

# H31K0 pressure transmitter

## Overview

- for absolute, relative pressure and vacuum
- Pressure range from 0,6 to 4000 bar
- rugged, stainless steel housing
- for gases and liquids
- Measuring medium  $-40$  bis  $+125^{\circ}\text{C}$
- incl. EMI / RFI protection
- high resistance to shock and vibration
- wide variety of selectable options
- **Custom adjustments possible**

## Application

- Agriculture
- Automotive
- Diesel- and Natural-gas engine
- Hydraulics
- Air-Conditioning technology
- Pneumatic
- Mechanical engineering
- Plant construction and automation engineering



## Spezifikationen<sup>1</sup>

Performance		Environment	
<b>pressure ranges up to 160 MPa</b>		Compensated range	$-20 \dots +85^{\circ}\text{C}$
Accuracy	$< 0,50\% \text{ FS}$ <sup>2</sup>	Measuring medium	$-40 \dots +125^{\circ}\text{C}$
Accuracy BSL	$\leq 0,125\% \text{ FS}$ <sup>2</sup>	Ambience temperatur	$-40 \dots +105^{\circ}\text{C}$
Non-linearity	$\leq 0,15\% \text{ FS}$	Storage temperatur	$-40 \dots +125^{\circ}\text{C}$
Repeatability	$\leq 0,10\% \text{ FS}$	Temperature coefficient within the compensated range:	
Stability (1 year)	$\leq 0,10\% \text{ FS}$	Mean TC offset	$\leq 0,15\% \text{ FS} / 10\text{K}$
<b>pressure ranges above 200 MPa</b>		Mean TC range	$\leq 0,15\% \text{ FS}$
Accuracy	$< 1,00\% \text{ FS}$ <sup>2</sup>	Shock	1000 G 11 msec. $\frac{1}{2}$ Sinus
Accuracy BSL	$\leq 0,50\% \text{ FS}$ <sup>2</sup>	Vibration	25 G peak 20 ... 2000 Hz
Non-linearity	$\leq 0,30\% \text{ FS}$	Sealing	IP66, IP69K optional
Repeatability	$\leq 0,20\% \text{ FS}$		
Stability (1 year)	$\leq 0,20\% \text{ FS}$		
Response time	10 - 90% t(ms) $< 1$		
Proof pressure	up to 2x rated pressure		
Burst pressure	up to 5x rated pressure		
Pressure cycles	$> 10$ Million		





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Elektronics			
Excitation	1 - 0 ... 10V	12 - 32 VDC	
	2 - 4 ... 20mA	10 - 32 VDC	
	3 - 1 ... 5V	6 - 32 VDC	3
	4 - 0 ... 5V	6 - 32 VDC	3
	5 - 0,5 ... 4,5V	5 VDC	
	6 - I <sup>2</sup> C	5 VDC	4
Output impedance	< 100 Ω		
Current consumption	< 10mA		
Reverse voltage protection	yes		

Mechanics	
Pressure port	see select table
Electrical connection	see select table
Housing	304 stainless steel <sup>5</sup>
Weight	ca. 60 g

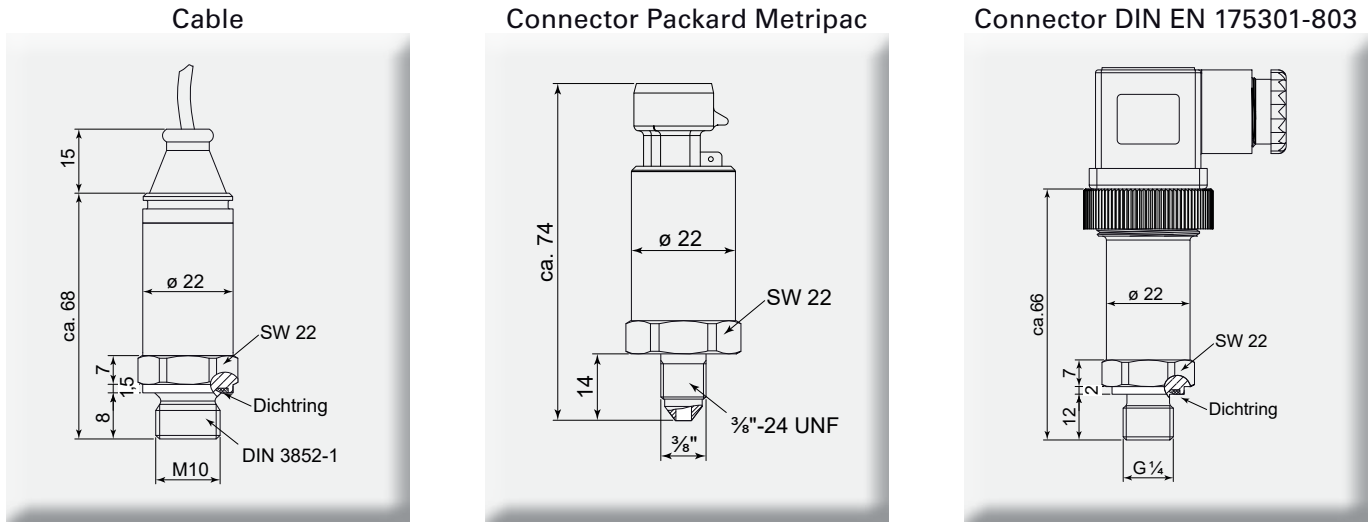
- 1 All datas at 25°C (RT)
- 2 incl. nonlinearity, hysteresis, repeatability, zero-offset and final offset acc. to IEC 61298-2
- 3 non radiometric
- 4 Electrical interface only with electrical connection Typ A or F
- 5 incl. wetted parts

## Electrical Interface

Typ		Output	PIN 1	PIN 2	PIN 3	PIN 4
	<b>DIN EN</b> 175301-803-A 175301-803-C	0,5 – 4,5 V, 1 – 5 V, 0 – 10 V	+ Supply	– Supply	+ Output	–
		4 – 20 mA	+ Supply	– Output	–	–
		I <sup>2</sup> C	–	–	–	–
	<b>Connector round</b> M12x1 A	0,5 – 4,5 V, 1 – 5 V, 0 – 10 V	+ Supply	–	– Supply	+ Output
		4 – 20 mA	+ Supply	–	– Output	–
		I <sup>2</sup> C	+ Supply	– Supply	SCL	SDA
		<b>Output</b>	<b>Pin A</b>	<b>Pin B</b>	<b>Pin C</b>	
	<b>Packard</b> Metripac	0,5 – 4,5 V, 1 – 5 V, 0 – 10 V	– Supply	+ Supply	+ Output	–
		4 – 20 mA	– Output	+ Supply	–	–
		I <sup>2</sup> C	–	–	–	–
		<b>Output</b>	<b>Red</b>	<b>Black</b>	<b>White</b>	<b>Green</b>
	<b>Cable</b>	0,5 – 4,5 V, 1 – 5 V, 0 – 10 V	+ Supply	– Supply	+ Output	–
		4 – 20 mA	+ Supply	– Output	–	–
		I <sup>2</sup> C	+ Supply	– Supply	SCL	SDA

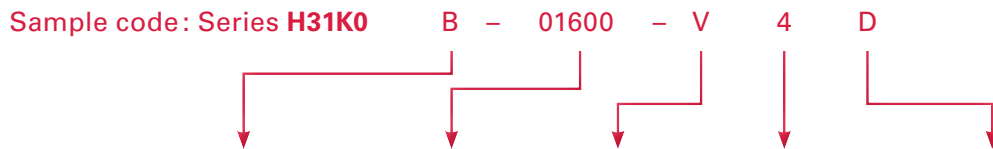
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## Dimensions



## Ordering Information

(Please use the characters in the chart below to construct your product code.)



Serie	Port Configuration	Pressure range	Type	Output signal	electr. Connection	Option
H31K0	A - G 1/4 male B - 1/4" NPT male	Please use code from table below	B - Relativ- pressure V - Vakuum	1 - 0 ... 10 V 3 - 1 ... 5 V 4 - 0 ... 5 V 5 - 0,5 ... 4,5 V	A - 600 mm Kabel B - DIN EN 175301-803 C D - DIN EN 175301-803 A	K - Customized
	<i>additional charge</i> C - 1/8" NPT male D - 7/16" 20 UNF male E - 9/16" 18 UNF male F - M14x1,5 male G - 1/4" SAE female H - 3/8x24 UNF male M - M10x1 male		A - Absolut pressure	<i>additional charge</i> 2 - 4 ... 20 mA 6 - I <sup>2</sup> C	<i>additional charge</i> C - Packard Metripack F - M12x1 4-pin connector round K - IP69K sealed	

Custom options available on request!

- The series has a 1 Year warranty.
- The purchaser is responsible for compatibility of the media, functional adequacy and correct installation of the transmitter
- Sensors more than 1000 bar (100 MPa) please clarify the configuration

Pressure range																					
Unit	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	bar	
Press.	0,6	1,0	1,6	2,5	4	6	10	16	25	40	50	60	100	160	250	400	600	1000	1600	2000	4000
Code	00060	00100	00160	00250	00400	00600	01000	01600	02500	04000	05000	06000	10000	16000	25000	40000	60000	100000	160000	200000	400000
in MPa	0,006	0,010	0,160	0,250	0,400	0,600	1,0	1,6	2,5	4	5	6	10	16	25	40	60	100	160	200	400

