



# **DMP 457**

### **Pressure Transmitter for** Shipbuilding and Offshore

Stainless Steel Sensor

accuracy according to IEC 60770: standard: 0.35 % FSO option: 0.25 % FSO

#### **Nominal pressure**

from 0 ... 100 mbar up to 0 ... 600 bar

#### **Output signals**

2-wire: 4 ... 20 mA others on request

#### **Special characteristics**

- LR-certificate (Lloyd's Register)
- DNV•GL Type Approval (Det Norske Veritas • Germanischer Lloyd)
- ABS-certificate (American Bureau of Shipping)
- **CCS-certificate** (China Classification Society)
- flush pressure port G 1/2" from 100 mbar
- excellent thermal behaviour

#### **Optional versions**

- IS-version Ex ia = intrinsically safe for gases and dusts
- welded pressure port

The pressure transmitter DMP 457 has been especially designed for rough conditions occurring especially in shipbuilding and offshore applications. All gaseous and liquid media, which are compatible with stainless steel 1.4404 (316L) respectively can be used.

Sensor element is a piezoresistive stainless steel sensor with high accuracy and excellent long-term stability. In order to meet the special requirements for shipbuilding and offshore applications extensive tests had to be passed to get the Lloyd's Register (LR), Det Norske Veritas - Germanischer Lloyd (DNV-GL) and China Classification Society (CCS) approvals.

#### Preferred areas of use are

Diesel Engines, Drives



Compressors, Pumps



Hydraulic and Pneumatic Control Systems



Fuel and Oil















Shipbuilding and Offshore

Input pressure range <sup>1</sup>												
Nominal pressure gauge	[bar]	-1 0	0.10	0.16	0.25	0.40	0.60	1	1.6	2.5	4	6
Nominal pressure abs.	[bar]	- 1	-	-	-	0.40	0.60		1.6	2.5	4	6
Level gauge / abs.	[mH <sub>2</sub> O]	- 1	1	1.6	2.5	4	6	10		25	40	60
Overpressure	[bar]	5	0.5	1	1	2	5	5	10	10	20	40
Burst pressure ≥	[bar]	7.5	1.5	1.5	1.5	3	7.5	7.5		15	25	50
	[]								, ,	1		
Nominal pressure gauge	[bar]	10	16	25	40	6	)	100	160	250	400	600
Nominal pressure abs.	[bar]	10	16	25	40	6	)	100	160	250	400	600
Level gauge / abs.	[mH <sub>2</sub> O]	100	160	250	400	) -		-	-	-	-	-
Overpressure	[bar]	40	80	80	105	5 21	0	600	600	1000	1000	1000
Burst pressure >	[bar]		120	120	210			1000	1000	1250	-	_
Vacuum resistance	[bui]		ır: unlimite						n request	1200		
¹ from 60 bar: measurement	starts with			o vacaa	111 1001014	1100	·N	1 541.0	moquest			
nom co bar. modedroment	Otario With	amoioni pro	55475									
Output signal / Supply												
Standard		2-wire:	4 20 m	1A / Y	V <sub>S</sub> = 8	32 Vpc						
Option IS-protection		2-wire:	4 20 m		$V_{\rm S} = 10$							
Performance		_ wo.	1 20 11	,	<b>v</b> 3 – 10	. 20 100						
Accuracy <sup>2</sup>		Ctanadana				0.4 h =	0 -	0/ FCC	<u> </u>			
Accuracy -		Standard			essure < essure ≥							
		Option:			essure ≥							
Permissible load		R <sub>max</sub> = [(\	$I_{S} - V_{S min}$									
Influence effects			.05 % FS(		,		los	ad: 0.05	% FSO / kg	)		
Long term stability			.03 /6 1 30 5 FSO / ye		erence c	anditions	100		,5 i 00 / NS			
Response time		< 10 mse		al by lei	erence co	JIIGILIOIIS						
	00770 #:			!!!4			:!!4\					
<sup>2</sup> accuracy according to IEC						s, repeatat	uity)					
Thermal effects (Offset		ı) / Permis		-	es							
Nominal pressure P <sub>N</sub>	[bar]		-1 (				< 0.				≥ 0.40	
Tolerance band	[% FSO]		≤ ± 0.7				≤ ±				± 0.75	
in compensated range	[°C]		-20 8				0 7				20 85	
Permissible temperature	S	medium:	-40 125	5°C	electi	ronics / eı	nvironn	nent: -40	85°C	storag	e: -40 1	00°C
Electrical protection												
Short-circuit protection		permane	nt									
Reverse polarity protecti	on	no dama	ge, but als	so no fun	ction							
Electromagnetic		emission	and immu	unity acc	ording to							
compatibility		- EN 61	1326	· -	DNV•GL	(Det Nors	ske Ve	ritas • Ge	ermanische	r Lloyd)		
Machanical at 1999												
wecnanical stability												
Mechanical stability Vibration		4 g (acco	rding to D	NV•GI :	class B. d	curve 2 / k	asis: I	FC 6006	8-2-6)			
Vibration		4 g (acco	rding to D	NV•GL:	class B, c	curve 2 / b	asis: I	EC 6006	68-2-6)			
Vibration  Materials						curve 2 / t	asis: I	EC 6006	88-2-6)			
Vibration  Materials  Pressure port		stainless	steel 1.44	104 (316	L)				68-2-6)			
Vibration  Materials		stainless standard	steel 1.44	104 (316 sta	L) inless ste	el 1.4404	(316L	)				
Vibration  Materials  Pressure port Housing		stainless standard option fie	steel 1.44	104 (316 sta g: sta	L) inless ste inless ste	el 1.4404 el 1.4404	(316L (316L	) ), with ca	able gland		at ail and	za a dina
Vibration  Materials  Pressure port		stainless standard	steel 1.44	104 (316) sta g: sta (fla	L) inless ste inless ste me-resist	el 1.4404 el 1.4404 ant, haloç	(316L (316L gen fre	) ), with ca e, increa	able gland sed resista	ince again	st oil and (	gasoline,
Vibration  Materials  Pressure port Housing  Cable sheath		stainless standard option fie TPE -U	steel 1.44 : Id housing	104 (316) sta g: sta (fla res	L) inless ste inless ste me-resist istant aga	el 1.4404 el 1.4404 ant, haloç	(316L (316L gen fre	) ), with ca e, increa	able gland sed resista	ince again	st oil and	gasoline,
Vibration  Materials  Pressure port Housing		stainless standard option fie TPE -U	steel 1.44 : Id housing	sta sta g: sta (fla res FK	L) inless ste inless ste me-resist istant aga	el 1.4404 el 1.4404 ant, halog ainst salt,	(316L (316L gen fre	) ), with ca e, increa	able gland sed resista			
Vibration  Materials  Pressure port Housing  Cable sheath  Seals (media wetted)		stainless standard option fie TPE -U standard option:	steel 1.44 : Id housing	sta sta g: sta (fla res FK wel	L) inless ste inless ste me-resist istant aga M Ided versi	el 1.4404 el 1.4404 ant, halog ainst salt,	(316L (316L gen fre	) ), with ca e, increa	able gland sed resista		st oil and o	
Vibration  Materials  Pressure port Housing  Cable sheath  Seals (media wetted)  Diaphragm		stainless standard option fie TPE -U standard option: stainless	steel 1.44 : Id housing :	104 (316) sta g: sta (fla res FK wel 135 (316)	L) inless ste inless ste me-resist istant aga M Ided versi	el 1.4404 el 1.4404 ant, halog ainst salt,	(316L (316L gen fre	) ), with ca e, increa	able gland sed resista			
Vibration  Materials  Pressure port Housing  Cable sheath  Seals (media wetted)  Diaphragm Media wetted parts		stainless standard option fie TPE -U standard option: stainless pressure	steel 1.44 : Id housing : steel 1.44 port, seal	104 (316) sta g: sta (fla res FK wel 135 (316) s, diaphr	L) inless ste inless ste ime-resist istant aga M ided versi L) ragm	el 1.4404 el 1.4404 ant, haloç ainst salt,	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil)			
Vibration  Materials  Pressure port Housing  Cable sheath  Seals (media wetted)  Diaphragm Media wetted parts  3 welded version only with pi		stainless standard option fie TPE -U standard option: stainless pressure	steel 1.44 : Id housing : steel 1.44 port, seal	104 (316) sta g: sta (fla res FK wel 135 (316) s, diaphr	L) inless ste inless ste ime-resist istant aga M ided versi L) ragm	el 1.4404 el 1.4404 ant, haloç ainst salt,	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil)			
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts  3 welded version only with pic  Category of the enviror		stainless standard option fie TPE -U standard option: stainless pressure	steel 1.44 id housing steel 1.44 port, seals to EN 837;	sta g: sta (fla res FK wel 435 (316) s, diaphr possible	L) inless ste inless ste me-resist istant aga M ided versi L) ragm for nomina	el 1.4404 el 1.4404 ant, haloç ainst salt,	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil)	ot	hers on re	equest
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts <sup>3</sup> welded version only with pi  Category of the enviror  Lloyd's Register (LR)		stainless standard option fie TPE -U standard option: stainless pressure s according	steel 1.44 id housing steel 1.44 port, seals to EN 837;	JO4 (316) sta g: sta (fla res FK wel J35 (316) s, diaphr possible V3, EMV	L) inless ste inless ste me-resist istant aga M Ided versi L) ragm for nomina	el 1.4404 el 1.4404 ant, halog ainst salt, on <sup>3</sup>	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil) ar	ot er of certific	hers on re	equest
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts  3 welded version only with putter only with putter of the enviror  Lloyd's Register (LR)  Det Norske Veritas	nment	stainless standard option fie TPE -U standard option: stainless pressure	steel 1.44 id housing steel 1.44 port, seals to EN 837;	JO4 (316) sta g: sta (fla res FK wel J35 (316) s, diaphr possible V3, EMV	L) inless ste inless ste me-resist istant aga M ided versi L) ragm for nomina	el 1.4404 el 1.4404 ant, halog ainst salt, on <sup>3</sup>	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil) ar	ot	hers on re	equest
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts <sup>3</sup> welded version only with pi  Category of the enviror  Lloyd's Register (LR)	nment	stainless standard option fie TPE -U standard option: stainless pressure s according	steel 1.44 id housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D	io4 (316) sta g: sta (fla res FK wel i35 (316) s, diaphr possible	L) inless ste inless ste me-resist istant aga M Ided versi L) ragm for nomina	el 1.4404 el 1.4404 ant, halog ainst salt, on <sup>3</sup>	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil) ar	ot er of certific	hers on re	equest
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts  3 welded version only with putter only with putter of the enviror  Lloyd's Register (LR)  Det Norske Veritas	nment	stainless standard option fie TPE -U standard option: stainless pressure s according EMV1, E temperat humidity:	steel 1.44 id housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D	io4 (316) sta g: sta (fla res FK wel i35 (316) s, diaphr possible	L) inless ste inless ste me-resist istant aga M Ided versi L) ragm for nomina 4 vibration: enclosure	el 1.4404 el 1.4404 ant, halog ainst salt, on 3	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil) ar	ot er of certific	hers on re	equest
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts <sup>3</sup> welded version only with port  Category of the enviror  Lloyd's Register (LR)  Det Norske Veritas •  Germanischer Lloyd (DN	nment	stainless standard option fie TPE -U standard option: stainless pressure s according EMV1, E temperat humidity:	steel 1.44 id housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D B	io4 (316) sta g: sta (fla res FK wel i35 (316) s, diaphr possible	L) inless ste inless ste me-resist istant aga M Ided versi L) ragm for nomina 4 vibration: enclosure	el 1.4404 el 1.4404 ant, halogainst salt, on 3  I pressure  B e: D	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil) ar	ot er of certific	hers on re	equest
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts  ** welded version only with pit  Category of the enviror  Lloyd's Register (LR)  Det Norske Veritas •  Germanischer Lloyd (DN)  Explosion protection	nment	stainless standard option fie TPE -U standard option: stainless pressure s according EMV1, E temperat humidity: electroma	steel 1.44 id housing steel 1.44 port, seale to EN 837; MV2, EMV ure: D B agnetic co	in the state of th	L) inless ste inless ste me-resist istant aga M ided versi L) ragm for nomina  4 vibration: enclosure ty:	el 1.4404 el 1.4404 ant, halogainst salt, on 3 d pressure  B e: D B	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil) ar	ot er of certific	hers on re	equest
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts <sup>3</sup> welded version only with port  Category of the enviror  Lloyd's Register (LR)  Det Norske Veritas •  Germanischer Lloyd (DN	nment	stainless standard option fie TPE -U standard option: stainless pressure s according  EMV1, E temperat humidity: electroma  IBEXU 10 zone 0:	steel 1.44 id housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D B agnetic co	JO4 (316) sta g: sta (fla res FK wel J35 (316) s, diaphr possible J3, EMV	L) inless ste inless ste inless ste ine-resist istant aga M Ided versi L) ragm for nomina 4 vibration: enclosure ty: IECEX I	el 1.4404 el 1.4404 ant, halogainst salt, on 3  I pressure  B E D B	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil) ar	ot er of certific	hers on re	equest
Vibration  Materials  Pressure port Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts  **welded version only with pir Category of the enviror Lloyd's Register (LR) Det Norske Veritas • Germanischer Lloyd (DN  Explosion protection  Approvals DX19-DMP 457	NV-GL)	stainless standard option fie TPE -U standard option: stainless pressure s according  EMV1, E temperat humidity: electroma  IBEXU 10 zone 0: zone 20:	steel 1.44 id housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D B agnetic co D ATEX 10 II 1G E II 1D E	JO4 (316) sta g: sta (fla res FK wel J35 (316) s, diaphr possible J3, EMV mpatibili cx ia IIIB x ia IIIC	L) inless ste inless st inless ste inless st inless	el 1.4404 el 1.4404 ant, halogainst salt, on 3  I pressure  B E D B BE 12.00	(316L (316L gen fre sea wa	) ), with ca e, increa ater, hea	able gland sed resista vy oil) ar	ot er of certific	hers on re	equest
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts  **welded version only with pictory  Category of the enviror  Lloyd's Register (LR)  Det Norske Veritas •  Germanischer Lloyd (DN  Explosion protection  Approvals	NV-GL)	stainless standard option fie TPE -U standard option: stainless pressure s according  EMV1, E temperat humidity: electroma  IBExU 10 zone 0: zone 20: U <sub>i</sub> = 28 V	steel 1.44 id housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D B agnetic co D ATEX 10 II 1G E II 1D E II, I <sub>i</sub> = 93 m	JO4 (316) sta g: sta (fla res FK wel J35 (316) s, diaphr possible  J3, EMV mpatibili cx ia IIIB x ia IIIC A, Pi = 6	L) inless ste inless ste inless ste ime-resist istant aga M Ided versi L) ragm for nomina 4 vibration: enclosure ity:  IECEX I T4 Ga T 85°C D 660 mW, I	el 1.4404 el 1.4404 ant, haloq ainst salt, fon 3  I pressure  B B BE 12.00 a a i ≈ 0 μH	(316L (316L) gen fre sea war	), with cae, increa	able gland sed resista vy oil)  ar  numbe	of er of certific	hers on recate: 13/20 cate: TAA	equest
Vibration  Materials  Pressure port Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts  **welded version only with pir Category of the enviror Lloyd's Register (LR) Det Norske Veritas • Germanischer Lloyd (DN  Explosion protection  Approvals DX19-DMP 457	NV-GL)	stainless standard option fie TPE -U standard option: stainless pressure s according  EMV1, E temperat humidity: electroma  IBEXU 10 zone 0: zone 20: U <sub>i</sub> = 28 V with field	steel 1.44 ild housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D B agnetic co D ATEX 10 II 1G E II 1D E II, I <sub>i</sub> = 93 m housing:	JO4 (316) sta g: sta (fla res FK wel J35 (316) s, diaphr possible J3, EMV mpatibili Cos X / ix ia IIIB x ia IIIC A, Pi = 6 Ci = 105	L) inless ste inless ste ime-resist istant aga M Ided versi L) ragm for nomina 4 vibration: enclosure ity:  IECEX I T4 Ga T 85°C D 60 mW, L nF	el 1.4404 el 1.4404 ant, haloq ainst salt, lon ³  I pressure  B E D B BE 12.00 a  -i ≈ 0 µH with cable	(316L (316L) gen fre sea war ranges	), with case, increase atter, head $P_N \le 40 \text{ bs}$ : $C_i = 84.$	able gland sed resista vy oil)  ar  numbe numbe	of certificer of certificer of certificer	hers on recate: 13/20 cate: TAA0	equest 0055 00001GF
Vibration  Materials  Pressure port Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts  **welded version only with pir Category of the enviror Lloyd's Register (LR) Det Norske Veritas • Germanischer Lloyd (DN  Explosion protection  Approvals DX19-DMP 457	NV-GL)	stainless standard option fie TPE -U standard option: stainless pressure s according  EMV1, E temperat humidity: electroma  IBExU 10 zone 0: zone 20: U <sub>i</sub> = 28 V with field the suppl	steel 1.44 ild housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D B agnetic co D ATEX 10 II 1G E II 1D E II, I <sub>i</sub> = 93 m housing:	JO4 (316) sta g: sta (fla res FK wel J35 (316) s, diaphr possible J3, EMV mpatibili Cos X / ix ia IIIB x ia IIIC A, Pi = 6 Ci = 105	L) inless ste inless ste ime-resist istant aga M Ided versi L) ragm for nomina 4 vibration: enclosure ity:  IECEX I T4 Ga T 85°C D 60 mW, L nF	el 1.4404 el 1.4404 ant, haloq ainst salt, lon ³  I pressure  B E D B BE 12.00 a  -i ≈ 0 µH with cable	(316L (316L) gen fre sea war ranges	), with case, increase atter, head $P_N \le 40 \text{ bs}$ : $C_i = 84.$	able gland sed resista vy oil)  ar  numbe	of certificer of certificer of certificer	hers on recate: 13/20 cate: TAA0	equest 0055 00001GF
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts <sup>3</sup> welded version only with pr  Category of the enviror  Lloyd's Register (LR)  Det Norske Veritas • Germanischer Lloyd (DN  Explosion protection  Approvals  DX19-DMP 457  Safety technical maximu	nment  IV•GL)  m values	stainless standard option fie TPE -U standard option: stainless pressure s according  EMV1, E temperat humidity: electroma  IBExU 10 zone 0: zone 20: U <sub>i</sub> = 28 V with field the suppl housing	steel 1.44 ild housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D B agnetic co D ATEX 10 II 10 E II 10 E II, i = 93 m housing: y connect	in the standard stand	L) inless ste inless st inless ste inless ste inless st inless	el 1.4404 el 1.4404 ant, haloq ainst salt, fon 3  I pressure  B E: D B BE 12.00 a  a  i ≈ 0 μH with cable r capacity	(316L (316L) gen fre sea war ranges	), with cae, increa e, increa ater, hea P <sub>N</sub> ≤ 40 ba c: C <sub>i</sub> = 84. x. 90 nF	able gland sed resista vy oil)  ar  numbe numbe	of certificer of certificer of certificer	hers on recate: 13/20 cate: TAA0	equest 0055 00001GF
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts <sup>3</sup> welded version only with procession of the enviror Lloyd's Register (LR)  Det Norske Veritas • Germanischer Lloyd (DN  Explosion protection  Approvals  DX19-DMP 457  Safety technical maximus  Permissible temperatures	nment  IV•GL)  m values	stainless standard option fie TPE -U standard option: stainless pressure s according  EMV1, E temperat humidity: electroma  IBExU 10 zone 0: zone 20: U <sub>i</sub> = 28 V with field the suppl housing in zone 0	steel 1.44 id housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D Bagnetic co D ATEX 10 II 1G E II 1D E housing: 4 y connect :	in the state of th	L) inless ste inless ste inless ste ine-resist istant aga M ided versi L) agm for nomina  4 vibration: enclosure ty:  IECEx I T4 Ga T 85°C D 660 mW, L ne an inne 60°C wi	el 1.4404 el 1.4404 ant, haloq ainst salt, fon 3  I pressure  B E: D B BE 12.00 a  a  i ≈ 0 μH with cable r capacity	(316L (316L) gen fre sea war ranges	), with cae, increa e, increa ater, hea P <sub>N</sub> ≤ 40 ba c: C <sub>i</sub> = 84. x. 90 nF	able gland sed resista vy oil)  ar  numbe numbe	of certificer of certificer of certificer	hers on recate: 13/20 cate: TAA0	equest 0055 00001GF
Vibration  Materials Pressure port Housing  Cable sheath  Seals (media wetted)  Diaphragm Media wetted parts  **welded version only with pit* Category of the enviror Lloyd's Register (LR) Det Norske Veritas • Germanischer Lloyd (DN  Explosion protection Approvals DX19-DMP 457  Safety technical maximus  Permissible temperature: environment	nment  IV•GL)  m values	stainless standard option fie TPE -U standard option: stainless pressure s according  EMV1, E temperat humidity: electroma  IBExU 10 zone 0: zone 20: U <sub>i</sub> = 28 W with field the suppl housing in zone 0 in zone 1	steel 1.44 id housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D Bagnetic co D ATEX 10 II 1G E II 1D E I, I <sub>i</sub> = 93 m housing: 4 y connect or higher	in the standard stand	L) inless ste inless ste ime-resist istant aga M Ided versi L) ragm for nomina  4 vibration: enclosure ity:  IECEX I T4 Ga T 85°C D 660 mW, L nF ve an inne . 60 °C wi	el 1.4404 el 1.4404 ant, halogainst salt, on 3  I pressure  B B BE 12.00 a a -i ≈ 0 μH with cable r capacity th p <sub>atm</sub> 0.8	(316L (316L) gen fre sea wa ranges 27X e outlet v of ma	), with cae, increa e, increa ater, hea P <sub>N</sub> ≤ 40 b c: C <sub>i</sub> = 84. x. 90 nF p to 1.1 l	able gland sed resista vy oil)  ar  numbe numbe  7 nF (140 nF with	ot er of certific er of certific with ISO 4	hers on recate: 13/20 cate: TAA0	equest 0055 00001GF
Vibration  Materials  Pressure port  Housing  Cable sheath  Seals (media wetted)  Diaphragm  Media wetted parts <sup>3</sup> welded version only with procession of the enviror  Lloyd's Register (LR)  Det Norske Veritas • Germanischer Lloyd (DN  Explosion protection  Approvals  DX19-DMP 457  Safety technical maximus  Permissible temperatures	nment  IV•GL)  m values	stainless standard option fie TPE -U standard option: stainless pressure s according  EMV1, E temperat humidity: electroma  IBExU 10 zone 0: zone 20: U <sub>i</sub> = 28 W with field the suppl housing in zone 0 in zone 1	steel 1.44 id housing steel 1.44 port, seals to EN 837; MV2, EMV ure: D B agnetic co D ATEX 10 II 1D E I, I <sub>i</sub> = 93 m housing: 0 y connect or higher pacitance:	104 (316) sta g: sta (fla res FK, wel 135 (316) s, diaphr possible  137 (316) 138 (316) 139 (316	L) inless ste inless ste ime-resist istant aga M Ided versi L) ragm for nomina  4 vibration: enclosure ity:  IECEX I T4 Ga T 85°C D 660 mW, L nF ve an inne . 60 °C wi . 70 °C I line/shie	el 1.4404 el 1.4404 ant, haloquinst salt, on 3  I pressure  B B BE 12.00 a α α α α γ α α γ α γ α α γ α α γ α α α γ α α γ α α α γ α α γ α α α γ α α α γ α α α α α γ α	(316L (316L) gen fre sea was ranges  27X  e outlet r of ma 3 bar u	), with cae, increa e, increa ater, hea P <sub>N</sub> ≤ 40 b c: C <sub>i</sub> = 84. x. 90 nF p to 1.1 l e/signal	able gland sed resista vy oil)  ar  numbe numbe	ot er of certific er of certific with ISO 4	hers on recate: 13/20 cate: TAA0	equest 0055 00001GF

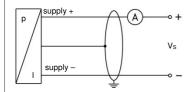
### Shipbuilding and Offshore

Miscellaneous		
Current consumption	max. 25 mA	
Weight	approx. 140 g (with ISO 4400)	
Installation position	any <sup>4</sup>	
Operational life	> 100 x 10 <sup>6</sup> pressure cycles	
CE-conformity	EMC Directive: 2014/30/EU	Pressure Equipment Directive: 2014/68/EU (module A) 5
ATEX Directive	2014/34/EU	

- <sup>4</sup> Pressure transmitters are calibrated in a vertical position with the pressure connection down. If this position is changed on installation there can be slight deviations in the zero point for pressure ranges  $P_N \le 1$  bar.
- This directive is only valid for devices with maximum permissible overpressure > 200 bar

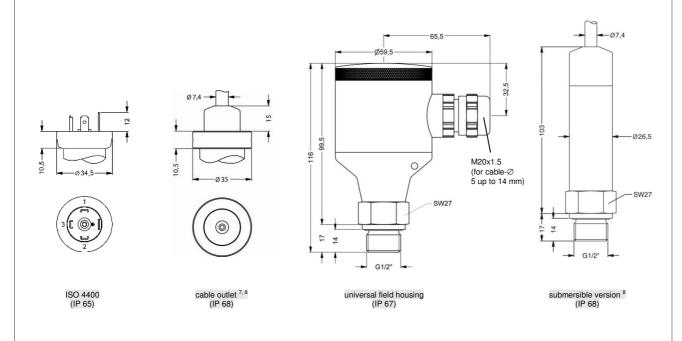
#### Wiring diagram

2-wire-system (current)



Pin configuration							
Electrical connection	ISO 4400	field housing	cable colours (IEC 60757)				
Supply +	1	IN +	wh (white)				
Supply –	2	IN –	bn (brown)				
Shield	ground pin		gnye (green-yellow)				

#### Electrical connections <sup>6</sup> (dimensions in mm)



<sup>&</sup>lt;sup>6</sup> Generally shielded cable has to be used! Cable versions are delivered with shielded cable. For ISO 4400 the use of shielded cable is compulsory.

<sup>7</sup> tested at 4 bar or 40 mH<sub>2</sub>O for 24 hours

<sup>8</sup> shielded cable with integrated air tube for atmospheric reference (for nominal pressure ranges absolute, the air tube is closed); different lengths available

## Mechanical connection (dimensions in mm) Standard © 2018 BDISENSORS GmbH - The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and materials. 91 -Ø26,5 4 G1/2" G1/2" DIN 3852 Option 4 2 15 G 1/4" G 1/2" G1/2" EN 837 G1/4" DIN 3852 G1/4" EN 837 4 20 1/4" NPT 1/2" NPT 1/4" NPT O-Ring -21 -71 -14 --Ø10 G1/2" •G1/2" -G1/2" flush DIN 3852 (up to 40 bar) G1/2" open port DIN 3852 (up to 40 bar)



#### Ordering code DMP 457 **DMP 457** Pressure 6 0 0 6 0 1 in bar, gauge in bar, absolute 2 in mH<sub>2</sub>O, gauge 1 6 0 2 in mH<sub>2</sub>O, absolute <sup>2</sup> 6 0 3 [mH<sub>2</sub>O] [bar] 0 0 0 6 0 0 5 0 0 0 0 0.1 1.6 0.16 2.5 0.25 2 4 0.4 4 6 0.6 6 0 0 6 5 0 0 10 0 16 1.6 0 2.5 0 25 0 40 4 0 60 6 0 © 2015 BD/SENSORS GmbH - The specifications given in this document represent the state of engineering at the time of publishing. We reserve the right to make modifications to the specifications and mate 0 0 2 100 10 0 2 160 16 0 2 0 2 5 250 25 400 40 0 0 2 0 3 60 6 100 6 0 3 5 0 3 0 0 3 0 0 3 1 0 2 9 9 9 160 2 250 4 400 600 -1 ... 0 customer consult Output 4 ... 20 mA / 2-wire 1 Intrinsic safety 4 ... 20 mA / 2-wire F customer consult 9 standard for $P_N \ge 0.4$ bar 0.35 % 3 standard for $P_N < 0.4$ bar 0.50 % option for $P_N \ge 0.4$ bar 0.25 % 2 customer consult Electrical connection Male and female plug ISO 4400 3 1 G 0 (for cable Ø 4...6 mm) Male and female plug ISO 4400 GL 3, 4 G 0 0 (for cable Ø 10...14 mm) Male and female plug ISO 4400 GL 3, 4 G 0 (for cable Ø 4,5...11 mm) Cable outlet (TPE-U-cable) 5 R Т 3 8 0 Field housing stainless steel 8 Submersible version (1.4404 / 316L) Т Т 3 with TPE-U-cable 5 customer 9 9 9 Mechanical connection G1/2" DIN 3852 0 0 1 G1/2" EN 837 0 0 G1/4" DIN 3852 3 0 0 G1/4" EN 837 0 G 1/2" DIN 3852 with 6 F 0 0 flush sensor G1/2" DIN 3852 open pressure port <sup>6</sup> 0 0 Н N 0 0 N 4 0 9 9 9 1/2" NPT 1/4" NPT customer consult FKM without (welded version) 2 9 customer consult Special version 0 0 0 9 9 9 standard customer consult 1 from 60 bar: measurement starts with ambient pressure

20.07.2015



<sup>&</sup>lt;sup>2</sup> absolute pressure possible from 0.4 bar

<sup>&</sup>lt;sup>3</sup> Shielded cable has to be used! Cable versions are delivered with shielded cable.

<sup>&</sup>lt;sup>4</sup> female plug is GL-approbated

 $<sup>^{5}</sup>$  cable with integrated  $\,$  air tube for atmospheric pressure reference; different lengths deliverable

<sup>&</sup>lt;sup>6</sup> possible up to 40 bar

 $<sup>^{7}</sup>$  welded version only with pressure ports according to EN 837; possible with pressure ranges  $P_N \le 40$  bar