

Railway technology

Pressure switches - Pressure transmitters - Thermostats



Lubrication systems

Pressure monitoring for automatic lubrication systems.

Control and safety systems

Overload control, door-closing systems, fire extinguishing systems.

Pantographs

Control and monitoring of pneumatically operated pantographs.

Galley systems

Cooling machine, control of the inlet and outlet pressure of the cooling system, level monitoring of the cooling liquid.

Bogie suspensions

Air pressure control for level regulation.

Brake systems

Pneumatic and hydraulic brake systems, emergency brake systems.

Sanitary facilities

Pressure monitoring of water and air supply, vacuum monitoring of toilet, level monitoring of black water, grey water and fresh water.

Global market leaders in railway technology put their trust in Trafag

Alstom

DB Deutsche Bahn

Faiveley Transportation

Bombardier

SNCF

Sigma Coachair Group

CRRC

Siemens

Wabtec Corporation



Diagnostic systems

Mobile units for testing pressures on rail cars. Hydraulic monitoring systems on railway switches.

Diesel engines

Pressure and temperature monitoring of lubrication, fuel, intake and charge air or cooling water.

Air-conditioning systems

Pressure monitoring of cooling compressors, monitoring of room temperature.

Windscreen washer systems

Level monitoring in windscreen washer water tanks.

Sanding systems

Monitoring of the pressure in sanding systems.

Propulsion

Monitoring of pressure and temperature in water or oil circuits of motors, gearboxes and in cooling circuits of current converters.

Maintenance systems

Track tamping machines, rail milling machines for reprofiling the rail head.

Overview railway products

Pressure transmitters



NAR 8258

Very compact and robust. 1st choice for all applications with electrical connector M12x1 or Industrial standard.

6



ECR 8478

1st choice for absolute versions, low measuring ranges and corrosive or clogging media. Frontal membrane and corrosion resistant materials available.

8



NAH 8253

Very compact and robust. For applications where accuracy of 0.15 % is required (e.g. braking systems).

6



EPR 8293

For applications with electrical connection DIN EN 175301-803-A.

8



EPR 8283

Very robust, wide range of process connections. 1st choice for all applications with electrical connector DIN EN 175301-803-A.

7



CMP 8270

With CANopen output signal for pressure and temperature. Accuracy up to 0.1 %.

9

Pressure switches



NAR 8258

Very compact and robust electronic pressure switch with 1 or 2 configurable switching outputs.

10



9R5

Electromechanical pressure switch with one microswitch in stainless steel housing.

12



EPN-S 8320

Robust electronic pressure switch for applications with electrical connector DIN EN 175301-803-A or cable. 1 switching output, configurable with SC.

11

Temperature monitoring



I/IS 404/414
Capillary tube thermostat with extra robust housing for applications in rough environment.

14



M/MS 624/634
Thermostat with a wide range of options and versions. 1st choice as it covers most applications.

15



IA/IAS 409/419
Ambient temperature thermostat with robust housing for applications in rough environment.

14



MS...R 630/632
Thermostat with limiter functionality. Used in applications where manual reset to original status is required.

15

General accessories



SMI
For parameterising the electronic pressure switch NAR 8258.

10



THP...
Hand pump with precision manometer.

13



SC
Handheld for parameterisation of pressure transmitters and electronic pressure switches.

11



V6/V7
Stop valve for exchanging pressure transmitter without interrupting the process.

13



A.../D...
Adapters with manometer pressure ports.

13

NAR 8258

Railway Pressure Transmitter



- Measuring accuracy 0.3 %
- Excellent long-term stability
- Completely welded steel sensor system without additional seals
- Dielectrical strength: 750 VDC, meets EN 50155 (Railways)

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 6 to 0 ... 700 bar 0 ... 100 to 0 ... 10000 psi
Output signal	4 ... 20 mA
Accuracy @ 25°C typ.	± 0.3 % FS typ.
Media temperature	-40°C ... +85°C
Ambient temperature	EN 50155: OT6 (-40°C ... +85°C)

Data sheet www.trafag.com/H72307

NAH 8253

Precision pressure transmitter



- Optional: Switching output 1 or 2 PNP transistors
- Accuracy classes 0.1 %, 0.15 %
- Excellent temperature resistance
- Dielectrical strength 600 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
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

EPR 8283

Railway Pressure Transmitter



- Accuracy classes 0.3 %, 0.5 %
- Completely welded steel sensor system without additional seals
- Dielectrical strength: 750 VDC, 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
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/H72319



ECR 8478

Railway Pressure Transmitter with ceramic sensor



- Measuring ranges from 100 mbar
- Relative or absolute pressure measurement
- Frontal membrane optional
- Dielectrical strength: 600 VAC / 750 VDC, meets EN 50155 (Railways)

Technical Data

Measuring principle	Thick-film-on-ceramic
Measuring range	0 ... 0.1 to 0 ... 60 bar 0 ... 1.5 to 0 ... 1000 psi
Output signal	4 ... 20 mA
Accuracy @ 25°C typ.	± 0.3 % FS typ. (± 0.5 % FS typ., ± 1 % FS typ.)
Media temperature	-25°C ... +125°C
Ambient temperature	-25°C ... +125°C

Data sheet www.trafag.com/H72337

EPR 8293

Railway Pressure Transmitter



- Accuracy classes 0.3 %, 0.5 %
- Completely welded steel sensor system without additional seals
- Dielectrical strength: 500 VAC, 50 Hz, meets EN 50155 (Railways)

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 2.5 to 0 ... 600 bar
Output signal	4 ... 20 mA
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/H72311

CMP 8270

CANopen Miniature Pressure Transmitter

CANopen



- Accuracy classes 0.1 %, 0.15 %, 0.3 %, 0.5 %
- Measurement of pressure and temperature
- CANopen bus protocol DS301/DS404 supports CAN 2.0A/B

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



NAR 8258

Electronic pressure switch



- Measuring accuracy 0.3 %
- 1 or 2 PNP transistors
- Parameterization via smartphone App (Android)
- Switching current up to 400 mA
- Dielectrical strength: 750 VDC, meets EN 50155 (Railways)

Technical Data

Measuring principle	Thin-film-on-steel
Measuring range	0 ... 6 to 0 ... 700 bar 0 ... 100 to 0 ... 10000 psi
Output signal	Switching output: 1 or 2 PNP transistors
Accuracy @ 25°C typ.	± 0.3 % FS typ.
Media temperature	-40°C ... +85°C
Ambient temperature	EN 50155: OT6 (-40°C ... +85°C)

Data sheet www.trafag.com/H72307

SMI

Sensor Master Interface



- Read out of sensor data
- Parameterization of switching points on NAX pressure switches
- Fast and easy operation via Windows or 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
Operation Interface	Via Windows or Android App "Sensor Master Communicator SMC"
Communication SMC/SMI	Via Bluetooth LE (Android) or LAN/RJ45 (Windows)

Data sheet www.trafag.com/H72618

EPN-S 8320

Electronic Pressure Switch



- Rugged design for harsh environments
- 1 PNP transistor
- Wide temperature range
- Switchpoint factory set or programmable on site with Trafag Sensor Communicator SC

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	Switching output: 1 transistor
Accuracy @ 25°C typ.	± 0.5 % FS typ. (Switchpoint)
Media temperature	-40°C ... +125°C
Ambient temperature	Standard: -25°C ... +85°C Option accessory 67: -40°C ... +125°C

Data sheet www.trafag.com/H72333

SC

Sensor Communicator



- Read out of 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

Flyer www.trafag.com/H70654

9R5

Mechanical pressure switch Picostat



- Stainless steel housing
- Stainless steel bellow sensor, welded
- Compact design

Technical Data

Measuring principle	Steel bellow welded
Setting range	-0.8 ... 2 to 7 ... 12 bar -11 ... 29 to 102 ... 174 psi
Output signal	1 Floating change-over contact (SPDT)
Media temperature	-40°C ... +85°C
Ambient temperature	-40°C ... +85°C (EN 50155: OT6)

Data sheet www.trafag.com/H72370



THP...

Hand pump



- For testing of 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



- Allows replacement of instruments without interruption of process (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

A.../D...

Adapters with manometer pressure ports



- Pressure adapters with different thread combinations and materials for individual applications

Technical Data

Material 1.4435 (AISI316L) / Brass

Data sheet www.trafag.com/H72258

I/IS 404/414

Industat



- Rugged housing
- Protection IP65

Technical Data

Measuring range	-30°C ... +40°C to +70°C ... +350°C
Output signal	Floating change-over contact
Media temperature	-30°C ... +350°C

Data sheet www.trafag.com/H72110

IA/IAS 409/419

Industat



- Rugged housing
- Protection IP65

Technical Data

Measuring range	-30°C ... +30°C to 0°C ... +60°C
Output signal	Floating change-over contact
Media temperature	-30°C ... +60°C

Data sheet www.trafag.com/H72116

MST 624/634

Ministat



- Protection IP54
- Electrical connection on terminal screw

Technical Data

Measuring range	-30°C ... +40°C to +70°C ... +350°C
Output signal	Floating change-over contact
Media temperature	-30°C ... +350°C

Data sheet www.trafag.com/H72174

MS...R 630/632

Mini Limistat



- External or internal resetting
- Protection IP54
- Electrical connection on terminal screw

Technical Data

Measuring range	-30°C ... +40°C to +70°C ... +350°C
Output signal	Floating change-over contact
Media temperature	-30°C ... +350°C

Data sheet www.trafag.com/H72173

Reliable quality

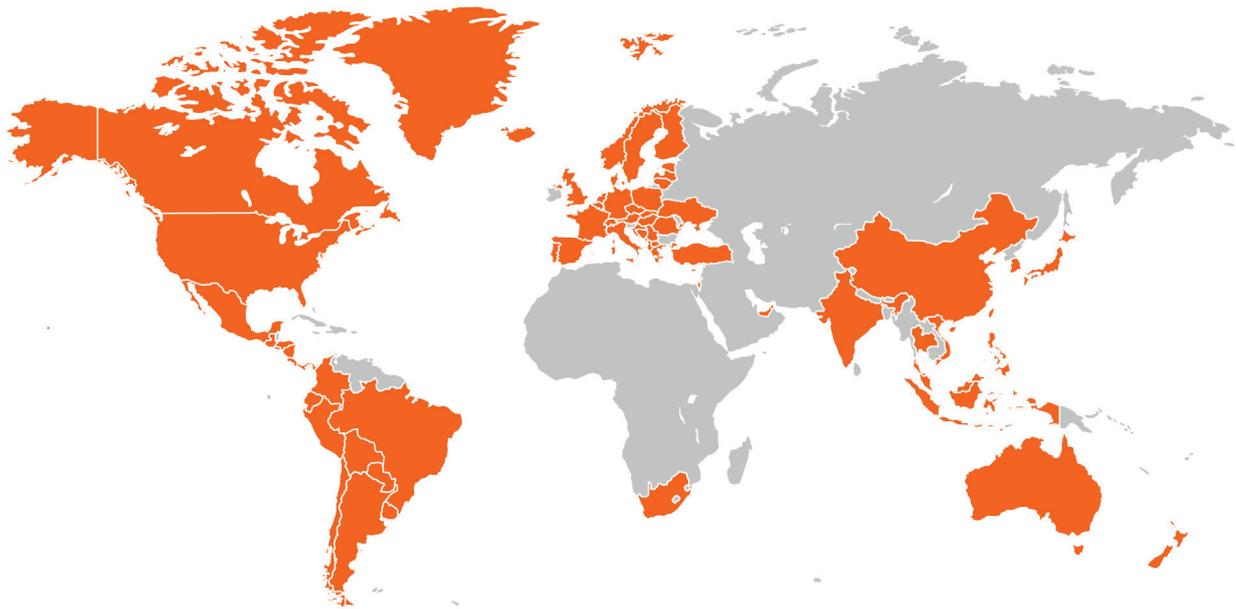
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