motralec Danfoss Pressure transmitter Type AKS 32R and AKS 2050 DEMANDE DE PRIX >
4,8/5 sur +600 avis . Depuis 1976 . 3 agences : Herblay-sur-Seine (95), Sèvres (92), Étréchy (91) . www.motralec.com

ENGINEERING TOMORROW

Data Sheet

Pressure transmitter Type **AKS 32R** and **AKS 2050**



AKS 32R is a ratiometric pressure transmitter that converts the measured pressure to a linear output signal. The output signal is relative to the supply voltage meaning that the min. pressure output will be 10% of the actual supply voltage and the max. pressure output will be 90% of the actual supply voltage.

At a supply voltage of 5 V, the output signal is:
- 0.5 V at min pressure range
- 4.5 V at max. pressure range

The robust design and the ratiometric output signal makes the transmitter suitable for systems together with ratiometric A/D converters within a number of fields:
- A/C systems
- Refrigeration plant
- CO_2 plant
- Process control
- Laboratories

Features
- Highly developed sensor technology means great regulation accuracy
- Selective temperature compensation
- Compatible with all refrigerants incl. ammonia and CO_2
- Robust construction gives protection against mechanical influences such as shock, vibration, and pressure surge
- Polarity protected inlets
- Sealed gauge measuring principle (pressure reference = 1013 mbar)
- For use in zone 2 explosive atmospheres

motralec ★★★★★ 4,8/5 . +600 avis DEMANDE DE PRIX >
4 rue Lavoisier, 95220 Herblay-sur-Seine . Tél. 01 39 97 65 10 . service-commercial@motralec.com . www.motralec.com

Product specification

Technical data

Table 1: Performance (EN 60770)

Features	Description
Accuracy (incl. Linearity, Hysteresis and repeatability)	± 0.3% FS (typ.)
	± 0.8% FS (max.)
Non-linearity (best fit straight line)	< ± 0.2% FS
Hysteresis and repeatability	≤ ± 0.1% FS
Thermal zero point operation	≤ ± 0.1% FS/10K (typ.)
	≤ ± 0.2% FS/10K (max.)
Thermal sensitivity operation	≤ ± 0.1% FS/10K (typ.)
	≤ ± 0.2% FS/10K (max.)
Response time	< 4 ms
Max. working pressure	See Dimensions and weight
Burst pressure	> 6 × FS
Power-up time	< 50 ms

Table 2: Electrical specifications

Features	Description
Nominal output signal (short-circuit protection)	10 – 90% of [U_B]
Supply voltage [U_B] (polarity protected)	4.5 – 5.5 V DC at 5 V DC (nom.)
Power consumption	< 5 mA at 5 V DC
Ratiometricity	< 0.05% FS / 4.5 – 5.5 V
Sink / source	< 1 mA
Load [R_L] (load connected to ground)	RL ≥ 10 kΩ at 5 V DC

Table 3: Environmental conditions

Sensor operating temperature range	Normal			-40 – 125 °C
	ATEX Zone 2			-10 – 85 °C
Media temperature range				-40 – 125 °C
Compensated temperature range				See ordering
Transport / storage temperature range				-50 – 85 °C
EMC – Emission				EN 61000-6-3
EMC – Immunity	Electrostatic discharge	Air	8 kV	EN 61000-6-2
		Contact	4 kV	EN 61000-6-2
	RF	field	10 V/m, 26 MHz – 1 GHz	EN 61000-6-2
		conducted	3 V_{rms}, 150 kHz – 30 MHz	EN 61000-6-2
	Transient	Burst	4 kV (CM)	EN 61000-6-2
		Surge	1 kV (CM, DM)	EN 61000-6-2
Insulation resistance				> 100 MΩ at 100 V DC
Vibration stability	Sinusoidal	20 g, 25 Hz – 2 kHz		IEC 60068-2-6
	Random	7.5 g_{rms} , 5 Hz – 1 kHz		IEC 60068-2-64
Shock resistance	Shock	500 g / 1 ms		IEC 60068-2-27
	Free fall	1 m		IEC 60068-2-32
Enclosure (IP protection fulfilled together with mating connector)				IP65-IEC 60529

motralec ★★★★★ 4,8/5 . +600 avis
4 rue Lavoisier, 95220 Herblay-sur-Seine . Tél. 01 39 97 65 10 . service-commercial@motralec.com . www.motralec.com

Dimensions and weight

Table 4: Dimensions

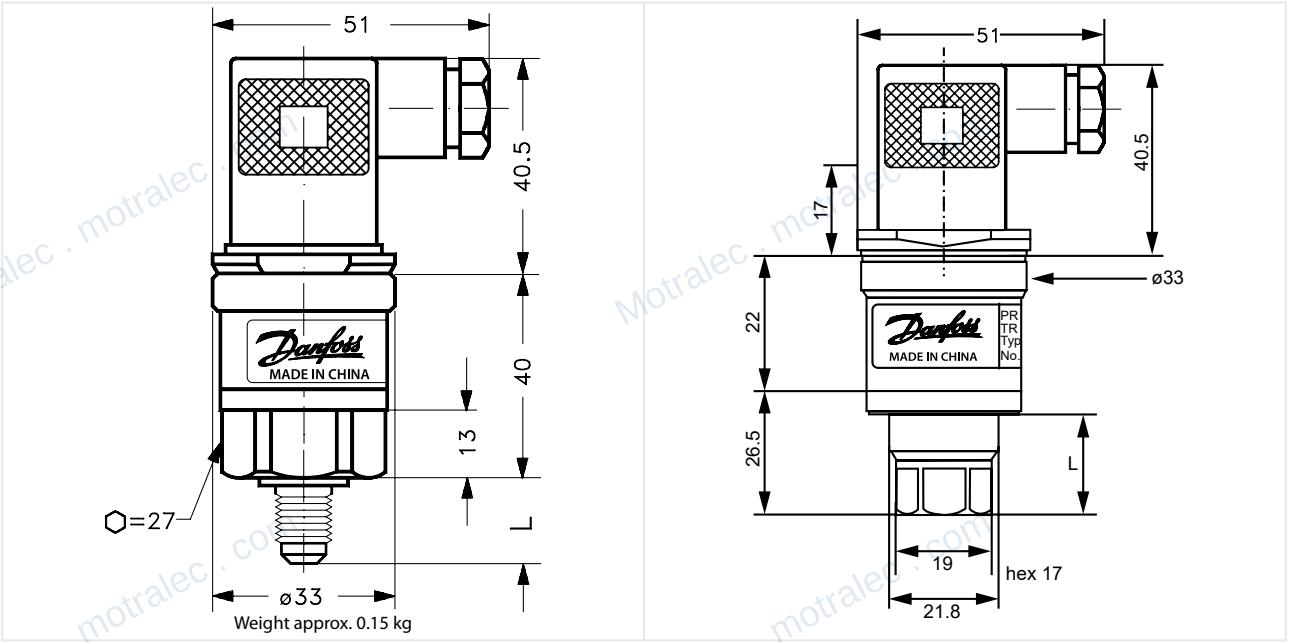
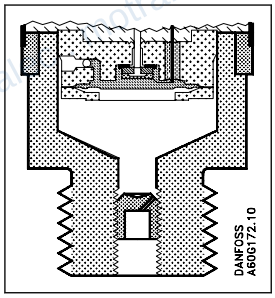


Table 5: Dimensions and weight

Pressure connection	L [mm]
¼-18 NP	16
G ½ A ISO 228/1	21
¼ in. flare 7/16 - 20 UNF	16.5
⅜ solder	30
7/16 UNF flare female with valve deflator	21.5

Pulse-snubber, AKS 2050

Figure 1: Pulse-snubber

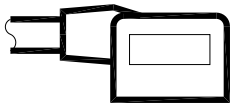
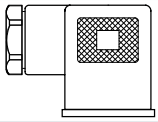


Cavitation, liquid hammer and pressure peaks may occur in liquid filled systems with changes in flow velocity, e.g. fast closing of a valve or pump starts and stops.

The problem may occur on the inlet and outlet side, even at rather low operating pressures.

Plug connections

Table 6: Plug connections

Cable	Description	PG9	Description
	Black: + Blue: - / common Brown: Signal		1: + 2: - / common 3: Signal

motralec ★★★★★ 4,8/5 . +600 avis

4 rue Lavoisier, 95220 Herblay-sur-Seine . Tél. 01 39 97 65 10 . service-commercial@motralec.com . www.motralec.com

Explosive atmosphere

Table 7: Explosive atmospheres

Zone 2 applications	CE Ex II 3G Ex nA IIA T3 Gc -20C<Ta<85C	EN60079-0; EN60079-15

The products for ATEX Zone 2 are applicable in refrigeration applications employing any flammable refrigerants classified as IIA – please, refer to AKS installation guide. In ATEX Zone 2 applications at low temperatures cable and plug must be protected against impact.

Table 8: Flammable refrigerants

Features	Description
AKS products can be used in end user applications employing the following flammable refrigerants: A3: R290, R600, R600a, R1270 A2L: R32, R444B, R452A/B, R454A/B/C, R455A, R1234zyef	IEC/EN 60335-2-89 (commercial refrigerating appliances) IEC/EN 60335-2-40 (electrical heat pumps, air-onditioners)

For other products not ATEX Zone 2 assessed, an ignition risk assessment has been conducted with reference to IEC/EN 60335-2-89 (commercial refrigerating appliances) and IEC/EN 60335-2-40 (electrical heat pumps, air-conditioners).

For countries where safety standards are not an indispensable part of the safety system, Danfoss recommends the installer to seek a third-party approval of the system containing flammable refrigerant. Note: Please, follow specific selection criteria stated in the data sheet for these particular refrigerants.

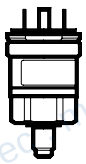
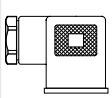
Mechanical characteristics

Table 9: Mechanical characteristics

Features	Descriptions
Electrical connection	EN 175301-803 plug / 2m cable
Wetted parts, material	EN10088-1-1.4404 (AISI 316L)
Housing material	EN10088-1-1.4404 (AISI 316L)
Refrigerants	DR3, DR55, DR7, HDR110, L40, R1234yf, R1234ze, R1270, R1290, R134a, R22, R227, R23, R290, R32, R404A, R407A, R407B, R407C, R407F, R410A, R413A, R417A, R422A, R422D, R427A, R438A, R444B, R447A, R448A, R449A, R449B, R450A, R452A/B, R454A/B/C, R455A, R502, R507, R513A, R600, R600a, R717 (NH3), R744 (CO2), R1270

Ordering

Table 10: Ordering

	Type	Operating range [bar]	Permissible working pressure PB [bar]	Compensated temp. range [°C]	Code no.				
					¼ NPT (1)	G ⅜A (2)	7/16 in. flare (3)	⅜ solder	7/16-20 Female flare with depressor (5)
	AKS 32R	-1 – 12	33	-30 – 40	060G1037	060G1038	060G1036	060G3551	060G6323
		-1 – 12	33	-30 – 40	–	–	060G6339 (4)	–	060G5961 (4)
		-1 – 34	55	0 – 80	–	–	060G0090	060G3552	060G6341
		-1 – 34	55	0 – 80	–	–	060G6340(4)	–	–
	AKS 2050	-1 – 59	100	-30 – 40	060G6342	060G5750	–	060G6408	–
		-1 – 99	150	-30 – 40	060G6343	060G5751	–	–	–
		-1 – 159	250	0 – 80	060G6344	060G5752	–	–	–
	Connecting plug with 5 m cable (mounted on pressure transmitter obtains IP67)				060G1034				–
	Plug Pg 9				060G0008				–

motralec ★★★★★ 4,8/5 . +600 avis

4 rue Lavoisier, 95220 Herblay-sur-Seine . Tél. 01 39 97 65 10 . service-commercial@motralec.com . www.motralec.com

[1] 1/4-18 NPT
[2] EN 837 - G 3/8 A
[3] ISO 11926-2⁄3, 7⁄16 - 20 UNF Flare
[4] Incl. Plug connections
[5] ISO 8434-1, 7/16-20 UNf, Female with depressor

Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

Some approvals may change over time. You can check the most current status at danfoss.com or contact your local Danfoss representative if you have any questions.

Table 11: Certificates, declarations and approvals

File name	Document type	Document topic	Approval Authority
E227388	Explosive - Safety Certificate	Hazardous Locations	UL
E31024	Electrical - Safety Certificate		UL
E311982	Electrical - Safety Certificate		UL
064G9615.06	EU Declaration	ATEX/EMCD/RoHS	Danfoss
060G9688.00	Manufacturers Declaration		Danfoss
F18477.5123467890YTN	Pressure - Safety Certificate	CRN	TSSA
060R3160.00	Manufacturers Declaration	China RoHS	Danfoss
064R9402.00	Manufacturers Declaration	PED	Danfoss
060R3162.00	Manufacturers Declaration		Danfoss
E494625	Electrical - Safety Certificate		UL
1786330	Explosive - Safety Certificate		CSA

motralec ★★★★★ 4,8/5 . +600 avis
4 rue Lavoisier, 95220 Herblay-sur-Seine . Tél. 01 39 97 65 10 . service-commercial@motralec.com . www.motralec.com

ENGINEERING TOMORROW

Online support

Danfoss offers a wide range of support along with our products, including digital product information, software, mobile apps, and expert guidance. See the possibilities below.

The Danfoss Product Store



The Danfoss Product Store is your one-stop shop for everything product related—no matter where you are in the world or what area of the cooling industry you work in. Get quick access to essential information like product specs, code numbers, technical documentation, certifications, accessories, and more.
Start browsing at store.danfoss.com.

Find technical documentation



Find the technical documentation you need to get your project up and running. Get direct access to our official collection of data sheets, certificates and declarations, manuals and guides, 3D models and drawings, case stories, brochures, and much more.

Start searching now at www.danfoss.com/en/service-and-support/documentation.

Danfoss Learning



Danfoss Learning is a free online learning platform. It features courses and materials specifically designed to help engineers, installers, service technicians, and wholesalers better understand the products, applications, industry topics, and trends that will help you do your job better.

Create your Danfoss Learning account for free at www.danfoss.com/en/service-and-support/learning.

Get local information and support



Local Danfoss websites are the main sources for help and information about our company and products. Find product availability, get the latest regional news, or connect with a nearby expert—all in your own language.

Find your local Danfoss website here: www.danfoss.com/en/choose-region.

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

motralec ★★★★★ 4,8/5 . +600 avis
4 rue Lavoisier, 95220 Herblay-sur-Seine . Tél. 01 39 97 65 10 . service-commercial@motralec.com . www.motralec.com

motralec

Expert en pompes, moteurs électriques et ventilateurs industriels depuis 1976.
Herblay-sur-Seine (95) . Sèvres (92) . Étréchy (91) . www.motralec.com

Besoin d'un prix ou d'un conseil technique ?

Danfoss Pressure transmitter Type AKS 32R and AKS 2050

4,8/5 . +600 avis

- Devis rapide et conseil technique par nos spécialistes
- Plus de 200 000 références et 30 marques distribuées
- Vente, réparation, bobinage et SAV en atelier
- Livraison partout en France, accompagnement avant et après-vente

DEMANDE DE PRIX >