

The selection is detailed on page 7



# LW-PG

## Pressure transmitter

### Functional characteristics

- Stainless steel liquid connection unit
- Resistant to all common refrigerants
- Special shell design, with significant anti-condensation effect
- Support for custom tags

### Product application

- supercharger
- condenser
- compressor
- Air conditioning equipment

### Product description

#### Suitable for refrigeration and air conditioning technology

The LW-PG pressure transmitter is optimally designed to meet the specific application requirements of refrigeration and air conditioning technology. This type of transmitter has an integral design that eliminates the need for seals at the processing end. The LW-PG type can be used with all common refrigerants.

#### Excellent reliability

This type of transmitter has a fully hermetically welded, oil-free metal film sensing to maintain good air tightness for a long time. In addition, these highly efficient sensors are manufactured using stainless steel film technology, which provides high long-term stability and has very high burst pressures.

#### High cost performance

The production line of this type of transmitter is highly flexible, which not only increases the output of the transmitter, but also makes the transmitter have a very high cost performance.

## Measuring range

Manometer pressure								
MPa	Measuring range	0...0.6	0...1	0...1.5	0...1.6	0...2	0...2.5	0...3
	Upper overvoltage limit	2	2	3.2	3.2	5	5	8
	Rupture pressure	10	10	16	16	25	25	40
	Measuring range	0...3.5	0...4	0...4.5	0...5	0...6	0...10	0...16
	Upper overvoltage limit	8	8	8	8	8	20	32
	Rupture pressure	40	40	40	40	40	80	100

Vacuum and +/- measuring range						
MPa	Measuring range	-0.1...+0.7	-0.1...+0.9	-0.1...+1	-0.1...+1.5	-0.1...+2
	Upper overvoltage limit	2	2	2	3.2	5
	Rupture pressure	10	10	10	16	25
	Measuring range	-0.1...+2.5	-0.1...+2.9	-0.1...+4.5	-0.05...+0.7	-0.05...+1
	Upper overvoltage limit	5	8	12	2	2
	Rupture pressure	25	40	55	10	10

Other measuring ranges are available on request

Negative pressure protection

is

## Output signal

Optional model	
Signal type	signal
Current (2-wire)	4...20mA
Voltage (3-wire)	DC 1...5V
	DC 0...10V
Proportional voltage (3-wire type)	DC 0.5...4.5V

Other output signals can be provided on request.

load( $\Omega$ )	
Current (2-wire)	$\leq (\text{Power supply} - 7 \text{ V}) / 0.02 \text{ A}$
Voltage (3-wire)	$> \text{Maximum output signal} / 1 \text{ mA}$
Proportional voltage (3-wire type)	$> \text{Maximum output signal} / 1 \text{ mA}$

## Supply voltage

Power source	
The power required depends on the selected output signal	
4 ... 20 mA	DC 7 ...30 V
DC 1 ... 5 V	DC 8 ...30 V
DC 0 ... 10 V	DC 14 ... 30 V
DC 0.5 ... 4.5 V	DC 4.5 ... 5.5 V

## Reference condition

Temperature	15 ... 25 °C
Atmospheric pressure	86 ... 106 kPa
humidness	45 ... 75 %r.h
Power source	DC 24 V
Nominal position	Vertically aligned, process connection facing down

## Accuracy specification

Accuracy under reference conditions	≤2 %FS
	Includes nonlinearity, hysteresis, zero drift and final value deviation (corresponding measurement tolerances according to IEC 61298-2)
Temperature tolerance (-25 ... +85°C)	
▪ The average temperature coefficient of zero	The typical value is ≤ 0.5%FS/10 K
▪ The average temperature coefficient at full scale	≤ 0.3 %FS/10 K
Long-term stability (According to IEC 61298-2)	≤ 0.3 %FS/years

## Response time

Set time	≤ 5 ms
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## Working condition

Protection level (according to IEC 60529)		
The level of protection depends on the type of electrical connection		
▪ Circular aviation joint M12 x 1	IP67	
▪ Metri-Pack 150 series	IP67	
▪ The cable runs straight out	IP69K	
The protection levels described herein are applicable only when matching joints of similar protection levels are provided		
Temperature		
▪ Medium	-40 ... +100 °C	-40 ... +212 °F
▪ Environment	-25 ... +85 °C	-13 ... +185 °F
▪ Store	-25 ... +85 °C	-13 ... +185 °F
Stability		
The pressure transmitter can withstand industrial grade standard refrigerant		


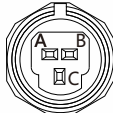


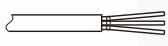
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## Process connection

Optional model	
Standard	Thread size
EN 837	G ¼ B
ANSI/ASME B1.20.1	⅜ NPT
	¼ NPT
ISO 7	1/4NPT
KS	1/2NPT
SAE	7/16-20 UNF-2A, 90° Taper

## Wiring diagram

Round Aviation plug M12 x 1 (4 pins)				Metri-Pack 150 series			
		Two-wire system	Three-wire system			Two-wire system	Three-wire system
	UB	1	1		1	UB	B
OV	3	3	3	OV	C	A	
S+	-	4	4	S+	-	C	

The straight cable exits			
		Two-wire system	Three-wire system
	UB		brown
OV		green-	green
S+			white

Cable cross-sectional area: 3 x 0.14 mm<sup>2</sup>  
Cable diameter: 3.2mm  
Cable length: 0.5 m, 1 m, 2 m and 5 m

### Emote:

UB Positive power terminal  
OV Negative terminal  
S+ Analog output

## Electrical connection

Short-circuit resistance	S+ vs. OV
Polarity reverse protection	UB vs. OV
Overtoltage protection	Max DC 36 V
Insulation voltage	DC 500 V

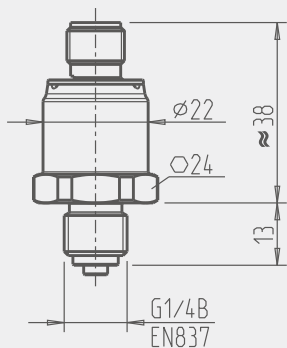
## Materials

Liquid connection unit	The sensor and process connections are made of stainless steel
Non-liquid parts	The housing is made of stainless steel
	The electrical connection is made of highly resistant glass fiber reinforced plastic PBT GF 30

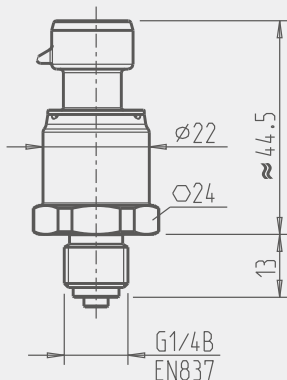


Size mm

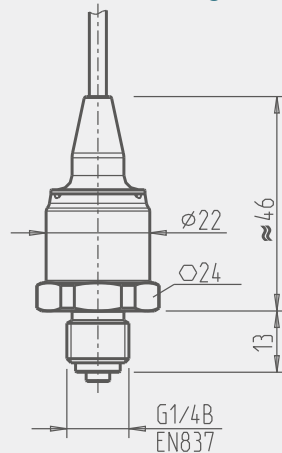
Round aviation joint M12 x 1 (mm)



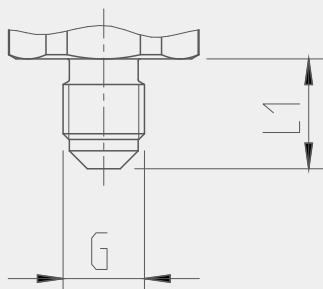
Metri-Pack 150 series



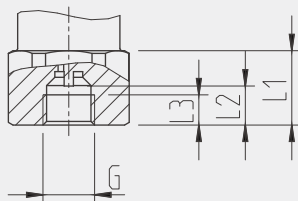
The cable runs straight out



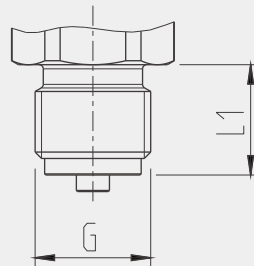
Process connection



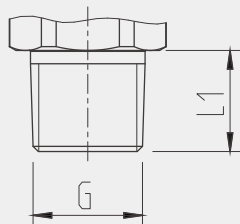
G	L1
7/16-20 UNF-2A, 90°锥度	15



G1	L1	L2	L3
7/16-20 UNF-2B	16	8.4	6.5



G	L1
G ¼ B EN 837	13



G	L1
½ NPT	10
¼ NPT	13
PT ¼	13
R ¼	13

## Range table

Negative pressure	code	MPa	code	Bar	code	kPa	code	kg/cm <sup>2</sup>	code	Psi/-inHg
	MV001	-0.1/0	BV001	-1/0	KV001	-100/0	GV001	-1/0	RV030	-30"/0 Hg
Positive and negative pressure	code	MPa	code	Bar	code	kPa	code	kg/cm <sup>2</sup>	code	Psi/-inHg
	MC006	-0.1/0.06	BC006	-1/0.6	KC006	-100/60	GC006	-1/0.6	PC015	-30"/0/15
	MC015	-0.1/0.15	BC015	-1/1.5	KC015	-100/150	GC015	-1/1.5	PC030	-30"/0/30
	MC030	-0.1/0.3	BC030	-1/3	KC030	-100/300	GC030	-1/3	PC060	-30"/0/60
	MC050	-0.1/0.5	BC050	-1/5	KC050	-100/500	GC050	-1/5	PC100	-30"/0/100
	MC090	-0.1/0.9	BC090	-1/9	KC090	-100/900	GC090	-1/9	PC160	-30"/0/160
	MC150	-0.1/1.5	BC150	-1/15	KC150	-100/1500	GC150	-1/15	PC200	-30"/0/200
MC240	-0.1/2.4	BC240	-1/24	KC240	-100/2400	GC240	-1/24	PC300	-30"/0/300	
Positive pressure	code	MPa	code	Bar	code	kPa	code	kg/cm <sup>2</sup>	code	Psi
	MP001	0/0.1	BP001	0/1	KP001	0/100	GP001	0/1	PP1E5	0/15
	MP1E6	0/0.16	BP1E6	0/1.6	KP1E6	0/160	GP1E6	0/1.6	PP003	0/30
	MP2E5	0/0.25	BP2E5	0/2.5	KP2E5	0/250	GP2E5	0/2.5	PP006	0/60
	MP004	0/0.4	BP004	0/4	KP004	0/400	GP004	0/4	PP010	0/100
	MP006	0/0.6	BP006	0/6	KP006	0/600	GP006	0/6	PP016	0/160
	MP010	0/1	BP010	0/10	KP010	0/1000	GP010	0/10	PP020	0/200
	MP016	0/1.6	BP016	0/16	KP016	0/1600	GP016	0/16	PP030	0/300
	MP025	0/2.5	BP025	0/25	KP025	0/2500	GP025	0/25	PP040	0/400
	MP040	0/4	BP040	0/40	KP040	0/4000	GP040	0/40	PP060	0/600
	MP060	0/6	BP060	0/60	KP060	0/6000	GP060	0/60	PP100	0/1000
	MP100	0/10	BP100	0/100	KP100	0/10000	GP100	0/100	PP150	0/1500
	MP160	0/16	BP160	0/160	KP160	0/16000	GP160	0/160	PP200	0/2000
	MP250	0/25	BP250	0/250	KP250	0/25000	GP250	0/250	PP300	0/3000
	MP400	0/40	BP400	0/400	KP400	0/40000	GP400	0/400	PP400	0/4000
MP600	0/60	BP600	0/600	KP600	0/60000	GP600	0/600	PP600	0/6000	
MP1000	0/100	BP1000	0/1000	KP1000	0/100000	GP1000	0/1000	PP1000	0/10000	

## LW-PG-Selection composition

Selection example LW-PG

MP001 / A / E / L / N / Z / J / P / A

1.Measuring range	R( )	See range table (page 6)
2.Output signal	A	4-20mA
	B	Other output signals
3.Power supply	E	DC 9...30V
	F	DC 14...30V
	G	DC 4.5...5.5V
4.Temperature range	L	0...+80°C
	M	-30...+100°C
5.Precision class	N	0.1%
	O	0.25%
	P	0.5%
6.Process connection	U	G1/4B
	V	G1/4A
	W	1/4NPT
	X	1/2NPT
	Y	M20×1.5 (Flat diaphragmatic type)
	Z	G1/2B
	A	G1/2 (Flat diaphragmatic type)
	B	G1B (Flat diaphragmatic type)
	T( )	Other threaded connections
7.Seal material	G	copper
	H	Stainless steel
	I	NBR
	J	FPM/FKM
	T( )	Other materials
8.Electrical connection	N	M12*1 (Round joint)
	O	M16*1.5 (Circular joint)
	P	Hersman joint
	Q	Bayonet joint
	R	Parker bayonet connector
9.Liquid material	S	Head cable connection
	A	316L
	B	304SS

## Instructions:

LW-PG pressure transmitter, measuring range: 0~0.1MPa, output signal 4-20mA, power supply is 24C, temperature range is 0... 80°C, accuracy class 0.1%, process connection G1/2B, sealing material is fluorine rubber, electrical connection is Hersman joint, liquid material 316L.

## Product certification

Compliance and approval; Rodewieg pressure gauges meet key standards and certifications for process measurement technology; Thus guaranteeing the highest reliability in such Settings;