MARKTECHNICAL
SENSORS & CONTROLS

Hydraulics

Pressure switches - Pressure transmitters - Thermostats

trafag
sensors controls

Pressure and temperature monitoring for hydraulic applications

Applications in mobile and stationary hydraulics demand the highest robustness and reliability from sensors. Trafag pressure transmitters are used in applications from high-accuracy test benching to heavy construction and agricultural equipment. They are proven for long-term stability in extremely harsh environments: from the dusty heat of deserts to the icy cold of sub-arctic forests. The reliable pressure transmitters with exceptionally long-term stability are also highly praised in stationary hydraulics, helping to avoid costly production interruptions.

Agricultural and forestry machines

Tractors, harvesting machines, transport machines

Renewable energies

Rotor control in wind power plants, solar tracking in photovoltaic systems

Construction machines

Excavators, mobile cranes, concrete pumps and mixers

Communal and special vehicles

Garbage collection, heavy transporters, firefighting vehicles

Test and inspection installations

Injection moulding machines, forming presses, stretch-blow machines

Test and inspection installations

Chassis test benches, material inspection systems, inspection of hydraulic components

Hydraulic components and subsystems

Valve block systems, power packs, tank monitoring


trafag
SP1
SP2
0520
SWITZERLAND

Products overview

Pressure transmitters

NAT 8252 8
Industrial Pressure Transmitter

Compact and robust all-rounder with many design variants and options. First choice for standard applications with M12x1 electric connections, Industrial Standard, or Deutsch DT04-3pole/-4pole.

NAH 8254 9
Pressure Transmitter with increased accuracy

For applications demanding increased precision or standard applications at elevated operating temperatures.

IO-Link

NAI 8273 9
IO-Link Pressure Transmitter and Switch

Measures pressure and temperature, accuracy class up to 0.3%. With IO-Link and PNP/NPN switching output.

NAH 8253 10
Precision Pressure Transmitter

For applications requiring high precision or absolute pressure together with high long-term stability. Optionally available with increased electric strength of 500 VAC.

ESH 8845 10
High-Accuracy Pressure Transmitter

Accuracy up to 0.05% for test and measurement applications.
Optional: flush membrane version.

EPI 8287 12
Industrial Pressure Transmitter

Robust all-rounder with many design variants and options. First choice for standard applications with electric connection EN 175301-803-A or with AISI316L steel housings.

EPN/EPNCR 8298 12
Engine Pressure Transmitter

For high pressures up to 2500 bar.

ECT 8472 13
Industrial Pressure Transmitter

Where absolute pressure measurement is required or in contact with corrosive media. Housing options in various steel variants or titanium.

ECT 8473 13
Industrial Pressure Transmitter with increased accuracy

For low pressure applications, absolute pressure measurements with increased precision and in contact with corrosive media.

CANopen

CMP 8271 15
CANopen Miniature Transmitter

Compact and robust all-rounder with many design variants and options. First choice for standard applications with CANopen.

CANopen

CMP 8270 15
CANopen High-Accuracy Pressure Transmitter

High accuracy up to 0.1 %, absolute and relative pressure measurement, integrated media temperature measurement.

Pressure transmitters

NAH 8254 20 kHz 11
Pressure Transmitter
for highly dynamic pressure curves
For measuring highly dynamic pressure curves and short-term pressure peaks with a signal cut-off frequency up to 20 kHz.

FPT 8236 14
Flush Membrane Transmitter
For applications with viscous, corrosive or clogging media, with analogue output.

IO-Link

FPI 8237 14
Flush Membrane Transmitter
with IO-Link
For applications with viscous, corrosive, or clogging media, integrated media temperature measurement, with IO-Link output.

Level measurement

ECL 8439 18
Submersible Pressure Transmitter
Level probe for hydrostatic measurement from 0.1 to 2 bar, measurement ranges configurable using smartphone app.

NAL 8838 19
Submersible Pressure Tansmitter
Level probe for specific applications which require high accuracy or with corrosive media.

DLF 8980 19
Level Switch with Display
For liquid level up to 2000 mm, with display and NFT communication for parametrizing via smartphone app.

TFC 20
Float Level Sensor
Float sensor for measurement of levels up to 2000 mm.

TFS 20
Float Level Switch
Float level switch with up to 6 switchpoints and optional temperature measurement.

TOS 21
Optical Level Switch
Optical level switch for simple and cost-effective limit detection.

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sensors controls

Products overview

Electronic pressure switches and pressure transmitters

NAI 8273 9
IO-Link Pressure Transmitter and Switch
Measures pressure and temperature, accuracy class up to 0.3%. With IO-Link and PNP/NPN switching output.

DPS 8381 16
Pressure Switch with Display and steel sensor
First choice for pressure measurement with display. Continuous analogue signal as well as 1 to 2 switch outputs can be parametrised with app via NFC.

DPC 8380 17
Pressure Switch with Display and ceramic sensor
For applications with absolute pressure measurement, low pressures or contact with corrosive media. Continuous analogue signal as well as 1 to 2 switch outputs can be parameterised with app via NFC.

Mechanical pressure switches

PICOSTAT 9B4 22
Pressure Switch with bellows sensor
For low pressure ranges and pulse-free pressure curves. Gas-tight variants available.

PICOSTAT 9R5 22
Mechanical Pressure Switch
Electromechanical Pressure Switch with one microswitch in stainless steel housing.

PICOSTAT 9K4 23
Pressure Switch with piston sensor
For high pressure ranges and pressure curves with pulsations.

PICOSTAT 9M4 23
Pressure Switch with membrane sensor
For medium pressure ranges and pressure curves with pulsations.

Temperature measurement and monitoring

DTP 8180 24
Display Temperature Switch and Transmitter
Electronic temperature transmitter and switch with display. Continuous analogue signal as well as 1 to 2 switch outputs can be parametrised with app via NFC.

ISP/ISPT 474 25
Compact Thermostat
Thermostat in block construction with switch output.

Accessories

SMI 26

Sensor Master Interface

For the configuration of the electronic pressure switches NAT 8252 and NAH 8254, and level sensor ECL 8439.

SC 26

Sensor Communicator

For the configuration of the pressure transmitter NAH 8253, EPN/EPNCR 8298, CMP 8270, and electronic pressure switch EPN-S 8320.

THP... 27

Hand Pump

For testing transmitter and switch pressures. With high accuracy electronic manometers.

V6/V7 27

Stop Valve

Stop valve for exchanging pressure transmitters without process interruption.

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sensors controls

Sensor technology

Key components of Trafag's pressure transmitters are pressure sensors based on thin-film-on-steel technology (welded design without O-ring) or thick-film-on-ceramic technology. Both sensor technologies come from Trafag's own production and were developed in-house as well as with the ASIC application-specific microchip.

As a result, pressure sensors and electronics work in perfect unison and achieve a unique level of long-term stability and reliability, even under the most adverse environmental conditions.

NAT 8252

Industrial Pressure Transmitter

- Smallest design
- Completely welded steel sensor system without additional seals
- Excellent long-term stability
- Optional: 5-fold overpressure resistance
- Optional: Switching output 1 or 2 PNP

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 2.5 to 0 ... 700 bar 0 ... 30 to 0 ... 10000 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC and more, 0.5 ... 4.5 VDC ratiometric
Accuracy @ 25°C typ.	± 0.5 % FS typ.
Media temperature	–40°C ... +125°C
Ambient temperature	–40°C ... +125°C

Data sheet www.trafag.com/H72303

Setting the switching points

Sensor Master Interface (SMI)

More information on page 26

Sensor Master Communicator (SMC)

Fast and easy operation via Android or Windows App „Sensor Master Communicator" (SMC)

NAH 8254

Pressure Transmitter with increased accuracy

- Measuring accuracy 0.3 %
- Completely welded steel sensor system without additional seals
- Excellent long-term stability
- Optional: 5-fold overpressure resistance

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 0.2 to 0 ... 700 bar 0 ... 3 to 0 ... 10000 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC and more, 0.5 ... 4.5 VDC ratiometric
Accuracy @ 25°C typ.	± 0.3 % FS typ.
Media temperature	–40°C ... +125°C
Ambient temperature	–40°C ... +125°C

Data sheet www.trafag.com/H72304

NAI 8273

IO-Link Pressure Transmitter and Switch

IO-Link

- Pressure measuring accuracy 0.3 %, 0.5 %
- Media and device temperature measurement
- Excellent long-term stability
- 2 Switching outputs PNP/NPN configurable
- Optional: 5-fold overpressure resistance

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	-0.2 ... 0.2 to 0 ... 700 bar
Output signal	IO-Link 1.1, COM3, min. process cycle time 1 ms, Smart Sensor Profile ED2 2 Switching outputs PNP/NPN
Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ.
Media temperature	–40°C ... +125°C
Ambient temperature	–40°C ... +105°C

Data sheet www.trafag.com/H72621

NAH 8253

Precision Pressure Transmitter

Parametrisation via
Sensor Communicator (SC)
More information on page 26

- Smallest design
- Accuracy classes 0.1 %, 0.15 %, 0.3 %
- Excellent temperature resistance
- Relative and absolute pressure measurement
- Optional: Dielectric strength 500 VAC, meets EN 50155 (Railways)

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 2.5 to 0 ... 600 bar 0 ... 30 to 0 ... 7500 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 ... 4.5 VDC ratiometric
Accuracy @ 25°C typ.	± 0.3 % FS typ. ± 0.15 % FS typ. ± 0.1 % FS typ.
Media temperature	-40°C ... +125°C
Ambient temperature	-40°C ... +125°C

Data sheet www.trafag.com/H72300

ESH 8845

High-Accuracy Pressure Transmitter

- Accuracy up to 0.05 % FS
- Versions with frontal or with flush diaphragm
- Media temperature to 125°C
- EMC protection, IEC 61000

Technical Data

Measuring principle	Piezoresistive
Measuring range	0 ... 0.1 to 0 ... 100 bar
Output signal	4 ... 20 mA, 0 ... 5 VDC, 0 ... 10 VDC
Accuracy @ 25°C typ.	0.5 % FS
Media temperature	-40°C ... +125°C
Ambient temperature	-40°C ... +125°C

Data sheet www.trafag.com/H72354

NAH 8254

Pressure Transmitter for highly dynamic pressure curves

Based on the proven industrial and mobile NAH 8254 hydraulics transmitter in the miniature HEX19 size, Trafag offers special versions allowing the desired cut-off frequency to be selected from various levels over 20 kHz (corresponding to 18 µs rise time, 10…90 % nominal pressure) for highly dynamic pressure measurements, down to 11 Hz for maximum signal smoothing. The fast electronics based on Trafag's own mixed-signal chip can reproduce even high-frequency pressure gradients without distortion, regardless of sampling rates. Both the thin-film-on-steel sensor element and basic design of the transmitter have been proven under extreme conditions (vibration, shock, temperature change, high pressure peaks, etc) in the harsh construction and forestry machinery environments and guarantee unsurpassed robustness and reliability in the measurement and testing field.

- Cut-off frequency 20 kHz
- For highly dynamic pressure curves
- Analogue signal processing
- Measuring accuracy 0.3 %
- Excellent long-term stability

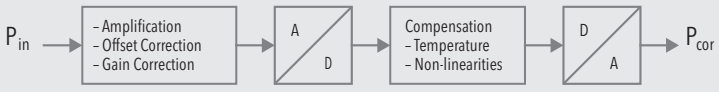
For more information about measuring highly dynamic pressure curves, see our whitepaper www.trafag.com/H70350

Technical Data

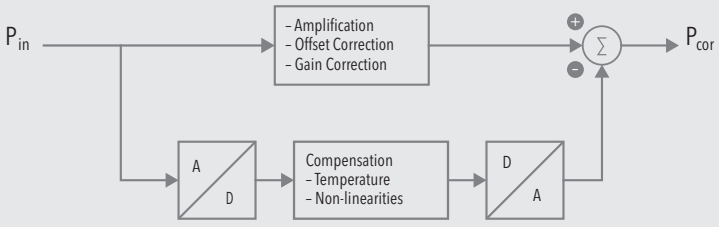
Measuring principle	Thin-film-on-steel
Measuring range	0 ... 0.2 to 0 ... 700 bar 0 ... 3 to 0 ... 10000 psi
Output signal	4 ... 20 mA, 0.5 ... 4.5 VDC ratiometric
Accuracy @ 25°C typ.	± 0.3 % FS typ.
Media temperature	–40°C ... +125°C
Ambient temperature	–40°C ... +125°C

Data sheet www.trafag.com/H72304

Non-Trafag conventional single path signal chain



Trafag Mixed Signal ASIC signal chain comprising separate paths for amplification and compensation



Schematic design of Trafag ASIC TX

The conventional (non Trafag) design with fully digital signal processing is limited by the speed of the A/D or D/A converter. The Trafag design consists of two signal components. The main path (about 98 % of the signal) experiences purely analogue amplification with zero-point and span correction and therefore very fast. Only the correction signals (temperature and non-linearities) are digitally processed and comparatively slow. This is not time-sensitive since temperature changes also exhibit response times in the minute range. Only the non-linearities correction is time relevant, which in the case of Trafag sensors makes up only about 1 % of the signal. Therefore, only about 1 % of the signal depends on the speed of the A/D or D/A converter.

trafag sensors controls

EPI 8287

Industrial Pressure Transmitter

- Excellent long-term stability
- Completely welded steel sensor system without additional seals
- Accuracy classes 0.3%, 0.5%
- Optional: 5-fold overpressure resistance
- Optionally with housing material AISI316L

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 2.5 to 0 ... 700 bar 0 ... 30 to 0 ... 10000 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 0.5 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 … 4.5 VDC ratiometric
Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ.
Media temperature	–40°C ... +125°C
Ambient temperature	–40°C ... +125°C

Data sheet www.trafag.com/H72317

EPN/EPNCR 8298

Engine Pressure Transmitter

- Nominal pressure up to 2500 bar
- High vibration resistance
- Different accuracy classes
- Completely welded steel sensor system without additional seals

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 2.5 to 0 ... 2500 bar
Output signal	4 ... 20 mA 0.5 ... 4.5 VDC ratiometric
Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ.
Media temperature	-40°C ... +125°C
Ambient temperature	-40°C ... +125°C

Data sheet www.trafag.com/H72312

Parametrisation via
Sensor Communicator (SC)
More information on page 26

ECT 8472

Industrial Pressure Transmitter

- Excellent media compatibility
- Relative or absolute pressure measurement
- Titanium version optional
- Wide temperature range

Technical Data

Measuring principle	Thick-film-on-ceramic
Measuring range	0 ... 1 to 0 ... 400 bar 0 ... 15 to 0 ... 5000 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 ... 4.5 VDC ratiom.
Accuracy @ 25°C typ.	± 0.5 % FS typ.
Media temperature	-25°C ... +125°C
Ambient temperature	-25°C ... +125°C

Data sheet www.trafag.com/H72324

ECT 8473

Industrial Pressure Transmitter with increased accuracy

- Measuring ranges from 100 mbar
- Excellent media compatibility
- Relative or absolute pressure measurement
- Titanium version optional
- Frontal membrane optional

Technical Data

Measuring principle	Thick-film-on-ceramic
Measuring range	0 ... 0.1 to 0 ... 40 bar 0 ... 1.5 to 0 ... 500 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 ... 4.5 VDC ratiom.
Accuracy @ 25°C typ.	± 0.3 % FS typ.
Media temperature	-25°C ... +125°C
Ambient temperature	-25°C ... +125°C

Data sheet www.trafag.com/H72326

FPT 8236

Flush Membrane Transmitter

- Flush membrane with smooth and plain surface
- Membrane in Duplex steel 1.4462
- Completely welded sensor system
- Excellent long-term stability

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 1 to 0 ... 100 bar 0 ... 15 to 0 ... 1500 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 … 4.5 VDC ratiometric
Accuracy @ 25°C typ.	± 0.5 % FS typ.
Media temperature	–10°C ... +125°C
Ambient temperature	–10°C ... +125°C

Data sheet www.trafag.com/H72343

FPI 8237

IO-Link Pressure Transmitter and Switch

- Flush membrane with smooth and plain surface, Duplex steel 1.4462
- Media temperature measurement
- Completely welded sensor system
- Excellent long-term stability

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	-0.5 ... 0.5 to 0 ... 100 bar correlating with -14.5 ... 14.5 to 0 ... 1450 psi
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, 0.5 … 4.5 VDC ratiometric
Accuracy @ 25°C typ.	± 0.5 % FS typ.
Media temperature	–10°C ... +125°C
Ambient temperature	–10°C ... +125°C

Data sheet www.trafag.com/H72622

CMP 8271

CANopen Miniature Transmitter

- Small and rugged construction
- CANopen bus protocol DS301/DS404 supports CAN 2.0A/B
- LSS (DS 305 V2.0)
- Optional: 5-fold overpressure resistance

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 2.5 to 0 ... 700 bar 0 ... 30 to 0 ... 10000 psi
Output signal	Bus protocol CANopen DS404
Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ.
Media temperature	-40°C ... +125°C
Ambient temperature	-40°C ... +125°C

Data sheet www.trafag.com/H72619

CMP 8270

CANopen High-Accuracy Pressure Transmitter

- Small and rugged construction
- Different accuracy classes
- Measurement of pressure and temperature
- CANopen bus protocol DS301/DS404 supports CAN 2.0A/B
- LSS (DS 305 V2.0)

Technical Data

Measuring principle	Thin-film-on-steel, piezoresistive
Measuring range	0 ... 0.2 to 0 ... 600 bar 0 ... 3 to 0 ... 7500 psi
Output signal	Bus protocol CANopen DS404
Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ. ± 0.15 % FS typ. ± 0.1 % FS typ.
Media temperature	-50°C ... +135°C
Ambient temperature	-40°C ... +125°C

Data sheet www.trafag.com/H72614

DPS 8381

Pressure Switch with Display and steel sensor

Fast and easy parametrisation via Android App

NFC

More information see below

- Parametrisation also via NFC-smartphone App (Android)
- Display and electrical connection are independently rotatable 335°/343°
- Analogue output switchable mA or V
- Integrated data logger
- Measuring range adjustable

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 2.5 to 0 ... 600 bar 0 ... 30 to 0 ... 7500 psi adjustable
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, switchable mA or V
Switching output	2 PNP
Accuracy @ 25°C typ.	± 0.5 % FS typ.
Media temperature	-25°C ... +85°C
Pressure unit for display	bar, psi, MPa, kPa, mWC, mmWC, inchWC, %, user scale
Logger	Ring buffer: 3518 data points Sampling time: 0.1 ... 999.9 s, Off (0)

Data sheet	www.trafag.com/H72321

Parametrisation with the Trafag-App „Sensor Master"

With the free Android app „Sensor Master", available in the Google Play Store, the parameters of the Trafag display pressure switches DPS 8381, DPC 8380 and the display temperature switch DTP 8180 and display level switch DLF 8980 can be set very simply through a smartphone. In addition to a variety of parameters for the switchpoints, the measurement range can be scaled. Communication is conducted via the NFC interface on the display. Via this interface, the measured values of the internal data logger can be read out via smartphone, analysed and exported for further processing.

DPC 8380

Pressure Switch with Display and ceramic sensor

Fast and easy parametrisation via Android App

NFC

More information on page 16

- Parametrisation also via NFC-smartphone App (Android)
- Display and electrical connection are independently rotatable 335°/343°
- Analogue output switchable mA or V
- Integrated data logger
- Pressure range adjustable

Technical Data

Measuring principle	Thick-film-on-ceramic
Measuring range	0 ... 0.2 to 0 ... 100 bar 0 ... 2.5 to 0 ... 1500 psi adjustable
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, switchable mA or V
Switching output	2 PNP
Accuracy @ 25°C typ.	± 0.5 % FS typ. ± 0.3 % FS typ.
Media temperature	-25°C ... +85°C
Pressure unit for display	bar, psi, MPa, kPa, mWC, mmWC, inchWC, %, user scale
Logger	Ring buffer: 3518 data points Sampling time: 0.1 ... 999.9 s, Off (0)

Data sheet www.trafag.com/H72320

trafag sensors controls

ECL 8439

Submersible Pressure Transmitter

- Also suitable for thick and viscous media
- Different materials for optimum media compatibility
- Configurable measuring ranges
- Optional: Enhanced lightning protection

Technical Data

Measuring principle	Thick-film-on-ceramic
Measuring range	0 ... 0.1 to 0 ... 6.0 bar 0 ... 1.5 to 0 ... 100 psi
Output signal	4 ... 20 mA
Accuracy @ 25°C typ.	± 0.3 % FS typ. Range 0 ... 0.1 to 0 ... 0.2 bar: ± 0.5 % FS typ.
Media temperature	max. -25°C ... +70°C
Ambient temperature	max. -25°C ... +70°C

Data sheet www.trafag.com/H72336

Configuration of measurement ranges

Sensor Master Interface (SMI)
More information see below

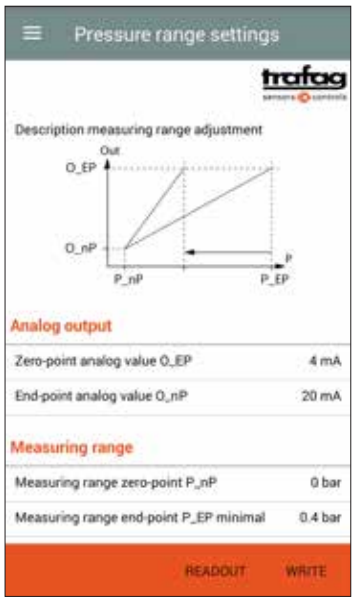
Configuration of measuring range

Sensor Master Interface (SMI)

More information on page 26

Sensor Master Communicator (SMC)

Fast and easy operation via Android or Windows App „Sensor Master Communicator" (SMC)



NAL 8838

Submersible Pressure Tansmitter

- Pressure ranges from 100 mbar
- Cable PUR or FEP
- Option: Chemical resistant material, in titanium
- Option: Lightning protection (IEC 61000-4-5)

Technical Data

Measuring principle	Piezoresistive
Measuring range	0 ... 0.1 to 0 ... 25 bar
Output signal	4 ... 20 mA 0 ... 10 VDC
Accuracy @ 25°C typ.	0.5 %, 0.25 %, 0.1 %
Media temperature	-5°C ... +50°C
Ambient temperature	-5°C ... +50°C

Data sheet www.trafag.com/H72228

DLF 8980

Level Switch with Display

Fast and easy parametrisation via Android App

NFC

More information on page 16

- Parametrisation also via NFC-smartphone App (Android)
- Display and electrical connection are independently rotatable 335°/343°
- Analogue output switchable mA or V
- Integrated data logger
- Measuring resolution 5, 10, 20 mm

Technical Data

Measuring principle	Magnetic float with reed contacts
Measuring range	Max. level 2000 mm, Resolution of 5, 10 or 20 mm
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, switchable mA or V
Switching output	2 PNP
Media temperature	max. -30°C ... +105°C -30°C ... +90°C PP floats -30°C ... +60°C PVC floats
Ambient temperature	-30°C ... +85°C
Pressure unit for display	mm, inch, user scale, % FS

Data sheet www.trafag.com/H72450

trafag sensors controls

TFC

Float Level Sensor

- Measuring resolution 5, 10, 20 mm
- Various float and stem material available
- Optional : Temperature sensor PT1000
- Protection IP65

Technical Data

Measuring principle	Magnetic float with reed contacts
Measuring range	Max. level 2000 mm, Resolution 5, 10 or 20 mm
Output signal	4 ... 20 mA, 0 ... 5 VDC, 0 ... 10 VDC
Media temperature	Up to 150°C

Data sheet	www.trafag.com/H20040

TFS

Float Level Switch

- Protection IP65
- Optional: Temperature sensor PT1000 or thermostat
- Potted electrical contacts

Technical Data

Measuring principle	Magnetic float with reed contacts
Measuring range	Max. level 2000 mm
Output signal	Up to 6 switching contacts
Media temperature	Up to 180°C

Data sheet	www.trafag.com/H20041

TOS

Optical Level Switch

- No moving parts
- Hermetic construction, sealed electronics
- Minimum degree of protection IP65

Technical Data

Measuring principle	Infrared transceiver
Measuring range	Working pressure max. 260 bar
Output signal	PNP or NPN transistor
Media temperature	-40 ... +85°C

Data sheet www.trafag.com/H20042

trafag sensors controls

PICOSTAT 9B4

Pressure Switch with bellows sensor

- Improved vibration resistance
- For low pressure ranges
- High repeatability

Technical Data

Measuring principle	Bellows
Measuring range	-0.6 ... 3.4 to 4 ... 40 bar -8 ... 45 to 60 ... 500 psi
Output signal	1 Floating change-over contact (SPDT)
Switching differential	Not adjustable
Repeatability	± 0.5 % FS typ.
Media temperature	–40°C ... +125°C

Data sheet www.trafag.com/H72367

PICOSTAT 9R5

Pressure Switch with stainless steel bellows sensor

- Stainless steel housing
- Stainless steel bellows sensor, welded
- High repeatability
- Rugged housing
- Meets EN 50155 (Railway)

Technical Data

Measuring principle	Steel bellows welded
Output signal	1 Floating change-over contact (SPDT)
Switching differential	Not adjustable
Media temperature	–40°C ... +85°C

Data sheet www.trafag.com/H72370

PICOSTAT 9K4

Pressure Switch with piston sensor

- High pressure ranges
- Robust even with pulsating pressure curves

Technical Data

Measuring principle	Piston
Measuring range	1 ... 10 to 40 ... 400 bar 14 ... 150 to 580 ... 5800 psi
Output signal	1 Floating change-over contact (SPDT)
Switching differential	Not adjustable
Repeatability	± 1.0 % FS typ.
Media temperature	–25°C ... +125°C

Data sheet www.trafag.com/H72369

PICOSTAT 9M4

Pressure Switch with membrane sensor

- For medium pressure ranges
- Robust even with pulsating pressure curves

Technical Data

Measuring principle	Membrane
Measuring range	1 ... 10 to 10 ... 100 bar 14 ... 150 to 150 ... 1500 psi
Output signal	1 Floating change-over contact (SPDT)
Switching differential	Not adjustable
Repeatability	± 2.0 % FS typ.
Media temperature	0°C ... +80°C

Data sheet www.trafag.com/H72368

DTP 8180

Display Temperature Switch and Transmitter

Fast and easy parametrisation via Android App

NFC

More information on page 16

- Parametrisation also via NFC-smartphone App (Android)
- Display and electrical connection are independently rotatable 335°/343°
- Analogue output switchable mA or V
- Integrated data logger
- Temperature range adjustable

Technical Data

Measuring principle	PT 1000, DIN EN 60751 class A, 2 conductors
Measuring range	-50°C ... +150°C / -58°F ... 302°F adjustable 50 ... 100 % FS
Output signal	4 ... 20 mA, 0 ... 5 VDC, 1 ... 6 VDC, 0 ... 10 VDC, switchable mA or V
Switching output	2 PNP
Accuracy @ 25°C typ.	± 0.5 % FS typ. + temperature sensor error
Temperature unit for display	°C, °F, K, user scale
Logger	Ring buffer: 3518 data points Sampling time: 0.1 ... 999.9 s, Off (0)

Data sheet	www.trafag.com/H72352

ISP/ISPT 474

Picostat Thermostat

- Compact design
- Rugged housing
- High repeatability
- Protection IP65

Technical Data

Measuring range	+5°C ... +95°C to +20°C ... +150°C
Output signal	Floating change-over contact
Switching differential	Not adjustable
Repeatability	± 1 % FS typ.

Data sheet	www.trafag.com/H72113

trafag sensors controls

SMI

Sensor Master Interface

Fast and easy operation via
Android or Windows App

- Read out of sensor data
- Parametrisation of switching points on NAx pressure switches
- Measurement range adjustment on Submersible Pressure Transmitter ECL 8439
- Fast and easy operation via Android App „Sensor Master Communicator SMC"
- Reset pressure measurement instruments to factory settings

Technical Data

Ambient temperature	0°C ... +40°C
Supply voltage	5 VDC, ±0.25, 1 A (Supply via USB interface)
Protection	IP20
Storage temperature	-10°C ... +50°C
Dimensions	LxWxH: 120x76x27 mm
Communication SMC/SMI	Via Bluetooth LE (Android) or LAN/RJ45 (Windows)
Operation Interface	Via Android or Windows App „Sensor Master Communicator SMC"

Data sheet www.trafag.com/H72618

SC

Sensor Communicator

- Read out sensor data
- Adjustment of zero point and span
- Real time pressure measuring
- Software update and battery charge with USB-interface

Technical Data

- Identification of device data: Model, signal output, type plate, manufacturing date
- Setting of switchpoint (8320 EPN-S)
- CANopen: Setting of Node-ID and baudrate
- Reset to factory settings

Instruction www.trafag.com/H73699

THP...

Hand Pump

THP30

THP700

- For testing pressure transmitters and pressure switches

Technical Data

Connection	G1/4" female

Product No.	Range [bar]
THP30	-0.85 ... +25
THP700	0 ... 700, Resolution 0.2 bar

V6/V7

Stop Valve

V6

V7

- Allows replacement of instruments without process interruption (max. 40 bar)

Technical Data

Material	1.4305 / FKM
Pressure	max. 600 bar
Media temperature	-25°C ... +125 °C

Data sheet www.trafag.com/H72258

Product No.		Connection
V6	For water, air, light-crude, heavy oil	G1/2" male G1/4" female
V7	For water, air, light-crude, heavy oil	G1/4" male G1/4" female

Reliable quality

Worldwide represented, globally trusted, Swiss based

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India
Italy
Japan
Austria
Poland (Joint Venture)
Russia (Joint Venture)
Switzerland (Headquarters)
Spain
Czech Republic
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Estonia
Finland
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Honduras
Hungary
Iceland
Indonesia
Israel
Korea
Latvia
Lithuania
Macedonia
Malaysia
Mexico
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New Zealand
Nicaragua
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Taiwan
Thailand
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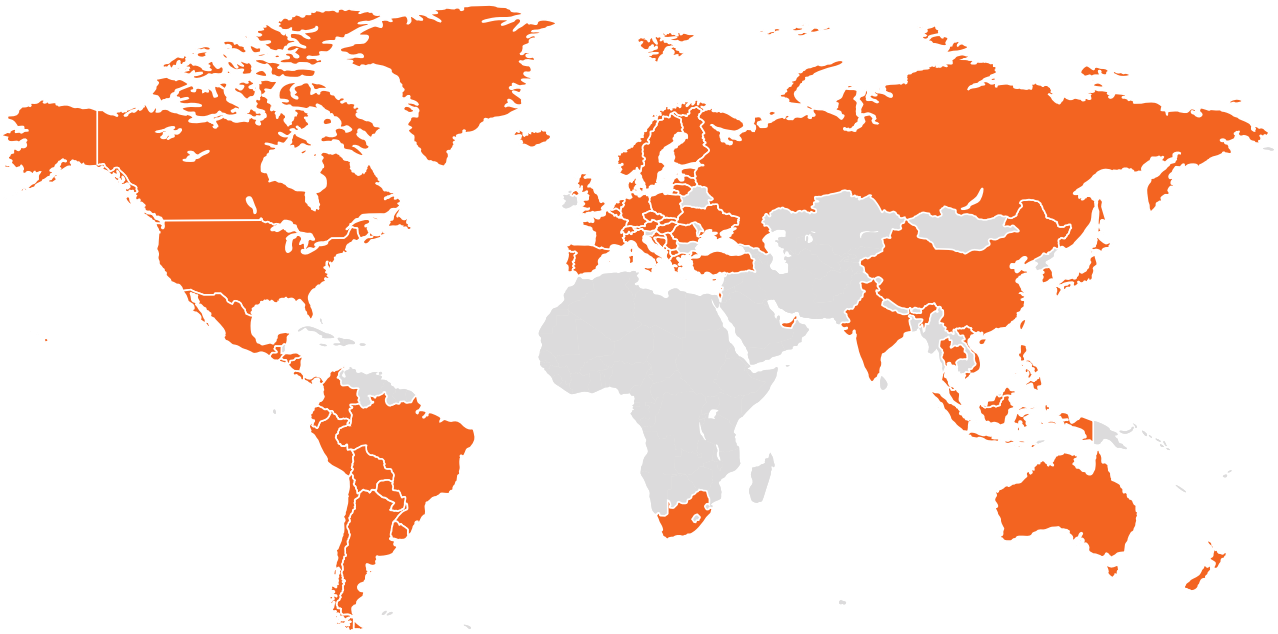
Vietnam

Subject to change 09/2022 H701187d



The coordinates to the representatives can be found at www.trafag.com/trafag-worldwide

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