

# Industrial built-in duct sensor IKF1 (design B)

with passive output



Technical data	Application
<b>Ambient temperature:</b>	-30 ... +150 °C (LM 235 Z max. 125 °C),
<b>Tolerance classes:</b>	PT100/PT1000 DIN EN 60751 B NI1000 DIN EN 43760 B
<b>Measurement current:</b>	< 1 mA
<b>Housing material:</b>	aluminium, form B
<b>Degree of protection:</b>	IP 43
<b>Sensor tube:</b>	V2A 1,4301/6 mm Ø regarding length, see table
<b>Dip sleeves:</b>	nickel-plated brass or V4A overview/lengths, see page 165
<b>Connection:</b>	Screw terminals for 2-wire connection 0.14 to 2.5 mm <sup>2</sup> max. cable length 50 m only to SELV - max. 30 V~ / 42 V =
<b>Sensor characteristics:</b>	pages 170–171
<b>Ambient temperature (housing)</b>	max. +100 °C

The IKF1 industrial built-in duct sensor is used to measure the temperature of liquids and gases in pipes, air ducts or tanks in industrial machines, apparatus and plant. A special installation flange (MF) is required when installing the sensor in an air duct. If the sensor is to be used in liquids, nickel-plated brass dip sleeves (THMs) are required. In aggressive media, the use of stainless steel (V4A) dip sleeves (THV) is recommended. Dip sleeves and installation flanges are not included in standard delivery and must be ordered separately as accessories.

Please pay regard to the EMC directives. Avoid parallel laying of sensor line and mains supply cables or use shielded sensor lines.

Sensor	Installation length (IL) 65 mm (for 50 mm dip sleeves)	Installation length (IL) 115 mm (for 100 mm dip sleeves)	Installation length (IL) 165 mm (for 150 mm dip sleeves)	PG
<b>PT 100</b>	<b>IKF1P 100/50</b> Item No. G 9150010	<b>IKF1P 100/100</b> Item No. G 9150140	<b>IKF1P 100/150</b> Item No. G 9150270	III
<b>PT 1000</b>	<b>IKF1P 1000/50</b> Item No. G 9150020	<b>IKF1P 1000/100</b> Item No. G 9150150	<b>IKF1P 1000/150</b> Item No. G 9150280	III
<b>NI 1000</b>	<b>IKF1N 1000/50</b> Item No. G 9150030	<b>IKF1N 1000/100</b> Item No. G 9150160	<b>IKF1N 1000/150</b> Item No. G 9150290	III
<b>NI 1000 TK 5000</b>	<b>IKF1N 1000 TK 5000/50</b> Item No. G 9150040	<b>IKF1N 1000 TK 5000/100</b> Item No. G 9150170	<b>IKF1N 1000 TK 5000/150</b> Item No. G 9150300	III
<b>NTC 10 K</b>	<b>IKF1C 10/50</b> Item No. G 9150070	<b>IKF1C 10/100</b> Item No. G 9150200	<b>IKF1C 10/150</b> Item No. G 9150330	III
<b>LM 235 Z</b>	<b>IKF1LM/50</b> Item No. G 9150130	<b>IKF1LM/100</b> Item No. G 9150260	<b>IKF1LM/150</b> Item No. G 9150390	III

Sensor	Installation length (IL) 215 mm (for 200 mm dip sleeves)	Installation length (IL) 265 mm (for 250 mm dip sleeves)	Installation length (IL) 315 mm (for 300 mm dip sleeves)	PG
<b>PT 100</b>	<b>IKF1P 100/200</b> Item No. G 9150400	<b>IKF1P 100/250</b> Item No. G 9150530	<b>IKF1P 100/300</b> Item No. G 9151710	III
<b>PT 1000</b>	<b>IKF1P 1000/200</b> Item No. G 9150410	<b>IKF1P 1000/250</b> Item No. G 9150540	<b>IKF1P 1000/300</b> Item No. G 9151760	III
<b>NI 1000</b>	<b>IKF1N 1000/200</b> Item No. G 9150420	<b>IKF1N 1000/250</b> Item No. G 9150550	<b>IKF1N 1000/300</b> Item No. G 9151770	III
<b>NI 1000 TK 5000</b>	<b>IKF1N 1000 TK 5000/200</b> Item No. G 9150430	<b>IKF1N 1000 TK 5000/250</b> Item No. G 9150560	<b>IKF1N 1000 TK 5000/300</b> Item No. G 9151780	III
<b>NTC 10 K</b>	<b>IKF1C 10/200</b> Item No. G 9150460	<b>IKF1C 10/250</b> Item No. G 9150590	<b>IKF1C 10/300</b> Item No. G 9151810	III
<b>LM 235 Z</b>	<b>IKF1LM/200</b> Item No. G 9150520	<b>IKF1LM/250</b> Item No. G 9150650	<b>IKF1LM/300</b> Item No. G 9151870	III

Accessory	Item No.	Equipment	PG
<b>MF</b>	G 9990160	Installation flange for built-in duct sensor	III

Dimensioned drawing and connection diagram for industrial built-in duct sensor on page 149  
Dimensioned drawing of installation flange on page 149