

Data sheet

# Temperature sensors (Pt 1000) ESMT, ESM-10, ESM-11, ESMB-12, ESMC, ESMU

## Products



- Platinum-based sensors, 1000 Ω at 0 °C

All the temperature sensors are two-wire devices, and all connections are inter-changeable.

The surface sensor type ESM-11 has a spring contact surface to ensure a good heat transfer on pipes of all sizes. The basic sensor contains a platinum element with a characteristic that complies with EN 60751.

## Ordering

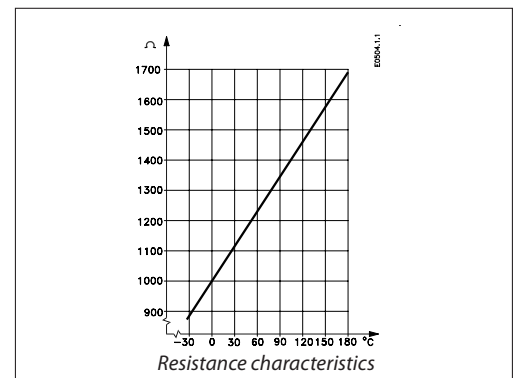
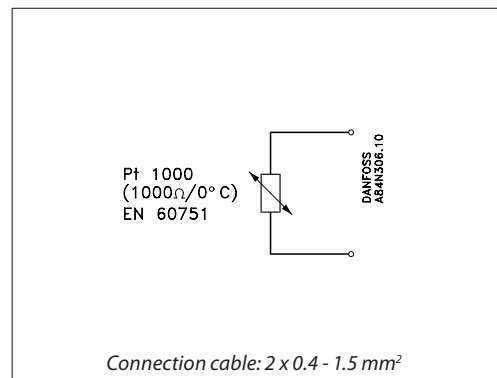
### Temperature sensors

Type	Designation	Code No.
ESMT	Outdoor sensor	084N1012
ESM-10	Room temperature sensor	087B1164
ESM-11	Surface sensor	087B1165
ESMB-12	Universal sensor	087B1184
ESMC	Surface sensor	087N0011
ESMU-100	Immersion sensor, 100 mm, copper	087B1180
ESMU-250	Immersion sensor, 250 mm, copper	087B1181
ESMU-100	Immersion sensor, 100 mm, stainless steel	087B1182
ESMU-250	Immersion sensor, 250 mm, stainless steel	087B1183

### Accessories and spare parts

Type	Designation	Code No.
Pocket	Immersion, stainless steel 100 mm, for ESMU-100, Cu ( 87B1180)	087B1190
Pocket	Immersion, stainless steel 250 mm, for ESMU-250, Cu ( 87B1181)	087B1191
Pocket	Immersion, stainless steel 100 mm, for ESMB-12, ( 87B1184)	087B1192
Pocket	Immersion, stainless steel 250 mm, for ESMB-12, ( 87B1184)	087B1193
Heat conducting paste 3.5 cm <sup>3</sup>		041E0110
Plastic ties e.g. for ESM-11 (25 pcs). Recommendable for high temperatures.		087B1167

## Wiring



**Data, general**

All temperature sensors contain a Pt 1000 element. Instructions are supplied with the products.

Type	Temperature range	Enclosure	Time constant	PN
ESMT	-50 to 50 °C	IP 54	≤ 15 min	-
ESM-10	-30 to 50 °C	IP 54	8 min	-
ESM-11	0 to 100 °C	IP 32	3 s	-
ESMB-12	0 to 100 °C	IP 54	20 s	-
ESMC	0 to 100 °C	IP 54	10 s	-
ESMU-100/-250	0 to 140 °C	IP 54	2 s (in water) 7 s (in air)	25
Pocket	0 to 180 °C	-	See "Data specific"	25

			Packing
Materials	ESMT	Cover: ABS Base: PC (polycarbonate)	xx
	ESM-10	Cover: ABS Base: ABS	xx
	ESM-11	Cover: ABS Base: PC (polycarbonate)	xx
	ESMB-12	Encapsulation: 18/8 stainless steel Cable: 2.5 m, PVC, 2 x 0.34 mm <sup>2</sup>	x
	ESMC	Encapsulation: Top part: Nyrol, button part: Nickel coated Cu Cable: 2 m, PCV, 2 x 0.2 mm <sup>2</sup>	x
	ESMU-100/-250	Tube and body: AISI 316 Head: PA (polyamide)	x
	ESMU-100/-250 Cu	Tube: Copper (Cu) Body: Brass Head: PA (polyamide)	x
Pocket	Tube and body: AISI 316	x	
Electrical connection	ESMT	Terminal block for 2 wires in base part	
	ESM-10	Terminal block for 2 wires in base part	
	ESM-11	Terminal block for 2 wires in base part	
	ESMB-12	2-wire cable (2 x 0,34 mm <sup>2</sup> ) spliced	
	ESMC	2-wire cable (2 x 0,2 mm <sup>2</sup> )	
	ESMU-100/-250	Terminal block for 2 wires in head, PG 9 cable entry supplied with the product	
Mounting	ESMT/ESM-10	Wall mounting with screws (supplied with the product)	
	ESM-11/ESMC	Clamp for tube DN 15-65 supplied	
	ESMB-12	For pipe or flat surface or in pocket. Usage of heat conducting paste is recommended.	
	ESMU-100/-250	G 1/2 A and gasket (is supplied with the product)	
	Pocket	G 1/2 A	

x = PE (polyethylene) bag  
xx = Paperboard

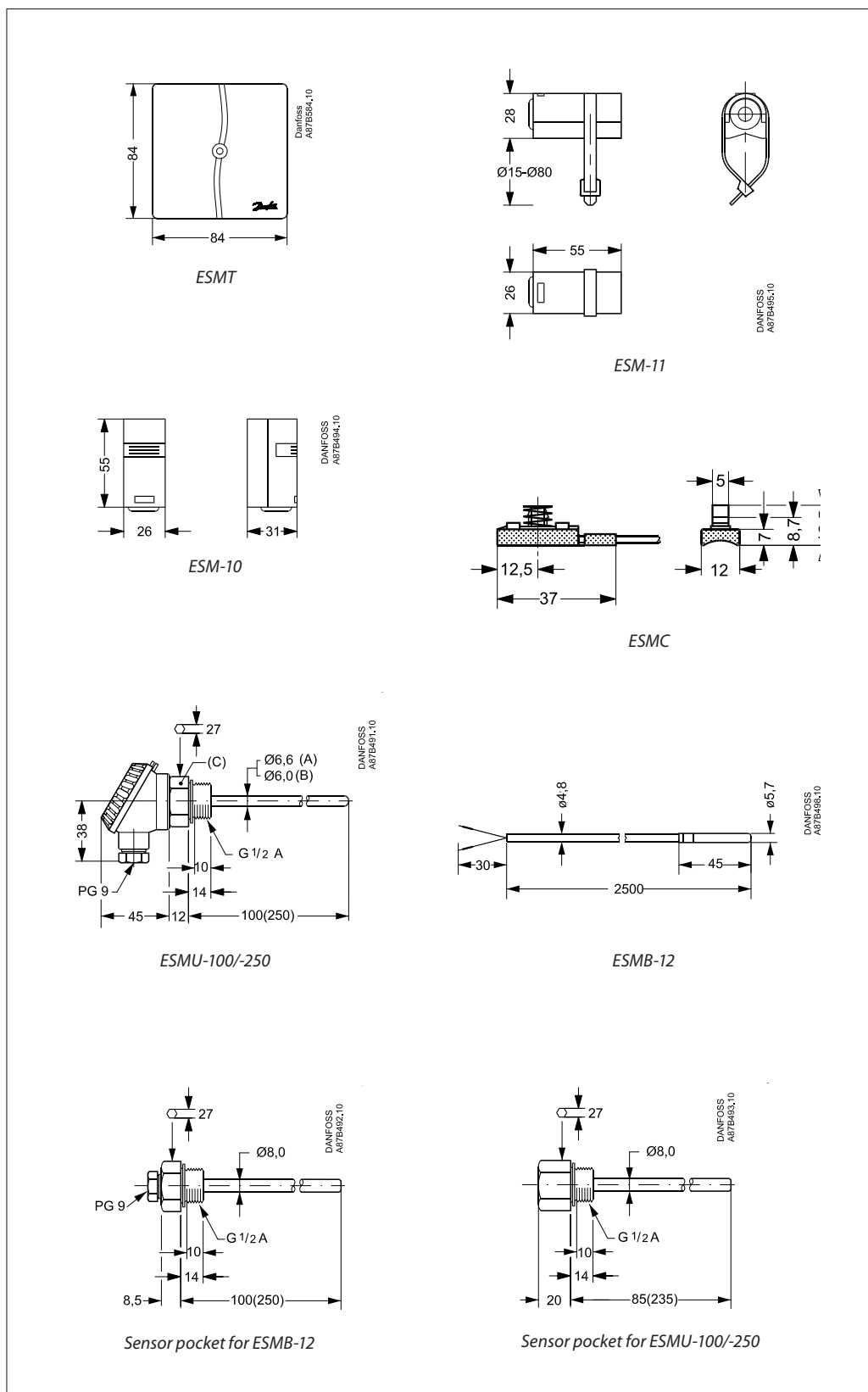
**Data, specific**

Sensor characteristics	Referring to EN, Class 2 B	Max. deviation 2 K
Time constants	ESMU (Cu) in pocket	32 s (in water) 160 s (in air)
	ESMB in pocket	20 s (in water) 140 s (in air)

**Specific info**

ESM-10 ESM-11	Type name is found at cable inlet
ESMB-12 ESMC	Code no. is printed on cable
ESMT	Code no. is found on black base part's back
ESMU	Code no. is found on cap's top

Dimensions



		087B1182 and 087B1183	087B1180 and 087B1181
ESMU	(A)	Stainless steel (AISI 316)	Copper (Cu)
	(B)		Brass
	(C)		

