The selection is detailed on page 12

DB05

Cone Type Thermal Resistance Thermometer

Working principle

Thermal resistance is a kind of temperature measuring element commonly used in low and medium temperature region, which measures temperature by using the property that the resistance of the substance changes with the change of temperature.
The heated part of the thermal resistance (temperature sensing element) is evenly wound on the skeleton made of insulating material with a thin metal wire. When there is a temperature gradient in the measured medium, the measured temperature is the average temperature in the medium layer within the range of the temperature sensing element.

Product description

This series of thermal resistance thermometers can be used in combination with a variety of jackets.

Various combinations of Pt100 or Pt1000 components, connectors, plunges, and neck lengths can be used with temperature bushings. Suitable for a variety of temperature casing sizes and applications.

It can be equipped with its own transmitter that can output analog or digital signals.

Explosion protection (optional)
Allowable power Pmax and allowable ambient temperature refer to EC Type inspection Certificate, Ex Certificate or product instructions.

Product application

Machinery industry, factory and tank manufacturing

Energy technology and power plants

Chemical engineering

The food and beverage industry

Sanitation, heating and air conditioning technology

Functional characteristics

Sensor range: -196... + 600 ℃

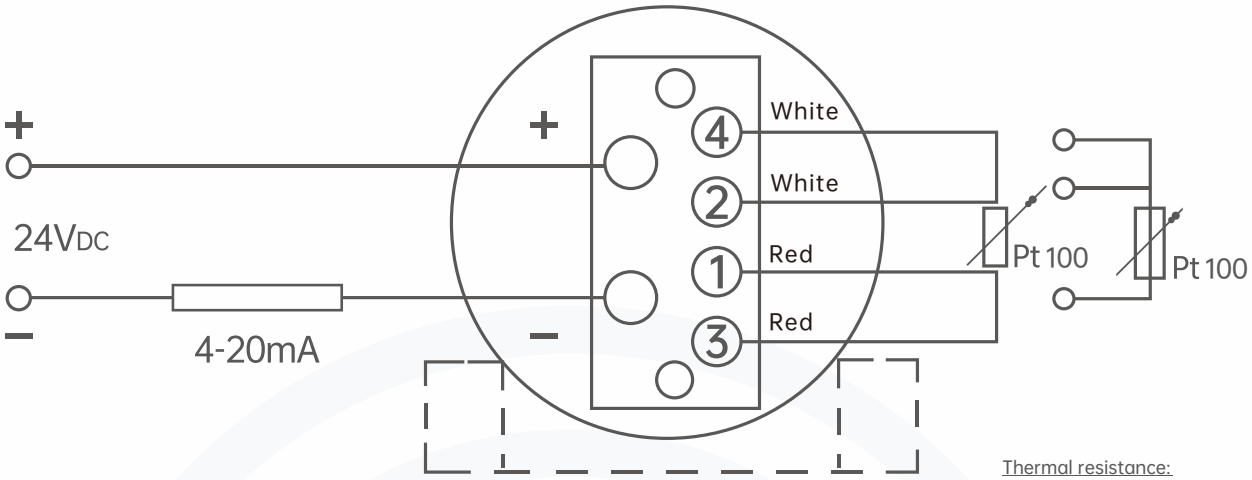
Suitable for mounting all standard form guards

Measuring rod with spring (replaceable)

PT100 and PT1000 sensors

Explosion proof type

Working principle Analytic table



Thermal resistance:
three or four wire system

Sensor

The table shows the temperature ranges listed in the corresponding standard, where the tolerance values (accuracy grades) are valid.

Measuring element

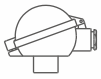
Connection mode	
unitware	1 x 2Wire system
	1 x 3 Wire system
	1 x 4 Wire system
two-element	2 x 2 Wire system
	2 x 3 Wire system
	2 x 4 Wire system[2)]

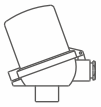
Effective range of accuracy levels, according to EN 60751		
Category	Sensor structure	
	Winding form	Film type
Blevel	-196 ... +600℃	-50 ... +500℃
	-196 ... +450℃	-50 ... +250℃
A level[3)]	-100 ... +450℃	-30 ... +300℃
AA level[3)]	-50 ... +250℃	0 ... 150℃

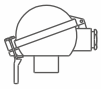
Connector

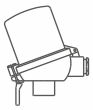
Connector material and specification


DBM


DBM-A


DBM-B


DBM-C


DBM-D


DBM-E

Material	Cable inlet thread specification	Protection level (Maximum value)	Protective cap	Surface	The connection to the neck tube
Aluminum	M20×1.5 or 1/2NPT[1)]	IP65	Flat top cover with 2 screws	Blue finish	M24×1.5, 1/2 NPT
Aluminum	M20×1.5 or 1/2NPT[1)]	IP65	Spherical hinged cover with cylinder head screws	Blue finish	M24×1.5, 1/2 NPT
Aluminum	M20×1.5 or 1/2NPT[1)]	IP65	Raised hinged cover with cylinder head screws	Blue finish	M24×1.5, 1/2 NPT
Aluminum	M20×1.5 or 1/2NPT[1)]	IP65	Spherical hinged cover with clamping handle	Blue finish	M24×1.5, 1/2 NPT
Aluminum	M20×1.5 or 1/2NPT[1)]	IP65	Raised hinged cover with clamping handle	Blue finish	M24×1.5, 1/2 NPT
Stainless steel	M20×1.5[1)]	IP65	Precision cast nut	Natural color, electric polishing	M24×1.5

1) Standard (other available on demand);
2) Levels of protection can be provided upon request, describing temporary or prolonged immersion

Explosion protection							
There is no	Ex i (Gas) Zones 0, 1, 2	Ex i (dust) Precincts 20, 21, 22	Ex eb (Gas) Zone 1	Ex tb (Dust) Zone 21	Ex ec (Gas) Zone 2	Ex nA (Gas) Zone 2	Ex tc (Dust) Zone 22
x	x	x	-	-	-	-	-
x	x	x	x	x	x	x	x
x	x	x	x	x	x	x	x
x	x	-	-	-	-	-	-
x	x	-	-	-	-	-	-
x	x	-	-	-	-	-	-

Cable inlet

Standard

Plastic

Plastic

Nickel-plated brass

Stainless steel

Optical thread

Sealing plug for transport

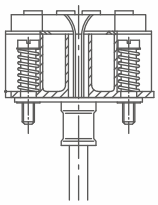
Cable inlet material and specification

Cable inlet	Cable inlet thread specification	Minimum/maximum ambient temperature
Standard cable inlet 1)	M20×1.5 or 1/2NPT	-40 ... +80°C
Plastic cable head (Cable diameter 6... 10 mm)1)	M20×1.5 or 1/2NPT	-40 ... +80°C
Plastic cable head (Cable diameter 6... 10 mm), Ex e1)	M20×1.5 or 1/2NPT	-20 ... +80°C (Standard)
		-40 ... +70°C (selectable)
Nickel-plated brass cable joint (Cable diameter 6... 12 mm)	M20×1.5 or 1/2NPT	-60[2]/-40 ... +80°C
Stainless steel cable connector (Cable diameter 7... 12 mm)	M20×1.5 or 1/2NPT	-60[2]/-40 ... +80°C
Optical thread	M20×1.5 or 1/2NPT	-
Sealing plug for transport	M20×1.5 or 1/2NPT	-40 ... +80 °C

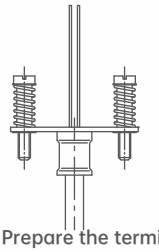
Cable inlet	Colour	Protection level (Max) IEC/ compliant EN 60529 Standard	Explosion protection							
			There is no	Ex i (gas) 0, 1, Zone 2	Ex i (Dust) 20, 21, Zone 22	Ex eb (gas) Zone 1	Ex tb (dust) Zone 21	Ex ec (Gas) 2, 21, Zone 22	Ex nA (Gas) Zone 2	Ex tc (Dust) Zone 22
Standard cable inlet [1]	Natural quality	IP65	x	x	-	-	-	-	-	-
Plastic cable head [1]	Black or grey	IP66[3]	x	x	-	-	-	-	-	-
Plastic cable head,Ex e[1]	Baby blue	IP66[3]	x	x	x	-	-	-	-	-
Plastic cable head,Ex e[1]	black	IP66[3]	x	x	x	x	x	x	x	x
Nickel-plated brass cable joint	Natural quality	IP66[3]	x	x	x	-	-	-	-	-
Nickel plated brass cable head,Ex e	Natural quality	IP66[3]	x	x	x	x	x	x	x	x
Stainless steel cable joint	Natural quality	IP66[3]	x	x	x	x	x	x	x	x
Stainless steel cable head,Ex e	Natural quality	IP66[3]	x	x	x	x	x	x	x	x
Optical thread	-	IP00	x	x	x[4]	x[4]	x[4]	x[4]	x[4]	x[4]
Sealing plug for transport	transparent	-	Not applicable, only for protection during transport							

1) Not applicable to DBM-E connectors;
2) Special versions (only with special permission) and other temperatures are available on request;
3) A level of protection can be provided upon request, describing temporary or prolonged immersion;
4) Suitable cable connectors for operation

Transmitter



The terminal board for the transmitter is installed



Prepare the terminal board for installing the transmitter

Mount to measuring rod

When the transmitter is mounted to the measuring rod, the transmitter replaces the terminal and is fixed directly to the terminal panel of the measuring rod.

Install it in the protective cap of the connection head

Instead of mounting the transmitter on the measuring rod, it is recommended to install it in the connection head protective cap. Because this installation ensures better insulation, in addition, it simplifies the replacement and installation operations required for maintenance.

Transmitter

Transmitter model number

Output signal 4... 20 mA HART® protocol, FOUNDATION™ Fieldbus and PROFIBUS® PA standard cable entry			
Transmitter	S10 type	S20 type	S30 type
Exportation			
▪ 4 ... 20 mA	×	×	-
▪ HART® agreement	-	×	-
▪ FOUNDATION™ PROFIBUS® PA	-	-	×
Connection mode			
▪ 1 x 2 Wire, 3-wire or 4-wire system	×	×	×
Measuring current	< 0.2mA	< 0.3mA	< 0.2mA
Explosion protection	Selectable	Selectable	Standard

Transmitter model number

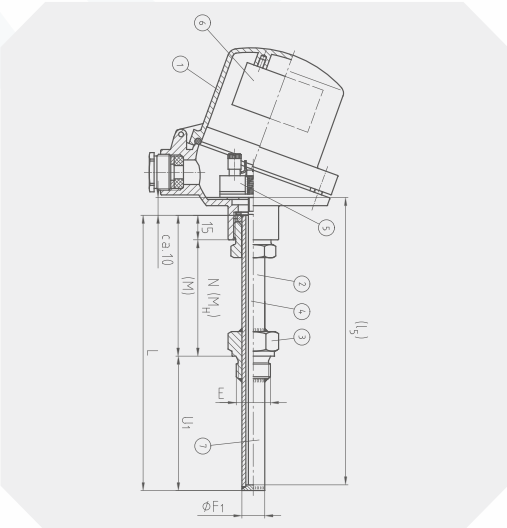
连接头	S10 type	S20 type	S30 type
DBM	○	-	○
DBM-A	○	○	○
DBM-B	●	●	●
DBM-C	○	○	○
DBM-D	●	●	●
DBM-E	○	○	○

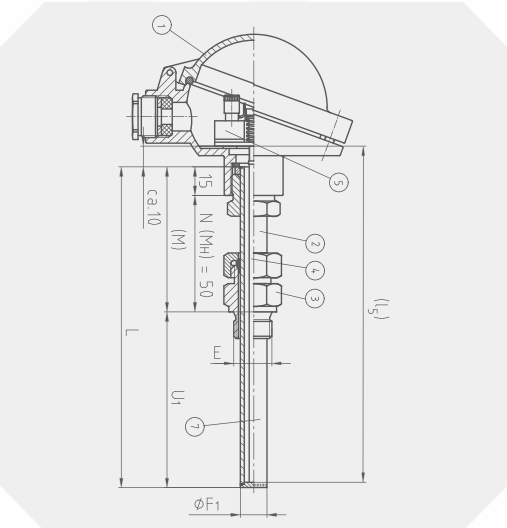
○ Install the wiring terminal instead ● Install the connector in the protective cap – Cannot install

For all the connectors listed here, they can be used to mount the transmitter on the measuring rod. 2 transmitters can be installed as required.
In order to correctly determine the overall measurement error, the measurement error of the sensor and transmitter must be increased.

Module

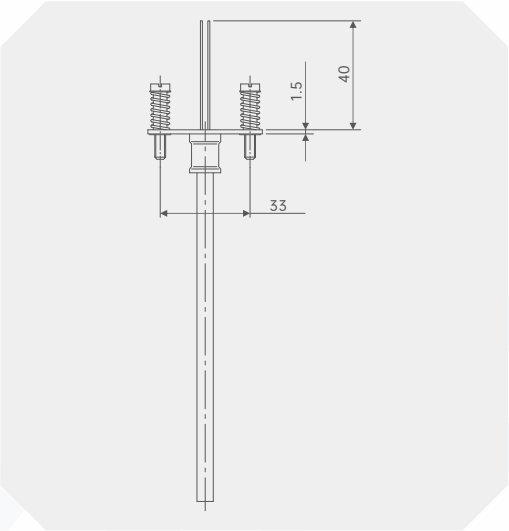
Legend:
① Junction box
② Cervical canal
③ Process connection
④ Measuring rod
⑤ Terminal board/Transmitter (optional)
⑥ Transmitter (optional) Protective tube
⑦ Total length of the protective tube
(L) Measure the length of the probe
L5 Protective tube insertion length, According to DIN 43772
Ø F1 Protective tube diameter
E Mounting thread
N (MH) Neck length
(M) Neck length



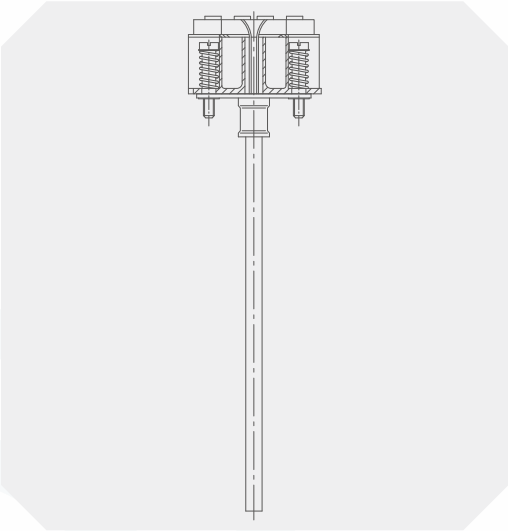


Size mm

Prepare the transmitter design for installation



A transmitter design is installed



Specification and material

Measure the length of the probe l_s (mm)	Tolerance (mm)
75 ... 825	$^{+2}_{0}$
> 825	$^{+3}_{0}$

Measure rod diameterØ d (mm)		Label (according to DIN 43735)	Tolerance (mm)
3	Standard configuration	30	$3_{\pm 0.05}$
6	Standard configuration	60	$6\ ^{0}_{-0.1}$
8 (Ø6mm with casing)	Standard configuration	-	$8\ ^{0}_{-0.1}$
8	Standard configuration	80	$8\ ^{0}_{-0.1}$
1/8 inch [3.17 mm] 1/4 inch [6.35 mm] 3/8 inch [9.53 mm]	Optional, available on request	-	-

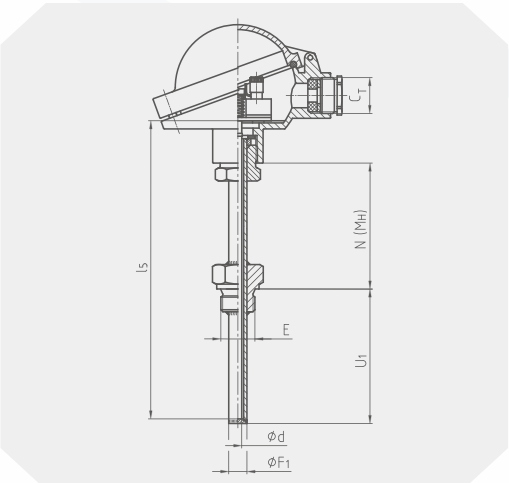
Protection tube design

Protective tube, conforming to DIN43772 Standard

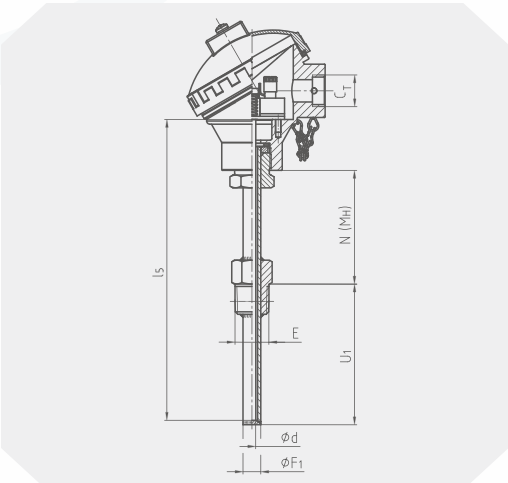
Legend:

U1	Insertion length
L5	Measure the length of the probe
N (MH)	Neck length
CT	Threaded cable inlet
ØF1	Protective tube diameter
E	Mounting thread
Ød	Measure rod diameter
P	Movable sleeve mounting thread

Protective tube, Straight, mounting thread, 2G shape (straight thread)



Protective tube, Straight, mounting thread, 2G (taper thread)



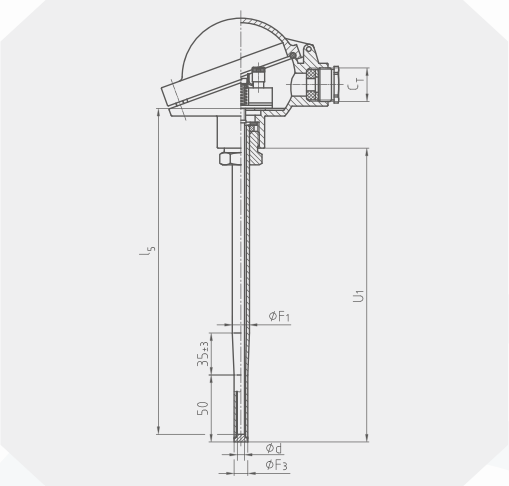
Protection tube design

Protective tube, conforming to DIN43772 Standard (with/without movable sleeve)

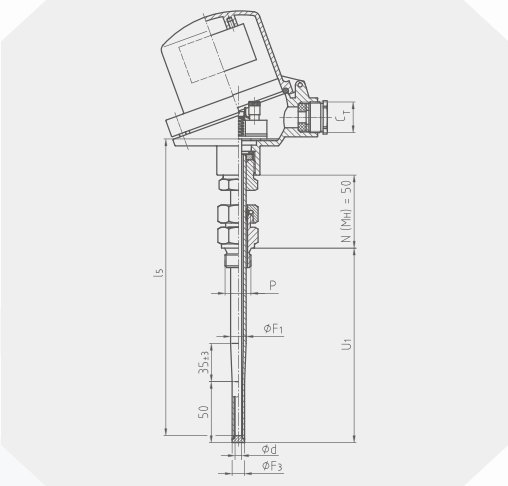
Legend:

U1	Insertion length
L5	Measure the length of the probe
N (MH)	Neck length
CT	Threaded cable inlet
Ø F1	Protective tube diameter
E	Mounting thread
Ø d	Measure rod diameter
P	Movable sleeve mounting thread

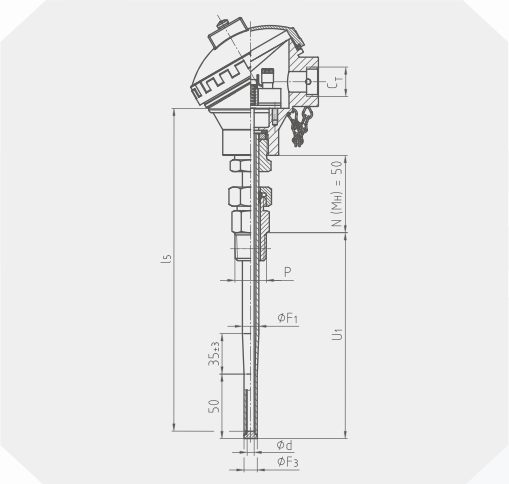
Protective tube, straight, smooth, 2-shape (without thread, smooth)



Protective tube, Straight, smooth rod, 2-shape (straight thread)



Protective tube, straight, smooth rod, 2-shape (tapered thread)



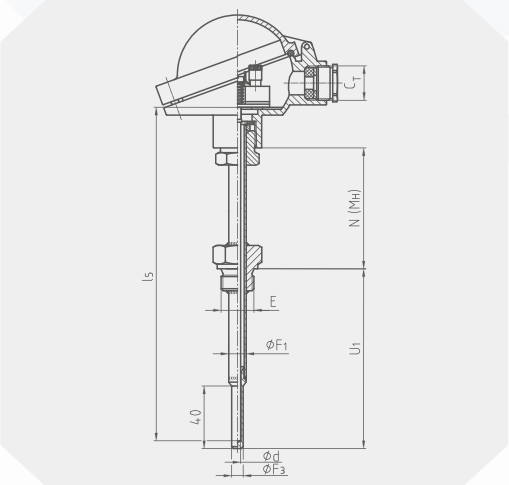
Protection tube design

Mounting thread According to DIN 43772

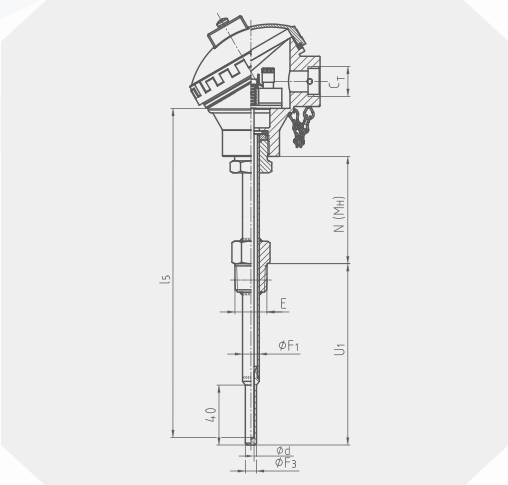
legend:

U1	Insertion length
L5	Measure the length of the probe
N (MH)	Neck length
CT	Threaded cable inlet
Ø F1	Protective tube diameter
Ø F3	Protective tube end diameter
E	Mounting thread
Ø d	Measure rod diameter
P	Movable sleeve mounting thread

Protective tube, taper, straight thread, 3G shape



Protective tube, taper, taper thread, 3G shape

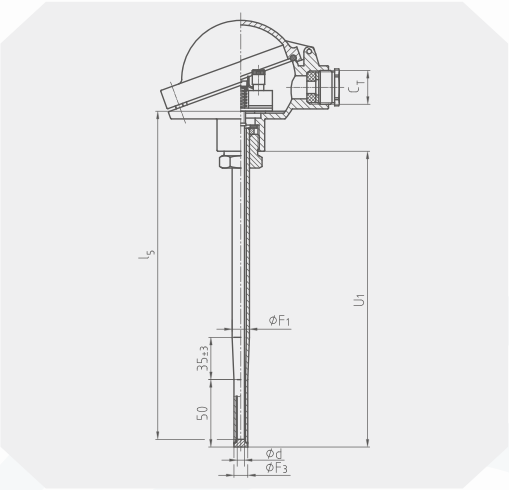


Protection tube design
Compliant with DIN43772 (with/ without movable sleeve)

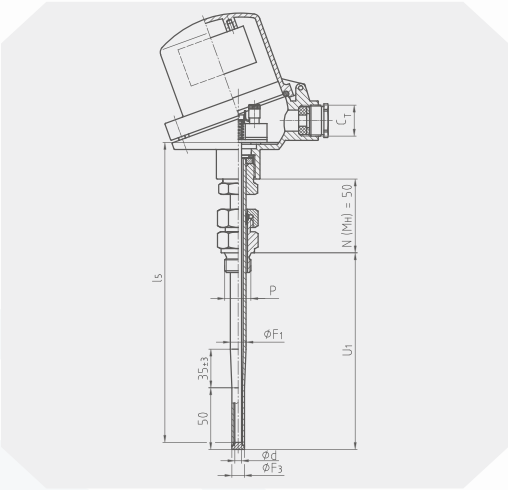
Legend:

U1	Insertion length
L5	Measure the length of the probe
N (MH)	Neck length
CT	Threaded cable inlet
Ø F1	Protective tube diameter
Ø F3	Protective tube end diameter
E	Mounting thread
Ø d	Measure rod diameter
P	Movable sleeve mounting thread

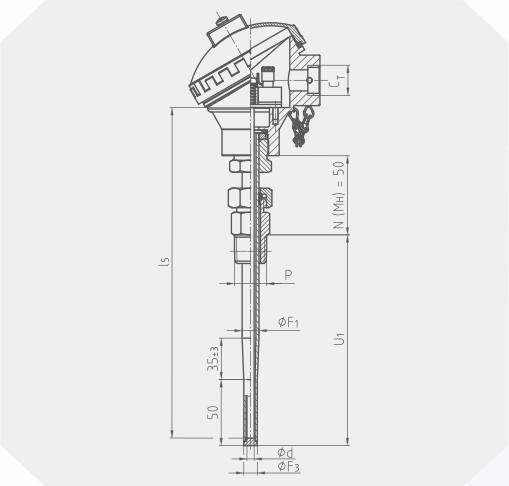
Protective tube, straight, smooth, 3-shape (without thread, smooth)



Protective tube, Straight, smooth rod, 3-shape (straight thread)



Protective tube, straight, smooth rod, 3-shape (tapered thread)

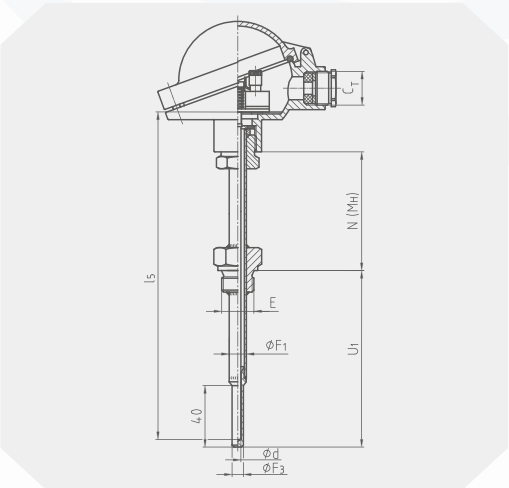


Protection tube design
Mounting thread, non-standard design

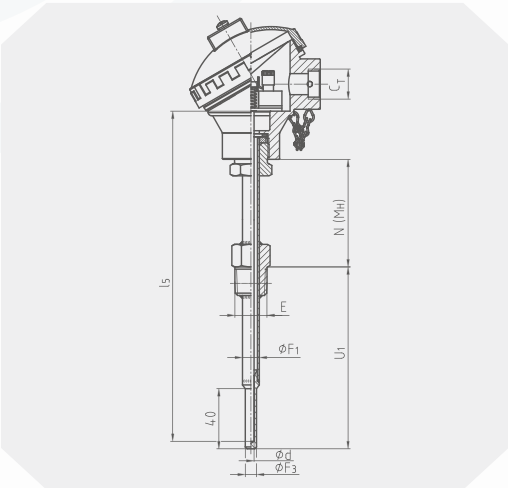
Legend:

U1	Insertion length
L5	Measure the length of the probe
N (MH)	Neck length
KE	1/2 NPT: 8.13 mm 3/4 NPT: 8.61mm
CT	Threaded cable inlet
Ø F1	Protective tube diameter
Ø F3	Protective tube end diameter
E	Mounting thread
Ø d	Measure rod diameter
P	Movable sleeve mounting thread

Protective tube, tapered, solid welded end (straight thread)



Protective tube, tapered, solid welded end (tapered thread)



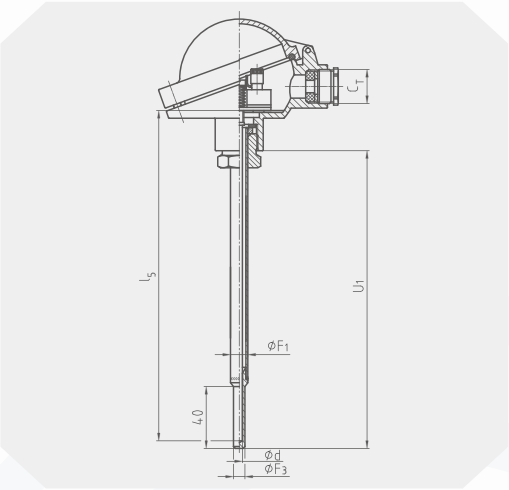
Protection tube design

Protective tube (with/ without movable sleeve)

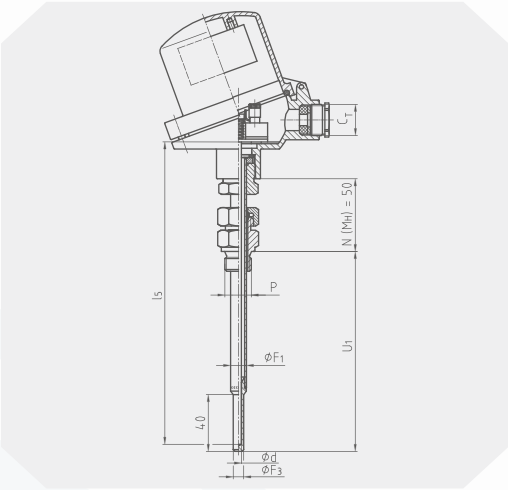
Legend:

U1	Insertion length
L5	Measure the length of the probe
N (MH)	Neck length
CT	Threaded cable inlet
ØF1	Protective tube diameter
ØF3	Protective tube end diameter
E	Mounting thread
Ød	Measure rod diameter
P	Movable sleeve mounting thread

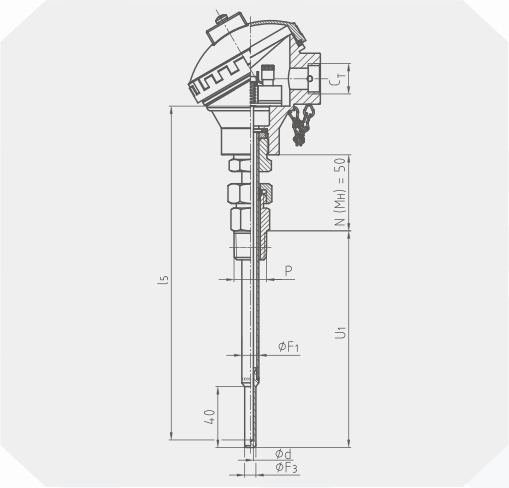
Protective tube, tapered, solid welded end (no thread, plain rod)



Protective tube, tapered, solid welded end (straight thread)



Protective tube, tapered, solid welded end (tapered thread)



Protection tube design

The protective tube consists of a drawn tube and a welded bottom that can be screwed into the junction box using a rotary threaded connection (outer nut). After loosening the outer nut, the junction box and cable outlet can be adjusted to the desired position. At the factory, the process connections are welded in place according to customer specifications. This will determine the insertion length. It is best to use a DIN compliant insert length.
The immersion depth in the process medium should be at least 10 times the outer diameter of the protective tube.

Protective tube type

Protective tube (according to DIN 43722)	Protective tube diameter	Process connection	Suitable for measuring probe diameter	Connection to measuring head	Materials
Straight, 2G, mounting thread	9 x 1 mm	G 1/4 B, mounting thread	6 mm	M24 x 1.5 (Rotatable threaded connection, external nut)	1.4571
		G 1/2 B, mounting thread			
		G 3/4 B, mounting thread			
		G 1 B, install thread			
		M18 x 1.5, mounting thread			
		M20 x 1.5, mounting thread			
		M27 x 2, mounting thread			
		1/2 NPT, mounting thread			
		3/4 NPT, mounting thread			

Protection tube design

The protective tube consists of a drawn tube and a welded bottom that can be screwed into the junction box using a rotary threaded connection (outer nut). After loosening the outer nut, the junction box and cable outlet can be adjusted to the desired position. At the factory, the process connections are welded in place according to customer specifications. This will determine the insertion length. It is best to use a DIN compliant insert length.
The immersion depth in the process medium should be at least 10 times the outer diameter of the protective tube.

Protective tube type

Protective tube (according to DIN 43722)	Protective tube diameter	Process connection	Suitable for measuring probe diameter	Connection to measuring head	Materials
Straight, 2G, mounting thread	11 x 2 mm 12 x 2.5 mm	G 1/2 B, mounting thread	6 mm	M24 x 1.5 (Rotatable threaded connection, external nut)	1.4571
		G 3/4 B, mounting thread			
		G 1 B, install thread			
		M18 x 1.5, mounting thread			
		M20 x 1.5, mounting thread			
		M27 x 2, mounting thread			
		1/2 NPT, mounting thread			
		3/4 NPT, mounting thread			
	14 x 2.5 mm	G 1/2 B, mounting thread	8 mm (6 mm, thimble)		
		G 3/4 B, mounting thread			
		G 1 B, install thread			
		M18 x 1.5, mounting thread			
		M20 x 1.5, mounting thread			
		M27 x 2, mounting thread			
		1/2 NPT, mounting thread			
		3/4 NPT, mounting thread			
Tapered, 3G, mounting thread	12 x 2.5 mm, The cone transitions to 9 mm	G 1/2 B, mounting thread	6 mm		
		G 3/4 B, mounting thread			
		G 1 B, install thread			
		M18 x 1.5, mounting thread			
		M20 x 1.5, mounting thread			
		M27 x 2, mounting thread			
		1/2 NPT, mounting thread			
		3/4 NPT, mounting thread			
Straight, smooth rod, 2-shape, with/without adjustable clamp	9 x 1 mm 11 x 2 mm 12 x 2.5 mm	G 1/2 B adjustable collar (metal collar)	6 mm		
		1/2 NPT active collar (metal collar)			
		Unthreaded connection			
Tapered, smooth rod, 3-shape, with /without adjustable clamp	12 x 2.5 mm, The cone transitions to9 mm	G 1/2 B adjustable collar (metal collar)	6 mm		
		1/2 NPT active collar (metal collar)			
		Unthreaded connection			

Protection tube design

The protective tube consists of a drawn tube and a welded bottom that can be screwed into the junction box using a rotary threaded connection (outer nut). After loosening the outer nut, the junction box and cable outlet can be adjusted to the desired position. At the factory, the process connections are welded in place according to customer specifications. This will determine the insertion length. It is best to use a DIN compliant insert length.
The immersion depth in the process medium should be at least 10 times the outer diameter of the protective tube.

Other protective tube models

Conical protection tube, non-standard design	Protective tube diameter	Process connection	Suitable for measuring probe diameter	Connection to measuring head	Materials
Tapered, solid welded end, mounting thread	9 x 1 mm, The cone transitions to 6 mm	G 1/4 B, mounting thread	3 mm	M24 x 1.5 (Rotatable threaded connection, external nut)	1.4571
		G 1/2 B, mounting thread			
		G 3/4 B, mounting thread			
		G 1 B, install thread			
		M18 x 1.5, mounting thread			
		M20 x 1.5, mounting thread			
		M27 x 2, mounting thread			
		1/2 NPT, mounting thread			
		3/4 NPT, mounting thread			
	11 x 2 mm, Cone transition to 6 mm 12 x 2.5 mm, cone transition to 6 mm	G 1/2 B, mounting thread			
		G 3/4 B, mounting thread			
		G 1 B, install thread			
		M14 x 1.5, mounting thread			
		M18 x 1.5, mounting thread			
		M20 x 1.5, mounting thread			
		1/2 NPT, mounting thread			
		3/4 NPT, mounting thread			
Tapered, solid welded end, smooth rod, with/without movable clamp	9 x 1 mm, cone transition to 6 mm 11 x 2 mm, cone transition to 6 mm 12 x 2.5 mm, cone transition to 6 mm	G 1/2 BMovable sleeve (metal collar)			
		1/2 NPTMovable sleeve (metal collar)			
		Without threaded connection (bare rod)			

Straight protective tube, non-standard design	Protective tube diameter	Process connection	Suitable for measuring probe diameter	Connection to measuring head	Materials
Straight, mounting thread	6 x 1 mm 8 x 1 mm	G 1/4 B, mounting thread	3 mm	M24 x 1.5 (Rotatable threaded connection, external nut)	1.4571
		G 1/2 B, mounting thread			
		M18 x 1.5, mounting thread			
		M20 x 1.5, mounting thread			
		1/2 NPT, mounting thread			
	10 x 1 mm 10 x 1.5 mm	G 1/2 B, mounting thread	6 mm		316L
		G 3/4 B, mounting thread			
		G 1 B, install thread			
		M18 x 1.5, mounting thread			
		M20 x 1.5, mounting thread			
		M27 x 2, mounting thread			
		1/2 NPT, mounting thread			
		3/4 NPT, mounting thread			

Protection tube design

The protective tube consists of a drawn tube and a welded bottom that can be screwed into the junction box using a rotary threaded connection (outer nut). After loosening the outer nut, the junction box and cable outlet can be adjusted to the desired position. At the factory, the process connections are welded in place according to customer specifications. This will determine the insertion length. It is best to use a DIN compliant insert length.
The immersion depth in the process medium should be at least 10 times the outer diameter of the protective tube.

Other protective tube models

Straight protective tube, Non-standard design	Protective tube diameter	Process connection	Suitable for measuring probe diameter	Connection to measuring head	Materials
Straight, mounting thread	12 x 1 mm 12 x 1.5 mm	G 1/2 B, installation thread	8 mm (6 mm, thimble)	M24 x 1.5 (Rotatable threaded connection, external nut)	316L
		G 3/4 B, installation thread			
		G 1 B, installation thread			
		M18 x 1.5, installation thread			
		M20 x 1.5, installation thread			
		M27 x 2, installation thread			
		1/2 NPT, mounting thread			
		3/4 NPT, installation thread			
Straight, smooth rod with/without movable clamp	6 x 1 mm 8 x 1 mm	G 1/2 B movable ferrule (metal collar)	3 mm		1.4571 316L (8x1 mm)
		1/2 NP movable ferrule (metal collar)			
		Without threaded connection (bare rod)			
	9 x 1 mm 10 x 1 mm 10 x 1.5 mm 12 x 1 mm 12 x 1.5 mm	G 1/2 B movable ferrule (metal collar)	6 mm		1.4571 316L (9x1 mm)
		1/2 NP movable ferrule (metal collar)			
		Without threaded connection (bare rod)			

Insertion length

Protection tube design	Standard insertion length	Minimum/maximum insertion length
Straight, mounting thread, 2G (DIN 43772)	160, 250, 400 mm	50 mm / 4,000 mm
Tapered, mounting thread, 3G shape (DIN 43772)	160, 220, 280 mm	110 mm / 4,000 mm
Straight, smooth rod, with/without adjustable sleeve, 2-shape (DIN 43772)	-	50 mm / 4,000 mm
Tapered, smooth rod, with/without adjustable sleeve, 3-shape (DIN 43772)	-	110 mm / 4,000 mm
Tapered, solid welded ends, mounting threads, non-standard design	160, 250, 400 mm	75 mm / 4,000 mm
Tapered, smooth rod, solid welded end, with/without movable sleeve, non-standard design	-	75 mm / 4,000 mm

Neck length

The neck tube can be screwed into the junction box. Neck length depends on the intended use. Usually the neck tube acts as a barrier. In many cases, the neck tube can also be used as an extended cooling element between the junction box and the medium, providing protection for the built-in transmitter at high medium temperatures.

Protection tube design	Standard insertion length	Minimum/maximum insertion length
Straight, mounting thread, 2G (DIN 43772)	130 mm	30 mm / 1,000 mm
Tapered, mounting thread, 3G shape (DIN 43772)	132 mm	30 mm / 1,000 mm
Straight, smooth rod, 2-shape with adjustable sleeve (DIN 43772)	50 mm	50 mm
Straight, smooth rod, no adjustable sleeve, 2-shape (DIN 43772)	-	-
Tapered, smooth rod, 3-shape with adjustable sleeve (DIN 43772)	50 mm	50 mm
Tapered, smooth rod, without movable sleeve, 3-shape (DIN 43772)	-	-
Tapered, solid welded ends, mounting threads, non-standard design	130 mm	30 mm / 1,000 mm
Tapered, solid welded ends with movable ferrule, non-standard design	50 mm	50 mm
Tapered, solid welded ends, no process connections, non-standard design	-	-

DB05-Selection composition

Selection example Threaded type DB05

B	S	G	J	S	V	F	B	E	C	S	A	P	N
1	2	3	4	5	6	7	8	9	10	11	12	13	14

1.Selection description	A	All-in-one transmitter
	B	Threaded casing
	C	Intrinsically safe explosion-proof type
	D	Flameproof type
	T( )	Other types
2.Threaded connection	S	Sliding thread
	F	Fixed thread
3.Insert probe design	G	Fixed installation
	H	Spring fixed terminal block (replaceable insert)
4.Junction box	I	aluminum
	J	Stainless steel
	K	With digital temperature display
	T( )	Other types of junction boxes
5.Electrical interface	R	1/2NPT
	S	M20×1.5
6.Wiring block/sensor	U	Crastin Terminal block
	V	Ceramic connection block
	W	S10 (4-20mA transmitter)
	X	S20 (HART transmitter)
	Y	S30 (Fieldbus transmitter)
7.Wire system	F	Single 3-wire system
	T	Double branch 6-wire system
	T( )	Other wire system
8.Dimension of thread connection	A	1/2NPT
	B	G1/2
	C	M20×1.5
9.Thermal resistance element	E	Pt100, B level
	F	Pt100, A level
	G	Pt1000, B level
	H	Pt1000, A level
10.Probe material	C	304SS
	L	316/316L (1.4401/1.4435)
	T( )	Other materials
11.Temperature range (℃)	N	-50...+250
	O	-50...+450
	P	-200...+250
	Q	-200...+450
	R	-200...+600
	S	0...+400
	T	0...+500
	T( )	Other measured temperatures

DB05-Selection composition

Selection example Threaded type DB05

B	S	G	J	S	V	F	B	E	C	S	A	P	N
1	2	3	4	5	6	7	8	9	10	11	12	13	14

12.Rod length (mm)	A	50	
	B	100	
	C	150	
	D	200	
	E	250	
	F	300	
	G	350	
	H	400	
	I	450	
	J	500	
	T( )	Other lengths	
13.Rod diameter (mm)	S	3mm	
	Q	4mm	
	R	5mm	
	P	6mm	
	T	8mm	
	U	10mm	
14.Safety certification	E	Intrinsic safety	
	D	flameproof	
	N	There is no	
15.Additional order information	X	Additional information	
	N	There is no	

Instructions:

It means that the DB05 thermal resistance is a thermometer with threaded sleeve, the thread connection mode is sliding thread, the probe rod design is fixed installation, the connection box is stainless steel, the electrical interface is M20*1.5, the sensor is ceramic connection block, the single three-wire system, the thread specification is G1/2, the thermal resistance element is Pt100, the grade B, the probe rod material is 304SS, and the thermal resistance component is PT100. Temperature range 0... 400℃, rod length 50mm, rod diameter 6mm, no explosion-proof, 15 parts are not required.

DB05-Selection composition

Selection example
Flange connection type **DB05**

B	S	G	L	V	B	G	N	V	D	G	X	F	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14

1.Selection description	A	All-in-one transmitter
	B	Flange casing
	C	Intrinsically safe explosion-proof type EEx-i
	D	Flameproof Ex-d
	T( )	Other types
2.Flange connection	S	20592 Standard flange
	F	ANSI Standard flange
3.Insert probe design	G	Fixed installation
	H	Spring fixed terminal block (replaceable insert)
4.Junction box	K	aluminum
	L	Stainless steel
	M	With digital temperature display
	T( )	Other types of junction boxes
5.Electrical interface	U	1/2NPT
	V	M20×1.5
6.Wiring block/sensor	A	Crastin Terminal block
	B	Ceramic connection block
	C	S10 (4-20mA transmitter)
	D	S20 (HART transmitter)
	E	S30 (Fieldbus transmitter)
7.Wire system	G	Single 3-wire system
	H	Double branch 6-wire system
	T( )	Other wire system
8.Flange connection size	N	DN25
	O	DN50
	P	DN80
	Q	DN100
	R	ANSI 1"
	S	ANSI 2"
	T	ANSI 3"
	U	ANSI 4"
	T( )	Other flange types
9.Thermal resistance element	V	Pt100, B level
	W	Pt100, A level
	X	Pt1000, B level
	Y	Pt1000, A level
10.Rod diameter	A	3mm
	B	4mm
	C	5mm
	D	6mm
	E	8mm
	F	10mm

DB05-Selection composition

Selection example
Flange connection type DB05

B	S	G	L	V	B	G	N	V	D	G	X	F	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14

11.Rod length (mm)	G	50	
	O	100	
	P	150	
	Q	200	
	R	250	
	S	300	
	T	350	
	U	400	
	V	450	
	W	500	
	T( )	Other lengths	
12.Probe rod material	X	304SS	
	Y	316/316L (1.4401/1.4435)	
	Z	Other materials	
13.Temperature range (℃)	A	-50...+250	
	B	-50...+450	
	C	-200...+250	
	D	-200...+450	
	E	-200...+600	
	F	0...+400	
	G	0...+500	
	T( )	Other measured temperatures	
14.Safety certification	X	Intrinsic safety	
	Y	flameproof	
	Z	There is no	
15.Additional order information	V	Additional information	
	N	There is no	

Instructions:

It means that the DB05 thermal resistance is a thermometer with flanged sleeve, the connection mode is 20592 standard flange, the probe rod design is fixed installation, the connection box is stainless steel, the electrical interface is M20*1.5, the sensor is ceramic connecting block, the single three-wire system, the flange specification is DN25, the thermal resistance element is Pt100, the class B, the diameter of the probe rod is 6mm. The length of the rod is 50mm, the material of the rod is 304SS, and the temperature range is 0... 400℃, no explosion-proof, 15 items are not required.

Product certification

Compliance and approval; Rodwig thermometers meet key standards and certifications for process measurement technology; Thus guaranteeing the highest reliability in such Settings;

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