motralec Danfoss Temperature transmitter Type MBT 9110 For industrial an· 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

Temperature transmitter Type **MBT 9110**

For industrial and marine applications



MBT 9110 transmitter with box enclosure
Standard transmitter: D
Galvanic isolated transmitter: E



MBT 9110 transmitter for B-head
High cap for integration with B-head temperature sensor.
Standard transmitter: A
Galvanic isolated transmitter: B



MBT 9110 transmitter as terminal block
Standard transmitter: G
Galvanic isolated transmitter: H

The MBT 9110 temperature transmitter can be used for converting the Pt 100 / Pt 1000 ohm signal or the thermo couple mV signal to a 4 – 20 mA signal.

The MBT 9110 is a very durable and reliable temperature transmitter with all major marine approvals and can be used together with all our sensors based on Pt or Thermocouple technology.

MBT 9110 transmitters in the standard program are delivered in an enclosure, but are also used as an integrated part of certain temperature sensors.

The transmitter is available as standard or galvanic isolated with or without EEx approval.

Features

- 2-wire universal transmitter for industrial and maritime applications
- Pt 100, Pt 1000 or thermocouple input
- 4 – 20 mA standard output - with or without galvanic isolation
- For mounting in DIN B connection head, heightened lid or in a separate enclosure
- Advanced sensor fault indication
- Temperature linearized

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

Primary accuracy	Pt 100 Thermocouple type E, J, K, L, N, T, U Thermocouple type B, R, S	< ± 0.3 °C < ± 1.0 °C < ± 2.0 °C
Linearity error	< 0.1% FS	
Temp. coefficient	< ± 0.01% FS / °K_{amb}	
Response time	Programmable 1 – 60 sec. 1 sec. standard	
Cold solder point compensation (CJC)	< ± 1.0 °C	
Warm-up time	5 min.	
Update time	440 ms	
Effect of sensor cable resistance (3/4 wires)	< 0.002 Ω / Ω	

K_{amb} = Ambient temperature change

Table 2: Electrical specifications

Supply voltage		8 – 35 V DC
EEx Galvanic supply voltage		7.2 – 30 V DC
Effect of supply voltage variation		< 0.005% FS / V DC
Output		4 – 20 mA current loop
Sensor fault indication		Namur NE43 upscale 23 mA
Input	Standard	Pt 100 (EN 60751) 2, 3 - wire -200 – 800 °C Pt 1000 (EN 60751) 2, 3 - wire
	Galvanic isolation	Pt 100 (EN 60751) 2, 3, 4 - wire -200 – 800 °C Pt 1000 (EN 60751) 2, 3 - wire Thermocouple (EN 60584)
Signal/noise ratio		Min. 60 dB
Max. lead cross-section		1 × 1.5 mm^2
Max. cable resistance		5 Ω / core

Table 3: Environmental conditions for Box enclosure

Insulation voltage	1500 V AC
EMC	EN 61326-1
Vibration/shock	IEC 60068-2-6 / IEC 60068-2-84
Vibration	4 g / 2 –100 Hz
Humidity	0 – 98% RH, according to IEC 60068-1, IEC 60068-2-2
Ambient temperature	-40 – 70 °C
In seperate enclosure	IP54 according to IEC 60529

Table 4: Mechanical characteristics

Max. offset	50% of max. input value (Pt 100: 400 °C) (Thermocouple, type R: 650 °C)
Net weight	In heightened lid for B-head: 0.080 kg In Box enclosure: 0.360 kg

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

In separate enclosure

Figure 1: MBT 9110 transmitter

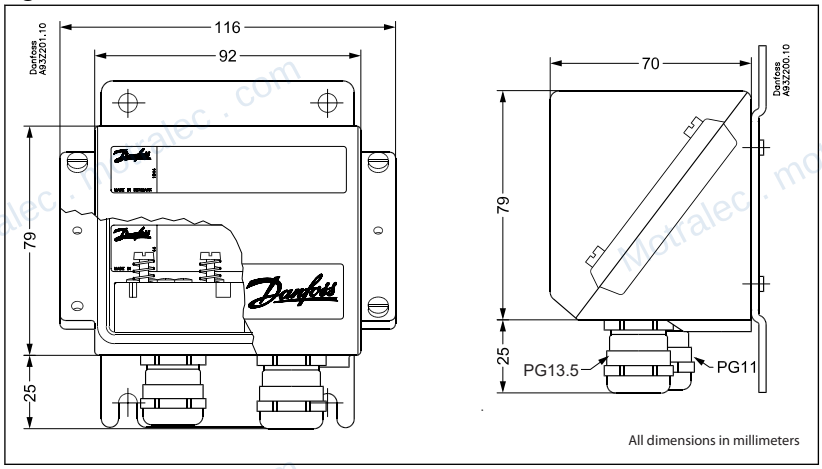
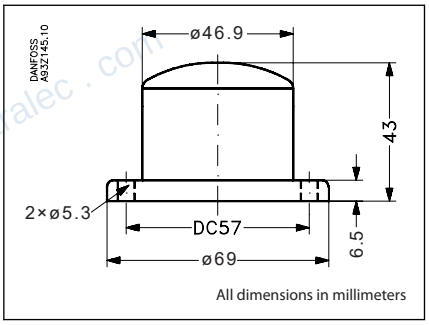


Figure 2: MBT 9110 transmitter for B-head

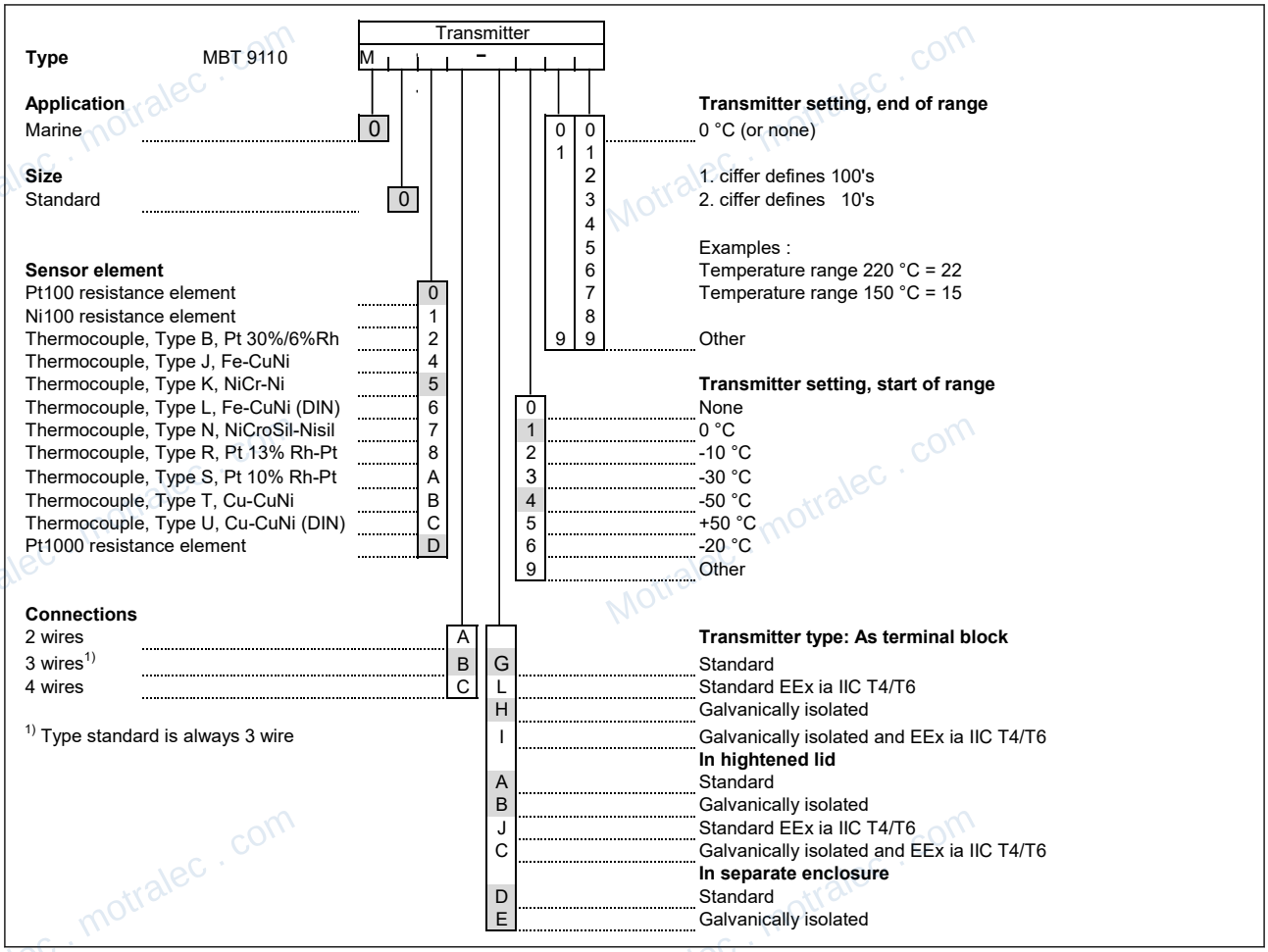


motralec ★★★★★ 4,8/5 . +600 avis
4 rue Lavoisier, 95220 Herblay-sur-Seine . Tél. 01 39 97 65 10 . service-commercial@motralec.com . www.motralec.com

Ordering

Ordering standard

Figure 3: Specification code for MBT 9110



NOTE:

- Only the transmitter as terminal block is Ex approved and lable marked according to our Ex approval.
- Versions with Ex transmitter in highthened lid or in separate enclosure are not Ex approved and therefore the lable can´t be marked as such.

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

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 5: Certificates and declarations

File name	Document type	Document topic	Approval authority
TAA000013F	Marine - Safety Certificate	-	DNV GL
19-20014	Marine - Safety Certificate	-	LR
06871-FO BV	Marine - Safety Certificate	-	BV
TA16099M	Marine - Safety Certificate	-	NKK
GB19PTB00025	Marine - Safety Certificate	-	CCS
084R1019.01	EU Declaration	EMCD/ROHS	Danfoss
RU Д-DK.АЛ87.В.00022_19	EAC Declaration	EMC	EAC
UA.1O146.D.00075-19	UA Declaration	EMCD/LVD	LLC CDC EURO TYSK
084R1021.00	Manufacturers Declaration	China RoHS	Danfoss
097R0004.01	Manufacturers Declaration	RoHS	Danfoss

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.

Spare Parts

Get access to the Danfoss spare parts and service kit catalog right from your smartphone. The app contains a wide range of components for air conditioning and refrigeration applications, such as valves, strainers, pressure switches, and sensors.

Download the Spare Parts app for free at www.danfoss.com/en/service-and-support/downloads.

Any information, including, but not limited to information on selection of product, its application or use, product design, weight, dimensions, capacity or any other technical data in product manuals, catalogues descriptions, advertisements, etc. and whether made available in writing, orally, electronically, online or via download, shall be considered informative, and is only binding if and to the extent, explicit reference is made in a quotation or order confirmation. Danfoss cannot accept any responsibility for possible errors in catalogues, brochures, videos and other material. Danfoss reserves the right to alter its products without notice. This also applies to products ordered but not delivered provided that such alterations can be made without changes to form, fit or function of the product. All trademarks in this material are property of Danfoss A/S or Danfoss group companies. Danfoss and the Danfoss logo 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 Temperature transmitter Type MBT 9110 For industrial and marine applications

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 >