

PRESSURE GAUGES

FULL STAINLESS STEEL

APPLICATIONS

- Liquid & gaseous mediums
- Corrosive environments
- Oil & Gas applications
- Chemical & Petrochemical
- Food & Beverages
- Nuclear power plants



BASIC MODEL	TP101	TP102	TP103	TP104
SPECIAL FEATURES	All SS measuring system Socket-case, direct welded Dry / liquid filled CE marking	All SS measuring system Socket-case, direct welded Dry / liquid filled CE marking External zero adjustment	All SS measuring system Socket-case, direct welded Dry / liquid filled	All SS measuring system Socket-case, direct welded / two piece construction Dry / liquid filled DIN style case and ring
NOMINAL DIAL SIZES	DN100, DN125, DN150 & DN250	DN100, DN125, DN150 & DN250	DN50, DN63, DN80 ¹ & DN100 ¹	DN63, DN100 & DN150
RANGE	-1...1,600 bar	-1...1,600 bar	-1...400 bar for DN50 -1...1,000 bar for DN50/80/100	-1...1,600 bar -1...1,000 bar for DN63
ACCURACY	CL 1.0 CL 0.5 or CL 0.6 ²	CL 1.0 CL 0.5 or CL 0.6 ²	CL 1.6	CL 1.0 CL 0.5 or CL 0.6 ²
MOUNTING STYLES	Bottom Bottom with wall mounting Lower back Lower back with 3-hole panel Lower back with mounting bracket 2" Pipe mounting	Bottom Bottom with wall mounting Lower back Lower back with 3-hole panel Lower back with mounting bracket 2" Pipe mounting	Bottom Lower / Centre back Bottom with wall mounting Centre back with 3-hole panel Centre back with mounting bracket	Bottom Lower / Centre back Bottom with wall mounting Centre back with 3-hole panel Centre back with mounting bracket 2" Pipe mounting
PROCESS CONNECTION ³	1/2" NPT (M) 1/2" BSP (M)	1/2" NPT (M) 1/2" BSP (M)	1/4" NPT (M) 1/4" BSP (M)	1/2" NPT (M) 1/2" BSP (M)
WETTED PARTS	AISI 316L SS Monel ²	AISI 316L SS Monel ²	AISI 316L SS	AISI 316L SS Monel ²
CASE MATERIAL	AISI 304 SS AISI 316 SS ² Epoxy coated ²	AISI 304 SS AISI 316 SS ² Epoxy coated ²	AISI 304 SS AISI 316 SS ²	AISI 304 SS AISI 316 SS ² Epoxy coated ²
PROTECTION CLASS	IP 65 IP 66 / IP 67 ²	IP 65 IP 66 / IP 67 ²	IP 65	IP 65 IP 66 / IP 67 ²
REFERENCE STANDARD	EN 837-1	EN 837-1	EN 837-1	EN 837-1
SAFETY CLASS	S1 (Open front, blow off disc)	S1 (Open front, blow off disc)	S1 (Open front) ⁴	S1 (Open front, blow off disc)
WINDOW	Sheet glass Shatterproof / Plexi ²	Sheet glass Shatterproof / Plexi ²	Sheet glass Shatterproof / Plexi ²	Steel glass Shatterproof / Plexi ²
OPTIONAL EXTRAS	NACE MR0175 / MR0103 IBR certificate ATEX certificate Dampened movement MRP Pointer Short overpressure Oxygen service	NACE MR0175 / MR0103 IBR certificate ATEX Certificate Dampened movement MRP Pointer Short overpressure Oxygen service	MRP Pointer Oxygen service ATEX certificate	NACE MR0175 / MR0103 IBR certificate Dampened movement MRP Pointer Short overpressure Oxygen service

Notes

1. In two piece construction (case connected to process connection through sealed compression fitment).
2. Optional, charges extra, contact factory for details.
3. Other connections & sizes are available, charges extra, contact factory for details.

4. For DN80 & DN100 only
5. Equivalent scales available in kg/cm²., psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.

PRESSURE GAUGES

HIGH SAFETY

APPLICATIONS

- Liquid & gaseous mediums
- Corrosive environments
- Oil & Gas applications
- Chemical & Petrochemical
- Food & Beverages



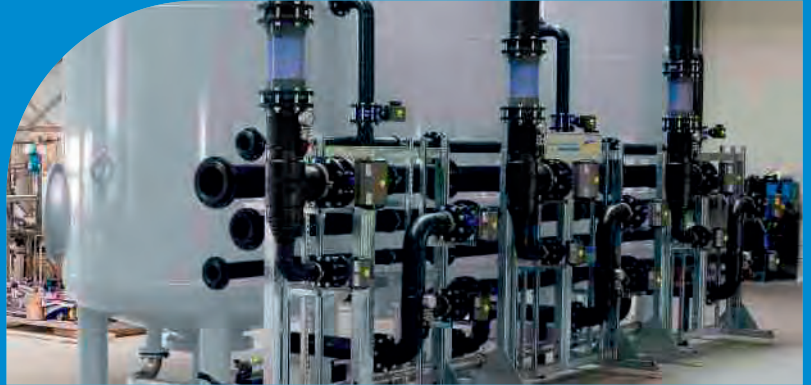
BASIC MODEL	TP201	TP202	TP203	TP204
SPECIAL FEATURES	Solid front with full blow back All stainless steel system	Solid front with full blow back All stainless steel system External zero adjustment	Solid front with full blow back All stainless steel system Dry / Filled version	Solid Front, Turret design Thermoplastic case Standard accuracy $\pm 0.5\%$ FS
NOMINAL DIAL SIZES	DN100 & DN150	DN100 & DN150	DN63	4.5"
RANGE	-1...1,600 bar	-1...1,600 bar	-1...1,000 bar	-1...1,600 bar
ACCURACY	CL 1.0 CL 0.5 or CL 0.6 ¹	CL 1.0 CL 0.5 or CL 0.6 ¹	CL 1.6	CL 0.5 CL 1.0 ¹
MOUNTING STYLES	Bottom Bottom with wall mounting Lower back with 3-hole panel	Bottom Bottom with wall mounting Lower back with 3-hole panel	Bottom Bottom with wall mounting Centre back with 3-hole panel	Bottom Bottom with wall mounting Lower back with 3-hole panel
PROCESS CONNECTION ²	1/2" NPT (M) 1/2" BSP (M)	1/2" NPT (M) 1/2" BSP (M)	1/4" NPT (M) 1/4" BSP (M)	1/2" NPT (M) 1/4" NPT (M)
WETTED PARTS	AISI 316L SS Monel ¹	AISI 316L SS Monel ¹	AISI 316L SS	AISI 316L SS Monel ¹
CASE MATERIAL	AISI 304 SS AISI 316 SS ¹	AISI 304 SS AISI 316 SS ¹	AISI 304 SS AISI 316 SS ¹	Phenolic Resin (PBTP)
PROTECTION CLASS	IP 65 IP 66 / IP 67 ¹	IP 65 IP 66 / IP 67 ¹	IP 65	IP 65 IP 66 / IP 67 ¹
REFERENCE STANDARD	EN 837 - 1	EN 837 - 1	EN 837 - 1	ANSI B 40.1
SAFETY CLASS	S3 (Solid front, full blow back)	S3 (Solid front, full blow back)	S3 (Solid front, full blow back)	Solid front, full blow back
WINDOW	Shatterproof	Shatterproof	Shatterproof	Shatterproof / Plexi ¹
OPTIONAL EXTRAS	NACE MR0175 / MR0103 IBR certificate ATEX certificate Dampened movement MRP Pointer Short overpressure Oxygen service	NACE MR0175 / MR0103 IBR certificate ATEX certificate Dampened movement MRP Pointer Short overpressure Oxygen service	MRP Pointer Oxygen service	NACE MR0175 / MR0103 IBR certificate Dampened movement Short overpressure Oxygen service

Notes 1. Optional, charges extra, contact factory for details.
2. Other connections & sizes are available, charges extra, contact factory for details.
3. Equivalent scales available in kg/cm², psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.

DIFFERENTIAL PRESSURE GAUGES

APPLICATIONS

- Liquid & gaseous mediums
- Corrosive environments
- Oil & Gas applications
- Chemical & Petrochemical
- Filtration & Water applications
- Pumps, compressors & diesel engines



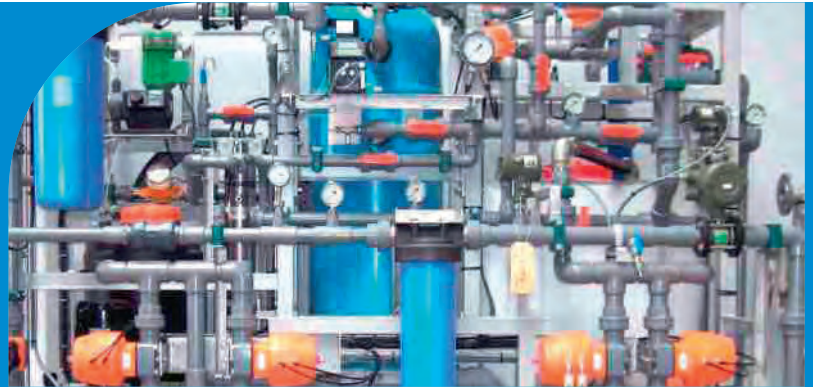
BASIC MODEL	TP301	TP302	TP303	TP303
SPECIAL FEATURES	Single side static sustainable Electric contacts (Optional) Static pressure 400 bar (max) Dry / liquid filled ATEX certificate External Zero Adjustment	Single side static sustainable All SS measuring system Electric contacts (Optional) Static pressure 100 bar (max) Dry / liquid filled External Zero Adjustment	Economical version All SS measuring system Static pressure 4 bar (max) Bellow type Electric contacts (Optional) External Zero Adjustment	Suitable for direct valve mounting All SS measuring system Static pressure 4 bar (max) Bellow type Electric contacts (Optional) External Zero Adjustment
NOMINAL DIAL SIZES	DN100, DN125 & DN150	DN100, DN125 & DN150	DN150	DN150
RANGE	400mmWC...60 bar	0.6...10 bar	100 mbar...6 bar	100 mbar...6 bar
ACCURACY	CL 1.6 CL 1.0 ¹	CL 2.5	CL 1.6 (range ≤ 1 bar) CL 1.0 (range > 1 bar)	CL 1.6 (range ≤ 1 bar) CL 1.0 (range > 1 bar)
MOUNTING STYLES	Bottom Bottom with wall mounting Bottom with 2" Pipe / Yoke Centre back with 3-hole panel	Bottom Bottom with wall mounting Bottom with 2" Pipe / Yoke Centre back with 3-hole panel	Bottom Bottom with wall mounting Bottom with 2" Pipe / Yoke	Bottom Bottom with wall mounting Bottom with 2" Pipe / Yoke
PROCESS CONNECTION ²	1/4" NPT (F) x 2 Nos	1/4" NPT (F) x 2 Nos	1/2" NPT (M) x 2 Nos	1/2" NPT (M) x 2 Nos
CHAMBERS	AISI 316 SS, AISI 316L SS Monel ² Hastelloy C ²	AISI 304 SS AISI 316 SS AISI 316L SS ²	AISI 316L SS	AISI 316L SS
SENSING ELEMENT (DIAPHRAGM / BELLOW)	AISI 316L SS Monel ² Hastelloy C ²	AISI 316L SS	AISI 316L SS	AISI 316L SS
CASE MATERIAL	AISI 304 SS AISI 316 SS ¹	AISI 304 SS AISI 316 SS ¹	AISI 304 SS AISI 316 SS ¹	AISI 304 SS AISI 316 SS ¹
PROTECTION CLASS	IP 67	IP 65	IP 65	IP 65
STATIC PRESSURE	40 bar for 400...600 mmWC 100 bar for ≥1000 mmWC	40 bar standard 100 bar ¹	6 bar up to 0.4 bar 25 bar for 1 bar...2.5 bar 40 bar for 4 bar...16 bar	6 bar up to 0.4 bar 25 bar for 1 bar...2.5 bar 40 bar for 4 bar...16 bar
WINDOW	Shatterproof	Shatterproof, Sheet glass	Shatterproof	Shatterproof
REFERENCE STANDARD	EN 837 - 3	EN 837 - 3	EN 837 - 3	EN 837 - 3
OPTIONAL EXTRAS	NACE MR0175 / MR0103 MRP Pointer Oxygen service Static pressure 250 bar Static pressure 400 bar	MRP Pointer Dampened movement Oxygen service CE / ATEX approved contacts Single / Double insulated contacts Inductive type contacts	MRP Pointer	MRP Pointer

Notes
 1. Optional, charges extra, contact factory for details.
 2. Other connections & sizes are available, charges extra, contact factory for details.
 3. Equivalent scales available in kg/cm², psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.

DIFFERENTIAL PRESSURE GAUGES

APPLICATIONS

- Hydraulic & pneumatic
- Pumps & compressors
- Diesel engines
- Water applications
- Filtration plants
- Blower vacuum monitoring
- Duct or room pressures
- Clean room applications



BASIC MODEL	TP401	TP402	TP403	TP404
SPECIAL FEATURES	Compact design Migrated pressure chamber Static pressure 200 bar (max) Piston operated	Isolated pressure chamber Static pressure 100 bar (max) Diaphragm operated	Isolated pressure chamber Static pressure 100 bar (max) Ex-proof version Various types of switches	Die cast aluminum case Silicon rubber diaphragm Jeweled bearings Red tipped pointer
NOMINAL DIAL SIZES	DN63, DN100 & DN150	DN63, DN100 & DN150	DN63, DN100 & DN150	120 mm
RANGE	0.25...10 bar	25 mmWC...600 mmWC (LP) 0.075...4 bar (HP)	25 mmWC...600 mmWC (LP) 0.075...4 bar (HP)	-20 "Hg... 15 psig -0,677... 1.034 bar
ACCURACY (Assending)	CL 4.5 CL 2.0	CL 2.0	CL 2.0	CL 2.0
MOUNTING STYLES	Bottom/with 3-hole panel Back/with 3-hole panel In-line/with 3-hole panel	Bottom/with 3-hole panel Back/with 3-hole panel In-line/with 3-hole panel	Bottom/with 3-hole panel Back/with 3-hole panel In-line/with 3-hole panel	Back/Panel
PROCESS CONNECTION ¹	1/4" NPT (F) x 2 Nos	1/4" NPT (F) x 2 Nos	1/4" NPT (F) x 2 Nos	1/8" NPT (F) x2 Nos
WETTED PARTS	AISI 316 SS Aluminum ²	AISI 316 SS Aluminum ²	AISI 316 SS Aluminum ²	Consult factory
CASE MATERIAL	AISI 304 SS	AISI 304 SS	AISI 304 SS	Die cast aluminum
PROTECTION CLASS	IP 65	IP 65	IP 65	-
STATIC PRESSURE	200 bar	100 bar for HP 35 bar for LP	100 bar for HP 35 bar for LP	25 psig (1,72 barg)
WINDOW	Sheet glass Shatterproof / Plexi ²	Sheet glass Shatterproof / Plexi ²	Sheet glass Shatterproof / Plexi ²	Acrylic
OPTIONAL EXTRAS	Reed switches	Reed switches	Reed switches	-

Notes

1. Other connections & sizes are available, charges extra, contact factory for details.
2. Optional, charges extra, contact factory for details.
3. Equivalent scales available in kg/cm², psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.

PRESSURE GAUGES

ELECTRIC CONTACT / MECHATRONIC

APPLICATIONS

- Pumps & motor controls
- Water treatment plants
- Hydraulic & pneumatics
- Chemical & petrochemicals
- Pharmaceutical industries
- HVAC & compressor industries
- Refrigeration



BASIC MODEL	TP501	TP502	TP503	TP504
SPECIAL FEATURES	Electrical contacts Dome type case Filled version ¹	Electrical contacts High Case version Filled version ¹	Solid front with full blow back Gauge with Transmitter output (4...20 mA)	CE complied microswitch SS case & measuring system High repeatability
NOMINAL DIAL SIZES	DN100 & DN150	DN100 & DN150	DN100 & DN150	DN100 & DN150
RANGE	-1...1,600 bar	-1...1,600 bar	-1...600 bar	-1...600 bar
ACCURACY	CL 1.0 ⁴	CL 1.0 ⁴	CL 1.0 ⁵	CL 1.0 ⁵
MOUNTING STYLES	Bottom Lower back Bottom with wall mounting Lower back with 3-hole panel Lower back with mounting bracket	Bottom Lower back Bottom with wall mounting Lower back with 3-hole panel	Bottom Bottom with wall mounting	Bottom
PROCESS CONNECTION ¹	1/2" NPT (M) 1/2" BSP (M)	1/2" NPT (M) 1/2" BSP (M)	1/2" NPT (M) 1/2" BSP (M)	1/2" NPT (M) 1/2" BSP (M)
WETTED PARTS	AISI 316L SS Monel ²	AISI 316L SS Monel ²	AISI 316L SS	AISI 316L SS Monel ²
CASE MATERIAL	AISI 304 SS AISI 316 SS ²	AISI 304 SS AISI 316 SS ²	AISI 304 SS	AISI 304 SS
PROTECTION CLASS	IP 65 (Dry)	IP 65 (Dry)	IP 65 (Dry)	IP 65 (Dry)
REFERENCE STANDARD	EN 837 - 1	EN 837 - 1	EN 837 - 1	EN 837 - 1
SAFETY CLASS	S1 (Open front, blow off disc)	S1 (Open front, blow off disc)	S3 (Solid front, full blow back)	S1 (Open front, blow off disc)
WINDOW	Plexi	Shatterproof Plexi ²	Shatterproof Plexi ²	Plexi
OPTIONAL EXTRAS	CE / ATEX approved contacts Single / Double insulated contacts Inductive type contacts SPDT / DPDT Booster relay for Inductive contacts Dampened movement Dielectric oil filled	CE / ATEX approved contacts Single / Double insulated contacts Inductive type contacts SPDT / DPDT Booster relay for Inductive contacts Dampened movement Dielectric oil filled	Dampened movement	1 SPDT / 2 SPDT

Notes
 1. Other connections & sizes are available, charges extra, contact factory for details.
 2. Optional, charges extra, contact factory for details.
 3. Equivalent scales available in kg/cm², psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.

4. Gauge accuracy CL 1.0 & Switching accuracy within CL 5.0
 5. Gauge accuracy CL 1.0 & Switching accuracy as per the Microswitch® / Transmitter

PRESSURE GAUGES

DIAPHRAGM

APPLICATIONS

- Low viscous liquids
- LP draft measurement
- Non-crystallized media
- Non-corrosive environments
- Clean-air, pharmaceutical & breweries



BASIC MODEL	TP601	TP602	TP603	TP604
SPECIAL FEATURES	All SS measuring system Socket-case direct welded Zero adjustment, on dial Dry version	All SS measuring system Threaded/Flanged connections External Zero adjustment ⁷	Compact design Stainless steel case Zero adjustment, on dial	All stainless steel system Electric contacts (Optional) Screwed/Flanged connections
NOMINAL DIAL SIZES	DN63, DN100, DN125 & DN150	DN100 & DN150	DN63, DN100 & DN150	DN100 & DN150
RANGE	-600...25...600 mbar 6...16 mbar ⁷ 100...600 mbar ⁶	-1...0...25 bar ⁴ 60...600 mbar 6...40 mbar	-600...25...600 mbar	-1...0.4...40 bar
ACCURACY	CL 1.6...CL 2.5	CL 1.6 CL 2.5 (below 60 mbar)	CL 2.5	CL 1.6
MOUNTING STYLES	Bottom Bottom with wall mounting Lower (LB) / Centre (CB) back LB ⁵ / CB with 3-hole panel LB ⁵ / CB with mounting bracket	Bottom Bottom with 2" Pipe / Yoke	Bottom Bottom with wall mounting Lower / Centre back Centre back with 3-hole panel Centre back with mounting bracket	Bottom Bottom with 2" Pipe / Yoke
PROCESS CONNECTION ¹	1/2" NPT (M) / BSP (M) [DN100/125/150] 1/4" NPT (M) [DN63]	1/2" NPT (M) 1/2" BSP (M)	1/2" BSP (M) [DN100/150] 1/4" BSP (M) [DN63]	1/2" NPT (M) 1/2" BSP (M)
WETTED PARTS	AISI 316 SS	AISI 316 SS ⁴	Copper Alloy	AISI 316 SS
CASE MATERIAL	AISI 304 SS AISI 316 SS ²	AISI 304 SS AISI 316 SS ²	AISI 304 SS	AISI 304 SS AISI 316 SS ²
PROTECTION CLASS	IP 54	IP 54	IP 54	IP 65
REFERENCE STANDARD	EN 837 - 3	EN 837 - 3	EN 837 - 3	EN 837 - 3
SAFETY CLASS	S1 (Open front)	S1 (Open Front)	S1 (Open Front)	S1 (Open Front)
WINDOW	Sheet glass Shatterproof / Plexi ²	Sheet glass Shatterproof / Plexi ²	Sheet glass Shatterproof / Plexi ²	Sheet glass Shatterproof / Plexi ²
OPTIONAL EXTRAS	Filled version Dampening screw Phenol case version ON/OFF type vent plug	PTFE protection on wetted parts Oxygen service		Filled version External zero adjustment Monel / Hastelloy C diaphragms PTFE protection on wetted parts Oxygen service Electric contact versions Special overpressure protection

Notes

1. Other connections & sizes are available, charges extra, contact factory for details.
2. Optional, charges extra, contact factory for details.
3. Equivalent scales available in kg/cm², psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.

4. Diaphragm material Spring steel + PTFE coated for range -1...10 bar.
5. Not available in DN63 sizes.
6. Applicable in filled version.
7. Only available in DN150.

PRESSURE GAUGES

SEALED DIAPHRAGM

APPLICATIONS

- Sterile applications
- Oil & Gas applications
- Corrosive environments
- Dairy, Ice cream industries
- Sanitary, food & beverages
- Pharmaceutical & paint industries
- Prevent Bacterial & fungal accumulation



BASIC MODEL	TP701	TP702	TP703	TP704
SPECIAL FEATURES	Integrated gauge seal assembly Laser welded diaphragm Reduce vibration/pulsation	Laser welded diaphragm Electric contacts ² Transmitter output ² Filled version	All welded system Diaphragm seal integrally welded to the gauge	All welded system Diaphragm seal integrally welded to the gauge
NOMINAL DIAL SIZES	DN50, DN63, DN80 ⁴ & DN100 ⁴	DN100	DN100 ⁴ & DN150 ⁴	DN100, DN125 & DN150
RANGE	-1...40 bar	0...160 bar / 0...250 bar / 0...400 bar / 0...600 bar	4...70 bar	-1...400 bar
ACCURACY	CL 1.6	CL 1.6	CL 1.6	CL 1.6
MOUNTING STYLES	Bottom	Bottom	Bottom	Bottom
PROCESS CONNECTION ¹	Centre back 1", 1.5", 2", 2.5" Clamp	Homogenizer, connection Homogenizer, with flange Homogenizer, with 1 1/4" BSP (F)	1/2" NPT (M) 1/2" BSP (M)	Lower back 1"...5" flange, ANSI B16.5 Rating: 150#...2500#
WETTED PARTS (Diaphragm & bottom chamber)	AISI 316L SS	AISI 316L SS	AISI 316 SS	AISI 316L SS ²
CASE MATERIAL	AISI 304 SS AISI 316 SS ²	AISI 304 SS AISI 316 SS ²	AISI 304 SS AISI 316 SS ²	AISI 304 SS AISI 316 SS ²
PROTECTION CLASS	IP 65 (Dry) IP 66 / IP 67 ²	IP 65 (Dry) IP 66 / IP 67 ²	IP 65 (Dry) IP 66 / IP 67 ²	IP 65 (Dry) IP 66 / IP 67 ²
REFERENCE STANDARD	EN 837-1	EN 837-1	EN 837-1	EN 837-1
SAFETY CLASS	S1 (Open Front)	S1 (Open front, blow off disc)	S1 (Open front, blow off disc)	S1 (Open front, blow off disc)
WINDOW	Shatterproof	Shatterproof	Shatterproof	Shatterproof
OPTIONAL EXTRAS	Filled version Tri clamp with gasket Bottom mating part	MRP pointer Magnetic contacts	Filled version Oxygen service	Filled version Dampened movement MRP pointer External zero adjustment

- Notes**
1. Other connections & sizes are available, charges extra, contact factory for details.
 2. Optional, charges extra, contact factory for details.
 3. Equivalent scales available in kg/cm², psi, kPa, MPa, bar/psi, kPa/bar, kPa/psi or any other special scales.
 4. DN63 measuring system