Cable-type temperature transducers

Cable-type temperature transducers may find application in environments, where the classical types of transducers with a head cannot be used because of lack of space or any other reasons. The capsule versions referred-to may be used for any conventionally applied types of temperature transducers. These standard case types make all customary temperature measurement eventualities possible: room temperature measurements, contact measurements of temperature, liquid and solid media temperature measurement. These cases are usable for normal types of thin−layer resistor temperature sensing elements, e.g. Ni1000, Ni10000, Ni891, Pt100, Pt500, Pt1000, NTC 10kΩ, NTC 20kΩ, type KTY, SMT160, sensors DALLAS and others. In the standard version, the sensing elements are provided with a 1 m two core cable. The sensing element terminals are insulated from the case. Shielding is not connecting to any wire of the transducer.
The measurement temperature range, specified for the individual sensing element types, may not be exceeded even for a short period of time.

Basic technical parameters

Transducers type / mark (x) / temperature range i.e.. SK2**P**... = sensor Pt100	Ni1000/5000ppm / L / -60 to 200 °C Ni1000/6180ppm / S / -60 to 200 °C Ni10000/6180ppm / SA / -60 to 200 °C Ni891 / J / -60 to ž 200 °C Pt100 / P / -40 to 400 °C Pt500 / PB / -40 to 400 °C Pt1000 / PA / -40 to 400 °C NTC 10kΩ / 10K / -50 to 125 °C NTC 20kΩ / H / -30 to 150 °C typy KTY / KTYxx / -40 to 150 °C SMT160 / SMT160 / -40 to 130 °C sensors DALLAS / D / -50 to 125 °C
Accuracy	B (sensors Pt and Ni only)
Degree of protection	IP 67
Measuring current: Ni1000, Pt1000, Pt500, Pt100, NTC, KTY, SMT, DALLAS	max. 0,5 mA max. 1 mA max. 2 mA
Standard cable length	1m
Connection	2-wire, 3-wire, 4-wire on the request
Accuracy	Sensors Ni – class B (ΔT = ± (0,4+0,007ltl) Sensors Pt – class B (ΔT = ± (0,3+0,005ltl) - IEC751 Sensors NTC, KTY, DALLAS – ± 1°C (0 °C ÷ 100 °C)

Resistance of one core (cable 1m)

Cable type	Resistance of one core (cable 1m) [Ω]
MCBE-AFEP 0,22 mm^2	0,083
MCBE-AFEP 0,15 mm^2	0,123
MC-ECS 0,5 mm^2	0,04
MC-ECS 0,34 mm^2	0,056
LiYCY 0,14 mm^2	0,122
MV-CNTEVSL 0,14 mm^2	0,135
BIMV-CNTEVS 0,34 mm^2	0,05
LiYCY 0,34 mm^2	0,053
M6BE - E6 0,22 mm^2	0,085

SK2 – stainless steel case Ø6x60 mm

y = lengths of the cable (m), standard lengths – 1m

Sensor type	all types of the sensors
Material of the case	stainless steel DIN 1.4301
Standard case length	60 mm
Length on the request	40 to 300 mm

Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
SK2x – 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK2x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK2x – 2MS - y	2-wire	BIMV-CNTEVS 2 x 0,34 mm^2	yes	-	PTFE	-60 ÷ 300 °C

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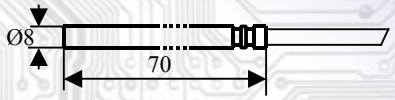
SK3 – stainless steel case Ø8x70 mm

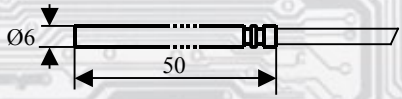
Sensor type	all types of the sensors
Material of the case	stainless steel DIN 1.4301
Standard case length	70 mm
Length on the request	50 to 300 mm



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
SK3x - 2SN - y	2-wire	MC-ECS 3 x 0,5 mm²	no	silicone	silicone	-60 ÷ 180 °C
SK3x - 3SN - y	3-wire	MC-ECS 3 x 0,5 mm²	no	silicone	silicone	-60 ÷ 180 °C

SK4 – aluminium case Ø6x50 mm

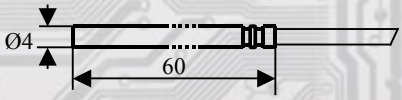
Sensor type	all types of the sensors
Material of the case	aluminium



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
SK4x – 2SN - y	2-wire	MC-ECS 2 x 0,34 mm²	no	silicone	silicone	-60 ÷ 180 °C
SK4x – 2PS - y	2-wire	LiYCY 3 x 0,34 mm²	yes	PVC	PVC	-30÷ 80 °C
SK4x – 3PS - y	3-wire	LiYCY 3 x 0,34 mm²	yes	PVC	PVC	-30÷ 80 °C
SK4x – 2SS - y	2-wire	MCBE-AFEP 3 x 0,5 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK4x – 3SS - y	3-wire	MCBE-AFEP 3 x 0,5 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C

SK5 – stainless steel case Ø4x60 mm

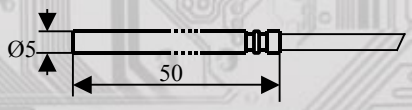
Sensor type	Ni, Pt, NTC20K
Material of the case	stainless steel DIN 1.4301
Standard case length	60 mm
Length on the request	40 to 300 mm



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
SK5x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,15 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK5x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,15 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK5x – 2MN - y	2-wire	MV-CNTEVSL 4 x 0,14 mm²	no	glass silicone	glass silicone	-60 ÷ 280 °C
SK5x - 3MN - y	3-wire	MV-CNTEVSL 4 x 0,14 mm²	no	glass silicone	glass silicone	-60 ÷ 280 °C

SK7 – stainless steel case Ø5x50 mm

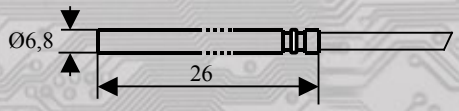
Sensor type	Ni, Pt, NTC20K
Material of the case	stainless steel DIN 1.4301
Standard case length	50 mm
Length on the request	40 to 300 mm



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
SK7x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,15 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK7x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,15 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK7x – 2TS - y	2-wire	M6BE-E6 3 x 0,22 mm²	yes	FEP fluorinated polymer	FEP fluorinated polymer	-60 ÷ 200 °C
SK7x – 3TS - y	3-wire	M6BE-E6 3 x 0,22 mm²	yes	FEP fluorinated polymer	FEP fluorinated polymer	-60 ÷ 200 °C
SK7x – 2MN - y	2-wire	MV-CNTEVSL 4 x 0,14 mm²	no	glass silicone	glass silicone	-60 ÷ 280 °C
SK7x – 3MN - y	3-wire	MV-CNTEVSL 4 x 0,14 mm²	no	glass silicone	glass silicone	-60 ÷ 280 °C

SK8 – zinc-coated brass case Ø6,8x26 mm

Sensor type	all types of the sensors
Material of the case	zinc-coated brass



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
SK8x - 2SN - y	2-wire	MC-ECS 3 x 0,5 mm²	no	silicone	silicone	-60 ÷ 180 °C
SK8x - 3SN - y	3-wire	MC-ECS 3 x 0,5 mm²	no	silicone	silicone	-60 ÷ 180 °C
SK8x - 2SS - y	2-wire	MCBE-AFEP 4 x 0,5 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK8x - 3SS - y	3-wire	MCBE-AFEP 4 x 0,5 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK8x - 4SS - y	4-wire	MCBE-AFEP 4 x 0,5 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK8x – 2PS - y	2-wire	LiYCY 3 x 0,34 mm²	yes	PVC	PVC	-30÷ 80 °C
SK8x – 3PS - y	3-wire	LiYCY 3 x 0,34 mm²	yes	PVC	PVC	-30÷ 80 °C

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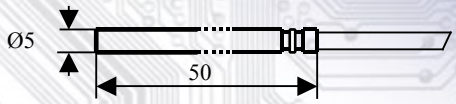
SK9 – stainless steel case Ø5x50 mm

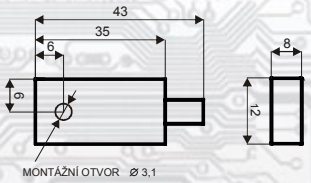
Sensor type	Ni, Pt, NTC20K
Material of the case	stainless steel DIN 1.4301



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
SK9x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK9x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SK9x – 2MN - y	2-wire	MV-CNTEVSL 4 x 0,14 mm²	no	glass silicone	glass silicone	-60 ÷ 280 °C
SK9x - 3MN - y	3-wire	MV-CNTEVSL 4 x 0,14 mm²	no	glass silicone	glass silicone	-60 ÷ 280 °C
SK9x – 2PS - y	2-wire	LiYCY 2 x 0,14 mm²	yes	PVC	PVC	-30÷ 80 °C

SP2 – measuring surface temperature, 35x12x8 mm

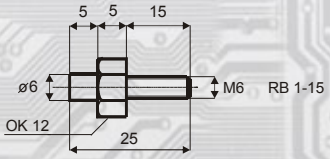
Sensor type	all types of the sensors
Material of the case	hard aluminium
Standard case length	35 mm
Length on the request	35 to 50 mm



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
SP2x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SP2x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
SP2x – 2MS - y	2-wire	BIMV-CNTEVS 2 x 0,34 mm²	yes	-	PTFE	-60 ÷ 300 °C

RB1 – stainless steel case, thread M6

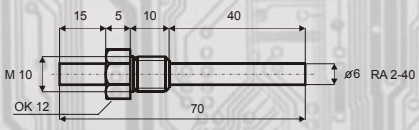
Sensor type	Ni, Pt, NTC20K
Material of the case	stainless steel DIN 1.4301



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
RB1x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
RB1x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C

RA2 – stainless steel case, stem Ø6x40 mm, thread M10

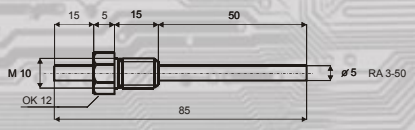
Sensor type	all types of the sensors
Material of the case	stainless steel DIN 1.4301



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
RA2x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm²	yes	silikon	FEP fluorinated polymer	-60 ÷ 200 °C
RA2x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm²	yes	silikon	FEP fluorinated polymer	-60 ÷ 200 °C
RA2x – 2TS - y	2-wire	M6BE-E6 3 x 0,22 mm²	yes	FEP fluorinated polymer	FEP fluorinated polymer	-60 ÷ 200 °C
RA2x – 3TS - y	3-wire	M6BE-E6 3 x 0,22 mm²	yes	FEP fluorinated polymer	FEP fluorinated polymer	-60 ÷ 200 °C
RA2x – 2MS - y	2-wire	BIMV-CNTEVS 2 x 0,34 mm²	yes	-	PTFE	-60 ÷ 300 °C

RA3 – stainless steel case, stem Ø5x50 mm, thread M10

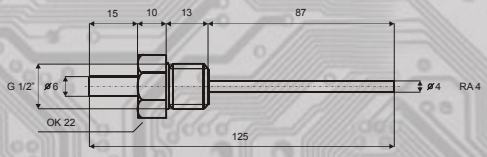
Sensor type	Ni, Pt, NTC20K
Material of the case	stainless steel DIN 1.4301



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
RA3x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
RA3x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C

RA4 – stainless steel case, stem Ø4x87 mm, thread G1/2"

Sensor type	Ni, Pt, NTC20K
Material of the case	stainless steel DIN 1.4301



Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
RA4x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
RA4x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm²	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C

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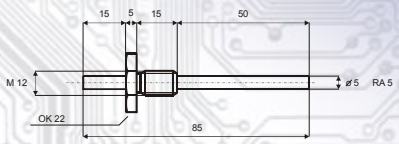
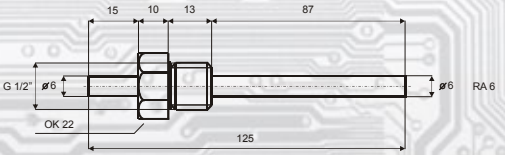


RA5 – stainless steel case, stem Ø5x50 mm, thread M12

Sensor type	Ni, Pt, NTC20K
Material of the case	stainless steel DIN 1.4301

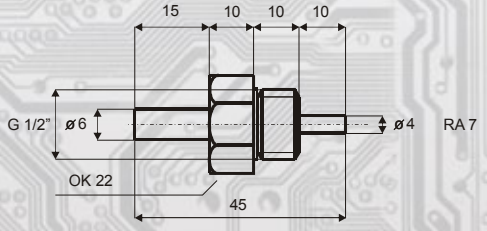
Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
RA5x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
RA5x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C



RA6 – stainless steel case, shank Ø6x87 mm, thread G1/2"

Sensor type	all types of the sensors
Material of the case	stainless steel DIN 1.4301

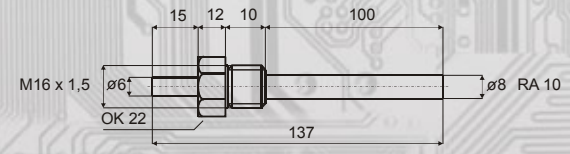
Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
RA6x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
RA6x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
RA6x – 2MS - y	2-wire	BIMV-CNTEVS 2 x 0,34 mm^2	yes	-	PTFE	-60 ÷ 300 °C



RA7 – stainless steel case, stem Ø4x10 mm, thread G1/2"

Sensor type	Ni, Pt, NTC20K
Material of the case	stainless steel DIN 1.4301

Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
RA7x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
RA7x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C



RA10 – stainless steel case, stem Ø8x100 mm, thread M16x1,5
Suitable for environment with vibration

Sensor type	all types of the sensors
Material of the case	stainless steel DIN 1.4301

Transducer type	Connection	Cable type	Shielding	Insulation external	Wire insulation	Cable temp. range
RA2x - 2SS - y	2-wire	MCBE-AFEP 2 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
RA2x - 3SS - y	3-wire	MCBE-AFEP 3 x 0,22 mm^2	yes	silicone	FEP fluorinated polymer	-60 ÷ 200 °C
RA2x – 2MS - y	2-wire	BIMV-CNTEVS 2 x 0,34 mm^2	yes	-	PTFE	-60 ÷ 300 °C