

In-line resistance thermometer Model TR25

WIKA data sheet TE 60.25



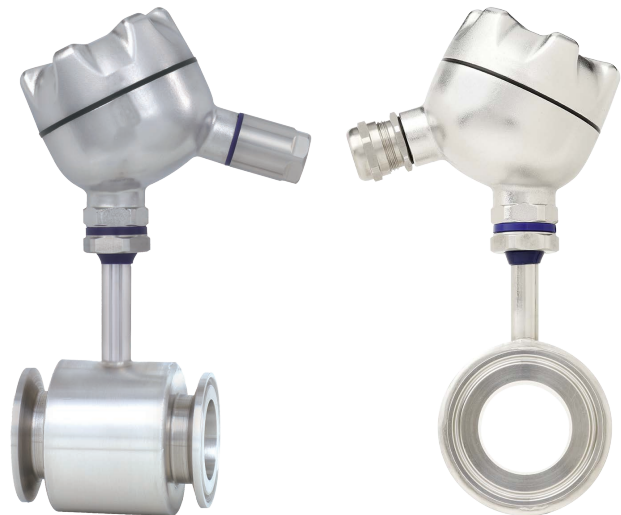
For further approvals,
see page 8

Applications

- Food and beverage industry, dairies, drink dispensers and bottling plants, breweries
- Bio and pharmaceutical industries, cleanroom technology
- For piggable systems

Special features

- Hygienic Design (dead-space free transitions)
- Residue-free and quick cleaning of the measuring point (piggable, suitable for SIP and CIP)
- Materials and surface finish qualities in accordance with pharmaceutical industry directives and standards
- High measuring accuracy with short response times
- Also as explosion-protected versions



In-line resistance thermometer, model TR25
Options: sealing combination at neck tube, cable gland in Hygienic Design

Description

Resistance thermometer for temperature measurement in pipelines with extremely high hygienic requirements. This thermometer is used in applications where a thermowell/protection tube immersed into the process medium is not possible or not desired, particularly for piggable pipelines, highly viscous media and flow conditions with high shear forces. A wide variety of process connections enables problem-free fitting into many different processes.

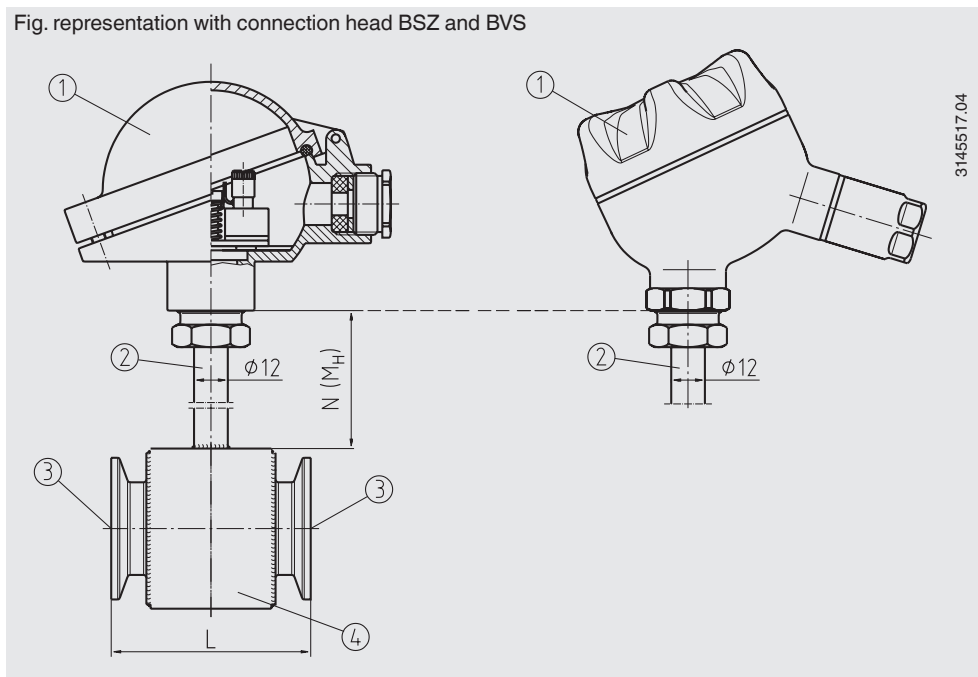
3- or 4-wire platinum measuring resistors in accuracy classes A and B per DIN EN 60751 serve as sensors.

Analogue or digital transmitters built into the connection head are capable of making various output signals available, for example 4 ... 20 mA, HART® protocol, FOUNDATION™ Fieldbus or PROFIBUS® PA.

Specifications

Representation of the components

Fig. representation with connection head BSZ and BVS



Legend:

- ① Connection head
- ② Neck tube
- ③ Process connection
- ④ Tubular body

L Insertion length
 N (M_H) Neck length

Measuring element	
Type of measuring element ¹⁾	Pt100 (thin-film) → For detailed specifications for Pt sensors, see technical information IN 00.17 at www.wika.com .
Measuring current	
Transmitter version	Model T15 < 0.2 mA Model T32 < 0.3 mA
Pt100 version (without transmitter)	0.1 ... 1.0 mA
Connection method	
Transmitter version	■ 1 x 3-wire ■ 1 x 4-wire
Pt100 version (without transmitter)	■ 1 x 3-wire ■ 1 x 4-wire
Tolerance value of the measuring element ²⁾ per IEC 60751	■ Class A ■ Class B

1) Instrument does not have a replaceable measuring insert.

2) Specification is only valid for the measuring element. Depending on the process connection, the deviation can be bigger.

→ For accuracy specifications of built-in temperature transmitters, see respective transmitter data sheet.

Accuracy specifications (4 ... 20 mA version) and HART® protocol

Measuring deviation ¹⁾

-1 Kelvin + accuracy of the relevant transmitter

1) Measured at 100 °C [212 °F]

Documentation and correction of measuring deviations

With these electrical thermometers, the measuring deviation can be determined under realistic mounting conditions and certified with a test certificate. The standard test temperature is 70 °C [158 °F]; others available on request.


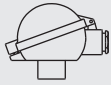
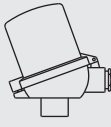
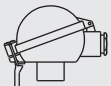
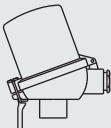


If a digital transmitter is mounted within the thermometer, any measuring deviation determined can be corrected using the transmitter's adaption feature.

Measuring range

Temperature range

Transmitter version	-50 ... +150 °C [-58 ... +302 °F] ¹⁾	
	Further measuring ranges are adjustable	
Pt100 version (without transmitter)	Class A	-30 ... +150 °C [-22 ... +302 °F]
	Class B	-50 ... +150 °C [-58 ... +302 °F]
Unit (4 ... 20 mA version)	Configurable °C, °F, K	

1) The connection head should therefore be protected from temperatures over 80 °C [176 °F].

Connection head						
Model	Material	Cable inlet thread size	Ingress protection (max.) ¹⁾ IEC/EN 60529	Cap	Surface	
 BS	Aluminium	<ul style="list-style-type: none"> ■ M20 x 1.5 ■ M12 x 1 coupler connector (4-pin) 	IP65 ³⁾	Flat cover with 2 screws	Blue, painted (RAL 5022)	
 BSZ	Aluminium	<ul style="list-style-type: none"> ■ M20 x 1.5 ■ M12 x 1 coupler connector (4-pin) 	IP65 ³⁾	Spherical hinged cover with cylinder head screw	Blue, painted (RAL 5022)	
	BSZ-H	Aluminium	<ul style="list-style-type: none"> ■ M20 x 1.5 ■ M12 x 1 coupler connector (4-pin) 	IP65 ³⁾	Raised hinged cover with cylinder head screw	Blue, painted (RAL 5022)
	BSZ-HK	PAV antistatic PA12	<ul style="list-style-type: none"> ■ M20 x 1.5 ■ M12 x 1 coupler connector (4-pin) 	IP65	Raised hinged cover with cylinder head screw	Black
	BSZ-H / DIH10²⁾	Aluminium	<ul style="list-style-type: none"> ■ M20 x 1.5 ■ M12 x 1 coupler connector (4-pin) 	IP65	Raised hinged cover with cylinder head screw	Blue, painted (RAL 5022)
 BSS	Aluminium	<ul style="list-style-type: none"> ■ M20 x 1.5 ■ M12 x 1 coupler connector (4-pin) 	IP65	Spherical hinged cover with clamping lever	Blue, painted (RAL 5022)	
 BSS-H	Aluminium	<ul style="list-style-type: none"> ■ M20 x 1.5 ■ M12 x 1 coupler connector (4-pin) 	IP65	Raised hinged cover with clamping lever	Blue, painted (RAL 5022)	
 BVS	Stainless steel (1.4308)	<ul style="list-style-type: none"> ■ M20 x 1.5 ■ M12 x 1 coupler connector (4-pin) 	IP65	Screw-on lid, Hygienic Design	Natural finish, electropolished	
 BVC	Stainless steel (1.4571)	<ul style="list-style-type: none"> ■ M16 x 1.5 ■ M12 x 1 coupler connector (4-pin) 	IP68 ⁴⁾	Flat screw-on lid	Metal bright finished	

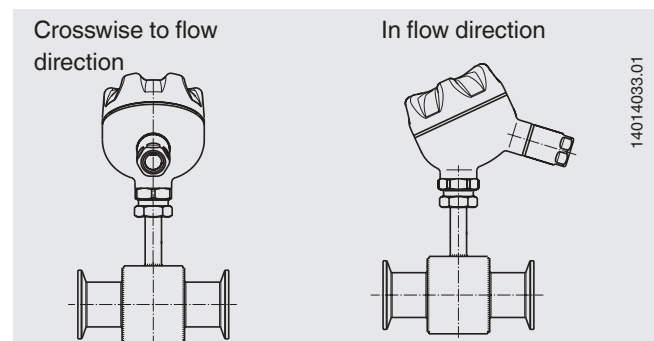
- 1) IP ingress protection of the connection head. The IP ingress protection of the complete TR25 instrument does not necessarily have to correspond to the connection head.
2) DIH10 LED display
3) Ingress protections describing temporary or permanent immersion, on request
4) Max. IP65 for cable inlet with M12 x 1 coupler connector (4-pin)



Further thread sizes on request.

Cable inlet with M12 x 1 coupler connector (4-pin)



Position of the cable inlet at the connection head



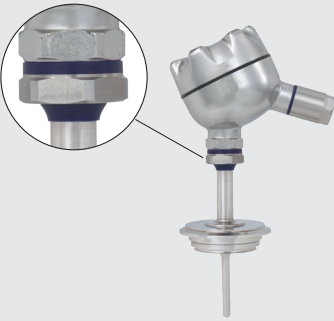
Transmitter	Model T15	Model T32
Transmitter data sheet	TE 15.01	TE 32.04
Figure		
Analogue output	4 ... 20 mA	<ul style="list-style-type: none"> ■ 4 ... 20 mA ■ HART® protocol
Possible assembly combinations		
BVC	○	○
BVS	○	○
BS	○	-
BSZ / BSZ-K	○	○
BSZ-H / BSZ-HK	●	●
BSS	○	○
BSS-H	●	●

Mounting of 2 transmitters on request

Legend

- Mounted instead of terminal block
- Mounted within the cover of the connection head
- Mounting not possible

Process connection	
Type of process connection	<ul style="list-style-type: none"> ■ Connection for pipes per DIN 11866 row A, B, C ■ Clamp per DIN 32676 ■ Threaded connection per DIN 11851 ■ Threaded connection per DIN 11864-1 form A ■ Threaded connection NEUMO BioConnect® <p>Other process connections on request</p>
Neck tube	
Neck tube diameter	12 mm [0.47 in]
Neck length N (M _H)	50 mm [1.97 in]
Surface roughness	<ul style="list-style-type: none"> ■ R_a ≤ 0.76 μm ■ R_a ≤ 0.76 μm electropolished ■ R_a ≤ 0.38 μm ■ R_a ≤ 0.38 μm electropolished
Connection to thermometer	Screwed into the connection head (M24 x 1.5)
Material (wetted)	Stainless steel

Process connection	
Sealing combination	<p>Transition from the connection head to the thermowell/protection tube is effected via version with sealing combination (polyurethane) of flat gasket and wiper</p> <ul style="list-style-type: none"> ■ Permanently prevents the penetration and depositing of humidity and impurities in this area (IP68) ■ Simplifies cleaning considerably (in combination with the patented BVS head and the hygienic cable gland, an easy to clean and hygienic measuring location results, even in non-wetted areas) 
Material (wetted)	Stainless steel 1.4435 (316L)
Sealing material	<ul style="list-style-type: none"> ■ NBR ■ PTFE ■ EPDM

→ For dimensions, see dimension tables from page 11.

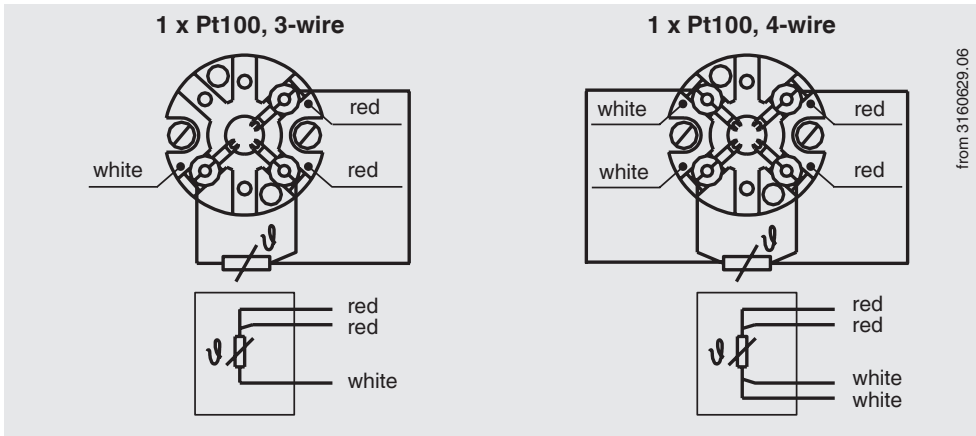
BioControl® is a registered trademark of the company NEUMO.

Output signal (transmitter version)	
Analogue output	
Transmitter models T15, T32	4 ... 20 mA
Transmitter model T32	HART® protocol
Factory configuration (transmitter)	→ Customer-specific configuration available on request
Sensor	Pt100
Connection method	3-wire
Measuring range	Measuring range 0 ... 150 °C [32 ... 302 °F] Other measuring ranges are adjustable
Time response	
Response time per IEC 60751	$t_{50} < 3.2 \text{ s}$ or $t_{90} < 7.3 \text{ s}$ + response time of the respective transmitter ¹⁾ → see data sheet for the respective transmitter

1) Flow-through housing OD 26.9 mm [1.06 in]

For further details on built-in temperature transmitters, see respective transmitter data sheet.

Electrical connection	
Connection type	<ul style="list-style-type: none"> ■ 1 x Pt100, 3-wire ■ 1 x Pt100, 4-wire



For the electrical connections of built-in temperature transmitters, see the corresponding data sheets or operating instructions.

Operating conditions	
Ambient temperature range	-40 ... +85 °C [-40 ... +185 °F]
Storage temperature range	-40 ... +85 °C [-40 ... +185 °F]

Further details on: operating conditions		
IP ingress protection per IEC/EN 60529		
First index number	Ingress protection / Short description	Test parameters
Ingress protections against solid foreign bodies (defined by the 1st index number)		
6	Dust-tight	Per IEC/EN 60529
Ingress protections against water (defined by the 2nd index number)		
5	Protected against water jets	Per IEC/EN 60529
7 ¹⁾	Protected against the effects of temporary immersion in water	Per IEC/EN 60529
8 ¹⁾	Protected against the effects of permanent immersion in water	As agreed upon



¹⁾ Ingress protections, describing temporary or permanent immersion, on request

Standard ingress protection of the model TR25 is IP65.

The specified ingress protections apply under the following conditions:





- Use of a suitable cable gland
- Use of a cable cross-section appropriate for the gland or select the appropriate cable gland for the available cable
- Adhere to the tightening torques for all threaded connections







Approvals

Logo	Description	Region
	EU declaration of conformity	European Union
	EMC directive ¹⁾ EN 61326 emission (group 1, class B) and immunity (industrial application)	
	Pressure Equipment Directive For thermowells/protection tubes > DN 25 [1"] and for the associated marking on the measuring instrument or thermowell/protection tube, WIKA confirms conformity with the Pressure Equipment Directive in accordance with the conformity assessment procedure, module H. For thermowells/protection tubes with nominal widths of ≤ DN 25 [1"], a CE marking in accordance with the Pressure Equipment Directive (PED) is not permitted and therefore, they are designed and manufactured without CE marking in line with the applicable sound engineering practice.	
	RoHS directive	
	UL - only for instrument version without explosion protection Safety (e.g. electr. safety, overpressure, ...)	USA and Canada

1) Only for built-in transmitter

Optional approvals

Logo	Description	Region
	ATEX directive Hazardous areas	European Union
	<ul style="list-style-type: none"> - Ex i Zone 0 gas II 1G Ex ia IIC T1 ... T6 Ga Zone 1 gas II 2G Ex ia IIC T1 ... T6 Gb Zone 20 dust II 1D Ex ia IIIC T125 ... T65 °C Da Zone 21 mounting to zone 20 dust II 1/2D Ex ia IIIC T125 ... T65 °C Da/Db Zone 21 dust II 2D Ex ia IIIC T125 ... T65 °C Db - Ex e ¹⁾ Zone 1 gas II 2G Ex eb IIC T1 ... T6 Gb ²⁾ Zone 2 gas II 3G Ex ec IIC T1 ... T6 Gc X Zone 21 dust II 2D Ex tb IIIC TX °C Db ²⁾ Zone 22 dust II 3D Ex tc IIIC TX °C Dc X - Ex n ¹⁾ Zone 2 gas II 3G Ex nA IIC T1 ... T6 Gc X Zone 22 dust II 3D Ex tc IIIC TX °C Dc X 	
	IECEx - in combination with ATEX Hazardous areas	International
	<ul style="list-style-type: none"> - Ex i Zone 0 gas Ex ia IIC T1 ... T6 Ga Zone 1 gas Ex ia IIC T1 ... T6 Gb Zone 20 dust Ex ia IIIC T125 ... T65 °C Da Zone 21 mounting to zone 20 dust Ex ia IIIC T125 ... T65 °C Da/Db Zone 21 dust Ex ia IIIC T125 ... T65 °C Db 	
	EAC	Eurasian Economic Community
	EMC directive ³⁾	
	Hazardous areas <ul style="list-style-type: none"> - Ex i Zone 0 gas 0Ex ia IIC T3/T4/5/T6 Zone 1 gas 1Ex ib IIC T3/T4/5/T6 - Ex n Zone 2 gas 2Ex nA IIC T6 ... T1 Gc X 	
	Ex Ukraine Hazardous areas	Ukraine
	<ul style="list-style-type: none"> - Ex i Zone 0 gas II 1G Ex ia IIC T1 ... T6 Ga Zone 1 gas II 2G Ex ia IIC T1 ... T6 Gb Zone 20 dust II 1D Ex ia IIIC T65°C Da Zone 21 dust II 2D Ex ia IIIC T65°C Db 	

Logo	Description	Region
	CCC ²⁾ Hazardous areas - Ex i Zone 0 gas Ex ia IIC T1~T6 Ga Zone 1 gas Ex ia IIC T1~T6 Gb Zone 2 gas Ex ic IIC T1~T6 Gc Zone 20 dust Ex iaD 20 T65/T95/T125 Zone 21 dust Ex iaD 21 T65/T95/T125	China
	KCs Hazardous areas - Ex i Zone 0 gas Ex ia IIC T4 ... T6 Zone 1 gas Ex ib IIC T4 ... T6	Korea
-	PESO Hazardous areas - Ex i Zone 0 gas Ex ia IIC T1 ... T6 Ga Zone 1 gas Ex ia IIC T1 ... T6 Gb	India
	PAC Kazakhstan Metrology, measurement technology	Kazakhstan
-	MChS Permission for commissioning	Kazakhstan
-	PAC Ukraine Metrology, measurement technology	Ukraine
	PAC Uzbekistan Metrology, measurement technology	Uzbekistan
	3-A ⁴⁾ Hygienic Design	USA
	EHEDG ⁴⁾ Hygienic Design	European Union

1) Only for connection head: model BSZ, BSZ-H

2) Without transmitter

3) Only for built-in transmitter

4) Confirmation of 3-A or EHEDG conformity only valid with separately selectable 2.2 test report

Instruments marked with "ia" may also be used in areas only requiring instruments marked with "ib" or "ic".

If an instrument with "ia" marking has been used in an area with requirements in accordance with "ib" or "ic", it can no longer be operated in areas with requirements in accordance with "ia" afterwards.

Version with explosion protection

The permissible power, P_{max} , as well as the permissible ambient temperature, for the respective category can be seen on the certificate for hazardous areas or in the operating instructions.

The transmitter have their own certificates for hazardous areas. The permissible ambient temperature ranges of the built-in transmitters can be taken from the corresponding transmitter operating instructions and approvals. The system operator is responsible for using suitable thermowells/protection tubes.

Certificates

Certificates		
Certificates	<ul style="list-style-type: none"> ■ 2.2 test report ■ 3.1 inspection certificate ■ DAkkS calibration certificate, traceable and accredited in accordance with ISO/IEC 17025 ■ Manufacturer's declaration regarding regulation (EC) 1935/2004 ■ Certificate of the surface roughness of wetted parts 	
Hygienic certificates	3-A approval	EHEDG approval
Clamp	Yes	Yes ²⁾
BioControl®	Yes	Yes
DIN 11851	Yes ¹⁾	Yes ²⁾
DIN 11864-1	Yes	Yes
DIN 11864-2	Yes	Yes
DIN 11864-3	Yes	Yes

1) In combination with
 - ASEPTO-STAR k-flex upgrade gaskets from Kieselmann GmbH, Germany or
 - SKS gasket set DIN 11851 EHEDG from Siersema Componenten Service (S.K.S.) B.V., Netherlands

2) In combination with
 T-ring seals from Combifit International B. V., Netherlands

The thermometer is immersed in a liquid bath for calibration.

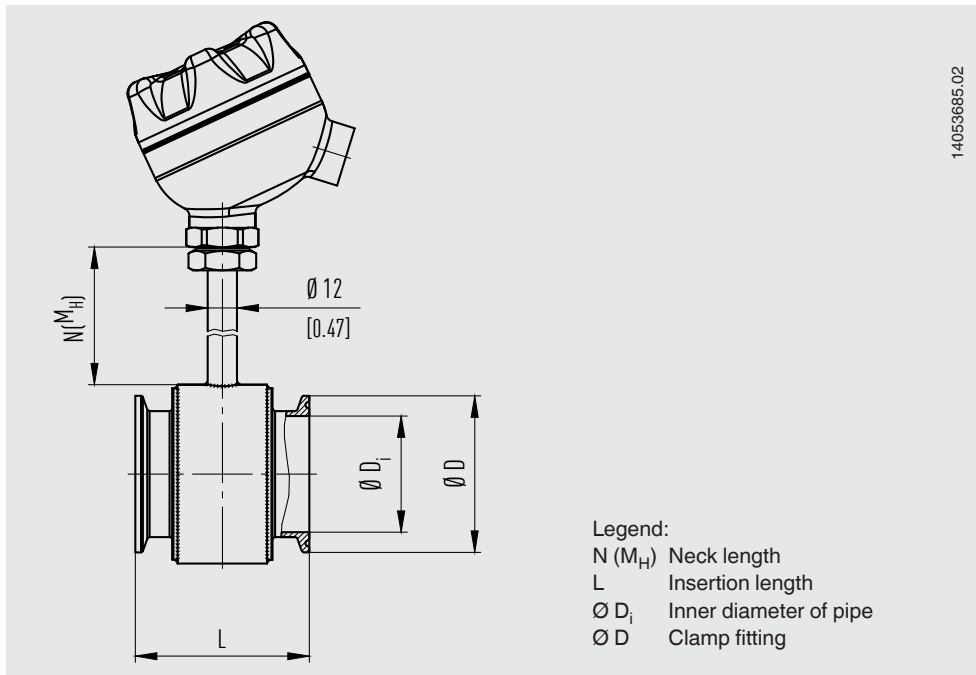
→ For approvals and certificates, see website

Patents, property rights

Case with easily cleanable twist crown, integrated into the case cap (GM 000984349)

Dimensions in mm [in]

Version with clamp connection



Legend:

- N (M_H) Neck length
- L Insertion length
- Ø D_i Inner diameter of pipe
- Ø D Clamp fitting

Clamp to DIN 32676 for pipes per DIN 11866, row A

DN	For pipe Outer Ø x wall thick- ness	Dimensions in mm [in]			PS in bar [psi] ¹⁾ _{2) 3)}
		Ø D _i	L	Ø D	
10	13 x 1.5	10 [0.39]	71 [2.8]	34 [1.34]	25 [362.6]
15	19 x 1.5	16 [0.63]	71 [2.8]	34 [1.34]	25 [362.6]
20	23 x 1.5	20 [0.79]	71 [2.8]	34 [1.34]	25 [362.6]
25	29 x 1.5	26 [1.02]	71 [2.8]	50.5 [1.99]	25 [362.6]
32	35 x 1.5	32 [1.26]	71 [2.8]	50.5 [1.99]	25 [362.6]
40	41 x 1.5	38 [1.5]	71 [2.8]	50.5 [1.99]	25 [362.6]
50	53 x 1.5	50 [1.97]	71 [2.8]	64.0 [2.52]	16 [232.1]

- 1) For maximum pressure range consider pressure rating of clamp.
- 2) Maximum operating temperature 150 °C [302 °F]
- 3) All thermowells/protection tubes of this model series that are internally pressurised, with a nominal diameter (DN) > 25 mm [0.98 in], are manufactured and tested to module H of the Pressure Equipment Directive.

Clamp per DIN 32676 for pipes per DIN 11866 row B (ISO 1127)

DN	For pipe Outer Ø x wall thick- ness	Dimensions in mm [in]			PS in bar [psi] _{1) 2) 3)}
		Ø D _i	L	Ø D	
8	13.5 x 1.6	10.3 [0.41]	71 [2.8]	25 [0.98]	25 [362.6]
10	17.2 x 1.6	14.0 [0.55]	71 [2.8]	25 [0.98]	25 [362.6]
15	21.3 x 1.6	18.1 [0.71]	71 [2.8]	34 [1.34]	25 [362.6]
20	26.9 x 1.6	23.7 [0.93]	71 [2.8]	50.5 [1.99]	25 [362.6]
25	33.7 x 2	29.7 [1.17]	71 [2.8]	50.5 [1.99]	25 [362.6]
32	42.4 x 2	38.4 [1.51]	71 [2.8]	50.5 [1.99]	25 [362.6]
40	48.3 x 2	44.3 [1.74]	71 [2.8]	64.0 [2.52]	16 [232.1]

- 1) For maximum pressure range consider pressure rating of clamp.
- 2) Maximum operating temperature 150 °C [302 °F]
- 3) All thermowells/protection tubes of this model series that are internally pressurised, with a nominal diameter (DN) > 25 mm [0.98 in], are manufactured and tested to module H of the Pressure Equipment Directive.

Clamp per DIN 32676 for pipes per DIN 11866, row C (ASME BPE)

DN	For pipe Outer Ø x wall thick- ness	Dimensions in mm [in]			PS in bar [psi] _{1) 2) 3)}
		Ø D _i	L	Ø D	
¾"	19.05 x 1.65	15.75 [0.62]	71 [2.8]	25 [0.98]	25 [362.6]
1"	25.4 x 1.65	22.1 [0.87]	71 [2.8]	50.5 [1.99]	25 [362.6]
1 ½"	38.1 x 1.65	34.8 [1.37]	71 [2.8]	50.5 [1.99]	25 [362.6]
2"	50.8 x 1.65	47.5 [1.87]	71 [2.8]	64.0 [2.52]	16 [232.1]

- 1) For maximum pressure range consider pressure rating of clamp.
- 2) Maximum operating temperature 150 °C [302 °F]
- 3) All thermowells/protection tubes of this model series that are internally pressurised, with a nominal diameter (DN) > 25 mm [0.98 in], are manufactured and tested to module H of the Pressure Equipment Directive.

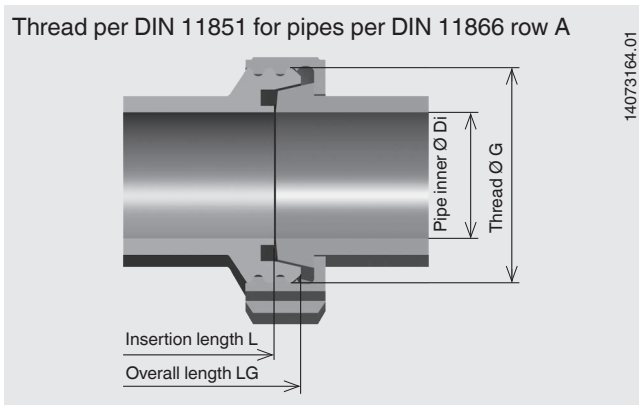
TRI-CLAMP® for pipes per BS4825 part 3 and O.D. tube

DN	For pipe Outer Ø x wall thick- ness	Dimensions in mm [in]			PS in bar [psi] _{1) 2) 3)}
		Ø D _i	L	Ø D	
½"	12.7 x 1.6	9.5 [0.37]	71 [2.8]	25 [0.98]	25 [362.6]
¾"	19.05 x 1.6	15.85 [0.62]	71 [2.8]	25 [0.98]	25 [362.6]
1"	25.4 x 1.6	22.2 [0.87]	71 [2.8]	50.5 [1.99]	25 [362.6]
1 ½"	38.1 x 1.6	34.9 [0.37]	71 [2.8]	50.5 [1.99]	25 [362.6]
2"	50.8 x 1.6	47.6 [1.87]	71 [2.8]	64.0 [2.52]	16 [232.1]

- 1) For maximum pressure range consider pressure rating of clamp.
- 2) Maximum operating temperature 150 °C [302 °F]
- 3) All thermowells/protection tubes of this model series that are internally pressurised, with a nominal diameter (DN) > 25 mm [0.98 in], are manufactured and tested to module H of the Pressure Equipment Directive.

Version with threaded connection

Thread per DIN 11851 for pipes per DIN 11866 row A

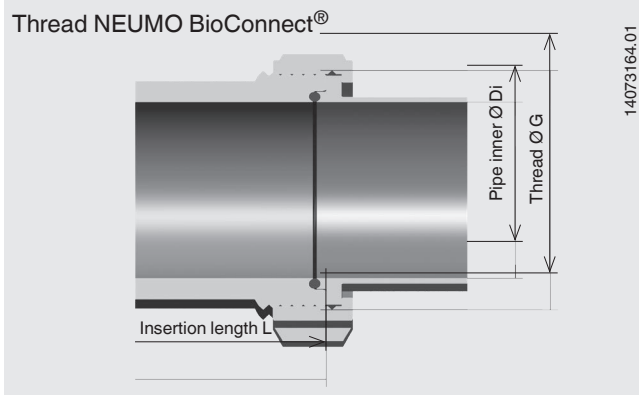


DN	For pipe Outer Ø x wall thick- ness	Dimensions in mm [in]				PS in bar [psi] ^{1) 2)}
		Ø D _i	G	LG	L	
10	13 x 1.5	10 [0.39]	Rd 28 x 1/8	84 [3.31]	76 [3.0]	40 [580.2]
15	19 x 1.5	16 [0.63]	Rd 34 x 1/8	84 [3.31]	76 [3.0]	40 [580.2]
20	23 x 1.5	20 [0.79]	Rd 44 x 1/8	84 [3.31]	72 [2.84]	40 [580.2]
25	29 x 1.5	26 [1.02]	Rd 52 x 1/8	84 [3.31]	70 [2.76]	40 [580.2]
32	35 x 1.5	32 [1.26]	Rd 58 x 1/8	84 [3.31]	70 [2.76]	40 [580.2]
40	41 x 1.5	38 [1.5]	Rd 65 x 1/8	84 [3.31]	70 [2.76]	40 [580.2]
50	53 x 1.5	50 [1.97]	Rd 78 x 1/8	84 [3.31]	70 [2.76]	25 [362.6]
65	70 x 2	66 [2.6]	Rd 95 x 1/8	88 [3.47]	72 [2.84]	25 [362.6]

1) For maximum pressure range consider pressure rating of clamp.

2) Maximum operating temperature 150 °C [302 °F]

Thread NEUMO BioConnect®



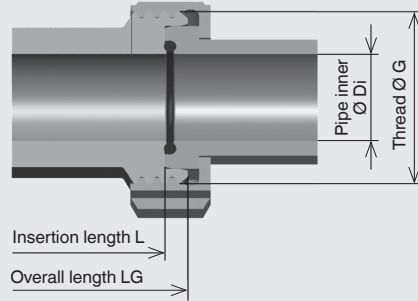
Thread NEUMO BioConnect®
for pipes per DIN 11866 row A

DN	For pipe Outer Ø x wall thick- ness	Dimensions in mm [in]			PS in bar [psi] ^{1) 2)}
		Ø D _i	G	L	
15	19 x 1.5	16 [0.63]	M30 x 1.5	84 [3.31]	16 [232.1]
20	23 x 1.5	20 [0.79]	M36 x 2	84 [3.31]	16 [232.1]
25	29 x 1.5	26 [1.02]	M42 x 2	84 [3.31]	16 [232.1]
32	35 x 1.5	32 [1.26]	M52 x 2	84 [3.31]	16 [232.1]
40	41 x 1.5	38 [1.5]	M56 x 2	84 [3.31]	16 [232.1]
50	53 x 1.5	50 [1.97]	M86 x 2	84 [3.31]	16 [232.1]
65	70 x 2	66 [2.6]	M90 x 3	88 [3.47]	16 [232.1]

1) For maximum pressure range consider pressure rating of clamp.

2) Maximum operating temperature 150 °C [302 °F]

Thread per DIN 11864-1 form A for pipes per
DIN 11866 row A



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DN	For pipe Outer Ø x wall thickness	Dimensions in mm [in]				PS in bar [psi] ^{1) 2)}
		Ø D _i	G	LG	L	
10	13 x 1.5	10 [0.39]	Rd 28 x 1/8	84 [3.31]	76 [3.0]	40 [580.2]
15	19 x 1.5	16 [0.63]	Rd 34 x 1/8	84 [3.31]	76 [3.0]	40 [580.2]
20	23 x 1.5	20 [0.79]	Rd 44 x 1/8	84 [3.31]	74 [2.91]	40 [580.2]
25	29 x 1.5	26 [1.02]	Rd 52 x 1/8	84 [3.31]	72 [2.84]	40 [580.2]
32	35 x 1.5	32 [1.26]	Rd 58 x 1/8	84 [3.31]	70 [2.76]	40 [580.2]
40	41 x 1.5	38 [1.5]	Rd 65 x 1/8	84 [3.31]	70 [2.76]	40 [580.2]
50	53 x 1.5	50 [1.97]	Rd 78 x 1/8	84 [3.31]	70 [2.76]	25 [362.6]
65	70 x 2	66 [2.6]	Rd 95 x 1/8	88 [3.47]	72 [2.84]	25 [362.6]

1) Maximum operating temperature 150 °C [302 °F]

2) All thermowells/protection tubes of this model series that are internally pressurised, with a nominal diameter (DN) > 25 mm [0.98 in], are manufactured and tested to module H of the Pressure Equipment Directive.

Flange connections, clamp connections and further nominal widths on request.

**Thread NEUMO BioConnect®
for pipes per DIN 11866 row B (ISO 1127)**

DN	For pipe Outer Ø x wall thickness	Dimensions in mm [in]			PS ^{1) 2)}
		Ø D _i	G	L	
15	21.3 x 1.6	18.1 [0.71]	M30 x 1.5	84 [3.31]	16 [232.1]
20	26.9 x 1.6	23.7 [0.93]	M36 x 2	84 [3.31]	16 [232.1]
25	33.7 x 2	29.7 [1.17]	M42 x 2	84 [3.31]	16 [232.1]
32	42.4 x 2	38.4 [1.51]	M52 x 2	84 [3.31]	16 [232.1]
40	48.3 x 2	44.3 [1.74]	M56 x 2	84 [3.31]	16 [232.1]
50	60.3 x 2	56.3 [2.22]	M86 x 2	84 [3.31]	16 [232.1]
65	76.1 x 2.3	71.5 [2.82]	M90 x 3	88 [3.47]	16 [232.1]

1) Maximum operating temperature 150 °C [302 °F]

2) All thermowells/protection tubes of this model series that are internally pressurised, with a nominal diameter (DN) > 25 mm [0.98 in], are manufactured and tested to module H of the Pressure Equipment Directive.

Ordering information

Model / Explosion protection / Connection head / Female thread on connection head / Terminal block, transmitter / Position of the cable inlet / Process connection / Material of wetted parts / Surface roughness / Insertion length / Neck tube length / Measuring element / Connection method / Temperature range / Certificates

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In case of a different interpretation of the translated and the English data sheet, the English wording shall prevail.