Ex db IIC T6 Ga/Gb Ex db IIC T6 Gb







## Micropilot FMR60B/62B/63B/66B/67B

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## About this document



This document has been translated into several languages. Legally determined is solely the English source text.

# Associated documentation

This document is an integral part of the following Operating Instructions:

#### **HART**

- BA02247F (FMR60B)
- BA02248F (FMR62B)
- BA02249F (FMR63B)
- BA02250F (FMR66B)
- BA02251F (FMR67B)

#### PROFIBUS PA

- BA02261F (FMR60B)
- BA02262F (FMR62B)
- BA02263F (FMR63B)
- BA02264F (FMR66B)
- BA02265F (FMR67B)

#### **PROFINET**

- BA02266F (FMR60B)
- BA02267F (FMR62B)
- BA02268F (FMR63B)
- BA02269F (FMR66B)
- BA02270F (FMR67B)

# Supplementary documentation

Explosion protection brochure: CP00021Z

The Explosion-protection brochure is available:

- In the download area of the Endress+Hauser website: www.endress.com -> Downloads -> Brochures and Catalogs -> Text Search: CP00021Z
- On the CD for devices with CD-based documentation

# Manufacturer's certificates

#### **KC Declaration of Conformity**

Certificate number:

23-KA4BO-0110X

#### **IEC Declaration of Conformity**

Certificate number: IECEx SEV 22.0028X

Affixing the certificate number certifies conformity with the following standards (depending on the device version):

IEC 60079-0: 2017IEC 60079-1: 2014IEC 60079-26: 2021

• Protection Device Safety Certification Notification No. 2021-22

# Manufacturer address

Endress+Hauser SE+Co. KG Hauptstraße 1 79689 Maulburg, Germany Address of the manufacturing plant: See nameplate.

# Extended order code

The extended order code is indicated on the nameplate, which is affixed to the device in such a way that it is clearly visible. Additional information about the nameplate is provided in the associated Operating Instructions.

#### Structure of the extended order code

FMR6xB	-	******	+	A*B*C*D*E*F*G*.
(Device type)		(Basic specifications)		(Optional specifications)

#### \* = Placeholder

At this position, an option (number or letter) selected from the specification is displayed instead of the placeholders.

#### Basic specifications

The features that are absolutely essential for the device (mandatory features) are specified in the basic specifications. The number of positions depends on the number of features available. The selected option of a feature can consist of several positions.

### Optional specifications

The optional specifications describe additional features for the device (optional features). The number of positions depends on the number of features available. The features have a 2-digit structure to aid identification (e.g. JA). The first digit (ID) stands for the feature group and consists of a number or a letter (e.g. J = Test, Certificate). The second digit constitutes the value that stands for the feature within the group (e.g. A = 3.1 material (wetted parts), inspection certificate).

More detailed information about the device is provided in the following tables. These tables describe the individual positions and IDs in the extended order code which are relevant to hazardous locations.

### Extended order code: Micropilot



The following specifications reproduce an extract from the product structure and are used to assign:

- This documentation to the device (using the extended order code on the nameplate).
- The device options cited in the document.

#### Device type

FMR60B, FMR62B, FMR63B, FMR66B, FMR67B

#### Basic specifications

Position 1, 2 (Approval)		
Selected option		Description
FMR6xB	KC	KC Ex db IIC T6T1 Ga/Gb KC Ex db IIC T6T1 Gb

Position 3, 4 (Output)		
Selected option		Description
FMR6xB	BA	2-wire, 4-20 mA HART
	DA	2-wire, PROFIBUS PA
	FA	2-wire, PROFINET, 10Mbit/s (APL)

Position 5 (Display, Operation)		
Selected option		Description
FMR6xB	N	Prepared for display FHX50B + Thread NPT1/2
	0	Prepared for display FHX50B + Thread M20

Position 6 (Housing, Material)			
Selected option		Description	
FMR6xB	В	Single compartment; Alu, coated	
	J	Dual compartment; Alu, coated	
	K	Dual compartment; 316L	
	M	Dual compartment L-shape; Alu, coated	
	N	Dual compartment L-shape; 316L, coated	

Position 7 (Electrical Connection)			
Selected option		Description	
FMR6xB	F	Thread M20, IP66/68 NEMA Type 4X/6P	
	G	Thread G1/2, IP66/68 NEMA Type 4X/6P	
	Н	Thread NPT1/2, IP66/68 NEMA Type 4X/6P	

Position 8 (Application)			
Selected opt	ion	Description	
FMR60B	В	Process temperature -20+150°C	
FMR62B FMR63B FMR67B	D	Process temperature -20+200°C	
FMR60B FMR66B FMR67B	F	Process temperature -40+80°C	
FMR6xB	J	Process temperature -40+150°C	
	L	Process temperature -40+200°C	
FMR62B	N	Process temperature -40+280°C	
FMR67B	P	Process temperature -40+450°C	
FMR62B	R	Process temperature -60+200°C	
	T	Process temperature -196+200°C	
FMR62B FMR63B	V	Process temperature -20+150°C, Steam application	
	W	Process temperature -20+200°C, Steam application	

Position 9, 10 (Antenna)			
Selected opt	ion	Description	
FMR60B FMR62B FMR66B FMR67B	GA	Drip-off, PTFE 50mm/2"	
FMR60B FMR63B	GE	Integrated, PEEK, 20mm/3/4"	
FMR60B	GF	Integrated, PEEK, 40mm/1-1/2"	
FMR62B	GM	Cladded flush mount, PTFE, 50mm/2"	
FMR63B	GN	Cladded flush mount, PTFE, 80mm/3"	
FMR67B	GP	Flush mount, PTFE, 80mm/3"	
FMR63B	GQ	Cladded, flush mount, PEEK, 20mm/3/4"	
	GR	Cladded, flush mount, PEEK, 40mm/1-1/2"	
FMR62B FMR67B	GT	Horn, 316L, 65mm/2.6"	

Position	Position 11, 12 (Process Connection, Sealing Surface)		
Selected option		Description	
FMR67E	JD	Alignment device, UNI flange	

Position 16	Position 16 (Seal)		
Selected op	tion	Description	
FMR62B FMR63B	В	PTFE cladded	
FMR63B	С	PEEK cladded	
FMR6xB	D	VKM Viton GLT	
	G	EPDM	
FMR60B FMR62B FMR63B FMR67B	J	HNBR	
	P	FFKM Kalrez	
FMR62B FMR67B	U	Graphite	

Position 17 (Air Purge Connection)								
Selected option		Description						
FMR6xB	1	G1/4						
	2	NPT1/4						
	3	Adapter G1/4						
	4	Adapter NPT1/4						

#### Optional specifications

ID Jx, Kx (Test, Certificate, Declaration)									
Selected op	tion	Description							
FMR6xB	JL	Ambient temp. transmitter -50°C/-58°F, sensor see specification							
	JT	Ambient temp. transmitter -60°C/-76°F, sensor see specification							

ID Nx, Ox (A	ID Nx, Ox (Accessory Mounted)								
Selected opt	tion	Description							
FMR6xB NA		Overvoltage protection							

ID Px, Rx (A	ID Px, Rx (Accessory Enclosed)								
Selected opt	ion	Description							
FMR6xB PA		Weather protection cover, 316L <sup>1)</sup>							

1) Only in connection with Position 6 = J, K, M, N

### Safety instructions: General

- The device is intended to be used in explosive atmospheres as defined in the scope of IEC 60079-0 or equivalent national standards. If no potentially explosive atmospheres are present or if additional protective measures have been taken: The device may be operated according to the manufacturer's specifications.
- Devices suitable for zone separation (marked Ga/Gb or Da/Db) are always suitable for installation in the less critical zone (Gb or Db).
  Due to space limitations the corresponding marking maybe not indicated on the nameplate.
- Comply with the installation and safety instructions in the Operating Instructions.

- Staff must meet the following conditions for mounting, electrical installation, commissioning and maintenance of the device:
  - Be suitably qualified for their role and the tasks they perform
  - Be trained in explosion protection
  - Be familiar with national regulations
- Install the device according to the manufacturer's instructions and national regulations.
- Do not operate the device outside the specified electrical, thermal and mechanical parameters.
- Only use the device in media to which the wetted materials have sufficient durability.
- Avoid electrostatic charging:
  - Of plastic surfaces (e.g. enclosure, sensor element, special varnishing, attached additional plates, ..)
  - Of isolated capacities (e.g. isolated metallic plates)
- Alterations to the device can affect the explosion protection and must be carried out by staff authorized to perform such work by Endress+Hauser

### Safety instructions: Special conditions

- In the case of process connections made of polymeric material or with polymeric coatings, avoid electrostatic charging of the plastic surfaces.
- For light metal flanges or flange faces (e.g. titanium, zirconium), avoid sparks caused by impact and friction.
- To avoid electrostatic charging: Do not rub surfaces with a dry cloth.
- In the event of additional or alternative special varnishing on the enclosure or other metal parts or for adhesive plates:
  - Observe the danger of electrostatic charging and discharge.
  - Do not install in the vicinity of processes (≤ 0.5 m) generating strong electrostatic charges.
- Avoid sparks caused by impact and friction.
- In the case of process connections made of polymeric material or with polymeric coatings, avoid electrostatic charging of the plastic surfaces.
- Avoid electrostatic charging of the sensor (e.g. do not rub dry and install outside the filling flow).

Optional specification, ID Px, Rx = PAConnect the weather protection cover to the local potential equalization.

Device type FMR67B and Basic specification, Position 11, 12 = JD

- In Zone 0, avoid sparks caused by impact and friction.
- Changing the position of the alignment device must be impossible:
  - After the alignment of the antenna via the pivot bracket
  - After tightening of the clamping flange
  - After setting the damping ring (torque 10 to 11 Nm)
- Degree of protection IP67 must be fulfilled.

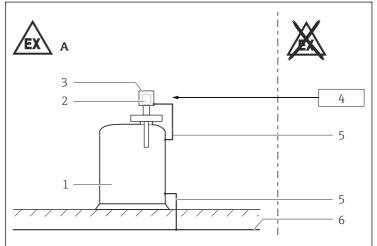
Device type FMR67B and Basic specification, Position 17 = 1, 2, 3, 4

- In Zone 0, avoid sparks caused by impact and friction.
- After removing the air purge connection: Lock the opening with a suitable plug.

Torque: 6-7 Nm

■ Degree of protection IP67 must be fulfilled.

#### Safety instructions: Installation



A002553

- A Zone 1
- 1 Tank; Zone 0, Zone 1
- 2 Electronic insert
- 3 Enclosure
- 4 Power supply
- 5 Potential equalization line
- 6 Local potential equalization
- After aligning (rotating) the enclosure, retighten the fixing screw.
- In potentially explosive atmospheres: Do not open the connection compartment cover and the electronics compartment cover when energized.
- Before operation:
  - Screw in the cover all the way.
  - Tighten the securing screw on the cover.
- Connect the device:
  - Using suitable cable and wire entries of protection type "Flameproof Enclosure (Ex db)".
  - Using piping systems of protection type "Flameproof Enclosure (Ex db)".

- When connecting through a conduit entry approved for this purpose, mount the associated sealing unit directly at the enclosure.
- Seal unused entry glands with approved sealing plugs that correspond to the type of protection. The plastic transport sealing plug does not meet this requirement and must therefore be replaced during installation.
- Only use certified cable entries or sealing plugs. The metal sealing plugs supplied meet this requirement.
- Only use genuine spare parts from Endress+Hauser which are specified for the device.

#### Basic specification, Position 5 = N, O

Observe the requirements according to IEC/EN 60079-14 for conduit systems and the wiring- and installation instructions of the suitable Safety Instructions (XA). In addition, observe national regulations and standards for conduit systems.

#### Basic specification, Position 7 = G

Flameproof equipment with G threaded entry holes is not intended for new installations but only for replacement of equipment in existing installations. Application of this equipment shall comply with the local installation requirements.

#### Safety instructions: Ex d joints

- Flameproof joints are not intended to be repaired.
- If required or if in doubt: ask manufacturer for specifications.

### Safety instructions: Zone separation Zone 0, Zone 1

*Basic specification, Position 9, 10 = Gx* 

- The separating element is not directly in contact with the process (process-wetted).
- Material specification of the separating element:
  - Glass feedthrough: ≥ 3 mm
  - Stainless steel weld: ≥ 1 mm
- Flameproof joint in connection with stainless steel weld: ≥ 0.2 mm.

*Basic specification, Position 9, 10 in connection with Position 16* The sealing is directly in contact with the process (process-wetted).

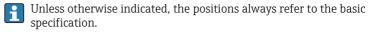
# Temperature tables



- The specified ambient and process temperature ranges exclusively refer to the explosion protection and must not be exceeded. Operationally permitted ambient temperature ranges can be restricted depending on the version: See Operating Instructions.
- Do not exceed the max. ambient temperature at the enclosure.
- Optional specification, ID Jx, Kx = JLLower limit of the ambient temperature for explosion protection changes to -50 °C.

Optional specification, ID Jx, Kx = JT Lower limit of the ambient temperature for explosion protection changes to  $-60\,^{\circ}\text{C}$ .

#### **Description notes**

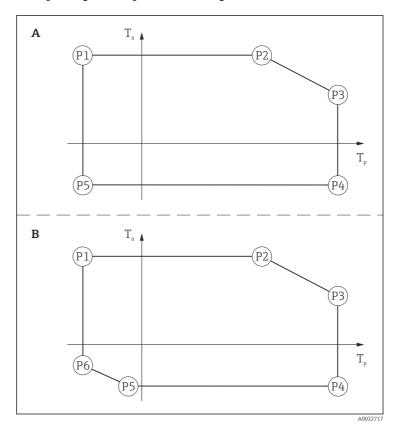


1st column: Temperature classes T6 (85 °C) to T1 (450 °C)

Column P1 to P5: Position (temperature value) on the axes of the derating

- T<sub>a</sub>: Ambient temperature in °C
- $T_p$ : Process temperature in °C

## Example diagrams of possible deratings



Position 6 (Housing, Material)
B, J, M

### FMR60B, FMR62B, FMR63B, FMR66B, FMR67B

Position 8 (Application)	
B, J, V	

## Position 9, 10 (Antenna) GA, GE, GF, GQ, GR

	P1		P2		Р3		P4		P5		P6	
	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	Ta
Т6	-40 <sup>1)</sup>	74	74	74	80	73	80	-40 <sup>2) 3)</sup>	-40 <sup>1)</sup>	-40 <sup>2) 3)</sup>	-	-
T5	-40 <sup>1)</sup>	79	79	79	95	76	95	-40 <sup>2)3)</sup>	-40 <sup>1)</sup>	-40 <sup>2)3)</sup>	-	-
T4	-40 <sup>1)</sup>	79	79	79	130	61	130	-40 <sup>2)3)</sup>	-40 <sup>1)</sup>	-40 <sup>2)3)</sup>	-	-
T3T1	-40 <sup>1)</sup>	79	79	79	150	52	150	-40 <sup>2) 3)</sup>	-40 <sup>1)</sup>	-40 <sup>2) 3)</sup>	-	-

- 1) 2)
- Position 16 = J, P: -20 °C Optional specification, ID Jx, Kx = JL: -50 °C Optional specification, ID Jx, Kx = JT: -60 °C 3)

## FMR62B, FMR63B, FMR67B

#### Position 8 (Application)

D, L, R, T, W

#### Position 9, 10 (Antenna)

GM, GN, GQ, GR, GP

	P1		P2		Р3		P4		P5		P6	
	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	Ta
Т6	-196 <sup>1) 2) 3)</sup>	74	74	74	80	73	80	-40 <sup>4)5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4) 5)</sup>	-196	-19
T5	-196 <sup>1) 2) 3)</sup>	79	79	79	95	76	95	-40 <sup>4) 5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4) 5)</sup>	-196	-19
T4	-196 <sup>1) 2) 3)</sup>	79	79	79	130	67	130	-40 <sup>4) 5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4) 5)</sup>	-196	-19
Т3	-196 <sup>1) 2) 3)</sup>	79	79	79	195	48	195	-40 <sup>4) 5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4) 5)</sup>	-196	-19
T2T1	-196 <sup>1) 2) 3)</sup>	79	79	79	200	46	200	-40 <sup>4)5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4) 5)</sup>	-196	-19

- Position 8 = D, W: -20 °C; P6 not relevant Position 8 = L: -40 °C; P6 not relevant 1)
- 2)
- 3) Position 8 = R: -60 °C; P6 not relevant
- Optional specification, ID Jx, Kx = JL:  $-50\,^{\circ}$ C Optional specification, ID Jx, Kx = JT:  $-60\,^{\circ}$ C 4)
- 5)

#### FMR62B, FMR67B

#### Position 8 (Application)

N, R, T

#### Position 9, 10 (Antenna)

GT

	P1		P2		P3		P4		P5		P6	
	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta
Т6	-196 <sup>1) 2)</sup>	74	74	74	80	73	80	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3) 4)</sup>	-196	-43
T5	-196 <sup>1) 2)</sup>	79	79	79	95	78	95	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3) 4)</sup>	-196	-43
T4	-196 <sup>1) 2)</sup>	79	79	79	130	75	130	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3) 4)</sup>	-196	-43
Т3	-196 <sup>1) 2)</sup>	79	79	79	195	68	195	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3) 4)</sup>	-196	-43
T2T1	-196 <sup>1) 2)</sup>	79	79	79	280 <sup>5)</sup>	58	280 5)	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3)4)</sup>	-196	-43

- 1) Position  $8 = N: -40 \,^{\circ}C$ ; P6 not relevant
- 2) Position  $8 = R: -60 \,^{\circ}C$ ; P6 not relevant
- 3) Optional specification, ID Jx, Kx = JL: -50 °C
- 4) Optional specification, ID Jx,  $Kx = JT: -60 \,^{\circ}C$
- 5) Position 8 = R, T: 200 °C

#### Position 8 (Application)

Ρ

#### Position 9, 10 (Antenna)

GT

	P1		P2		P3		P4		P5		P6	
	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta						
Т6	-40	74	74	74	80	73	80	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T5	-40	79	79	79	95	78	95	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T4	-40	79	79	79	130	75	130	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T3	-40	79	79	79	195	68	195	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T2	-40	79	79	79	290	57	290	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T1	-40	79	79	79	440	39	440	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-

- 1) Optional specification, ID Jx, Kx = JL: -50 °C
- 2) Optional specification, ID Jx,  $Kx = JT: -60 \,^{\circ}C$

Position 6 (Housing, Material)
K, N

## FMR60B, FMR62B, FMR63B, FMR66B, FMR67B

Position 8 (Application)	
B, J, V	

Position 9, 10 (Antenna)
GA, GE, GF, GQ, GR

	P1		P2		Р3		P4		P5		P6	
	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	Ta
Т6	-40 <sup>1)</sup>	72	72	72	80	70	80	-40 <sup>2)3)</sup>	-40 <sup>1)</sup>	-40 <sup>2)3)</sup>	-	-
T5	-40 <sup>1)</sup>	77	77	77	95	73	95	-40 <sup>2)3)</sup>	-40 <sup>1)</sup>	-40 <sup>2)3)</sup>	-	-
T4	-40 <sup>1)</sup>	77	77	77	130	53	130	-40 <sup>2)3)</sup>	-40 <sup>1)</sup>	-40 <sup>2)3)</sup>	-	-
T3T1	-40 <sup>1)</sup>	77	77	77	150	42	150	-40 <sup>2)3)</sup>	-40 <sup>1)</sup>	-40 <sup>2)3)</sup>	-	-

- Position 16 = J, P: -20 °C Optional specification, ID Jx, Kx = JL: -50 °C Optional specification, ID Jx, Kx = JT: -60 °C 1) 2)
- 3)

### FMR62B, FMR63B, FMR67B

#### Position 8 (Application)

D, L, R, T, W

#### Position 9, 10 (Antenna)

GM, GN, GQ, GR, GP

	P1		P2		P3		P4		P5		P6	
	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta
Т6	-196 <sup>1) 2) 3)</sup>	72	72	72	80	70	80	-40 <sup>4) 5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4) 5)</sup>	-196	-10
T5	-196 <sup>1) 2) 3)</sup>	77	77	77	95	74	95	-40 <sup>4) 5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4) 5)</sup>	-196	-10
T4	-196 <sup>1) 2) 3)</sup>	77	77	77	130	63	130	-40 <sup>4) 5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4) 5)</sup>	-196	-10
Т3	-196 <sup>1) 2) 3)</sup>	77	77	77	195	39	195	-40 <sup>4) 5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4) 5)</sup>	-196	-10
T2T1	-196 <sup>1) 2) 3)</sup>	77	77	77	200	37	200	-40 <sup>4) 5)</sup>	-50 <sup>1) 2) 3)</sup>	-40 <sup>4)5)</sup>	-196	-10

- Position 8 = D, W: -20 °C; P6 not relevant Position 8 = L: -40 °C; P6 not relevant 1)
- 2)
- 3) Position 8 = R: -60 °C; P6 not relevant
- 4)
- Optional specification, ID Jx,  $Kx = JL: -50 \,^{\circ}C$ Optional specification, ID Jx,  $Kx = JT: -60 \,^{\circ}C$ 5)

#### FMR62B, FMR67B

#### Position 8 (Application)

N, R, T

#### Position 9, 10 (Antenna)

GT

	P1		P2		Р3		P4		P5		P6	
	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	Ta
Т6	-196 <sup>1) 2)</sup>	72	72	72	80	71	80	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3) 4)</sup>	-196	-41
T5	-196 <sup>1) 2)</sup>	77	77	77	95	75	95	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3) 4)</sup>	-196	-41
T4	-196 <sup>1) 2)</sup>	77	77	77	130	73	130	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3) 4)</sup>	-196	-41
T3	-196 <sup>1) 2)</sup>	77	77	77	195	65	195	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3) 4)</sup>	-196	-41
T2T1	-196 <sup>1) 2)</sup>	77	77	77	280 <sup>5)</sup>	54	280 5)	-40 <sup>3) 4)</sup>	-50 <sup>1) 2)</sup>	-40 <sup>3) 4)</sup>	-196	-41

- 1) Position 8 = N: -40 °C; P6 not relevant
- 2) Position 8 = R: -60 °C; P6 not relevant
- 3) Optional specification, ID Jx,  $Kx = JL: -50 \,^{\circ}C$
- Optional specification, ID Jx, Kx = JT: -60 °C Position 8 = R, T: 200 °C 4)
- 5)

#### Position 8 (Application)

Р

#### Position 9, 10 (Antenna)

GT

	P1		P1 P2 1		P3		P4		P5		P6	
	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	Ta	T <sub>p</sub>	Ta	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	T <sub>a</sub>	T <sub>p</sub>	Ta
Т6	-40	72	72	72	80	71	80	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T5	-40	77	77	77	95	75	95	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T4	-40	77	77	77	130	73	130	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T3	-40	77	77	77	195	65	195	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T2	-40	77	77	77	290	52	290	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-
T1	-40	77	77	77	440	32	440	-40 <sup>1) 2)</sup>	-40	-40 <sup>1) 2)</sup>	-	-

- 1)
- Optional specification, ID Jx, Kx = JL:  $-50\,^{\circ}$ C Optional specification, ID Jx, Kx = JT:  $-60\,^{\circ}$ C 2)

#### Connection data

Basic specification, Position 3 = BA

#### Power supply

 $U \le 35 V_{DC}$ 

Basic specification, Position 3 = DA

#### Power supply

 $U \le 32 V_{DC}$ 

Basic specification, Position 3 = FA

#### Power supply

 $U \le 15 V_{DC}$ 

In connection with: *Basic specification, Position* 5 = N, O Installation according to the specifications of FHX50B.



Only the type of protection suitable for the device shall be connected!





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