

Machine Glass Thermometer

V-Form • Model 32



Approval German Lloyd*

Thermometers

Service intended

Universal application in plant, machine, tank and apparatus construction as well as for central and large heating systems.

Measuring principle

Liquid expansion

Limit of error

DIN 16 195

Pressure rating of stem

6 bar maximum (without thermowell)

Stem

10 mm diameter

6.5 mm diameter with NS 200 x 36 with union nut M 24 x 1.5

Case

Aluminium, brass colour anodised

Lettering

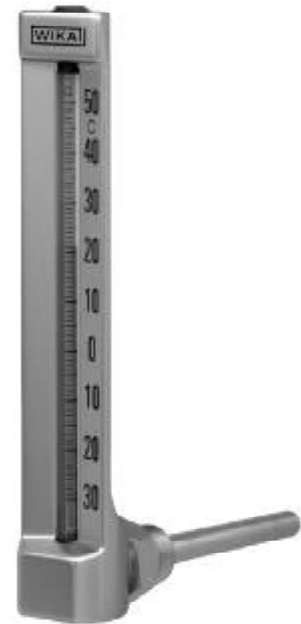
printed with special ink, protected by anodised finish

Thermometer glass insert

Rod shape, prismatic capillaries

Nominal size

110, 150 and 200 mm



* only straight design and 90° angle design

Nominal size 110 x 30 mm

Standard features

Design of connection

Connection E, male thread

Straight design (DIN 16181)

Male thread

G ½ A, M 20 x 1.5 (Form B to DIN)

G ¾ A, M 16 x 1.5 (Form B1 to DIN)

Male thread screwed into case

Length of stem $l_1 = 30, 40, 63, 100, 160, 250$ or 400 mm

Cu-alloy

90° angle design (DIN 16182)

Male thread

G ½ A, M 20 x 1.5 (Form S to DIN)

G ¾ A, M 16 x 1.5 (Form S1 to DIN)

Male thread inserted into case, removable

Length of stem $l_1 = 30, 40, 63, 100, 160, 250$ or 400 mm

Cu-alloy

135° angle design

Male thread

G ½ A, M 20 x 1.5

G ¾ A, M 16 x 1.5

Male thread screwed into case

Length of stem $l_1 = 30, 40, 63, 100, 160, 250$ or 400 mm

Cu-alloy

Scale ranges

Scale range °C	Scale spacing °C	Limit of error °C	Thermometric liquid
- 30 ... + 50	1	2	blue, wetting
0 ... 60		1.5	
0 ... 100	2	2	
0 ... 120		2	
0 ... 160		4	
0 ... 200		5	

Models

Model	Location of stem	DIN
G 3200	straight	DIN 16 181
W 3201	90° angle	DIN 16 182
W 3202	135° angle	-

Nominal size 150 x 36 mm

Standard features

Design of connection

Connection E, male thread

Straight design (DIN 16185)

Male thread

G ½ A, M 20 x 1.5 (Form B to DIN)

G ¾ A, M 27 x 2

Male thread screwed into case

Length of stem $l_1 = 63, 100, 160, 250$ or 400 mm

Cu-alloy

90° angle design (DIN 16186)

Male thread

G ½ A, M 20 x 1.5 (Form S to DIN)

G ¾ A, M 27 x 2

Male thread inserted into case, removable

Length of stem $l_1 = 63, 100, 160, 250$ or 400 mm

Cu-alloy

135° angle design

Male thread

G ½ A, M 20 x 1.5

G ¾ A, M 27 x 2

Male thread screwed into case

Length of stem $l_1 = 63, 100, 160, 250$ or 400 mm

Cu-alloy

Scale ranges

Scale range °C	Scale spacing °C	Limit of error °C	Thermometric liquid
- 60 ... + 40	2	2	red, wetting
- 30 ... + 50	1		1.5
0 ... 60		2	2
0 ... 100	2		
0 ... 120	4		
0 ... 160	4		
0 ... 200	4		

Models

Model	Location of stem	DIN
G 3210	straight	DIN 16 185
W 3211	90° angle	DIN 16 186
W 3212	135° angle	-

Nominal size 200 x 36 mm

Standard features

Design of connection

Connection E, male thread

Straight design (DIN 16 189)

Male thread

G ½ A, M 20 x 1.5 (Form B1 to DIN)

G ¾ A, M 27 x 2 (Form B to DIN)

Male thread screwed into case

Length of stem l_1 = 63, 100, 160, 250 or 400 mm

Cu-alloy

90° angle design (DIN 16 190)

Male thread

G ½ A, M 20 x 1.5 (Form S1 to DIN)

G ¾ A, M 27 x 2 (Form S to DIN)

Male thread inserted into case, removable

Length of stem l_1 = 63, 100, 160, 250 or 400 mm

Cu-alloy

135° angle design

Male thread

G ½ A, M 20 x 1.5 (Form B1 to DIN)

G ¾ A, M 27 x 2 (Form B to DIN)

Male thread screwed into case

Length of stem l_1 = 63, 100, 160, 250 or 400 mm

Cu-alloy

Scale ranges

Scale range	Scale spacing	Limit of error	Thermometric liquid
°C	°C	°C	
- 60 ... + 40	1	2	red, wetting
- 30 ... + 50			
0 ... 60		1.5	blue, wetting
0 ... 100			
0 ... 120	2		
0 ... 160			
0 ... 200	2	4	

Models

Model	Location of stem	DIN
G 3220	straight	DIN 16 189
W 3221	90° angle	DIN 16 190
W 3222	135° angle	DIN 16 191

Optional extras (for all nominal sizes)

- Dual scale °F/°C
- Other scale ranges
- Male thread made of other materials
- Thermowells per DIN (see data sheet TM 90.01)
made of Cu-alloy, steel, stainless steel or other materials

Design of connection (of choice)

Connection no. 3, union nut

Straight design (DIN 16 189)

Union nut

G ½, M 20 x 1.5 (Form C1 to DIN)

G ¾, M 27 x 2 (Form C to DIN)

M 24 x 1.5 (Form F to DIN)

Connection piece screwed into case, removable

Length of stem l_1

Form C1: l_1 = 89, 126, 186, 276 or 426 mm

Form C: l_1 = 93, 130, 190, 280 or 430 mm

Form F: l_1 = 155, 215, 275, 295, 355 or 415 mm

Union nut and connection piece in Cu-alloy, tube in St. 35 steel

90° angle design (DIN 16 190)

Union nut

G ½, M 20 x 1.5 (Form C1 to DIN)

G ¾, M 27 x 2 (Form C to DIN)

M 24 x 1.5 (Form F to DIN)

Connection piece inserted into case, removable

Length of stem l_1

Form C1: l_1 = 89, 126, 186, 276 or 426 mm

Form C: l_1 = 93, 130, 190, 280 or 430 mm

Form F: l_1 = 155, 215, 275, 295, 355 or 415 mm

Union nut and connection piece in Cu-alloy, tube in St. 35 steel

135° angle design (DIN 16 191)

Union nut

G ½, M 20 x 1.5 (Form C1 to DIN)

G ¾, M 27 x 2 (Form C to DIN)

M 24 x 1.5 (Form F to DIN)

Connection piece screwed into case, removable

Length of stem l_1

Form C1: l_1 = 89, 126, 186, 276 or 426 mm

Form C: l_1 = 93, 130, 190, 280 or, 430 mm

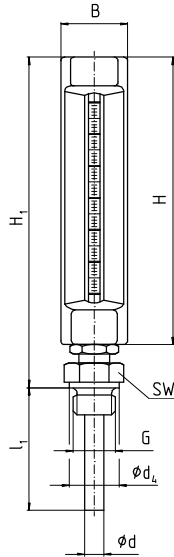
Form F: l_1 = 155, 215, 275, 295, 355 or, 415 mm

Union nut and connection piece in Cu-alloy, tube in St. 35 steel

Dimensions

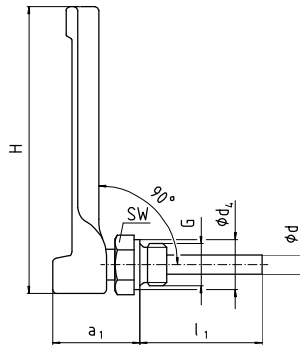
Design of connection E, male thread

Straight



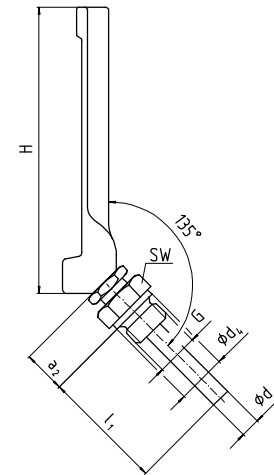
3073 092.01

90° angle



3073 106.01

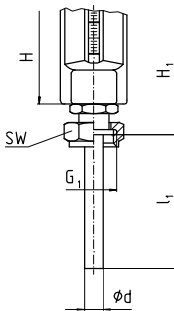
135° angle



3073 114.01

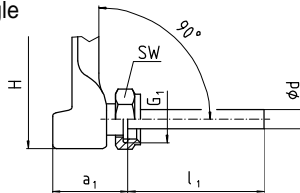
Design of connection no. 3, union nut (only with nominal size 200) (Basic connection for thermowells per DIN, Form CD, CE, CS)

Straight



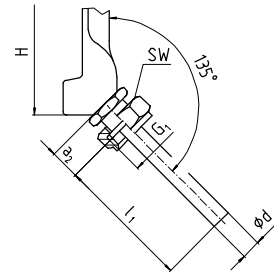
3073 122.01

90° angle



3073 130.01

135° angle



3073 181.01

Nominal size	Dimensions in mm										Weight in kg		
	a ₁	a ₂	B	Ø d	Ø d ₁	G	G ₁	H	H ₁	SW			
110	44	20	30	10	22	G 3/8 A	-	110	130	22	0.250		
					21	M 16 x 1.5				27			
					26	G 1/2 A							
					25	M 20 x 1.5							
150	46	21	36	10	26	G 1/2 A	-	150	170	27	0.300		
					25	M 20 x 1.5							
					32	G 3/4 A				32			
						M 27 x 2							
200	46	21	36	10	26	G 1/2 A	G 1/2	200	220	27	0.350		
					25	M 20 x 1.5						M 20 x 1.5	
					32	G 3/4 A							G 3/4
						M 27 x 2							
				6.5	-	-	M 24 x 1.5			32			

Ordering information

State: Model / Nominal size / Scale range / Design and size of connection / Length of stem l₁ / Optional extras required



INGENIEROS ASOCIADOS DE CONTROL S.L.

Tel.: 913831390
comercial@iac-sl.es