



ANWENDUNG

- ◆ Schiffbau
 - ◆ ABS, BV, DNV, GL, KRS, LR, NKK, RINA, RMRS, CCS
- ◆ Motorenbau
 - ◇ Schienenfahrzeuge
- ◆ Maschinenbau
- ◆ Hydraulik
 - ◇ HLK
 - ◇ Kältetechnik
 - ◇ Prozess Techn.
 - ◇ Wasseraufbereitung
 - ◇ Autoindustrie
 - ◇ Prüfstände
 - ◇ Ex
 - ◇ Lebensmittelindustrie
 - ◇ Autoklaven

APPLICATIONS

- ◆ Construction navale
 - ◆ ABS, BV, DNV, GL, KRS, LR, NKK, RINA, RMRS, CCS
- ◆ Constr. de moteurs
 - ◇ Véhicules sur rail
- ◆ Machines-outils
- ◆ Hydraulique
 - ◇ CVC
 - ◇ Réfrigération
 - ◇ Techn. de procédés
 - ◇ Traitement de l'eau
 - ◇ Industrie automobile
 - ◇ Banc d'essai à frein
 - ◇ Ex
 - ◇ Industrie alimentaire
 - ◇ Autoclavage

APPLICATIONS

- ◆ Shipbuilding
 - ◆ ABS, BV, DNV, GL, KRS, LR, NKK, RINA, RMRS, CCS
- ◆ Engine manufacturing
 - ◇ Railways
- ◆ Machine tools
- ◆ Hydraulics
 - ◇ HVAC
 - ◇ Refrigeration
 - ◇ Process technology
 - ◇ Water treatment
 - ◇ Automotive industry
 - ◇ Test benches
 - ◇ Ex
 - ◇ Food Industry
 - ◇ Autoclaves



HAUPTMERKMALE

- ◆ Sensor: Dünnschicht auf Stahl
- ◆ Messbereich: 0...2.5 bis 0...2500 bar
- ◆ Ausgangssignal: 4...20 mA
- 0.5...4.5 VDC (ration.)
- ◆ NLH (BSL durch 0): ± 0.1 % d.S. typ. oder ± 0.3 % d.S. typ.
- ◆ Betriebstemperatur: -40 ... +125°C

CARACTÈRES DISTINCTIFS

- ◆ Capteur: Couche mince sur acier
- ◆ Plage de mesure: 0...2.5 à 0...2500 bar
- ◆ Signal de sortie: 4...20 mA
- 0.5...4.5 VDC (ration.)
- ◆ NLH (BSL par 0): ± 0.1 % E.M. typ. ou ± 0.3 % E.M. typ.
- ◆ Température de service: -40 ... +125°C

MAIN CHARACTERISTICS

- ◆ Sensor: Thin film on steel
- ◆ Measuring range: 0...2.5 to 0...2500 bar
- ◆ Signal output: 4...20 mA
- 0.5...4.5 VDC (ration.)
- ◆ NLH (BSL through 0): ± 0.1 % FS typ. or ± 0.3 % FS typ.
- ◆ Operating temperature: -40 ... +125°C

VORTEILE

- ◆ Schiffszulassung
- ◆ verschiedene Genauigkeitsklassen
- ◆ Nenndruckbereich bis 2500 bar (Common Rail) mit Hochdruck-Gewindeanschluss
- ◆ Surge
- ◆ hohe Vibrationsfestigkeit
- ◆ gute Temperaturbeständigkeit
- ◆ komplett verschweisstes Sensorsystem aus Stahl ohne zusätzliche Dichtungen

AVANTAGES PRINCIPAUX

- ◆ approbations navales
- ◆ différente classe de précision
- ◆ Pression nominale jusqu'à 2500 bar (Common Rail) avec raccord de pression pour haute pression
- ◆ Surge
- ◆ grande résistance aux vibrations
- ◆ bonne résistance de température
- ◆ système de capteur en acier complètement soudé sans joints

MAIN FEATURES

- ◆ ship approvals
- ◆ different accuracy classes
- ◆ Nominal pressure up to 2500 bar (Common Rail) with high pressure threaded connection
- ◆ Surge
- ◆ high resistance of vibration
- ◆ good temperature resistance
- ◆ Completely welded steel sensor system without additional seals

BESTELLINFORMATION / INFORMATION POUR LA COMMANDE / ORDERING INFORMATION

Lager Code (kurze Lieferzeiten)/ Numéro de stock (délai de livraison bref)/ Code for stock products (short delivery time):

EPN (z.B./ Ex./e.g: EPN10.0A)

siehe Katalog:/ regardez catalogue:/ see catalogue: „Standard Products“

Varianten Code/ Numéro de variantes/ Custom build code

XXXXXX.XXX.XXX.XX.XX.XX...
8298

| | | | | | | | |
|---|------------|---------------|------|------|----------------------|------|----|
| Bereich | 0 ... 2.5 | Überdruck | max. | 5 | Berstdruck | 100 | 75 |
| Plage | 0 ... 4.0 | Surpression | | 8 | Pression destruction | 100 | 76 |
| Range | 0 ... 6.0 | Over pressure | | 12 | Burst pressure | 100 | 77 |
| | 0 ... 10 | | | 20 | | 200 | 78 |
| | 0 ... 16 | | | 32 | | 200 | 79 |
| [bar] | 0 ... 25 | [bar] | | 50 | [bar] | 300 | 80 |
| | 0 ... 40 | | | 80 | | 300 | 81 |
| | 0 ... 60 | | | 120 | | 500 | 82 |
| | 0 ... 100 | | | 200 | | 500 | 83 |
| | 0 ... 160 | | | 320 | | 1000 | 85 |
| | 0 ... 250 | | | 500 | | 1000 | 74 |
| | 0 ... 400 | | | 800 | | 1500 | 84 |
| | 0 ... 600 | | | 1000 | | 2000 | 86 |
| | 0 ... 1600 | | | 3000 | | 4000 | 89 |
| | 0 ... 2000 | | | 3000 | | 4000 | 90 |
| | 0 ... 2500 | | | 3000 | | 4000 | 91 |
| Sonderbereich nach Kundenwunsch, z. B.: plage sur demande du client, p. ex.: 0...2400bar / 0 ... 12 bar customized ranges on request, e.g.: | | | | | | | XX |

| | | | |
|---------|--|------|----|
| Sensor | Relativdruck, Genauigkeit:/ Pression relatif, précision relatif:/ Relative pressure, accuracy: | 0.3% | 23 |
| Capteur | Relativdruck, Genauigkeit:/ Pression relatif, précision relatif:/ Relative pressure, accuracy: | 0.5% | 25 |
| Sensor | | | |

| | | | |
|---------------------|--|--------------------|---|
| Druckanschluss | Für Bereiche/ pour plages/ for ranges: ≤ 600 bar | | |
| Raccord de pression | G 1/4" | aussen/ mâle/ male | (O-Ring / joint torique / o-ring) |
| Pressure connection | R 1/4" | aussen/ mâle/ male | |
| | G 1/2" | aussen/ mâle/ male | (Manometer/ manomètre/ manometer) |
| | Für Bereiche/ pour plages/ for ranges: > 600 bar | | |
| | M14x1.5 | aussen/ mâle/ male | (Kegeldichtung:/ Joint conique:/ Conical seal: 58°) |
| | M18x1.5 | aussen/ mâle/ male | (Kegeldichtung:/ Joint conique:/ Conical seal: 58°) |

| | | | |
|------------|---|---|----|
| Ausführung | Gerätestecker/ Embase mâle/ Male electrical plug: | EN175301-803-A (DIN43650-A) Mat.: PA: | |
| Exécution | Normale Vibrationsbeständigkeit/ Résistance de vibration normale/ Normal vibration resistance | ≤ 600 bar | 04 |
| Execution | Gerätestecker/ Embase mâle/ Male electrical plug: | EN175301-803-A (DIN43650-A) Mat.: PA: | |
| | Erhöhte Vibrationsbeständigkeit/ Résistance de vibration élargie/ extended vibration resistance | | 05 |
| | Kabel abgeschirmt/ Câble avec écran/ Cable with shield: | | |
| | **Material/ Matériel/ Material: FDR 25 (Raychem) | 4 x 0.5mm ² (Cable lenght see „accessories“) | 78 |
| | Gerätestecker/ Embase mâle/ Male electrical plug DIN72585 Code 1, Mat.: PBT (Contacts Mat.: Zn) | | 25 |
| | (nur mit Ausgangssignal/ seulement avec signal de sortie/ only with output: 23) | | |

| | | | | | |
|------------------|--|--------------------------------|---------------------|---|----|
| Ausgangssignal | Output | Load resistance | I _{SUPPLY} | U _{SUPPLY} | |
| Signal de sortie | 4 ... 20 mA | (U _{supply} -9V)/20mA | | 9 ... 32 VDC | 19 |
| Output | 0.5...4.5V DC | ≥15.0 kΩ | ≤12 mA | 5 VDC ±0.25 VDC ratiometrisch/ ratiométrique/ ratiometric | 23 |
| | (nur Ausführungen Nr. 25 und 78/ seulement exécutions No. 25 et 78/ only executions No. 25 and 78) | | | | |

| | | |
|-------------|--|--|
| Zubehör | Druckspitzendämpfung/ Élément d'amortissement à pointe de surpression/ Pressure peak damping element: | |
| Accessoires | Loch/ Trou/ Hole: | ø 1.0mm |
| Accessories | | ø 0.3mm |
| | | ø 0.5mm |
| | Kabeldose/ Fiche femelle/ Female electrical connector: | EN175301-803-A (DIN43650-A)/ NBR, -40...90°C |
| | Output 4...20mA & Gerätestecker/ Output 4...20mA & embase mâle/ Output 4...20mA & male electrical plug | |
| | EN175301-803-A (DIN43650-A): Pin 1 ⊕, Pin 2 ⊖ | |
| | **Kabellänge/ Longueur du câble/ Cable lenght: | 1.5 m |
| | | 3.0 m |
| | | 5.0 m |



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ÄNDERUNGEN VORBEHALTEN - SOUS RÉSERVE DE MODIFICATIONS - SUBJECT TO CHANGE

SPEZIFIKATIONEN

HAUPTMERKMALE

Sensor: Dünnschicht auf Stahl (s. Material)
Messbereich: 0...2.5 bis 0...2500 bar
Ausgangssignal: 4...20mA
0.5...4.5 VDC (ration.)

GENAUIGKEIT

Messgenauigkeit 0.5%
(Bestell.-Nr. 25)

TFB @ -25...+85°C: ± 2.0 % d.S. typ.
Genauigkeit @ +25°C: ± 0.5 % d.S. typ.
NLH @ +25°C (BSL durch 0): ± 0.3 % d.S. typ.
TK Nullpunkt und Spanne: ± 0.03 % d.S./K typ.
Langzeitstabilität
1 Jahr @ +25°C: ± 0.2 % d.S. typ.

Messgenauigkeit 0.3%
(Bestell.-Nr. 23)

TFB @ -25...+85°C: ± 0.5 % d.S. typ.
Genauigkeit @ +25°C: ± 0.3 % d.S. typ.
NLH @ +25°C (BSL durch 0): ± 0.1 % d.S. typ.
TK Nullpunkt und Spanne: ± 0.005 % d.S./K typ.
Langzeitstabilität
1 Jahr @ +25°C: ± 0.2 % d.S. typ.

ELEKTRISCHE DATEN

Ausgangssignal/ Speisespannung
4...20 mA: 24 (9...32) VDC
0.5...4.5 VDC: 5 VDC ratiometrisch
Anstiegszeit: typ. 1 ms/10...90%
Nenndruck

UMGEBUNGSBEDINGUNGEN

Betriebstemperatur: -40...+125°C
Medientemperatur: -40...+125°C
Schutzart: Ausf. 04/05²⁾: IP65
Ausf. 25²⁾/78: IP69K
Feuchtigkeit: max. 95% relativ
Vibration: Ausführung 04: 10g (50...2000 Hz)
Ausführung 05: 15g (50...2000 Hz)
Ausführung 25: 15g rms
Ausführung 78: 20g rms
Stoß: 50g/ 3 ms

EMV-SCHUTZ

(Ausgangssignal: 4...20mA)

Emission: EN/IEC 61000-6-4
Immunity: EN/IEC 61000-6-2

MECHANISCHE DATEN

Material
Sensor: 1.4548 (AISI630)
Gehäuse: 1.4542 (AISI630) /1.4301 (AISI304)
O-Ring (medienberührend): FKM 70°Sh
Gerätestecker/Kabel: siehe Bestellin-
formation
Anziehdrehmoment: übrige: 25 Nm
Druckanschluss 28/29: 30 Nm
Gewicht (ohne Kabel): ~ 80...110 g

SPECIFICATIONS

CARACTÈRES DISTINCTIFS

Capteur: Couche mince sur acier (voir matière)
Plage de mesure: 0...2.5 à 0...2500 bar
Signal de sortie: 4...20 mA
0.5...4.5 VDC (ration.)

PRÉCISION

Précision de mesure 0.5%
(No. commande 25)

TEB @ -25...+85°C: ± 2.0 % E.M. typ.
Précision @ +25°C: ± 0.5 % E.M. typ.
NLH @ +25°C (BSL par 0): ± 0.3 % E.M. typ.
CT point zéro et écart: ± 0.03 % E.M./K typ.
Stabilité à long terme
1 année @ +25°C: ± 0.2 % E.M. typ.

Précision de mesure 0.3%
(No. commande 23)

TEB @ -25...+85°C: ± 0.5 % E.M. typ.
Précision @ +25°C: ± 0.3 % E.M. typ.
NLH @ +25°C (BSL par 0): ± 0.1 % E.M. typ.
CT point zéro et écart: ± 0.005 % E.M./K typ.
Stabilité à long terme
1 année @ +25°C: ± 0.2 % E.M. typ.

SPÉCIFICATIONS ÉLECTRIQUES

Signal de sortie/ Tension d'alimentation
4...20 mA: 24 (9...32) VDC
0.5...4.5 VDC: 5 VDC ratiométrique
Sensibilité de réponse: typ. 1 ms/10...90%
pression nominale

CONDITIONS D'ENVIRONNEMENT

Température de service: -40...+125°C
Température de médias: -40...+125°C
Protection: Exécution 04/05²⁾: IP65
Exécution 25²⁾/78: IP69K
Humidité: 95% max. relatif
Vibration: Exécution 04: 10g (50...2000 Hz)
Exécution 05: 15g (50...2000 Hz)
Exécution 25: 15g rms
Exécution 78: 20g rms
Choc: 50g/ 3 ms

CEM PROTECTION

(Signal de sortie: 4...20mA)

Emission: EN/CEI 61000-6-4
Immunité: EN/CEI 61000-6-2

SPÉCIFICATIONS MÉCANIQUES

Matière
Capteur: 1.4548 (AISI630)
Boîtier: 1.4542 (AISI630) /1.4301 (AISI304)
O-Ring (contact. de médias): FKM 70°Sh
Embase mâle/Câble: voir information pour la
commande
Couple de serrage: reste : 25 Nm
Raccord de pression 28/29: 30 Nm
Poids (sans câble): ~ 80...110 g

SPECIFICATIONS

MAIN CHARACTERISTICS

Sensor: Thin film on steel (see material)
Measuring range: 0...2.5 to 0...2500 bar
Signal output: 4...20 mA
0.5...4.5 VDC (ration.)

ACCURACY

Measuring accuracy 0.5%
(Ordering No 25)

TEB @ -25...+85°C: ± 2.0 % FS typ.
Accuracy @ +25°C: ± 0.5 % FS typ.
NLH @ +25°C (BSL through 0): ± 0.3 % FS typ.
TC zero point and span: ± 0.03 % FS/K typ.
Long term stability
1 year @ +25°C: ± 0.2 % FS typ.

Measuring accuracy 0.3%
(Ordering No 23)

TEB @ -25...+85°C: ± 0.5 % FS typ.
Accuracy @ +25°C: ± 0.3 % FS typ.
NLH @ +25°C (BSL through 0): ± 0.1 % FS typ.
TC zero point and span: ± 0.005 % FS/K typ.
Long term stability
1 year @ +25°C: ± 0.2 % FS typ.

ELECTRICAL DATA

Output/ Supply voltage
4...20 mA: 24 (9...32) VDC
0.5...4.5 VDC: 5 VDC ratiometric
Rise time: typ. 1 ms/10...90%
nominal pressure

ENVIRONMENTAL CONDITIONS

Operating temperature: -40...+125°C
Media temperature: -40...+125°C
Protection: Execution 04/05²⁾: IP65
Execution 25²⁾/78: IP69K
Humidity: max. 95% relative
Vibration: Execution 04: 10g (50...2000 Hz)
Execution 05: 15g (50...2000 Hz)
Execution 25: 15g rms
Execution 78: 20g rms
Shock: 50g/ 3 ms

EMC PROTECTION

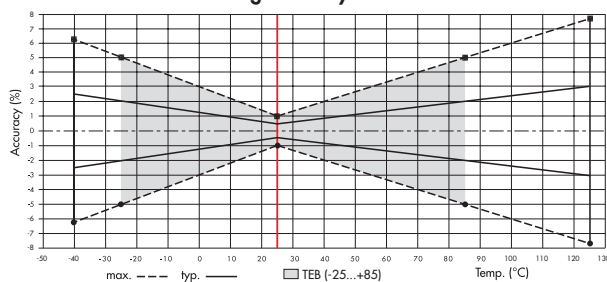
(Output: 4...20mA)

Emission: EN/IEC 61000-6-4
Immunity: EN/IEC 61000-6-2

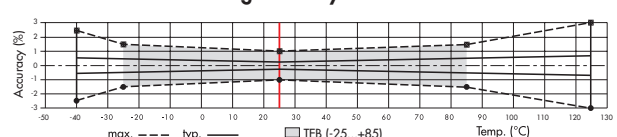
MECHANICAL DATA

Material
Sensor: 1.4548 (AISI630)
Housing: 1.4542 (AISI630) /1.4301 (AISI304)
O-Ring (media contacting): FKM 70°Sh
Male electrical plug/Cable: see ordering
information
Mounting torque: others: 25 Nm
Pressure connection 28/29: 30 Nm
Weight (without cable): ~ 80...110 g

Measuring accuracy 0.5%

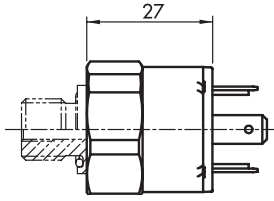


Measuring accuracy 0.3%

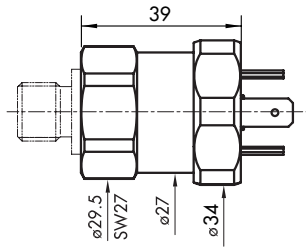


²⁾ Ausführung/ Exécution/ Execution 05/25: nur mit vorschriftsmässig montierter Kabeldose gültig/ valable seulement avec fiche femelle montée selon instructions/ provided female connector is mounted according to instructions

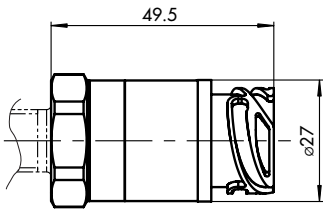
MASSBILDER / COTES D'ENCOMBREMENT / DIMENSIONS



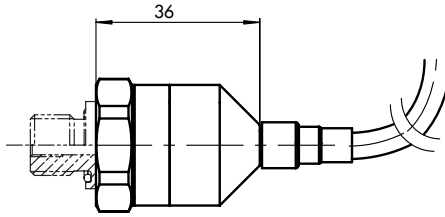
8298.XX.XXXX.04.XX.XX



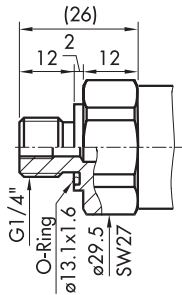
8298.XX.XXXX.05.XX.XX



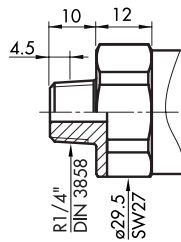
8298.XX.XXXX.25.XX.XX



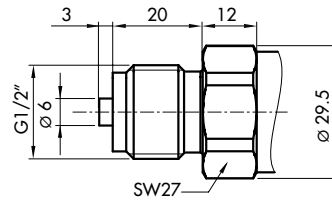
8298.XX.XXXX.78.XX.XX



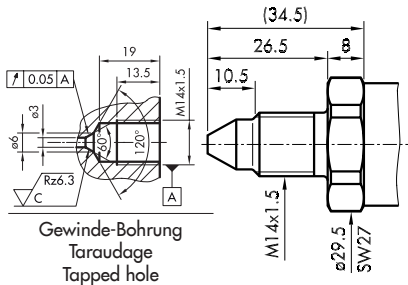
8298.XX.XX.17.XX.XX
Pressure ranges: ≤ 600 bar



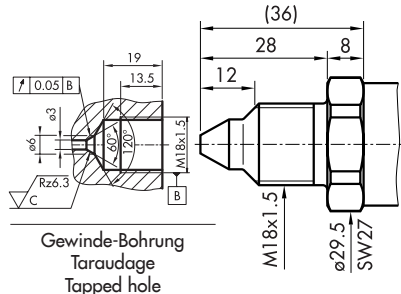
8298.XX.XX.19.XX
Pressure ranges: ≤ 600 bar



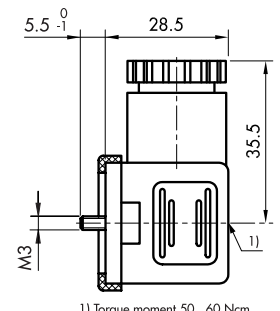
8298.XX.XX.11.XX.XX.XX
Pressure ranges: ≤ 600 bar



8298.XX.XX.28.XX.XX
Pressure ranges: ≤ 2500 bar



8298.XX.XX.29.XX.XX
Pressure ranges: ≤ 2500 bar

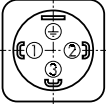


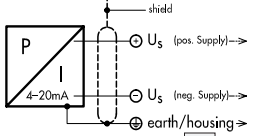
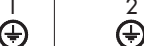
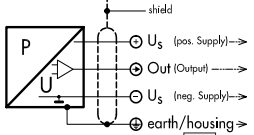


8298.XX.XXXX.XX.XX.58
1) Torque moment 50...60 Ncm

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ÄNDERUNGEN VORBEHALTEN - SOUS RÉSERVE DE MODIFICATIONS - SUBJECT TO CHANGE

ELEKTRISCHER ANSCHLUSS / RACCORDEMENT ÉLECTRIQUE / ELECTRICAL CONNECTION

| Schutzart / Protection | IP65 ²⁾ | IP69K | IP69K ²⁾ |
|---|---|--|--|
| Ausführung Exécution Execution Ausgangssignal Signal de sortie Output | EN175301-803A (DIN43650-A) 04/05  | Cable* 78 Abschirmung écran / shield  | DIN 72585* Code 1 25  |
|  8298.XX.XXXX.XX. 19 | standard 2 1 with accessory 92 1 2  | brown black yellow/green | - - - |
|  8298.XX.XXXX.XX. 23 | | brown blue black yellow/green | 1 2 4 3 |

*Entlüftung über das Kabelende/ Ventilation par extrémité du câble/ Ventilation via cable end

²⁾ Ausführung/ Exécution/ Execution 05/25: nur mit vorschriftsmässig montierter Kabeldose gültig/ valable seulement avec fiche femelle montée selon instructions/ provided female connector is mounted according to instructions