



The WD series of Gefran, are pressure transmitters for using in High temperature environment. The main characteristic of this series is the capability to read temperature of the media up to 315°C. The constructive principle is based on the hydraulic transmission of the pressure. The fluid-filled system assures the temperature stability. The physical measure is transformed in a electrical measure by means the strain-gauge technology.

### MAIN FEATURES

#### Electrical

- Digital output signal with DP404 CAN OPEN communication protocol
- Transmission frequency (Baud rate): 10 Kbaud to 1Mbaud (default 500 Kbaud)
- Software / Hardware selection of Baud rate and ID nodes
- Operation with 1 or 2 settable alarm limits
- "Autozero" for temperature compensation
- Zero and span drift compensation
- 80% FSO calibration signal
- Filling with certified oil FDA, CFR178.3620 and CFR172.878

#### Mechanical

- Pressure ranges: 0-35 to 0-2000 bar/0-500 to 0-15000 psi
- Extensimetric measurement principle with Wheatstone jumper
- Precision:  $< \pm 0.25\%$  FSO (H);  $< \pm 0.5\%$  FSO (M)
- Hydraulic transmission system to guarantee temperature stability.
- Protection level: IP65
- Standard threading: 1/2-20 UNF, M18x1.5; other versions on request
- Stainless steel 17-7 PH diaphragm with TiN (titanium nitride) coating
- Other types of diaphragm on request

#### GTP (advanced protection)

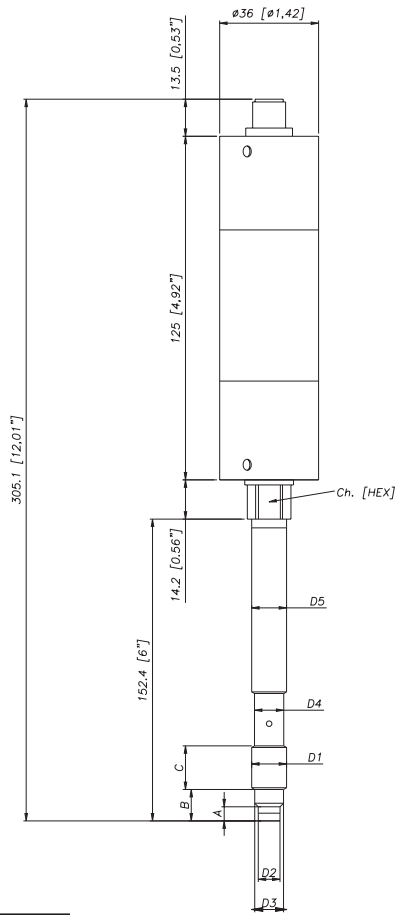
Coating with high resistance against corrosion, abrasion and high temperature

### TECHNICAL SPECIFICATIONS

Rated precision, including effects of linearity, repeatability and hysteresis	H $< \pm 0.25\%$ FSO (350...1000 bar) M $< \pm 0.5\%$ FSO (35...1000 bar)
Sampling	16 bit (1)
Pressure ranges	0-500 to 0-15.000 psi 0-35 to 0-1000 bar
Maximum applicable pressure	2 x FSO
Measurement principle	Strain gauge
Power supply	12...40 Vdc
Typical input	40 mA (2)
Insulation resistance (at 50Vdc)	$> 1000$ MOhm
Signal at rated pressure (FSO)	Depends on FSO
Signal at ambient pressure	0
Calibration of ambient pressure	Insertion of an offset
Signal protocol	DP404 CAN OPEN, with baud rate selectable from 10K to 1M baud (default 500 Kbaud)
Response time (10 at 90% FSO)	20 ms
Calibration signal	80% FSO
Protection against overvoltage and reverse polarity of power supply	YES
Compensated temperature range of strain Gauge Housing	0...+76°C 32...170°F
Maximum temperature range of strain Gauge Housing	-30...+85°C -22...185°F
Thermal drift in compensated range;	
Zero	$< 0.02\%$ FSO/°C
Calibration	$< 0.01\%$ FSO/°F
Sensitivity	$< 0.01\%$ FSO/°F
Max. diaphragm temperature	315°C (600°F)
Influence due to variation of fluid temperature (zero)	0.04bar/°C 30 Psi/100°F
Standard contact diaphragm with process	17-7 PH with TiN (titanium nitride) coating
Thermocouple (model WD2)	STD: Type * J (isolated coupling)
Protection level	IP65
Electrical connections	M12 DIN EN 50044 5-pin connector

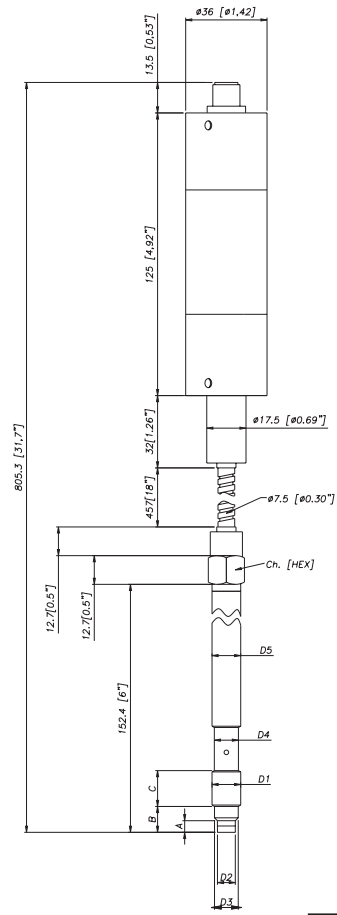
(1) resolution: 0.01 bar from 35...500bar; 0.1 bar from 700...1000bar; 0.1 psi from 5000...350psi; 1 psi from 7500...15000psi  
 (2) Conditions. Power supply 24 Vdc  
 FSO= Full Scale Output (Signal at rated pressure)

# MECHANICAL DIMENSIONS

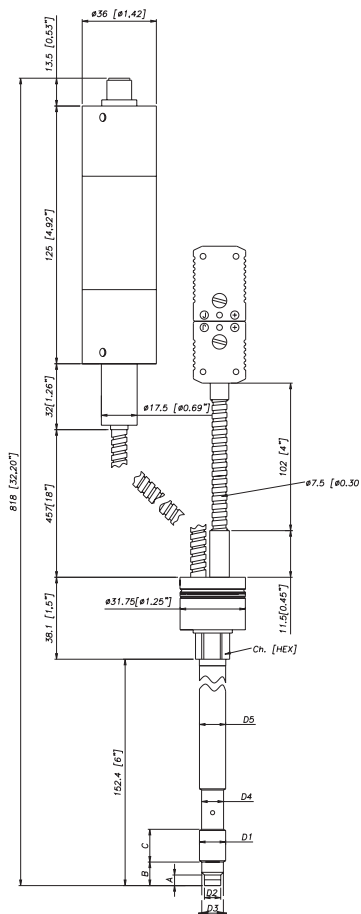


**WD0**

D1	<b>1/2 - 20UNF</b>
D2	$\varnothing 7.8 - 0.05$ [ $\varnothing 0.31$ " - 0.002 ]
D3	$\varnothing 10.5 - 0.025$ [ $\varnothing 0.41$ " - 0.001 ]
D4	$\varnothing 10.67$ [ $\varnothing 0.42$ " ]
D5	$\varnothing 12.7$ [ $\varnothing 0.5$ " ]
A	$5.56 - 0.26$ [ $0.22$ " - 0.01 ]
B	$11.2$ [ $0.44$ " ]
C	$15.74$ [ $0.62$ " ]
Ch [Hex]	$16$ [ $5/8$ " ]



**WD1**

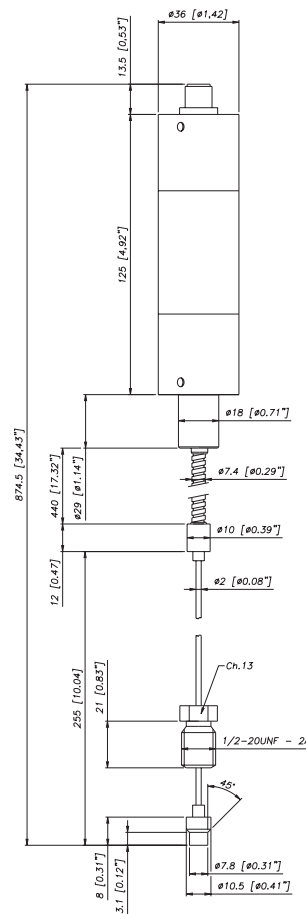


**WD2**

D1	<b>M18x1,5</b>
D2	$\varnothing 10 - 0.05$ [ $\varnothing 0.394$ " - 0.002 ]
D3	$\varnothing 16 - 0.08$ [ $\varnothing 0.63$ " - 0.003 ]
D4	$\varnothing 16 - 0.4$ [ $\varnothing 0.63$ " - 0.016 ]
D5	$\varnothing 18$ [ $\varnothing 0.71$ " ]
A	$6 - 0.26$ [ $0.24$ " - 0.01 ]
B	$14.8 - 0.4$ [ $0.58$ " - 0.016 ]
C	$19$ [ $0.75$ " ]
Ch [Hex]	$19$ [ $3/4$ " ]

**NOTE:**  
Dimensions refer to rigid rod option "4" (153 mm – 6")

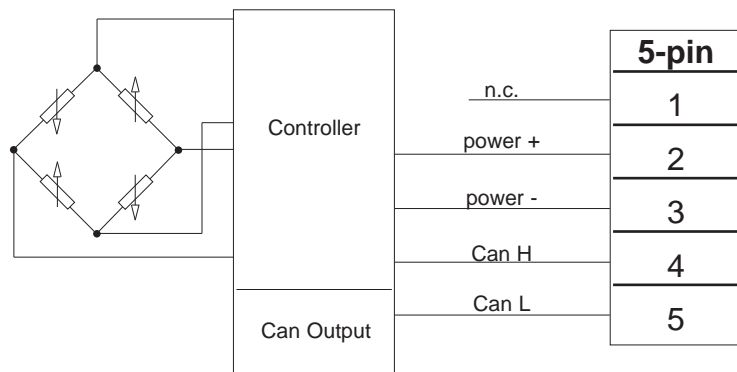
**ATTENTION:**  
use a maximum tightening torque of 56 Nm (500 in-lb) for installation



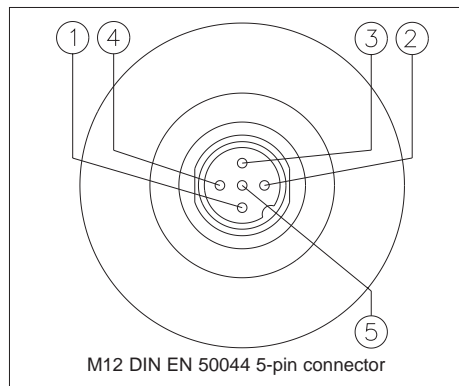
**WD3**

## ELECTRICAL CONNECTIONS

### CAN BUS DP404 DIGITAL OUTPUT



Shielding is connected to transducer body. It is advisable to ground it on the instrument side as well.



## ACCESSORIES

### Connectors

5 pin female connector (IP65 protection)

**CON031**

### Extension cords

5-pin connector with cord length 1 meter (3.3 ft)

5-pin connector with cord length 2 meters (7 ft)

5-pin connector with cord length 5 meters (17 ft)

**PCAV310**

**PCAV311**

**PCAV314**

Other lengths

**on request**

### Cord color code

Conn.	Wire
1	n.c.
2	Red
3	Black
4	White
5	Blue

### Accessories

Fastening bracket

Protective plug for 1/2 - 20 UNF

Protective plug for M18x1.5

Punch kit for 1/2-20 UNF

Punch kit for M18x1.5

Cleaning kit for 1/2-20 UNF

Cleaning kit for M18x1.5

**SF18**

**SC12**

**SC18**

**KF12**

**KF18**

**CT12**

**CT18**

# ORDER CODE

W - - - - - 000

OUTPUT SIGNAL	
CAN BUS	D

CONFIGURATION	
Rigid rod	0
Rigid + flexible rod	1
With thermocouple	2
Exposed capillary	3

CONNECTOR	
Standard	
5-pin M12	5

PRECISION CLASS	
± 0.25% (ranges ≥350 bar/5000 psi)	H
± 0.5%	M

MEASUREMENT RANGE			
bar		psi	
35	B35U	500	P05C
50	B05D	750	P75D
70	B07D	1000	P01M
100	B01C	1500	P15C
200	B02C	3000	P03M
350	B35D	5000	P05M
500	B05C	7500	P75C
700	B07C	10000	P10M
1000	B01M	15000	P15M

000= Special executions of the standard version or custom versions may be ordered on request

LENGTH OF FLEXIBLE ROD (mm / inches)		
Standard (WD0)		
0	none	
Standard (WD1, WD2)		
D	457mm	18"
E	610mm	24"
F	760mm	30"
Standard (WD3)		
L	711mm	28"
On request		
A	76mm	3"
B	152mm	6"
C	300mm	12"

LENGTH OF RIGID ROD * (mm / inches)		
Standard (WD0, WD1, WD2)		
4	153mm	6"
5	318mm	12.5"
Standard (WD3)		
0	none	
On request		
1	38mm	1.5"
2	50mm	2"
3	76mm	3"
6	350mm	14"
7	400mm	16"
8	456mm	18"

THREADING	
Standard	
1	1/2 - 20 UNF
4	M18 x 1.5

(\*) note: max. total length of rigid/flexible rod is 914 mm-36

**Example:**

**WD0-5-M-B07C-1-4-0-000**

Oil-filled melt pressure transducer with Can output, 5-pin connector, 1/2 - 20 UNF threading, pressure range 700 bar, precision class 0.5%, 153 mm (6") rigid rod.

**WD1-5-M-P03M-1-4-D-000**

Oil-filled melt pressure transducer with Can output, 5-pin connector, 1/2 - 20 UNF threading, pressure range 3000 bar, precision class 0.5%, 153 mm (6") rigid rod, 457 mm (18") flexible rod.

GEFRAN spa reserves the right to make aesthetic or functional changes at any time and without notice.

GEFRAN spa  
 via Sebina, 74  
 25050 PROVAGLIO D'ISEO (BS) - ITALIA  
 tel. 0309888.1 - fax. 0309839063  
 Internet: <http://www.gefran.com>

