

Pressure Transducer Model KM11

Complete stainless steel thinfilm sensor
without internal transmission fluid
Accuracy 1 % and 0,5 % F.S.

Features

- Rugged stainless steel construction
- High overpressure limits
- High shock and vibration stability
- Insensitive to temperature shocks
- Excellent long term stability
- Protection IP65 or IP68
- Explosion proof (intrinsically safe) for zone 1 and 2 acc. ATEX

Ranges

-1 ... 0 bar up to 0 ... 1600 bar
-30 in. Hg ... 0 psi up to 0 ... 20.000 psi

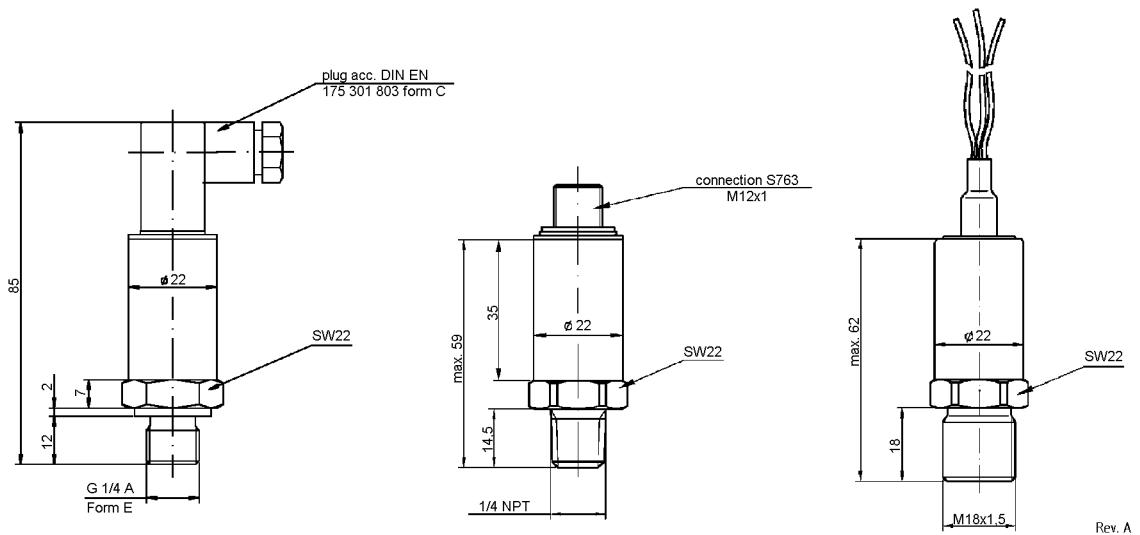
Applications

Machine- and apparatus construction
Automation
Hydraulic systems
Refrigeration- and air conditioning

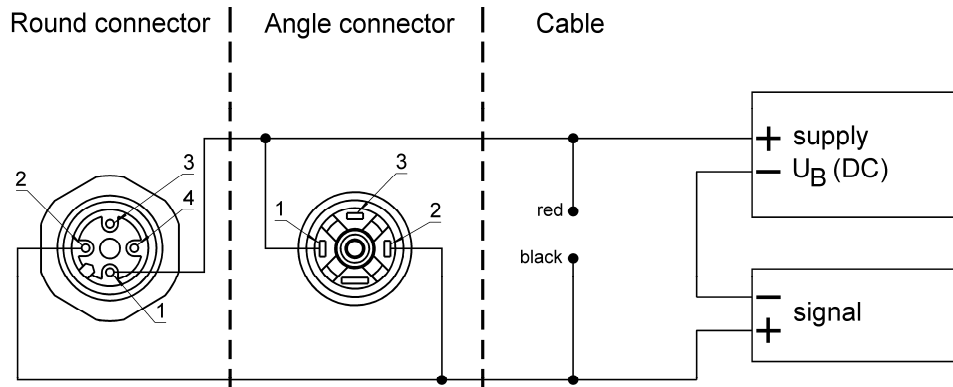


Technical specifications	KM11
Measuring principle	Internal thinfilm sensor without transmission fluid, signal processing by programmable precision CMOS ASIC with EEPROM data storage and analogue signal path
Range in bar	-1 0,6 1 1,6 2,5 4 6 10 16 25 40 60 100 160 250 400 600 1000 1600
Overpressure limit in bar	2 times \leq 350 bar, 1,5 times \leq 700 bar, 1,2 times $>$ 700 bar; With ATEX approval 1,5 times \leq 500 bar, 1,2 times $>$ 700 bar
Burst pressure	3 times F.S., 1,5 times F.S. for ranges $>$ 400 bar
Pressure type	Gauge, vacuum or compound
Process connection	G 1/4 A male according DIN 3852 Part 11 Form E (max. 600 bar) 1/4 NPT male according ANSI/ASME B1.20.1 (max. 1000 bar) M18x1,5 male high pressure connection Others on request
Material	Process connection Stainless steel 1.4542/1.4548 (17-4PH) Sensor Stainless steel 1.4542/1.4548 (17-4PH) with polysilicon cell Case Stainless steel 1.4542/1.4548 (17-4PH)
Power supply	12 ... 32 VDC, intrinsically safe version 12 ... 24 VDC, 5 VDC for ratiometric output
Output signal	4 ... 20 mA, 2-wire 0 ... 10 VDC, 1 ... 5 VDC, 0,5 ... 4,5 VDC ratiometric, 3-wire
Maximum loop resistance for 4 ... 20 mA	$\leq (U_B - 12 V) / 0,02 A$
Explosion proof (intrinsically safe)	II 2G EEx ia IIC T4 according to TÜV 06 ATEX 2975
Isolation between case and electrical connection	$> 100 M\Omega$ at 50 VDC
Isolation voltage	500 VAC
Supply current	20 mA for 4 ... 20 mA output
Accuracy according to DIN 16 086	1 % F.S., optional 0,5 % F.S. (terminal point)
Linearity	$\leq \pm 0,5$ % F.S., optional $\leq \pm 0,25$ % F.S.
Repeatability	$\leq \pm 0,1$ % F.S.
Long term stability	$\leq \pm 0,2$ % F.S. / year (at reference conditions)
Response time (10 ... 90 %)	≤ 1 ms
Permissible	Operation temperature -40 ... 105 °C, max. 85 °C for intrinsically safe version Medium temperature -40 ... 125 °C, max. 85 °C for intrinsically safe version Storage temperature -40 ... 125 °C
Total error including temperature influence	-40 ... -20 °C -20 ... 85 °C 85 ... 100 °C 3 %, typical $< \pm 2$ % 1 %, typical $< \pm 0,7$ % 2,5 %, typical $< \pm 1,5$ %
Vibration resistance	20 g in all directions according to IEC 68-2-6 and IEC 68-2-36
Shock-proof resistance	1 m (free fall onto steel plate) according to IEC 68-2-32
CE-mark/EMC	Emission and immunity according DIN EN 55022 and 61000-4-3, 25 V/m
Electrical connection	4 PIN angle connector according DIN EN 175301-803, round connector M12 with M12x1 thread, optional cable connection
Protection acc. EN 60 529/IEC 529	IP65, optional IP68
Weight in kg	0,09
Accessories, options	Valves, digital indicator

General dimension in mm



Electrical connection



Order information

Output signal	Accuracy	Range	Engineering unit	Protection	Process connection	Electrical connection	Options
(42) 4/20 mA	(100) 1 %	-1/ 0	BAR	(=) IP65	(MG9) G ¼ A form E male ¹⁾	(HM) Angle connector according to DIN EN 175301-803	(NH) Tagging wired
(01) 0/10 VDC	(050) 0,5 %	0/ 0,6		(IP68) IP68 (only with cable connection)	(M02) ¼ NPT male ²⁾	(M12) Round connector M12	
(15) 1/5 VDC		0/ 1,6		(ATEXG) Intrinsically safe for gas (only output signal 4/20 mA)	(MM18) M18x1,5 male high pressure connection	(F2) Cable connection Specify cable length in [m]	
(RM) 0,5/4,5 VDC ratiometric to 5 VDC supply		0/ 2,5					
		0/ 4					
		0/ 6					
		0/ 10					
		0/ 16					
		0/ 25					
		0/ 40					
		0/ 60					
		0/ 100					
		0/ 160					
		0/ 250					
		0/ 400					
		0/ 600					
		0/ 1000					
		0/ 1600					
others on request		others on request	psi and others on request		1) max. range 600 bar 2) max. range 1000 bar others on request		

How to order

Series	Type	Output signal	Accuracy	Range	Engineering unit	Protection	Process connection	Electrical connection	Option
K	M11	42	050	0/10	BAR	=	MG9	HM	NH

For pricing information contact Omni Instruments by phone on +44 845 9000 601 or via email at info@omni.uk.com