

Data sheet

# Pressure transmitters

## NSK and XSK



Pressure transmitters type NSK and XSK are compact, lightweight sensors with piezo resistive sensors to be used by OEM's in refrigeration and air conditioning units for high and low pressure protection, fan control, and diagnostic and performance monitoring purposes.

NSK has a ratiometric output signal, 0.5 to 4.5 Vdc @ 5 Vdc supply.

XSK has a current output signal, 4 to 20 mA.

### Features

- Applicable up to 135 °C fluid temperature
- Degree of enclosure IP 66
- UL approved, UL file no E43867
- Light and compact design
- Absolute / sealed gauge sensor type; 1 atmosphere (1013hPa) is defined as 0MPa.
- Applicable with:
  - R410A
  - R407C
  - R404A
  - R134a
- Color coded electrical connection for low and high pressure indication
  - NSK: Round Packard
    - green (LP)
    - black (HP)
  - XSK: Molex
    - blue (LP)
    - black (HP)
- Easy process connection
  - 1/4" female flare with depressor pin as standard
  - 1/4" male flare port
- Available with solder connection

## Pressure sensors: NSK and XSK

### Technical data

#### NSK Sensors

Output signal:	0.5 - 4.5 Vdc	Degree of enclosure:	IP66 (std. types)
Power supply:	5 V DC $\pm$ 0.25 V	Connector for body:	Packard
Power supply current:	< 10 mA	Packard block:	12065287
Load resistance:	> 10 k $\Omega$ / < 1000 pF	Packard terminal:	12089290
Absolute pressure type		Weight:	0.04 kg
Media:	R410A, R407C, R404A, R134a		

For other refrigerants please ask Danfoss.

Description	Pressure range		Accuracy <sup>1)</sup>	Output signal V	Ambient temperature range °C	Max. operating pressure bar	Electrical connections <sup>2)</sup>	Pressure connection <sup>2)</sup>	Code number		
	Min. bar (e)	Max. bar (e)							100 pcs.	20 pcs.	
NSK-BE007I-U009	-1	7	$\pm$ 3.0% FS	0.5 - 4.5	-30 - 85	11	Round Packard (Green)	$\frac{1}{4}$ " flare Female with depressor pin (wdp)	061H5148	061H5141	
NSK-BE010I-U009	0	10	$\pm$ 2.5% FS		-30 - 100	38.5			Round Packard (Black)	061H5149	061H5142
NSK-BE015I-U009	0	15								061H5150	061H5143
NSK-BE020I-U009	0	20					061H5151			061H5144	
NSK-BE030I-U009	0	30	$\pm$ 2.0% FS			061H5152	061H5145				
NSK-BE035I-U009	0	35	$\pm$ 2.5% FS			061H5153	061H5146				
NSK-BE050I-U009	0	50				061H5154	061H5147				

<sup>1)</sup> Includes non linearity, hysteresis, repeatability, and temperature drift.

Accuracy measured at 1,013 hPa, 5 V at -20-120 °C (-20-85 °C for NSK-BE007I-U009)

<sup>2)</sup> Concerning other connections please ask Danfoss.

#### XSK Sensors

Output signal:	4 - 20 mA	Degree of enclosure:	IP66 (std. types)
Power supply:	10.5 - 28 V DC	Connector for body:	Molex
Load impedance:	Max. 100 $\Omega$ (@12 V) Max. 500 $\Omega$ (@ 24 V)	Molex connector:	52117-0240
Absolute pressure type		Molex terminal:	52117-0340
Media:	R410A, R407C, R404A, R134a	Weight:	0.09 kg

For other refrigerants please ask Danfoss.

Description	Pressure range		Accuracy <sup>1)</sup>	Output signal mA	Ambient temperature range °C	Max. operating pressure bar	Electrical connections	Pressure connection	Code number			
	Min. bar (e)	Max. bar (e)							100 pcs.	20 pcs.		
XSK-AC07I-U188	-0.5	7	$\pm$ 3% FS	4 - 20	-20 - 70	38.5	Molex (Blue)	$\frac{1}{4}$ " flare Female wdp	061H5079	061H5099		
XSK-AC10I-U188	-0.5	10							061H5080	061H5100		
XSK-AC20I-U188	0	20								061H5101		
XSK-AC30B-U186	0	30				55	Molex (Black)		$\frac{1}{4}$ " flare Male	061H5067		
XSK-AC30I-U188	0	30								$\frac{1}{4}$ " flare Female wdp	061H5082	061H5102
XSK-AC35I-U188	0	35										061H5103
XSK-AC50B-U186	0	50								$\frac{1}{4}$ " flare Male		061H5161
XSK-AC50I-U188	0	50	$\frac{1}{4}$ " flare Female wdp		061H5104							

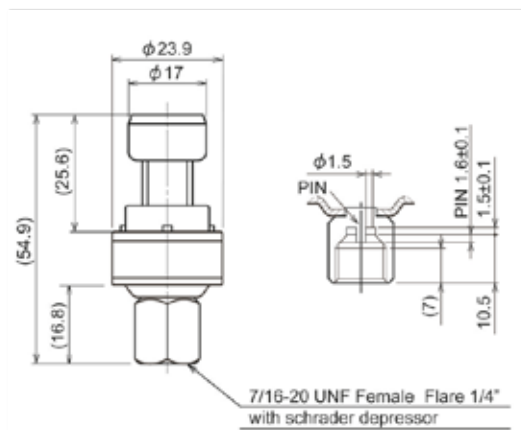
<sup>1)</sup> Includes non linearity, hysteresis, repeatability, and temperature drift.

Accuracy measured at 1,013 hPa and at -20-70 °C

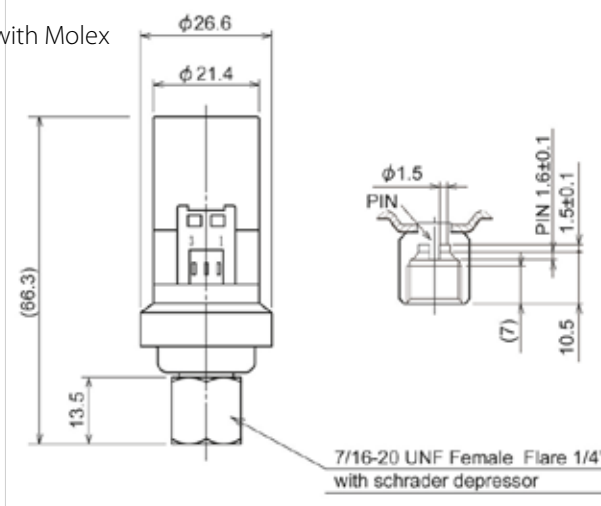
## Pressure sensors: NSK and XSK

### Dimensions and weight

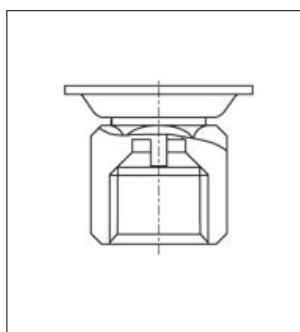
NSK pressure sensor with Round Packard connector



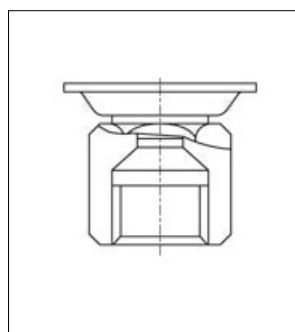
XSK pressure sensor with Molex connector



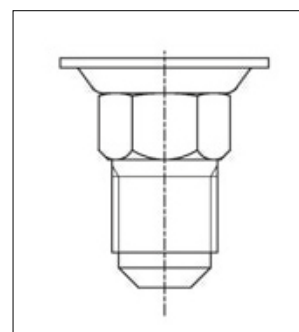
### Pressure connections



7/16-20 UNF Female flare 1/4"  
with schrader depressor



7/16-20 UNF Female flare 1/4"



7/16-20 UNF Male flare 1/4"

Recommended tightening torque in case of dry seal 12.7 to 15 Nm

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