

Diesel Exhaust Thermometer, Rigid Mount

Crimped-on ring case stainless steel

TAS
MERASERW5

Diesel exhaust thermometers are primarily used for the measurement of exhaust and cooling water temperatures at diesel engines. They are specially designed for these high mechanical and technical loads, among others due to the "stem in jacket version" and the standard case filling with highly viscous silicone oil. To increase their durability, diesel exhaust thermometers should always be applied in combination with a thermowell.

Standard Versions

This data sheet contains detailed information on our standard versions and available options. In overview 8000 you will find additional information on selection, metrological features, permissible ambient and storage temperatures as well as error limits, etc. Information on the metrologically optimal design of thermometers can be found in our technical information sheet T08-000-031.

Measuring Unit

With nitrogen filling (inert gas, physiologically safe)

Accuracy (DIN EN 13 190)

Class 1

Case

With polished crimped-on ring, stainless steel 304 (1.4301)

Degree of Protection (DIN EN 60 529/IEC 529)

IP65

Case Filling

Silicone oil

Nominal Case Sizes

63, 80, 100 mm (2 ½, 3, 4")

Case Configuration

Connection temperature sensor (stem):

- rigid mount with neck tube

Stem position:

- vertical bottom position

- centre back position (rm)

Temperature Ranges

0 – 120 °C (32 – 248 °F)

50 – 650 °C (122 – 1202 °F)

Temperature Sensor (Stem)

Made of stainless steel 316Ti (1.4571)

Max. static operating pressure: 25 bar

Stem models (jacket version): A5.5, A1.5 or A3.5

Stem Ø dF: 10, 12 or 13 mm (0.39, 0.47 or 0.51")

Stem length (standard): 150, 200, 250, 300 or 400 mm (5.91, 7.87, 9.84, 11.81 or 15.75")

Lmin = 150 mm (5.91")

Compression fitting

for stem model A5.5:

galvanised steel

Window

Instrument glass

Movement

Brass/German silver



Dial

0 – 120 °C aluminum white, scale black

50 – 650 °C aluminum natural finish, scale black

Pointer

Aluminum black

Indication Adjustment (±6 %)

Externally via screw

Ordering Information, Standard Ranges, Options

See page 4

Special Versions and Further Options

- Other stem lengths and connection threads upon request
- Version for particularly extreme loads
- Other temperature ranges and/or special scales, e.g. dual scale °C/°F, coloured fields or ranges, dial inscriptions
- Case parts stainless steel 316L (1.4404) upon request
- Position of connection radial at 3 o'clock, 9 o'clock, 12 o'clock, others upon request or other than vertical installation (90°)
- GOST version for Russia, Kazakhstan

Thermowells

See data sheets 8.8110ff.

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Stem Position, Code Letters, Dimensional Data and Weights

Vertical Bottom Stem Position

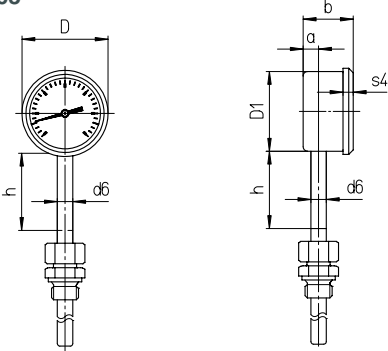
Stem model A5.5

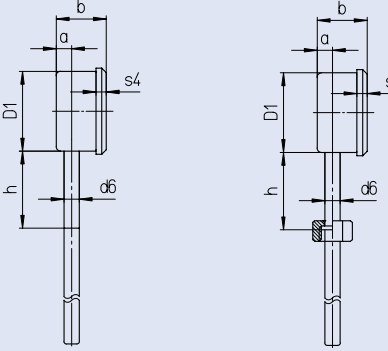
Stem model A1.5

Stem model 3.5

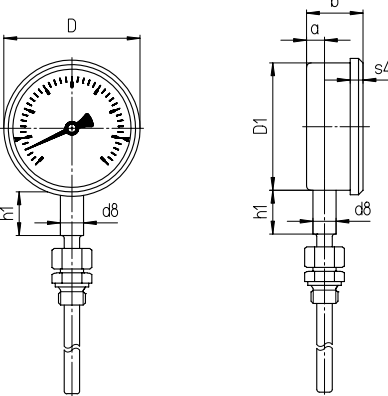
without additional code letter

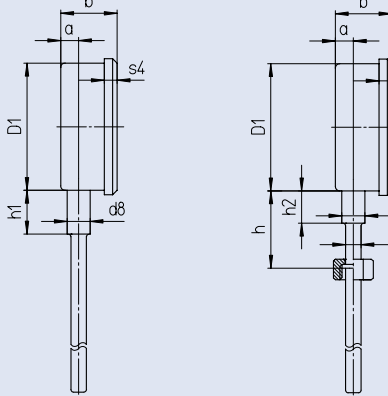
TAS 63

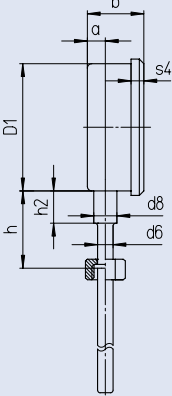




TAS 80, 100







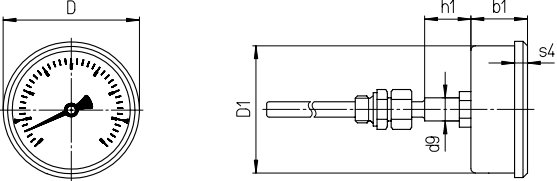
Centre Back Stem Position

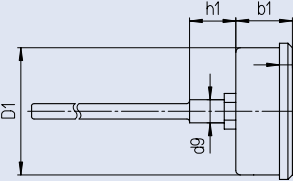
Stem model A5.5

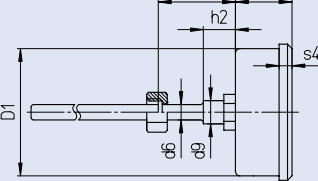
Stem model A1.5

Stem model 3.5

code letters **rm**







Dimensional Data (mm/inch) and Weights (kg/lb)

NCS	a	b	b1	D	D1	d6	d8	d9	h	h1	h2	s4	approx. weight ¹⁾ TAS
63 2½"	12 0.47	39 1.54	39 1.54	67 2.64	62 2.44	12 0.47	18 0.71	18 0.71	60 2.36	34 1.34	25 0.98	8 0.31	0.33 0.73
80 3"	15 0.59	42 1.65	42 1.65	86 3.39	79 3.11	12 0.47	18 0.71	18 0.71	60 2.36	34 1.34	25 0.98	8 0.31	0.5 1.1
100 4"	15 0.59	43 1.69	43 1.69	106 4.17	99 3.9	12 0.47	18 0.71	18 0.71	60 2.36	34 1.34	25 0.98	10 0.39	0.7 1.54

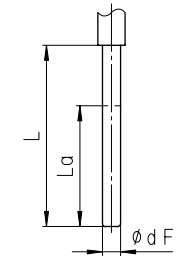
¹⁾ The data are examples and relate to the version with stem A1.5, Ø 10 mm (0.39"), length 200 mm (7.87")

Stem Models

Stem Models

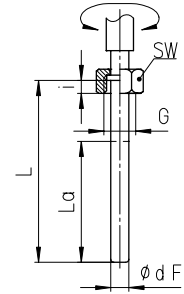
Process connection: Without screw fitting, plain stem

Stem model:	A1.5
Form acc. to DIN EN 13 190:	Form 1
Stem material:	1.4571
Stem Ø dF:	10, 12, 13 mm
Order length L (standard length):	150, 200, 250, 300, 350, 400 mm
Suitable thermowell models:	SK2 (8.8141)
(data sheet)	



Process connection: Union nut

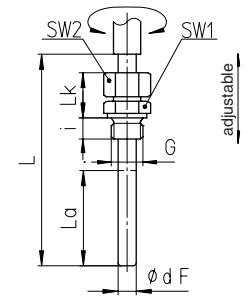
Stem model:	A3.5
Form acc. to DIN EN 13 190:	Form 5
Stem material:	1.4571
Stem Ø dF:	10, 12, 13 mm
Screw fitting material:	1.4571
Order length L (standard length):	150, 200, 250, 300, 350, 400 mm
Suitable thermowell models:	SF4F (8.8112), SF4.1F (8.8113)
(data sheet)	SF9 (8.8131)



Thread	G	SW	i
(dimensional data in mm/inch):	G ½	27 / 1.06	10 / 0.39
	G ¾	32 / 1.26	12 / 0.47
	M20x1.5	27 / 1.06	10 / 0.39
	M27x2	32 / 1.26	12 / 0.47

Process connection: Male thread/compression fitting

Stem model:	A5.5
Form acc. to DIN EN 13 190:	Form 2
Stem material:	1.4571
Stem Ø dF:	10, 12, 13 mm
Screw fitting material:	galvanised steel
Order length L (standard length):	150, 200, 250, 300, 350, 400 mm
Suitable thermowell models:	SF4 (8.8110), SF4F (8.8112)
(data sheet)	SF6, SF7 (8.8121)



Thread	G	SW1	i	Lk
(dimensional data in mm/inch):	G ½B	27 / 1.06	14 / 0.55	35 / 1.38
	G ¾B	32 / 1.26	16 / 0.63	37 / 1.46
	M20x1.5	27 / 1.06	14 / 0.55	35 / 1.38
	M27x2	32 / 1.26	16 / 0.63	37 / 1.46

Stem Ø	SW2
10 / 0.39	19 / 0.75
12 / 0.47	22 / 0.87
13 / 0.51	24 / 0.94

Minimum Stem Length and Active Length (mm/inch)

Stem model:	Length:	
	La	Lmin
A1.5	80 / 3.15	150 / 5.91
A3.5	80 / 3.15	150 / 5.91
A5.5	80 / 3.15	150 / 5.91
others	upon request	

The minimum length Lmin is the smallest feasible stem length.
Important: Please note the technical information sheet T08-000-031 on the metrologically optimal stem length.

The active length La is the temperature-sensitive part of the stem.

Basic Model:			Diesel Exhaust Thermometer with Rigid Mount	TAS
Case filling:	silicone oil			without code letters
Nominal case size:	case Ø 63, 80, 100 mm (2½, 3, 4")			63, 80, 100
Stem position/ case configuration:	vertical bottom position			without code letters
	centre back position			rm
Temperature ranges:	0 – 120 °C (32 – 248 °F)			0–120 °C
	50 – 650 °C (122 – 1202 °F)			
Stem in jacket version:	A1.5			A1.5
	A3.5			A3.5
	A5.5			A5.5
Stem Ø dF:	10, 12 or 13 mm (0.39, 0.47 or 0.51")			dF 10, 12, 13
Stem length:	L 150, 200, 250, 300, 350, 400 mm (5.91, 7.87, 9.84, 11.81 or 15.75")		e.g.	L = 150 mm
Process connection:	see page 3		e.g.	G½B
Options:	red mark	on the dial		
	plastic clip	red or green, external at crimped-on ring for NCS 80, 100		
	window	tempered safety glass for NCS 80 and 100		
	movement	stainless steel		
	case	polished		
	compression fitting	stainless steel		
	versions: DNV GL and Russian Sea Register	dial marking with symbol copy of the certificate upon request		
	model TAS 63, 80, 100			
	instrument tag	stainless steel plate 12 x 55 mm (0.47 x 2.17") with wire mounting or sticker upon the case		

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Special Versions: Please describe your requirements in cleartext!