

Relative and absolute pressure transmitter type 558 for mobile application

Pressure range
0 ... 6 – 60 bar



The pressure transmitter type 558 meets the highest requirements for the industry and vehicle manufacturing. This sensor is available with protection standard IP67 or IP69K. The optional pressure orifice prevents damage due to pressure peaks.

The compact and rugged design meets the requirement of shock- and vibration stability according Kfz-norm ISO 16750. The pressure transmitter type 558 guarantees highest EMC stability according to various Kfz regulations with test level up to 100V.

This sensor utilises a ceramic technology, developed by Huba Control and for the last 20 years, in millions of applications.

- Compact and rugged construction for high operating reliability
- Wide choice of connections available
- Excellent EMC capacity
- Negligible temperature influence on accuracy

Technical Overview

Pressure range				
Relative		0 ... 16 – 60 bar		
Absolute		0 ... 6 bar		
Operating conditions				
Medium		Liquids and gases		
Temperature	Medium	FPM -40 ... +125 °C		
		EPDM -40 ... +125 °C		
		NBR -20 ... +100 °C		
	Ambient	-40 ... +100 °C		
	Storage	-50 ... +100 °C		
Tolerable overload / Rupture pressure		2.5 x FS		
Materials				
Pressure connection		Stainless steel 1.4404 / AISI 316L		
Plug accommodation		Polyarylamide 50% GF UL 94 V-0		
Materials in contact with the medium	Pressure connection	Stainless steel 1.4404 / AISI 316L		
	Sensor	Ceramic Al ₂ O ₃ (96%)		
	Sealing material	EPDM, NBR, FPM		
Electrical overview				
	Output	Power supply	Load	Current consumption
2 wire	4 ... 20 mA	7.5 ... 33 VDC	$< \frac{\text{supply voltage} - 7.5 \text{ V}}{0.02 \text{ A}}$ [Ohm]	< 23 mA
	0 ... 5 V	7 ... 33 VDC	>10 kOhm / < 100 nF	< 7 mA
3 wire	0 ... 10 V	12 ... 33 VDC	>10 kOhm / < 100 nF	< 7 mA
	ration. 10 ... 90%	5 VDC ± 10%	>10 kOhm / < 100 nF	< 7 mA
Polarity reversal protection	Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage.			
Insulation voltage	500 VDC			
Protection class				
Protection class III				
Dynamic response				
Response time	< 2 ms (10 ... 90%, typ. 1 ms)			
Load cycle	< 100 Hz			
Electrical connection ¹⁾			Protection standard	
Kostal SLK 2.8 Codierung A			IP 69K	
AMP-JPT			IP 67	
AMP Superseal 1.5			IP 67	
Deutsch DT04-3P			IP 69K	
Metri Pack 150 P2S Series			IP 67	
M12x1			IP 69K	
Pressure connection				
Outside thread	7/16 - 20 UNF			
	1/4 - 18 NPT			
	G 1/4 sealed at back DIN 3852-E with profile seal FPM (-30 ... +135 °C)			
	G 1/8 sealed at back DIN 3852-E with profile seal FPM (-30 ... +135 °C)			
	M14x1.5 sealed at back DIN 3852-E with profile seal FPM (-30 ... +135 °C)			
R 1/4 acc. EN 10226				
Installation arrangement				
Unrestricted				
Tests / Admissions				
Electromagnetic compatibility	Noise immunity / Noise emission		Noise immunity automotive guideline	
	ISO 13766 - earth-moving equipment		ISO 11452-2, HF (Field), 100 V/m (200 ... 2000 MHz)	
	DIN EN 13309 - construction equipment		ISO 11452-4, HF (BCI), 100 mA (20 ... 400 MHz)	
	DIN ISO 14982 - agriculture and forestry		ISO 10605, ESD, ±15 kV contact, ±15 kV air	
	Automotive guideline ECE R10 ²⁾		ISO 7637-2 ³⁾ , puls 1, 2a, 2b, 3a, 3b (test level 4)	
Automotive guideline 2004/104/EG ²⁾		ISO 16750-2, Load Dump, 155 V (1 Ω, 300 ms)		
EN 61326-2-3 - pressure transducer ⁴⁾				
CISPR11				
Shock acc. ISO 16750-3	50 g, 11 ms, half sine wave, 1000x / axis			
Vibration acc. ISO 16750-3	Test VI (12 g, sinusoidal 18 g random vibration)			
UL	ANSI/UL 61010-1 acc. E325110			
Weight				
~ 90 g				
Packaging (Please state on order)				
Single packaging in cardboard			accessories integrated	
Multiple packaging in cardboard (25 pcs)				

Accuracy

Parameter		Unit	
Characteristic line acc. IEC 61298-2 ^{5),6)}		% fs	± 0.5
Resolution		% fs	0.1
Thermal characteristic ⁷⁾	max.	% fs/10K	± 0.2
Long term stability acc. IEC 61298-2	max.	% fs	± 0.5

Test conditions: 25 °C, 45% rF

¹⁾ Warranty of IP protection only with suitable classified plug (consider manufacturers' instructions)
³⁾ Pressure sensor for 12 V and 24 V power system (0 ... 5 V, 0 ... 10 V and 4 ... 20 mA)
⁵⁾ incl. zero point, full scale, linearity, hysteresis and repeatability

²⁾ E1 approval for customer specific type on request
⁴⁾ types M12x1 only
⁶⁾ Considering EMC interference < ±1.5% fs

⁷⁾ -40 ... +100 °C

Order code selection table in bar			1	2	3	4	5	6	7	8	9	10	11		
			558.	X	X	X	X	X	X	X	X	X	X		
Pressure mode	Relative		9												
	Absolute		8												
Pressure range ¹⁾	0 ... 6 bar		8	1	7										
	0 ... 16 bar		9	3	1										
	0 ... 25 bar		9	3	2										
	0 ... 40 bar		9	3	3										
	0 ... 60 bar		9	4	0										
Sealing material	EPDM	Ethylene propylene					1	0							
	NBR	Butadiene Acrylonitrile					2	0							
	FPM	Fluoro elastomer					5	0							
Output / Power supply	0 ... 5 V		7 ... 33 VDC						1						
	0 ... 10 V		12 ... 33 VDC						2						
	4 ... 20 mA		7.5 ... 33 VDC						3						
	ration. 10 ... 90%		5 VDC ±10%						7						
Electrical connection ²⁾	Kostal SLK 2.8 coding A								7	1					
	AMP-JPT									2					
	AMP Superseal 1.5									3					
	Deutsch DT04-3P									4					
	Metri Pack 150 P2S Series									5					
	M12x1		2w: IN=1 / OUT=3	3w: IN=1 / OUT=4 / GND=3						S					
Pressure connection ¹⁾	Outside thread	7/16-20 UNF									2				
		1/4-18 NPT										3			
		G 1/4 sealed at back DIN 3852-E with profile seal FPM											4		
		G 1/8 sealed at back DIN 3852-E with profile seal FPM											H		
		M14x1.5 sealed at back DIN 3852-E with profile seal FPM											6		
		R 1/4 acc. EN 10226											7		
Pressure orifice	without											0	1		
	with											2	1		
Pressure range variation (optional)	Indicate W and state range on order (e.g.: W0... + 50bar/Out1...8V)												W		

Order code selection table in psi			1	2	3	4	5	6	7	8	9	10	11		
			558.	X	X	X	X	X	X	X	X	X	X		
Pressure mode	Relative		9												
	Absolute		8												
Pressure range ¹⁾	0 ... 100 psi		8	B	7										
	0 ... 200 psi		9	C	1										
	0 ... 300 psi		9	C	2										
	0 ... 500 psi		9	C	3										
	0 ... 750 psi		9	D	0										
Sealing material	EPDM	Ethylene propylene					1	0							
	NBR	Butadiene Acrylonitrile					2	0							
	FPM	Fluoro elastomer					5	0							
Output / Power supply	0 ... 5 V		7 ... 33 VDC						1						
	0 ... 10 V		12 ... 33 VDC						2						
	4 ... 20 mA		7.5 ... 33 VDC						3						
	ration. 10 ... 90%		5 VDC ±10%						7						
Electrical connection ²⁾	Kostal SLK 2.8 coding A								7	1					
	AMP-JPT									2					
	AMP Superseal 1.5									3					
	Deutsch DT04-3P									4					
	Metri Pack 150 P2S Series									5					
	M12x1		2w: IN=1 / OUT=3	3w: IN=1 / OUT=4 / GND=3						S					
Pressure connection ¹⁾	Outside thread	7/16-20 UNF										2			
		1/4-18 NPT											3		
		G 1/4 sealed at back DIN 3852-E with profile seal FPM												4	
		G 1/8 sealed at back DIN 3852-E with profile seal FPM												H	
		M14x1.5 sealed at back DIN 3852-E with profile seal FPM												6	
		R 1/4 acc. EN 10226												7	
Pressure orifice	without												0	1	
	with												2	1	
Pressure range variation (optional)	Indicate W and state range on order (e.g.: W0... + 650psi/Out1...8V)													W	

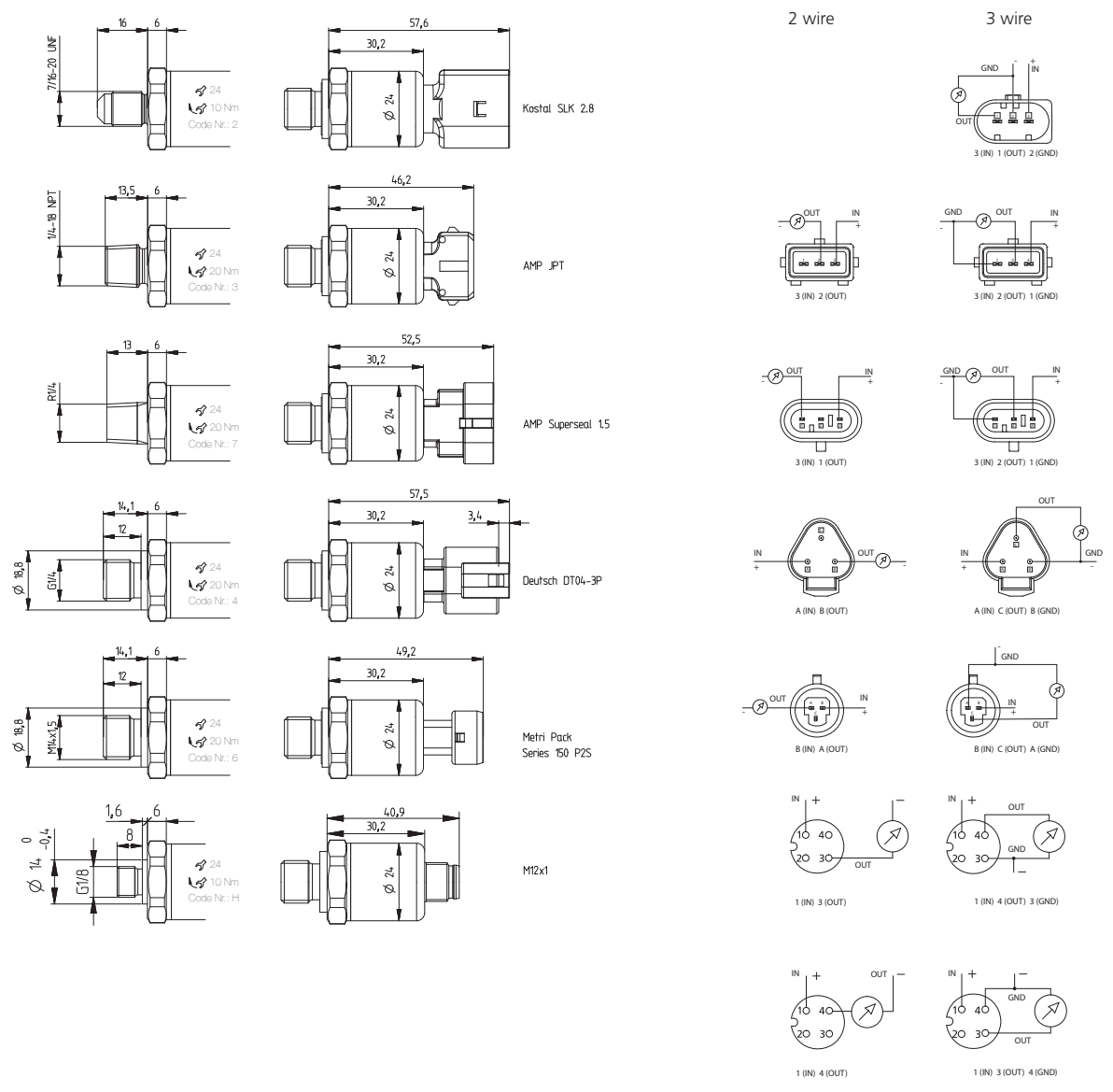
Accessories (supplied loose)		Order Number
Set - Female connector Kostal SLK 2.8 coding A	2 wire (3 wire with 1 blanking plug)	120369
Set - Female connector Kostal SLK 2.8 coding A	3 wire	120368
Set - Female connector AMP JPT	2 wire (3 wire with 1 blanking plug)	110442
Set - Female connector AMP JPT	3 wire	108767
Set - Female connector AMP Superseal 1.5 (0.5 - 1.0 mm ²)	3 wire (Blanking Plug to enable 2 wire)	120254
Set - Female connector AMP Superseal 1.5 (1.0 - 1.5 mm ²)	3 wire (Blanking Plug to enable 2 wire)	120255
Set - Female connector AMP JPT	3 wire	108767
Set - Female connector Metri Pack 150 P2S Series	3 wire	120345
Calibration certificate		104551

¹⁾ Other pressure ranges and pressure connections on request

²⁾ Delivery without female connector

Order code selection table in MPa		1	2	3	4	5	6	7	8	9	10	11	
		558. X X X X X X X X X X X X											
Pressure mode	Relative	9											
	Absolute	8											
Pressure range ¹⁾	0 ... 0.6 MPa	8	G	7									
	0 ... 1.6 MPa	9	H	1									
	0 ... 2.5 MPa	9	H	2									
	0 ... 4 MPa	9	H	3									
	0 ... 6 MPa	9	K	0									
Sealing material	EPDM Ethylene propylene					1	0						
	NBR Butadiene Acrylonitrile					2	0						
	FPM Fluoro elastomer					5	0						
Output / Power supply	0 ... 5 V									1			
	0 ... 10 V									2			
	4 ... 20 mA									3			
	ratiom. 10 ... 90%									7			
Electrical connection ²⁾	Kostal SLK 2.8 coding A								7	1			
	AMP-JPT									2			
	AMP Superseal 1.5									3			
	Deutsch DT04-3P									4			
	Metri Pack 150 P2S Series									5			
	M12x1	2w: IN=1 / OUT=3									S		
	2w: IN=1 / OUT=4									3w: IN=1 / OUT=4 / GND=3			
										3w: IN=1 / OUT=3 / GND=4		M	
Pressure connection ¹⁾	Outside thread	7/16-20 UNF										2	
		1/4-18 NPT											3
		G 1/4 sealed at back DIN 3852-E with profile seal FPM											4
		G 1/8 sealed at back DIN 3852-E with profile seal FPM											H
		M14x1.5 sealed at back DIN 3852-E with profile seal FPM											6
		R 1/4 acc. EN 10226											
Pressure orifice	without										0	1	
	with										2	1	
Pressure range variation (optional)	Indicate W and state range on order (e.g.: W0... + 5MPa/Out1...8V)											W	

Dimensions in mm / Electrical connections



¹⁾ Other pressure ranges and pressure connections on request ²⁾ Delivery without female connector

Huba Control AG

Headquarters

Industriestrasse 17
5436 Würenlos
Telefon +41 (0) 56 436 82 00
Telefax +41 (0) 56 436 82 82
info.ch@hubacontrol.com

Huba Control AG

Niederlassung Deutschland

Schlattgrabenstrasse 24
72141 Walddorfhäslach
Telefon +49 (0) 7127 23 93 00
Telefax +49 (0) 7127 23 93 20
info.de@hubacontrol.com

Huba Control SA

Succursale France

Rue Lavoisier
Technopôle Forbach-Sud
57602 Forbach Cedex
Téléphone +33 (0) 387 847 300
Télécopieur +33 (0) 387 847 301
info.fr@hubacontrol.com

Huba Control AG

Vestiging Nederland

Hamseweg 20A
3828 AD Hoogland
Telefoon +31 (0) 33 433 03 66
Telefax +31 (0) 33 433 03 77
info.nl@hubacontrol.com

Huba Control AG

Branch Office United Kingdom

Unit 13 Berkshire House
County Park Business Centre
Shrivenham Road
Swindon Wiltshire SN1 2NR
Phone +44 (0) 1993 776667
Fax +44 (0) 1993 776671
info.uk@hubacontrol.com