certificate and a 2-year warranty.



Hard carrying case (optional).
Ref. ECAL301

Options and accessories

Panel mounting and O₂ degreasing of the T214 can be requested. The T214 can be supplied in a portable case with accessories:

- T214 digital pressure gauge
- Pressure generator pump (various ranges)
- RB400BP01 connection kit
- ENAC calibration certificate
- Battery charger

Table of available ranges according to input type

CODE RANGE	RELATIVE (G)	VACCUUM (V)	COMBINED (E) ⁽⁷⁾	DIFFERENTIAL PRESSURE (D) ⁽⁶⁾	ABSOLUTE (A)	RESOLUTION DISPLAY READING
025 ⁽⁶⁾	0 - 25 ⁽⁵⁾	-25 / 0 ⁽⁵⁾	-25 / +25 ⁽¹⁾⁽⁵⁾	0 - 25 ⁽³⁾		0,02
070 ⁽⁶⁾	0 - 70 ⁽⁵⁾	-70 / 0 ⁽⁵⁾	-70 / +70 ⁽¹⁾⁽⁵⁾	0 - 70 ⁽³⁾		0,005
300 ⁽⁶⁾	0 - 300 ⁽⁵⁾	-300 / 0 ⁽⁵⁾	-300 / +300 ⁽⁵⁾	0 - 300 ⁽⁴⁾	0 - 300 ⁽¹⁾⁽⁵⁾	0,02
101	0 - 1	-1 / 0	-1 / +1	0 - 1 ⁽⁴⁾	0 - 1	0,00005
201	0 - 2		-1 / +2	0 - 2 ⁽⁴⁾	0 - 2	0,0001
701	0 - 7		-1 / +7	0 - 7 ⁽⁴⁾	0 - 7	0,0005
172	0 - 17		-1 / +17			0,001
352	0 - 35		-1 / +35			0,002
702	0 - 70					0,005
173	0 - 170					0,01
353	0 - 350					0,02
104	0 - 1000 ⁽²⁾					0,05

¹⁾ Not available with uncertainty of 0.1%FS²⁾ External sensor version. Max. overpressure 10%FS (1100 bar)³⁾ Max. static pressure: 300 bar⁴⁾ Max. static pressure: 3 times the range at 14 bar (the lowest)⁵⁾ Overpressure: 5 times the range⁶⁾ Only inert gases⁷⁾ For combined ranges, uncertainty is in % over SPAN.

mbar

bar

Coding (how to determine model)

T214-XXX Y Z-W

SERIES

CODE RANGE
(see table)

TYPE OF INPUT

G - Relative pressure
V - Vacuum
A - Absolute pressure
D - Differential pressure
E - Combined (vacuum - pressure)

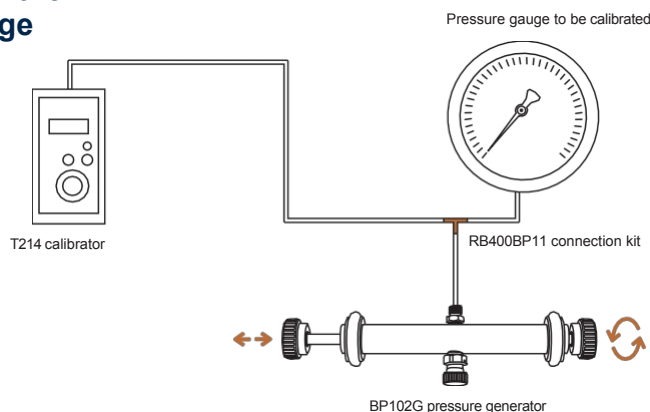
UNCERTAINTY
2 - 0.1% FE

OPTIONS

PR - Housing protector ER -
Rigid case

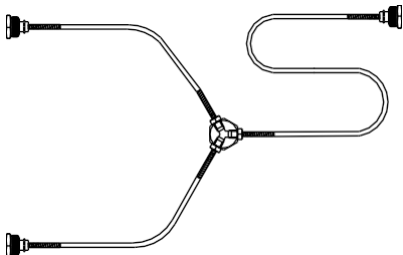















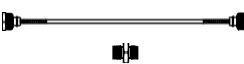
Operating diagram of the T214 pressure gauge



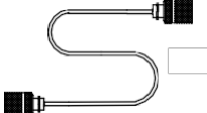






Connection kits and accessories

PNEUMATIC ACCESSORIES MAXIMUM 20 BAR

Reference	Description
RB400BP11	Connecting tubing with a 750 mm long section and two 500 mm extensions 
RB400BP22	Connecting tubing 750 mm long 
RS20012G	1/8" BSP M conical 60° union fitting on both ends 
RS20012	1/8" NPT M union fitting for 1/8" BSP M conical 60° 
RS20014	1/4" NPT M to 1/8" BSP M conical 60° fitting 
RS20016	3/8" NPT M to 1/8" BSP M 60° conical union nut 
RS20018	1/2" NPT M to 1/8" BSP M conical 60° fitting 
RS20012RG	1/8" BSP M fitting for 1/8" BSP M conical 60° 
RS20014RG	1/4" BSP M to 1/8" BSP M conical 60° fitting 
RS20016RG	3/8" BSP M to 1/8" BSP M conical 60° fitting 
RS20018RG	1/2" BSP M to 1/8" BSP M conical 60° fitting 
RBQSF612	1/8" BSP H fitting with quick-connect tube connector 6 mm 
U10351620	USIT washer for 1/8" BSP M threads 

Kits	
RB400BP01 Calibration Kit	consisting of: · RB400BP11 · RS20012 · RS20014 
Calibration Kit RB400BP01	composed of: · RB400BP22 · RS20012G 





HIGH PRESSURE ACCESSORIES UP TO 600 BAR

Reference	Description
V6006022	750 mm long x 6 mm diameter union tube 
V60018NPT6	High pressure fitting 1/8" NPT M 
V60018BSP6	High pressure fitting 1/8" BSP M 
V60014NPT6	High pressure fitting 1/4" NPT M 
V60014BSP6	High pressure fitting 1/4" BSP M 
V60038NPT6	High pressure fitting 3/8" NPT M 
V60038BSP6	High pressure fitting 3/8" BSP M 

HIGH PRESSURE ACCESSORIES UP TO 1000 BAR (stainless steel material)

Reference	Description
HK1-1000	High pressure SI kit in stainless steel, consisting of: (1) 1 metre long flexible tubing (1) 1/4" BSP M connector (1) 1/4" BSP H connector // (1) 1/4" BSP M x 1/2" NPT H
HTPA-1000	Kit of 7 SI adapters, stainless steel, consisting of: (1) 1/4" BSP M x 1/8" BSP H // (1) 1/4" BSP M x 1/8" NPT H (1) 1/4" BSP M x 3/8" BSP H // (1) 1/4" BSP M x 1/4" NPT H (1) 1/4" BSP M x 1/2" BSP H // (1) 1/4" BSP M x 3/8" NPT H (1) 1/4" BSP M x 1/2" NPT H

COMMON ACCESSORIES (TYRES AND HIGH PRESSURE)

Reference	Description
RS4TG	1/4" BSP HT-joint 
RS8RB4G	1/2" BSP M to 1/4" BSP H adapter 
RS40012GG RS40014GG RS40012GN RS40014GN RS41214GN	1/8" BSP H x 1/8" BSP H fitting 1/4" BSP H x 1/4" BSP H fitting 1/8" BSP H x 1/8" NPT H fitting 1/4" BSP H x 1/4" NPT H fitting 1/8" BSP H x 1/4" NPT H fitting 
U10351620 U13702015 U16702415 U20702815	USIT washer for 1/8" BSP M threads USIT washer for 1/4" BSP M threads USIT washer for 3/8" BSP M threads USIT washer for 1/2" BSP M threads 

The T214 has been designed to be used alternately as a pressure gauge and a milliammeter, by simply pressing a button on the instrument. This versatility allows you to calibrate electronic pressure transmitters by reading the pressure generated, as well as reading the 4-20 mA output signal from the transmitter.



Other equipment in the Tinycal range

The Tinycal family has been updated across the board, both in terms of design and performance. Most devices have been improved in terms of resolution and accuracy compared to the previous model. Improvements include a backlit display, improved measurement stability and simulation/generation over time, improved thermocouple connection via female mini TC connector, and the option to add accessories.

With this comprehensive range, Gometrics offers maintenance technicians modern and reliable tools for plant maintenance in the energy, gas and oil, chemical, pharmaceutical, cosmetics, aeronautical, automotive and food sectors, among others.

- **T224** Current calibrator. Signal range: 0-25 mA
- **T228** Current calibrator. Signal range: 0-51 mA
- **T234** Voltage calibrator. Signal range: 0-200 mV and 0-12V
- **T244** Thermoresistance and Pt100 (RTD) probe calibrator
- **T254** Thermocouple calibrator (TC)
- **T258** Thermoresistance (RTD) and thermocouple (TC) meter and simulator
- **T264** pH calibrator
- **T210-IS** ATEX digital pressure gauge and milliammeter
- **T310** Advanced digital pressure gauge and milliammeter



T210-IS

Intrinsically safe ATEX digital pressure gauge and milliammeter

Signal	Pressure and current
Pressure range	Min. 0-25 mbar, max. 0-350 bar
Pressure accuracy	0.05% FS Pressure
uncertainty at 1 year	0.25% FS and 0.10%
FS Current range	±30 mA
Current uncertainty	0.025% of reading +2 µA
Function	Measurement
Classification	II 1G Ex ia IIB T4



T258

**Temperature meter and simulator
Resistance temperature detectors (RTD) and thermocouples (TC)**

Signal	Pt100 (RTD)	Thermocouple (TC)		
Measurement range	-200 to 850 °C/ 0 to 400 Ω	-210 to 1820 °C -10 to 28 mV // -10 to 80 mV		
Simulation/generation range	-200 to 850 °C/ 0 to 400 Ω	200 to 1820 °C -10 to 28 mV // -10 to 80 mV		
		SIM	MED	
Uncertainty at 1 year	-200 to 200 °C	0.2	0.3	±0.05% FR -10 to 28 mV
	200 to 850 °C	0.4	0.4 °C	
	0 to 400 Ohm	0.05% FS		-210 °C to 1820 °C: See table*
Autonomy	14			14 h

* The table is in the manual (page 24)



T310

Advanced digital pressure gauge and milliammeter

Signal	Pressure and current
Pressure range	Min 0-25 mbar, max. 0-1000 bar, external sensor
Pressure accuracy	0.05% FS
Pressure uncertainty at 1 year	r 0.10% FS
Current range	±30 mA
Current uncertainty	0.025% of reading +2 µA
Function	Measurement
Advanced functions	Max/Min, Leak, DL for 32K data Datalogger, selection of 32 units
Display	5½ digit 20 mm LCD, with blue LED backlighting
Additional indication	Graphic bar 0-100% of measurement interval
Power	24 Vdc. Loop power supply option (transmitter)



GOMETRICS Barcelona

Pol. Ind. Riera de Caldes,
Basters 17
08184 Palau-Solità i
Plegamans, Barcelona
Tel. +34 93 864 68 43
info@gometrics.net

GOMETRICS Zona Centro

Ctra. de Vicálvaro a la estación de
O'Donnell, 2 B - 1ªA
28032 Madrid
Tel. +34 91 371 00 42
zcentro@gometrics.net

GOMETRICS North Area

Tel. +34 611 402 234
znorte@gometrics.net

GOMETRICS Levante

Tel. +34 647 923 602
levante@gometrics.net



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