



HU 300

Hammer Union Pressure Transmitter

special application
petrochemical industry / offshore

accuracy according to IEC 60770:
0.5 % FSO

Nominal pressure

from 0 ... 5000 psi up to 0 ... 15000 psi

Output signal

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

Product characteristics

- ▶ extreme robust and stable
- ▶ vibration / shock

Optional versions

- ▶ IS-version zone 0/1
- ▶ electrical connection Glenair (4-pin)

Versions on request

- ▶ electrical connection Jupiter (4-pin)

The pressure transmitter HU 300 has been especially developed for extreme operating conditions in the petrochemical industry (on- and offshore sites). A high degree of reliability and accuracy is the precondition for a perfect function during cementing and tightening processes (annulus) on wellbores.

A one-piece pressure port, a high quality pressure sensor and precise machining and assembly techniques ensure a small drifting and a high long-term stability. A very high resistance against vibration, shock and pressure peaks without any influence on the measurement characteristics is guaranteed.

Due to the extreme environmental conditions on-site, it is important to offer solutions to different requirements, as an intrinsic-safe version (zone 0/1), an electrical connection with IP 68 or special steel materials.

Preferred areas of use are



Cementing wellbores

Hydraulic fracturing

Intensifying wellbores

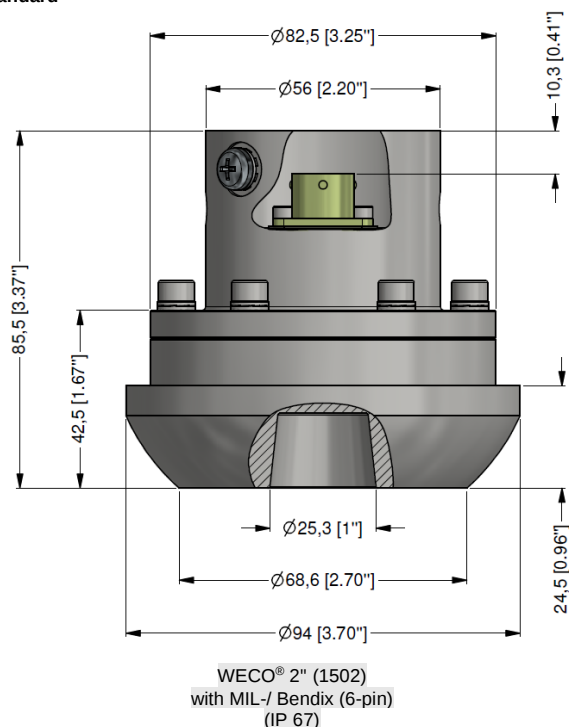


Pressure ranges				
Nominal pressure	[psi]	5000	6000	10000
Permissible overpressure	[psi]	7500	9000	15000
Burst pressure ≥	[psi]	10000	12000	20000
30000				
Supply				
Standard	2-wire: 4 ... 20 mA / V _S = 10 ... 30 V _{DC} ¹			
Ex-protection	2-wire: 4 ... 20 mA / V _S = 14 ... 28 V _{DC}			
¹ valid for temperature from -40 ... 85 °C; for higher temperatures the supply has to be limited				
Performance				
Accuracy	IEC 60770: ≤ ± 0.5 % FSO			
Permissible load	R _{max} = [(V _S – V _{S min}) / 0.02 A] Ω			
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ			
Long term stability	≤ ± 0.5 % FSO per 6 months			
Response time	≤ ± 1.5 msec			
Thermal effects (offset and span)				
Thermal errors	≤ ± 2 % FSO / 100 K			
In compensated range	-5 ... 60 °C			
Permissible temperatures				
Medium / environment	-40 ... 125 °C			
Storage	-55 ... 125 °C			
Calibration				
Calibration signal accuracy	≤ ± 0.2 % FSO			
Calibration signal	80 % FSO (16.8 mA)			
Electrical protection				
Short-circuit protection	permanent			
Reverse polarity protection	no damage, but also no function			
Electromagnetic compatibility	emission and immunity according to EN 61326			
Mechanical stability				
Vibration	20 g RMS / 10 ... 2000 Hz 7.5 g RMS / 5 ... 1000 Hz		according to DIN EN 60068-2-6 according to DIN EN 60068-2-64	
Shock	500 g / 1 msec half sine		according to DIN EN 60068-2-27	
Free Fall	1 m (free fall base: steel)		according to DIN EN 60068-2-32	
Materials				
Pressure port / diaphragm	stainless steel 1.4548 (316L)			
Housing	stainless steel 1.4404 (316L)			
Media wetted parts	pressure port			
Explosion protection				
Approval DX18-HU300	IBExU08ATEX1127 X zone 0/1: II 1/2 G Ex ia IIC T4 Ga/Gb			
Safety technical maximum values	U _i = 28 V, I _i = 100 mA, P _i = 700 mW, C _i = 1 nF, L _i = 5 µH, The supply connections have an inner capacity of max. 27 nF opposite the housing.			
Permissible temperatures for medium	-40 ... 70 °C			
Permissible temperatures for environment	in zone 0: -20 ... 60 °C with p _{atm} 0.8 bar up to 1.1 bar in zone 1: -25 ... 70 °C			
Connecting cables (by factory)	cable capacitance: signal line/shield also signal line/signal line: 150 pF/m cable inductance: signal line/shield also signal line/signal line: 1 µH/m			

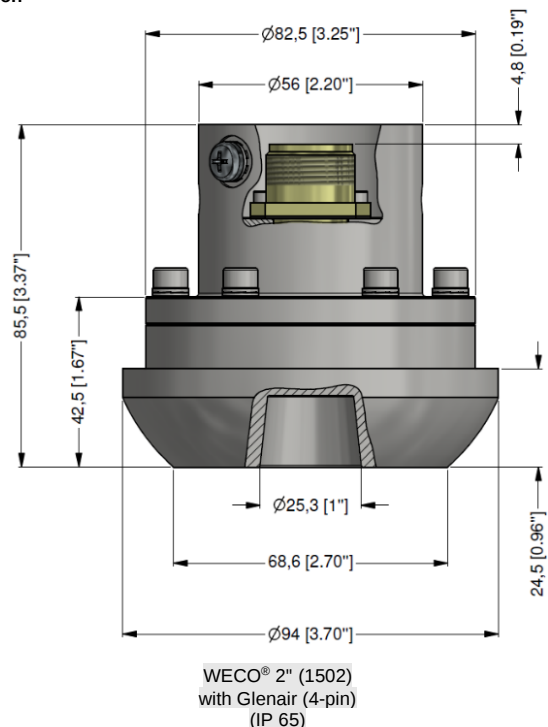
Miscellaneous			
Current consumption	max. 50 mA		
Installation position	any		
Weight	2.1 kg		
CE-conformity	EMC Directive: 2014/30/EU Pressure Equipment Directive: 2014/68/EU (module A)		
ATEX Directive	2014/34/EU		
Wiring diagram			
2-wire-system (current)			
Pin configuration			
Electrical connection	MIL-/ Bendix (6-pin)	Glenair (4-pin)	Jupiter 10TP (4-pin)
Supply + Supply – Calibration + Calibration –	pin A pin B pin E pin F	pin C pin B pin D pin A	1 2 3 4
Shield	pin D	plug housing	plug housing

Mechanical connection (dimensions mm / in)

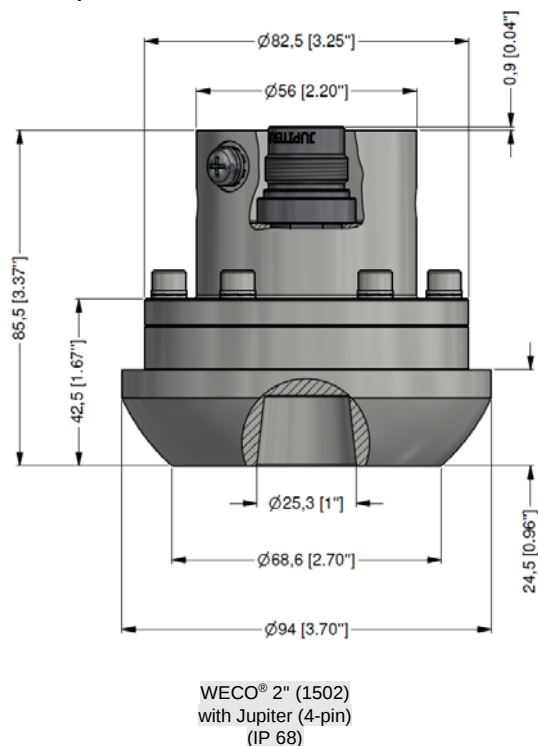
standard



option



option on request



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Ordering code HU 300

HU 300

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Standard version									
		H	U	0					
Input [psi]									
	5000	P	5	K	0				
	6000	P	6	K	0				
	10000	P	1	0	K				
	15000	P	1	5	K				
	customer	9	9	9	9				consult
Output									
	4 ... 20 mA / 2-wire				1				
	intrinsic safety 4 ... 20 mA / 2-wire				E				
	customer				9				consult
Accuracy									
	0.5 % FSO				5				
	customer				9				consult
Electrical connection									
	MIL-/ Bendix (6-pin)					B	2	0	
	type PT02_E10-6P-023 ¹								
	Glenair (4-pin)					B	Z	0	
	GC379-2-14S-2P ¹								
	Jupiter 10TP (4-pin) ¹					B	J	0	
	customer					9	9	9	consult
Mechanical connection									
	WECO 2" 1502					H	U	0	
	customer					9	9	9	consult
Material pressure port									
	stainless steel 1.4548 (17-4PH)					7	8		
	customer					9	9		consult
Material diaphragm									
	stainless steel 1.4548 (17-4PH)					Z	8		
	customer					9	9		consult
Special version									
	standard					0	0	0	
	customer					9	9	9	consult

¹ only male plugs
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