

8242/82

Engine Pressure Transmitter EPT (gauge pressure)



Druckmessumformer mit Dünnschicht DMS

Anwendungen

- Hydraulik / Pneumatik
- Motorenbau
- Schiffbau
- Schienenfahrzeuge
- Werkzeugmaschinen

Vorteile

- Gute Nullpunktstabilität
- Hohe Wechsellastfestigkeit
- Kleine robuste Bauweise
- EMV Schutz, IEC 61000
- Hohe Vibrationsfestigkeit
- Anwendungsoptimierte Genauigkeit
- für Motorenanwendungen optimiert

Capteur de pression avec jauges de contrainte à couches minces

Applications

- Hydraulique / Pneumatique
- Moteurs diesel
- Industrie navale
- Véhicule sur rails
- Machines-outils

Avantages principaux

- Grande stabilité du point zéro
- Une résistance mécanique élevée
- Construction miniature et robuste
- Avec filtre CEM, CEI 61000
- Grande résistance aux vibrations
- Précision orientée pour ces applications
- Optimisé pour applications moteurs

Pressure transmitter with thin-film strain gauges

Applications

- Hydraulics / Pneumatics
- Diesel Engines
- Shipbuilding
- Rail vehicle
- Machine tools

Main features

- High longterm stability
- Excellent resistance to pressure peaks
- Small and rugged construction
- Built-in filter EMC, IEC 61000
- High resistance of vibration
- Accuracy applications oriented
- for engine applications optimized

Zulassungen / Approbations / Approvals

BV, GL, KRS, PRS (Vorbereitung / préparation / preparation : ABS, DNV, LRS, RINA, RS, CCS)

Standardtypen / Types standard / Standard types

Messbereich Plage Range	Ausgangssignal Signal de sortie Output	Typ Type Type	Bestellnummer No de commande Ordering number
0 ... 4.0 bar	4 ... 20 mA	8242.76.2017.04.29.43.58	EPT 4.0 A
0 ... 6.0 bar	4 ... 20 mA	8242.77.2017.04.29.43.58	EPT 6.0 A
0 ... 10.0 bar	4 ... 20 mA	8242.78.2017.04.29.43.58	EPT 10.0 A
0 ... 16.0 bar	4 ... 20 mA	8242.79.2017.04.29.43.58	EPT 16.0 A
0 ... 25.0 bar	4 ... 20 mA	8242.80.2017.04.29.43.58	EPT 25.0 A
0 ... 40.0 bar	4 ... 20 mA	8242.81.2017.04.29.43.58	EPT 40.0 A
0 ... 60.0 bar	4 ... 20 mA	8242.82.2017.04.29.43.58	EPT 60.0 A

Bestellinformation / Information pour la commande / Ordering information

Type	Type	Type	relativ / relatif / relative relativ / relatif / relative	(with inversed electrical connection: Pin 1 ⊕ , Pin 2 ⊖)	8242.XX.XXX.XX.XX.XX...	8282.XX.XXX.04.29.XX...		
Bereich	0 ... 1.0 *		Überdruck	max. 2	Berstdruck	30	71	
Plage	0 ... 2.5 *		Surpression	6	Surcharge destructive	100	75	
Range	0 ... 4.0 *		Over pressure	10	Burst pressure	100	76	
	0 ... 6.0			15		100	77	
	0 ... 10			20		200	78	
bar	0 ... 16	bar		32	bar	200	79	
	0 ... 25			80		300	80	
	0 ... 40			80		300	81	
	0 ... 60			200		500	82	
	0 ... 100			200		500	83	
	0 ... 160			500		1000	85	
	0 ... 250			500		1000	74	
	0 ... 400			800		1500	84	
	0 ... 600			1000		2000	86	
Sonderbereich nach Kundenwunsch, z. B.: plage sur demande du client, p. ex.: customized ranges on request, e.g.:					0 ... +12 bar			
* auf Anfrage / sur demande / on request					0 ... +1600 bar		XX	
Genauigkeitsband	Standard	max. ± 1 %	bei Abgleichtemp. / temp. calibrage / calibration temp.		60°C		20	
Bande précision	Optional	max. ± 0.5 %	bei Abgleichtemp. / temp. calibrage / calibration temp.		60°C		21	
Accuracy band	Genauigkeit nach Kundenwunsch, z. B.: résolution sur demande du client, p. ex.: ± 2 % zwischen / intermédiaire / between +20...+60°C accuracy ranges on request, e.g.:						XX	
Druckanschluss	G 1/4"	aussen / mâle / male	(O-Ring / joint torique / o-ring)				17	
Raccord de pression	G 1/4"*	innen / femelle / female					10	
Pressure connection	G 1/2"*	aussen / mâle / male	(DIN3852-A)				21	
	M14x1.5*	aussen / mâle / male	(DIN3852-A)				22	
* auf Anfrage / sur demande / on request								
Ausführung	Gerätestecker / embase mâle / male electrical plug DIN43650-A						04	
Exécution	Kabel abgeschirmt / câble avec écran / cable with shield **							
Execution	1.5m, PUR (nur/seulement/only 4...20mA)						08	
	1.5m, PVC (-40...+80°C)						22	
	Gerätestecker / embase mâle / male electrical plug DIN72585* Code 1						25	
* auf Anfrage / sur demande / on request								
Ausgangssignal	Output	Load resistance	I _{SUPPLY}	U _{SUPPLY}			29	
Signal de sortie	4 ... 20 mA	(U _{Supply} -10V)/20mA		10 ... 32 V DC				
Output	0.5 ... 4.5V DC	≥5.0 kΩ	≤10 mA	5 V DC ratiometrisch/ratiométrique/ratiometric			23	
Zubehör	Druckspitzendämpfung / élément d'amortissement / pressure peak damping element							
Accessoires	Loch / trou / hole							
Accessories	ø1.0mm						40	
	ø0.3mm						43	
	ø0.5mm						45	
	Kabeldose / fiche femelle / female electrical connector						DIN43650-A	58
	Erhöhte Betriebstemperatur / température de service plus haute / higher operating temperature						-25...+125°C	67
	(Gerätestecker / embase mâle / male electrical plug DIN72585 Code 1							
	Ausgangssignal / signal de sortie / output 0.5 ... 4.5 V DC)							
** L = Kabellänge in mm / L = Longueur du câble en mm / L = Lead length in mm							XXXX	

Spezifikationen

Messbereich:	0...1.0 bis 0...600 bar
Speisespannung 4...20mA:	10...32 VDC nominal 24 VDC
0.5...4.5Volt:	5V DC ratiometrisch
Betriebstemperatur:	-25° ... 100°C
Option:	-25° ... 125°C
Lagertemperatur:	-25° ... 100°C
Vibration:	15g (20 ... 2000 Hz)
Schock:	50 g / 11 ms
Isolationswiderstand:	≥10MΩ, 200 VDC
Spannungsfestigkeit:	200 VAC, 50 Hz
Anstiegszeit:	typ. 1 ms/10...90% Nenndruck
Strombegrenzung (Überlast)	ca. 30 mA
Schutzart:	min. IP 65 ¹⁾
Feuchtigkeit:	max. 95% relativ
Material Sensor:	1.4542
Material Gehäuse:	1.4301
Material O-Ring:	Viton 70°Sh
Gewicht:	~ 85...110 g

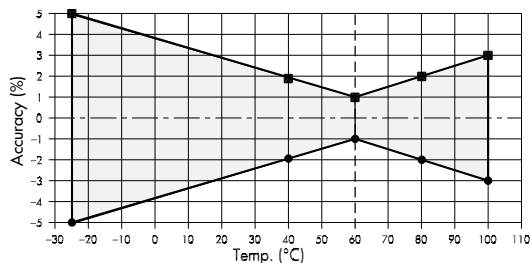
EMV Schutz (4...20mA)

Emission:	EN 50081-1
Immunität:	EN 50082-2
ESD:	IEC 61000-4-2, Level 3
RFI:	IEC 61000-4-3, Level 3
Burst:	IEC 61000-4-4, Level 3
Surge:	IEC 61000-4-5, Level 3
	R _i = 12 Ω
Conducted immunity:	IEC 61000-4-6, Level 3

Genauigkeit

Standard:	max. ± 1 % [60°C]
NLH:	± 0.35 % d.S. typ.
Thermische Hysterese:	± 0.2 % d.S. typ.
Reproduzierbarkeit:	± 0.05 % d.S. typ.
Temperaturkoeffizient	
Nullpunkt:	± 0.025% d.S./K typ.
Spanne:	± 0.025% d.S./K typ.

Standard: max. ± 1 %
Accuracy band of operating-
temperature (-25°C...+100°C)
Temperature calibration: 60°C



Optional:	max. ± 0.5 % [60°C]
NLH:	± 0.2 % d.S. typ.
Thermische Hysterese:	± 0.15 % d.S. typ.
Reproduzierbarkeit:	± 0.05 % d.S. typ.
Temperaturkoeffizient:	
Nullpunkt:	± 0.01% d.S./K typ.
Spanne:	± 0.01% d.S./K typ.

Spécifications

Etendue de mesure:	0...1.0 à 0...600 bar
Tension d'alimentation 4...20mA:	10...32 VDC nominal 24 VDC
0.5...4.5Volt:	5V DC ratiométrique
Température de service:	-25° ... 100°C
Option:	-25° ... 125°C
Température du stock:	-25° ... 100°C
Vibration:	15g (20... 2000 Hz)
Choc:	50 g / 11 ms
Résistance d'isolement:	≥10MΩ, 200 VDC
Rigidité diélectrique:	200 VAC, 50 Hz
Sensibilité de réponse:	typ. 1 ms/10...90% pression nominale
Courant courts circuit (surcharge admissible)	approx. 30 mA
Protection:	min. IP 65 ¹⁾
Humidité:	95% max. relatif
Matière capteur:	Z 6 CNU 17-04
Matière boîtier:	Z 6 CNU 18-09
Matière joint-torique:	Viton 70°Sh
Poids:	~ 85...110 g

CEM protection (4...20mA)

Emission:	EN 50081-1
Immunité:	EN 50082-2
DES:	CEI 61000-4-2, Niveau 3
IFR:	CEI 61000-4-3, Niveau 3
Salve:	CEI 61000-4-4, Niveau 3
Surge:	CEI 61000-4-5, Niveau 3
	R _i = 12 Ω
Immunité de conduction:	CEI 61000-4-6, Niveau 3

Précision

Standard:	max. ± 1 % [60°C]
NLH:	± 0.35 % E.M. typ.
Hystérésis therm.:	± 0.2 % E.M. typ.
Réproductibilité:	± 0.05 % E.M. typ.
Influence thermique	
Point zéro:	± 0.025% E.M./K typ.
Sensibilité:	± 0.025% E.M./K typ.

Specifications

Measuring range:	0...1.0 to 0...600 bar
Supply voltage 4...20mA:	10...32 VDC nominal 24 VDC
0.5...4.5Volt:	5V DC ratiometric
Operating temperature:	-25° ... 100°C
Option:	-25° ... 125°C
Storage temperature:	-25° ... 100°C
Vibration:	15g (20 ... 2000 Hz)
Shock:	50 g / 11 ms
Insulation resistance:	≥10MΩ, 200 VDC
Electric strength:	200 VAC, 50 Hz
Rise time:	typ. 1 ms/10...90% nominal pressure
Short circuit current (over pressure)	approx. 30 mA
Protection:	min. IP 65 ¹⁾
Humidity:	max. 95% relative
Material sensor:	17-4 PH, AISI 630
Material housing:	AISI 304
Material o-ring:	Viton 70°Sh
Weight:	~ 85...110 g

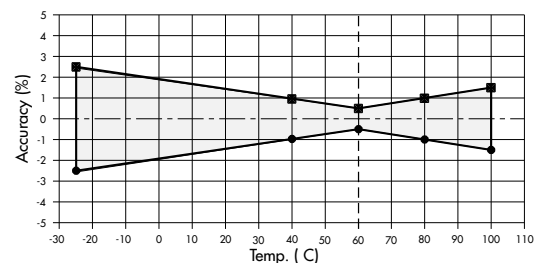
EMC protection (4...20mA)

Emission:	EN 50081-1
Immunity:	EN 50082-2
ESD:	IEC 61000-4-2, Level 3
RFI:	IEC 61000-4-3, Level 3
Burst:	IEC 61000-4-4, Level 3
Surge:	IEC 61000-4-5, Level 3
	R _i = 12 Ω
Conducted immunity:	IEC 61000-4-6, Level 3

Accuracy

Standard:	max. ± 1 % [60°C]
NLH:	± 0.35 % FS typ.
Therm. hysteresis:	± 0.2 % FS typ.
Repeatability:	± 0.05 % FS typ.
Temperature coefficient	
Zero:	± 0.025% FS/K typ.
Span:	± 0.025% FS/K typ.

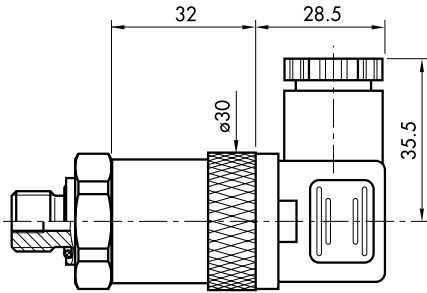
Optional: max. ± 0.5 %
Accuracy band of operating-
temperature (-25°C...+100°C)
Temperature calibration: 60°C



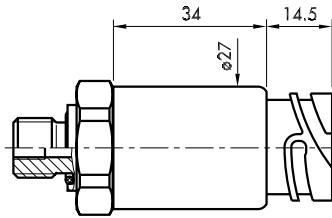
Optional:	max. ± 0.5 % [60°C]
NLH:	± 0.2 % E.M. typ.
Hystérésis therm.:	± 0.15 % E.M. typ.
Réproductibilité:	± 0.05 % E.M. typ.
Influence thermique	
Point zéro:	± 0.01% E.M./K typ.
Sensibilité:	± 0.01% E.M./K typ.

Optional:	max. ± 0.5 % [60°C]
NLH:	± 0.2 % FS typ.
Hysteresis therm.:	± 0.15 % FS typ.
Repeatability:	± 0.05 % FS typ.
Temperature coefficient	
Zero:	± 0.01% FS/K typ.
Span:	± 0.01% FS/K typ.

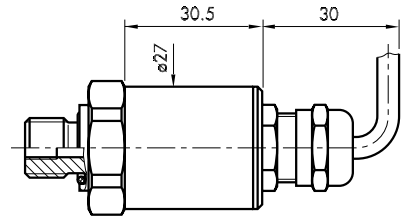
Massbild / Cotes d'encombrement / Dimensions



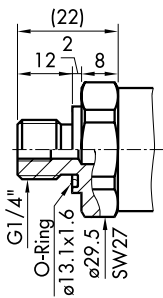
82X2.XX.2X17.04.29.XX



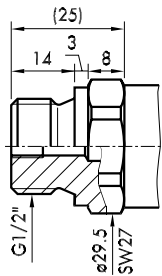
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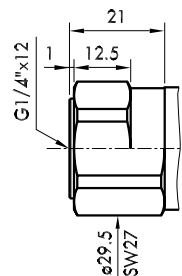
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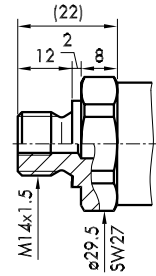
XXXX.XX.XX**17**.XX.XX



XXXX.XX.XX**21**.XX.XX



XXXX.XX.XX**10**.XX.XX



XXXX.XX.XX**22**.XX.XX

Elektrischer Anschluss / Raccordement électrique / Electrical connection

Schutzart / Protection ¹⁾	IP65 ¹⁾	IP68 ¹⁾	IP68 ¹⁾	IP67 ¹⁾
Tauchtiefe Profondeur d'immersion Immersion depth	-	1.5m	1.5m	-
Ausführung Exécution Execution	DIN 43650-A 04	Cable 08	Cable 22	DIN 72585 Code 1 25
Ausgangssignal Signal de sortie Output		Abschirmung écran / shield 	Abschirmung écran / shield 	
	8242 8282 2 1 1 2 	black blue 	white brown 	1 4 3
	1 2 3 	-	white green brown 	1 2 4 3

¹⁾ nur mit vorschriftsmässig montierter Kabeldose gültig
valable seulement avec fiche femelle montée selon instructions
provided female connector is mounted according to instructions