



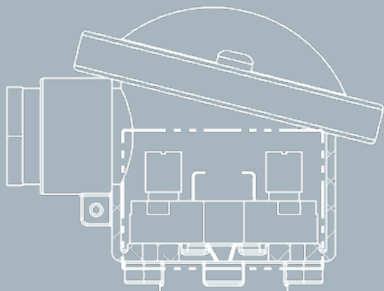
G1/2"

85

G1/2"

SENSORS CATALOGUE

TEMPERATURE MEASUREMENT IN INDUSTRIAL ENVIRONMENTS



Ø 1/2"

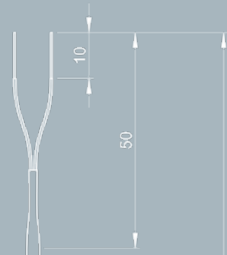
1/2

≈ 35

L3

L2

R45 ≥ Ø 1/2"
R60 ≥ Ø 3/4"



2000

PG7

Ø 18

Ø 15

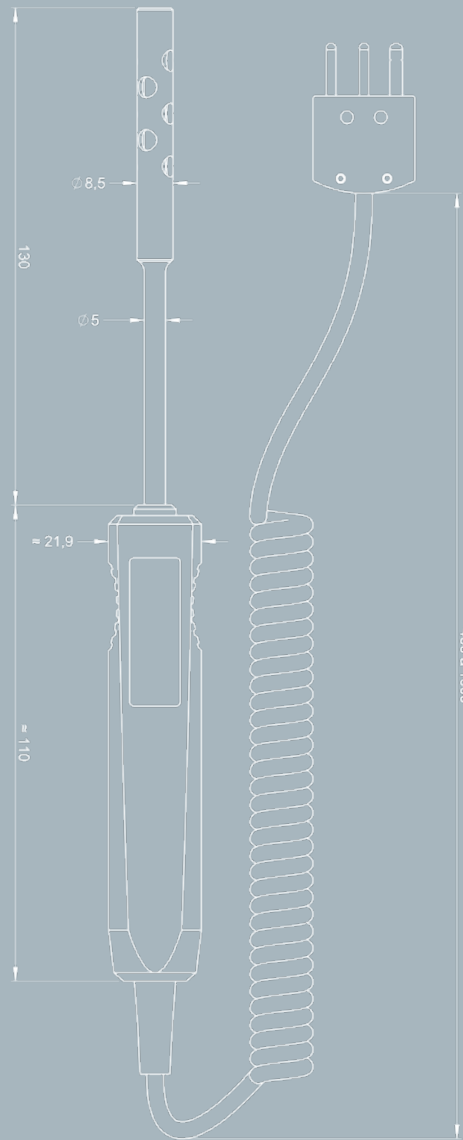
Ø 6,5

80

100

5

30



130

≈ 21,9

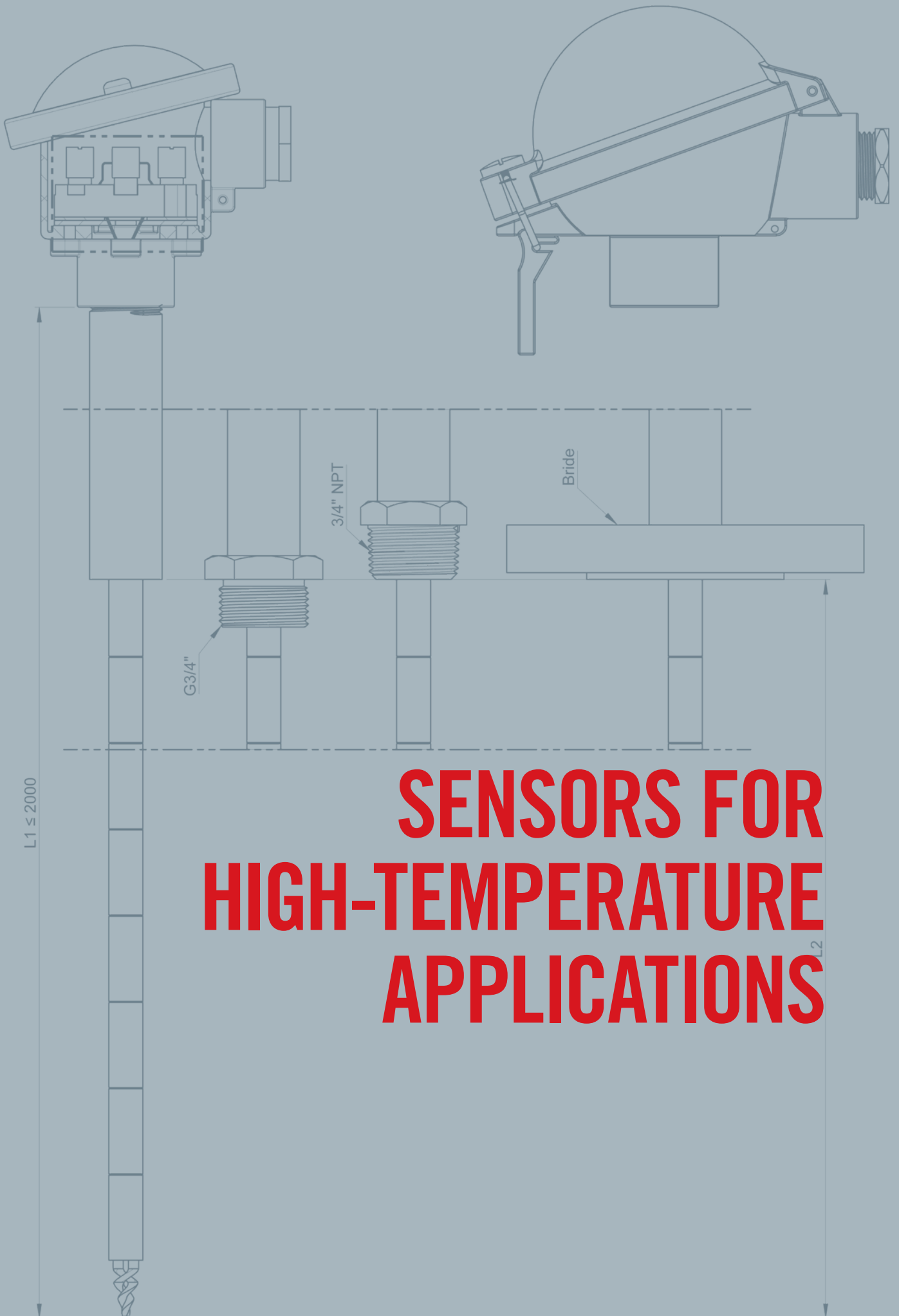
110

450 à 1000

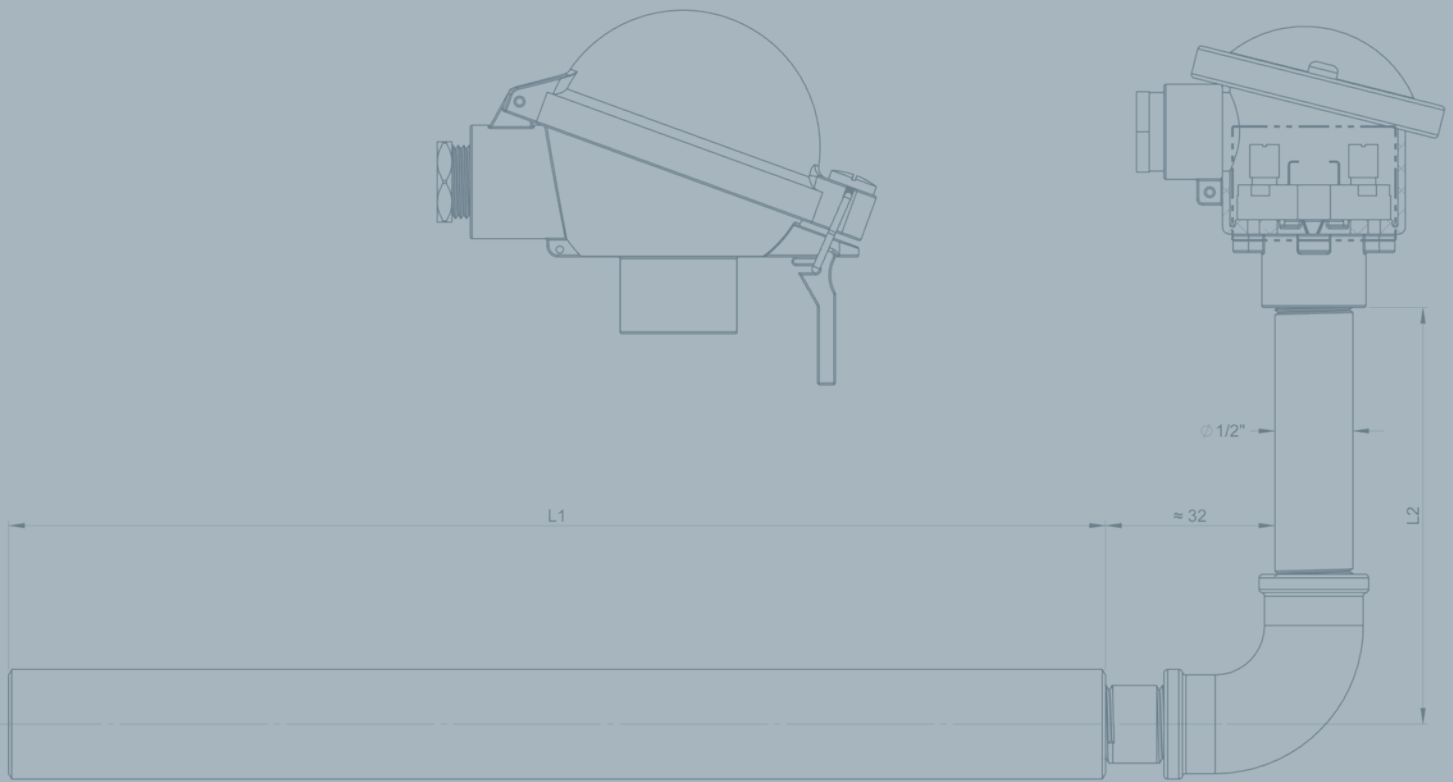
Ø 8,5

Ø 5





SENSORS FOR HIGH-TEMPERATURE APPLICATIONS



STRAIGHT CADID ASSEMBLIES

98

A	98
B	100
C	102
D	104
E	106
H	108
J	110

DEMOUNTABLE STRAIGHT CADID ASSEMBLIES

112

F	112
G	114

DEMOUNTABLE ELBOWED CADID ASSEMBLIES

116

LB	116
LC	118
LD	120
LE	122

BENT CADID ASSEMBLIES

124

XB	124
XC	126
XD	128
XE	130

TEMPERATURE MEASUREMENT ASSEMBLIES

CADID RANGE



- ▶ **Applications** : temperature of baths, ovens, furnaces and incinerators in metallurgy and glass manufacturing.
- ▶ Manufactured with all the types of thermocouples frequently used for pyrometry, proposed with **single or duplex mounting**.
- ▶ Depending on the protective tube, they may be used in **neutral, reducing, oxidizing, corrosive, sulphurous or carburizing atmospheres**.
- ▶ **COMPLETE RANGE**
- ▶ **16 assembly models divided into 3 series:** normal, reinforced and high-temperature, defined according to the temperature and atmosphere. **Various profiles and protective tubes are available.**
- ▶ **Configurable assemblies:** wide choice of terminations to be defined (material, connecting head, etc.)

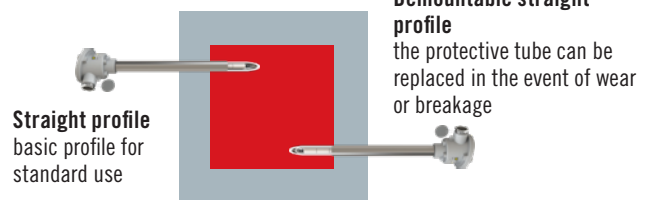


CONFIGURATOR CODE

CADID Series	Operating conditions
NORMAL	General use
REINFORCED	Adapted for more corrosive atmospheres and/or higher temperatures (thicker protection without welds)
HIGH-TEMPERATURE	Adapted for high temperatures (alumina/ceramic protection)

CHOICE OF PROTECTIVE TUBE PROFILE

FOR FURNACES AND OVENS













FOR BATHS

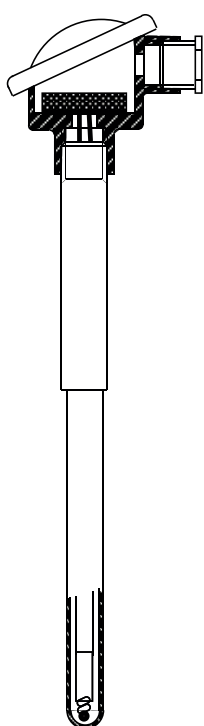


CADID ASSEMBLY SELECTION GUIDE

16 CADID assembly models are available with specific technical characteristics

Thermocouple protection		Protective tube profile	Straight	Demountable straight	Demountable elbowed	Bent
						
Normal series		Mechanically-welded protective tube	CADID B	—	CADID LB	CADID XB
		With internal sheath	CADID C	—	CADID LC	CADID XC
Reinforced series		Metal, drilled from bar stock	CADID D	CADID F	CADID LD	CADID XD
		With internal sheath	CADID E	CADID G	CADID LE	CADID XE
High-temperature series		Ceramic or alumina sheath	CADID H	—	—	—
		With internal sheath	CADID J	—	—	—

1 CHOOSE YOUR CADID ASSEMBLY >> 2 CONFIGURE YOUR CADID ASSEMBLY >> 3 COMMISSIONING GUIDE



For each CADID assembly model, various configurations need to be defined.



STEP 1: THERMOCOUPLE

Conductor type		Conductor type °C		Tolerance values	Ø of wires (mm)
		Min.	Max.		
J	Iron/ Copper-Nickel	- 40	+ 750	1.5°C or 0.4% of t	1.5
K	Nickel-Chrome / Nickel alloy	- 40	+ 1,000	1.5°C or 0.4% of t	1.5 2.3 3.0
S	10% Rhodium-Platinum/Platinum	0	+ 1,600	1°C for t < 1100°C [1 + 0.003 x (t-1100)] for t > 1100°C	0.35 0.5
B	5% Rhodium-Platinum / 30% Rhodium-Platinum	+ 600	+ 1,700	1.5°C or 0.25% of t	0.35 0.5

Advice for optimizing your thermocouple's life span

- ▶ Choose a thermocouple with a higher temperature withstand
- ▶ Increase the diameter of the thermocouple wires
- ▶ Protect the thermocouple with a 2nd alumina 710 sheath

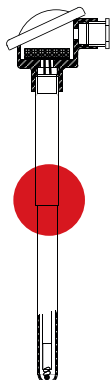
Temperature and voltage in mV, extract from the IEC584 correspondence table:

T°	Type of thermocouple						
	IEC584						ASTM E988
	T	J	k	N	R	B	WRe 3% -25%
-40°C	-1.475	-1.960	-1.527	-1.023	-0.188		
0°C	0	0	0	0	0	0	0
50°C	2.036	2.585	2.023	1.340	0.296	0.002	0.528
100°C	4.279	5.269	4.096	2.774	0.647	0.033	1.145
150°C	6.704	8.010	6.138	4.302	1.041	0.092	1.841
200°C	9.288	10.779	8.138	5.919	1.469	0.178	2.603
300°C	14.862	16.327	12.209	9.341	2.401	0.431	4.287
400°C	20.872	21.848	16.397	12.974	3.408	0.787	6.130
500°C		27.393	20.644	16.748	4.471	1.242	8.078
600°C		33.102	24.905	20.613	5.583	1.792	10.088
800°C			33.275	28.455	7.980	3.154	14.170
1000°C			41.276	36.256	10.506	4.834	18.230
1200°C			48.838	43.846	13.228	6.786	22.149
1400°C					16.040	8.956	25.882
1600°C					18.843	11.263	29.412
1800°C						13.591	32.712
2000°C							35.717

STEP 2: PROTECTIVE TUBE MATERIAL



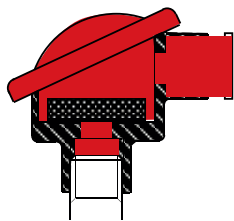
Series	Atmosphere	Max. temperature	Protective tube material
Normal	Neutral or oxidizing	800°C	AISI 304L
		1,050°C	AISI 316L
	Reducing	1,050°C	AISI 446
		1,100°C	Inconel 600
	Sulphurous or carburizing	1,050°C	AISI 446
Corrosive	-	AISI 446	
Reinforced	Neutral	800°C	Pure iron
		1,050°C	AISI 316L
	Neutral or oxidizing	1,050°C	AISI 446
		1,100°C	Inconel 600
	Reducing	1,050°C	AISI 446
		1,100°C	Inconel 600
	Sulphurous or carburizing	1,050°C	AISI 446
Corrosive	-	Inconel 600	
High-temperature	Neutral or oxidizing	1,400°C	AISI 446
		1,500°C	Inconel 600
	Reducing	1,050°C	AISI 304L
		1,100°C	AISI 316L
	Sulphurous or carburizing	1 350°C	Ceramic-alumina
1,400°C		Double ceramic-alumina	




STEP 3: FASTENING OF SENSOR

Fastening	Sleeve	Screwed fitting		Flange
Construction				
Technical characteristics	The sleeve is screwed or welded on the process.	G (gas) threading Parallel internal thread ensuring tightness via surfaces upstream of the threading (seal)	NPT threading as per ANSI B 1.20.1. It is designed according to an American standard for self-packing duct joints . Tightness is achieved by tightening the joint on the installation.	The flanges are defined according to the DIN or ANSI/ASME standards. They are distinguished by their material, nominal diameter and pressure withstand.

STEP 4:CONNECTING HEAD

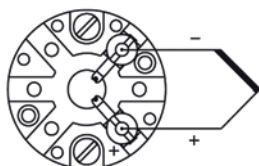


Model	DIN A	DIN B	DAN
Construction			
Technical characteristics	Screw-on cover 3/4 sleeve max.	Screw-on cover 1/2 sleeve max.	Captive pivoting cover 1/2 sleeve max.
	Easy wiring	The smallest and the most economical	Quick opening/closing Cover part of base

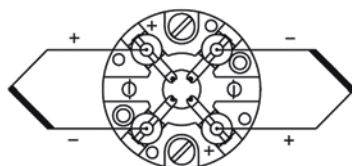
1 CHOOSE YOUR CADID ASSEMBLY >> 2 CONFIGURE YOUR CADID ASSEMBLY >> 3 COMMISSIONING GUIDE

ELECTRICAL CONNECTION

Thermocouple wiring diagrams



SINGLE



DOUBLE















EXTENSION AND COMPENSATION CABLES

Extension cables

Manufactured with wires of the same materials as the wires of the corresponding thermocouples. They are identified by the letter “X” placed after the code of the thermocouple, e.g. “KX”.

Compensation cables

Manufactured with wires of different materials from the corresponding thermocouple wires. They are identified by the letter “C” placed after the code of the thermocouple.

TC code	Extension code	Compensation code	NFC 42323 Feb. 1985	IEC 584-3 July 90 NFC 42324 Dec. 93
T	TX	TC		
J	JX	JC		
E	EX	EC		
K	KX	KC		
N	NX	NC		
R-S		KC/SCA		
B		BC		

Installation recommendations

- ▶ CADID assemblies must be handled with care.
- ▶ The assemblies with alumina/ceramic sheaths cannot withstand any shocks or bending.
- ▶ For the first time a new furnace is heated: raise by 100°C max. per hour. If it is necessary to mount the assembly when it is hot, insert the assembly in several stages, particularly if the assembly has an alumina sheath.

COMMISSIONING

Cold mounting is recommended to avoid thermal shock.



CADID A

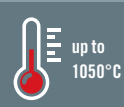
THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Straight temperature measurement assembly

SPECIFICATIONS

Model		CADID Type A	
Compliance with standards		IEC 584-1 / NF EN 60584-1	
Type		K	J
Class		1	
Wire diameter (mm)		1.5 / 2.3 / 3.0	1.5
TC		Single / Duplex	
Length L1 Min/Max (mm)		300 to 2,000 mm	
Length L2 Min/Max (mm)		200 to 1,500 mm	
Sleeve	Material	stainless steel	
	Length	200 to 500 mm	
	Diameter	1/2"	
Fastening		None / stainless-steel fitting / flange	
Output	Head type	DAN	DIN B
	Material	Light alloy	
	Output	1 cable gland M20x1.5	
	Cable diam.	5.5 to 7.5 mm	
	Equipment	Ceramic terminal strip (standard) Transmitter	
	IP	IP54	
Accessories		Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

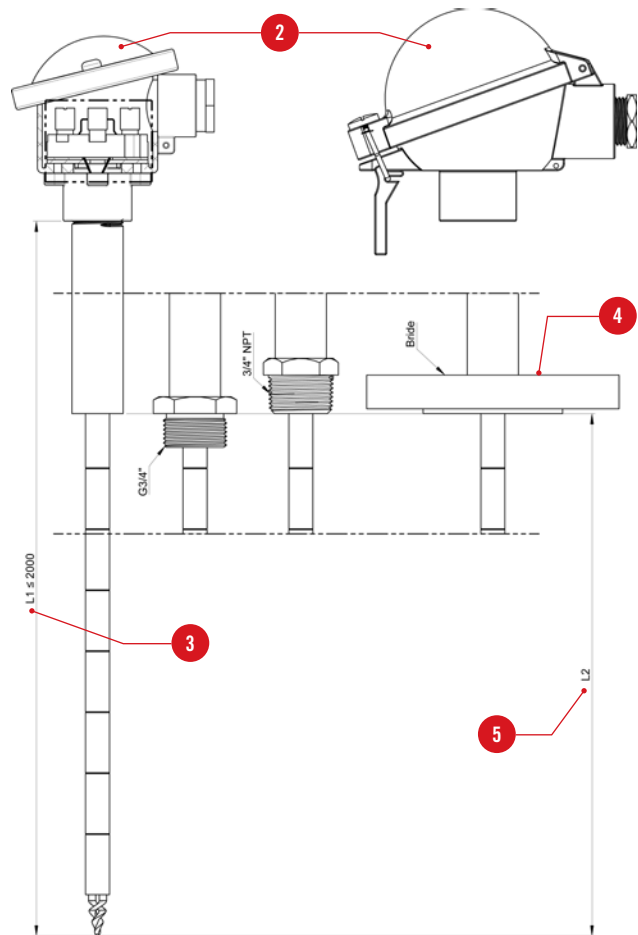
Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	LENGTH L1 (mm)	FASTENING	LENGTH L2 (mm)	OPTION	
CADID	-	A	-	-	-	-	-	TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	6	
Possible choice		1J 1K 2J 2K	1.5 2.3 3.0	DIN B: DIB DAN: DAN		Without: 000 G3/4": 001 3/4"NPT: 002 Flange: as per table below		LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	Tolerance values		∅ of wires (mm)
		Mini	Maxi	
J Iron / Copper-Nickel	-40	+750	1.5°C or 0.4% of t	1.5
K Nickel Chrome/ Nickel alloy	0	+1200	1.5°C or 0.4% of t	1.5 2.3 3.0

DIAGRAM



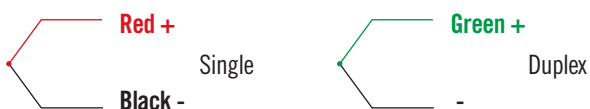
FASTENING

Flange code	Material	E1092-1		
		DN	PN	Face
405	316L	25	10/40	B1
400	316L	40	10/40	B1
413	316L	50	10/40	B1

TRANSMITTER (1 TC ONLY) - OPTION

Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



For any other configuration, please contact us.



CADID B

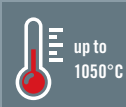
THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Straight temperature measurement assembly

SPECIFICATIONS

Model		CADID Type B	
Compliance with standards		IEC 584-1 / NF EN 60584-1	
Type		K	J
Class		1	
Wire diameter (mm)		1.5 / 2.3 / 3.0	1.5
TC		Single / Duplex	
Length L1 Min/Max (mm)		300 to 2,000 mm	
Length L2 Min/Max (mm)		200 to 1,500 mm	
		Necked welded	
Protective tube	Material	304L / 310 / 316 / 446 / INCONEL 600	
	Diameter	3/8" - 1/2"	
Fastening		None / stainless-steel fitting / flange	
Output	Head type	DAN	DIN B
	Material	Light alloy	
	Output	1 cable gland M20x1.5	
	Cable diam.	5.5 to 7.5 mm	
	Equipment	Ceramic terminal strip (standard) Transmitter	
	IP	IP54	
Accessories		Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	Ø WIRE	HEAD	PROTECTIVE TUBE	Ø PROT.	LENGTH L1 (mm)	FASTENING	LENGTH L2 (mm)	OPTION	
CADID	B									TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	6	7	8	
Possible choice		1J 1K 2J 2K	1.5 2.3 3.0	DIN B : DIB DAN : DAN	304L : AB 310 : BA 316L : AC 446 : BB Inconel 600 : CM	3/8" 1/2"		Without: 000 G1/2": 003 G3/4": 001 1/2"NPT: 004 3/4"NPT: 002 Flange: as per table below		LC5334A-100 : A LC5331A-321 : B LC5335A-100 : C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	Tolerance values		Ø of wires (mm)
		Min.	Max.	
J Iron/Copper-Nickel	-40	+750	1.5°C or 0.4% of t	1.5
K Nickel-Chrome/ Nickel alloy	-40	+1,000	1.5°C or 0.4% of t	1.5 2.3 3.0

FASTENING

Flange code	Material	E1092-1		
		DN	PN	Face
405	316L	25	10/40	B1
400	316L	40	10/40	B1
413	316L	50	10/40	B1

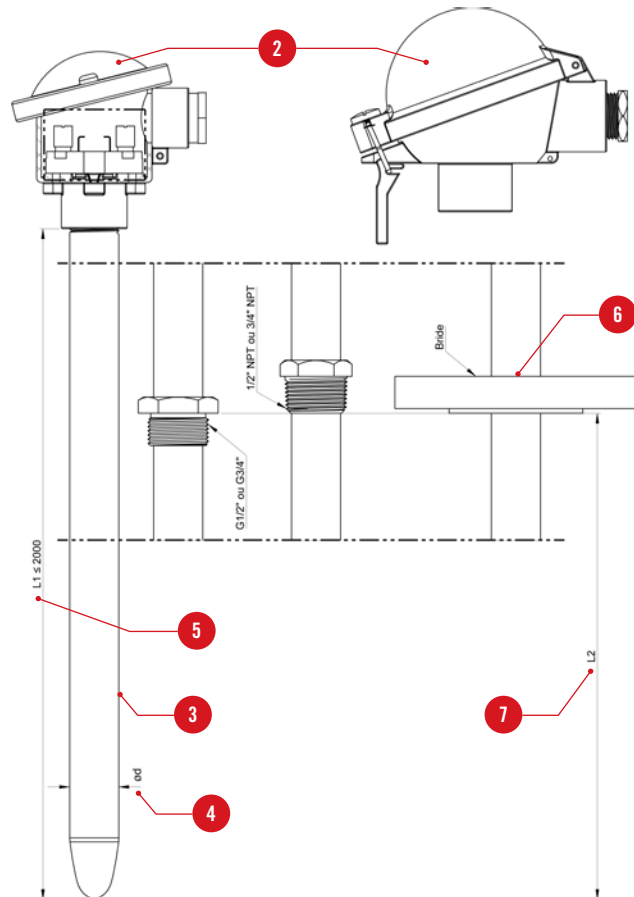
TRANSMITTER 1 TC ONLY- OPTION

Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



DIAGRAM



For any other configuration, please contact us.



CADID C

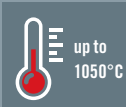
THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Straight temperature measurement assembly

SPECIFICATIONS

Model	CADID Type C		
Compliance with standards	IEC 584-1 / NF EN 60584-1		
Type	S		
Class	1		
Wire diameter (mm)	0.35 / 0.5		
TC	Single / Duplex		
Length L1 Min/Max (mm)	300 to 2,000 mm		
Length L2 Min/Max (mm)	200 to 1,500 mm		
Internal sheath	Ceramic 610 Diam.10x1.5 mm		
	Necked welded		
Protective tube	Material	310 / 446 / INCONEL 600	
	Diameter	1/2"	
Fastening	None / stainless-steel fitting / flange		
Output	Head type	DAN	DIN B
	Material	Light alloy	
	Output	1 cable gland M20x1.5	
	Cable diam.	5.5 to 7.5 mm	
	Equipment	Ceramic terminal strip (standard) Transmitter	
	IP	IP54	
Accessories	Extension cables, compensation cables		

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when orderin

MODEL	TYPE	TC	∅ WIRE	HEAD	PROTECTIVE TUBE	LENGTH L1 (mm)	FASTENING	LENGTH L2 (mm)	OPTION	
CADID	C								TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	6	7	
Possible choice		1S 2S	0.35 0.5	DIN B: DIB DAN: DAN	310: BA 446: BB Inconel 600: CM		Without: 000 G3/4": 001 3/4"NPT: 002 Flange: as per table below		LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	Tolerance values		∅ of wires (mm)
		Min.	Max.	
S	10 % rhodium-platinum/Platinum	0	+1,600	0.35 0.5
		1°C for t < 1100°C [1 + 0.003 x (t-1100)] for t > 1100°C		

FASTENING

Flange code	Material	E1092-1		
		DN	PN	Face
405	316L	25	10/40	B1
400	316L	40	10/40	B1
413	316L	50	10/40	B1

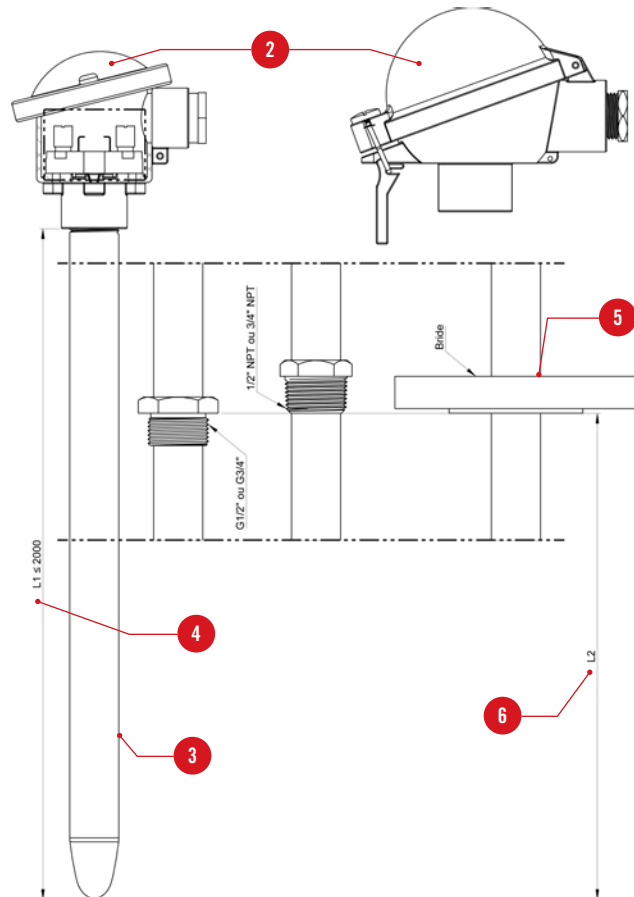
TRANSMITTER (1 TC ONLY) - OPTION

Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



DIAGRAM



For any other configuration, please contact us.



CADID D

THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Straight temperature measurement assembly

SPECIFICATIONS

Model	CADID Type D		
Compliance with standards	IEC 584-1 / NF EN 60584-1		
Type	K	J	
Class	1		
Wire diameter (mm)	1.5/ 2.3 / 3.0	1.5	
TC	Single / Duplex		
Length L1 Min/Max (mm)	300 to 2,000 mm		
	Metal, drilled from bar stock		
Protective tube	Material	Pure iron / 310 / 446 / INCONEL 600	
	Diameter	30 x 7 mm	
Output	Head type	DAN	DIN B
	Material	Light alloy	
	Output	1 cable gland M20x1.5	
	Cable diam.	5.5 to 7.5 mm	
	Equipment	Ceramic terminal strip (standard) Transmitter	
	IP	IP54	
Accessories	Extension cables, compensation cables		

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	PROTECTIVE TUBE	LENGTH L1 (mm)	TRANSMITTER	TRANSMITTER SCALE
CADID	D							
Reference in table and diagram		1	1	2	3	4	5	OPTION
Possible choice		1J 1K 2J 2K	1.5 2.3 3.0	DIN B: DIB DAN: DAN	310: BA 446: BB Inconel 600: CM Pure iron: FF		LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type		CONDUCTOR type °C		Tolerance values	∅ of wires (mm)
		Min.	Max.		
J	Iron/Copper-Nickel	-40	+750	1.5°C or 0.4% of t	1.5
K	Nickel-Chrome/Nickel alloy	-40	+1,000	1.5°C or 0.4% of t	1.5 2.3 3.0

TRANSMITTER (1 TC ONLY) - OPTION

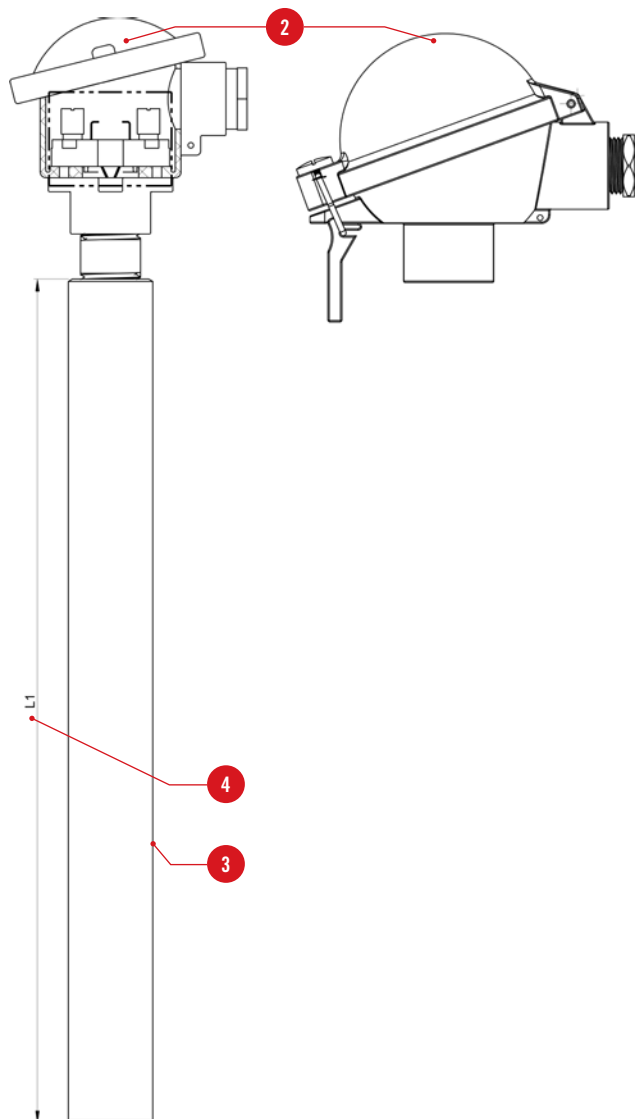
Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



For any other configuration, please contact us.

DIAGRAM





CADID E

THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Straight temperature measurement assembly

SPECIFICATIONS

Model	CADID Type E	
Compliance with standards	IEC 584-1 / NF EN 60584-1	
Type	K	S
Class	1	
Wire diameter (mm)	2.3	0.35 / 0.5
TC	Single / Duplex	
Length L1 Min/Max (mm)	300 to 2,000 mm	
	Metal, drilled from bar stock	
Protective tube	Material	Pure iron / 310 / 446 / INCONEL 600
	Diameter	30 x 7 mm
Internal sheath	Material	Ceramic 610
	Diameter	15 x 2 mm
Output	Head type	DAN DIN B
	Material	Light alloy
	Output	1 cable gland M20x1.5
	Cable diam.	5.5 to 7.5 mm
	Equipment	Ceramic terminal strip (standard) Transmitter
	IP	IP54
Accessories	Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

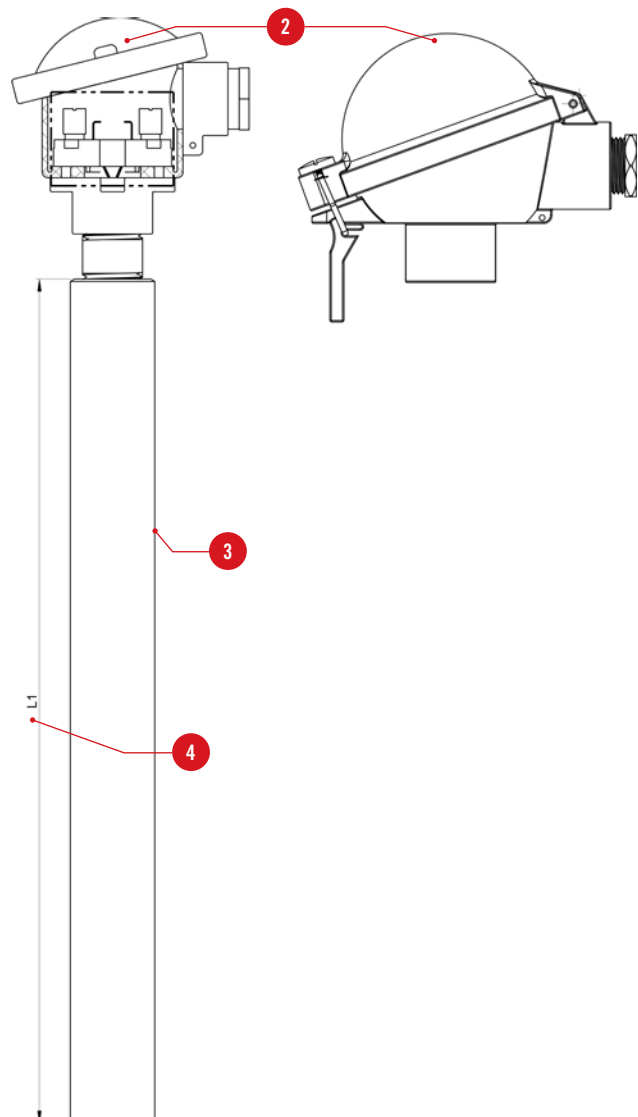
Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	PROTECTIVE TUBE	LENGTH L1 (mm)	OPTION	
CADID	E						TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	
Possible choice		1K 1S 2K 2S	0.35 0.5 2.3	DIN B: DIB DAN: DAN	310: BA 446: BB Inconel 600: CM Pure iron: FF		LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	Tolerance values		∅ of wires (mm)
		Min.	Max.	
K Nickel-Chrome/ Nickel alloy	-40	+1,000	1.5°C or 0.4% of t	2.3
S 10% rhodium-platinum/ Platinum	0	+1,600	1°C for t < 1100°C [1 + 0.003 x (t-1100)] for t > 1100°C	0.35 0.5

DIAGRAM



TRANSMITTER (1 TC ONLY) - OPTION

Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



For any other configuration, please contact us.



CADID H

THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Straight temperature measurement assembly

SPECIFICATIONS

Model		CADID Type H		
Compliance with standards		IEC 584-1 / NF EN 60584-1		
Type		K	S	B
Class		1		2
Wire diameter (mm)		2.3	0.35/0.5	0.5
TC		Single / Duplex		
TC mounting		Beaded, ceramic beads		
Length L1 Min/Max (mm)		300 to 2,000 mm		
Sealing sleeve		Stainless steel, diam.1/2", length 80mm		
Sheath	Material	Ceramic 610	Alumina 710	
	Diameter	15 x 2 mm	15 x 2.5 mm	
Output	Head type	DAN	DIN B	
	Material	Light alloy		
	Output	1 cable gland M20x1.5		
	Cable diam.	5.5 to 7.5 mm		
	Equipment	Ceramic terminal strip		
	IP	IP54		
Accessories		Extension cables, compensation cables		

DESIGN YOUR SENSOR

CONFIGURATOR CODE

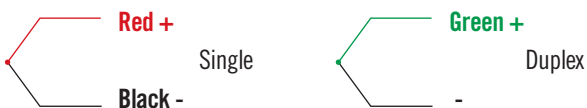
Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	SHEATH	LENGTH L1 (mm)	LENGTH LM (mm)
CADID	- H	-	-	-	-	-	-
Reference in table and diagram		1	1	2	3	4	5
Possible choice		1K / 1S 1B / 2K 2S / 2B	0.35 0.5 2.3	DIN B: DIB DAN: DAN	Ceramic 610: FP Alumina 710: FQ		LM > 80mm LM Standard: 80 mm

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

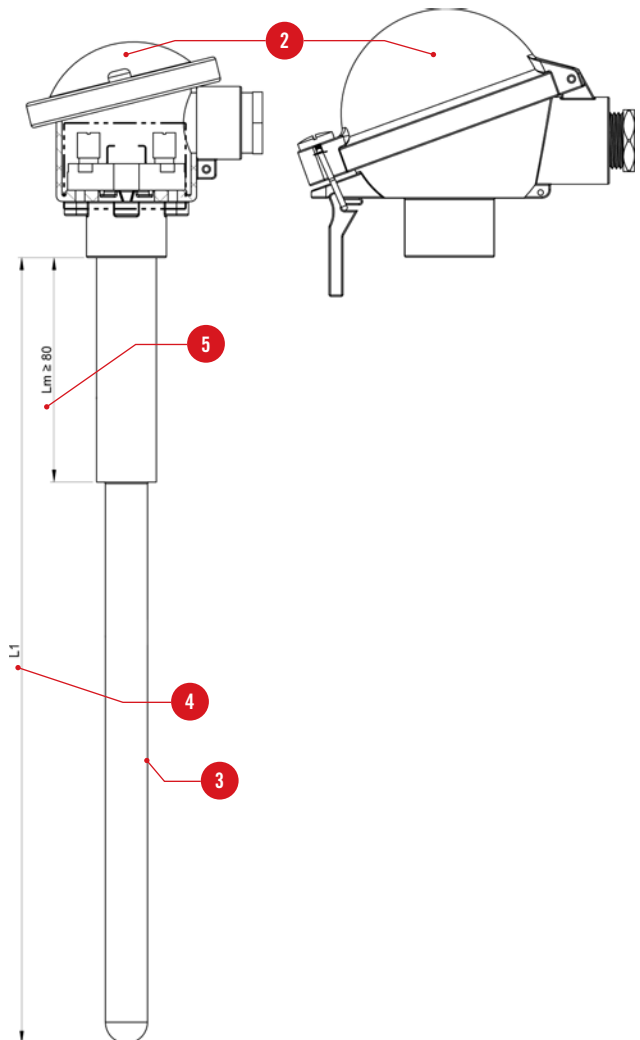
Conductor type	CONDUCTOR type °C	Tolerance values		∅ of wires (mm)
		Min.	Max.	
K Nickel-Chrome/ Nickel alloy	- 40	+ 1,000	1.5°C or 0.4% of t	2.3
S 10% rhodium-platinum / Platinum	0	+ 1,600	1°C for t < 1100°C [1 + 0.003 x (t - 1100)] for t > 1100°C	0.35 0.5
B 10% rhodium-platinum / 30% rhodium-platinum	+ 600	+ 1,700	1.5°C or 0.25% of t	0.5

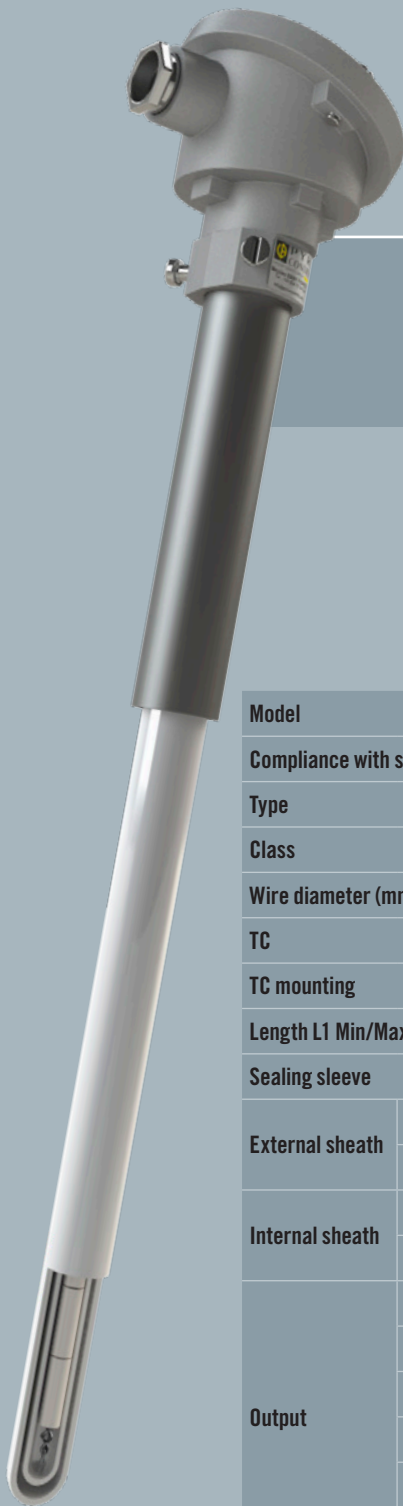
CONNECTION ON TERMINAL STRIP



For any other configuration, please contact us.

DIAGRAM





CADID J

THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Straight temperature measurement assembly

SPECIFICATIONS

Model		CADID Type J			
Compliance with standards		IEC 584-1 / NF EN 60584-1			
Type		S		B	
Class		1		2	
Wire diameter (mm)		0.35 / 0.5			
TC		Single / Duplex			
TC mounting		Beaded, ceramic beads			
Length L1 Min/Max (mm)		300 to 2,000 mm			
Sealing sleeve		Stainless steel, diam.32 x 2mm, length 150mm			
External sheath	Material	Metal-Ceramic	Ceramic 610	Ceramic 530	Ceramic 710
	Diameter	22x 3 mm	24 x 2.5 mm	26 x 4 mm	24 x 3 mm
Internal sheath	Material	Ceramic 610		Alumina 710	
	Diameter	15 x 2 mm		15 x 2.5 mm	
Output	Head type	DIN A			
	Material	Light alloy			
	Output	1 cable gland M20x1.5			
	Cable diam.	5.5 to 7.5 mm			
	Equipment	Ceramic terminal strip			
Accessories		IP54			
Accessories		Extension cables, compensation cables			

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	EXTERNAL SHEATH	LENGTH L1 (mm)	INTERNAL SHEATH	LENGTH LM (mm)
CADID	- J	-	-	-	-	-	-
Reference in table and diagram		1	1	2	3	4	5
Possible choice		1S 1B 2S 2B	0.35 0.5	Metal-Ceramic: GD Ceramic 610: FP Ceramic 530: FR Alumina 710: FQ		Ceramic 610: FP Alumina 710: FQ	LM > 150mm LM Standard: 200 mm

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

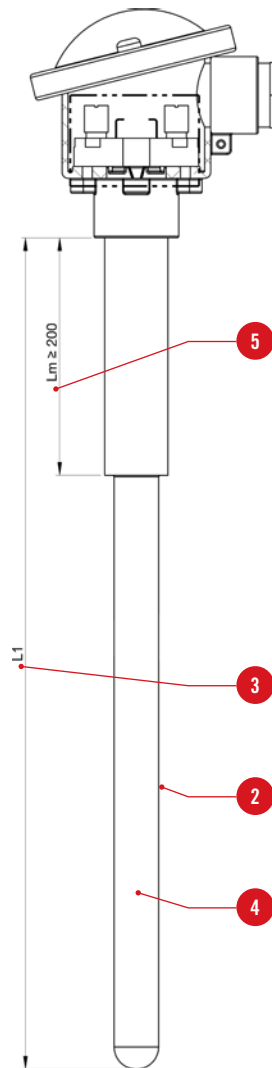
Conductor type	CONDUCTOR type °C	Tolerance values		∅ of wires (mm)	
		Min.	Max.		
S	10% rhodium-platinum / Platinum	0	+ 1,600	1°C for t < 1100°C [1 + 0.003 x (t - 1100)] for t > 1100°C	0.35 0.5
B	10% rhodium-platinum / 30% rhodium-platinum	+ 600	+ 1,700	1.5°C or 0.25% of t	0.35 0.5

CONNECTION ON TERMINAL STRIP



For any other configuration, please contact us.

DIAGRAM





CADID F

THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Demountable straight temperature measurement assembly

SPECIFICATIONS

Model	CADID Type F	
Compliance with standards	IEC 584-1 / NF EN 60584-1	
Type	K	J
Class	1	
Wire diameter (mm)	1.5/ 2.3 / 3.0	1.5
TC	Single / Duplex	
TC mounting	Beaded, ceramic beads	
Length L Min/Max (mm)	500 to 2,000 mm	
Sleeve	Stainless steel, diam. 1/2", length 200mm	
	Metal, drilled from bar stock	
Protective tube	Material	Pure iron / 310 / 446 / INCONEL 600
	Diameter	30 x 7 mm
Fastening	None / stainless-steel fitting / flange	
Output	Head type	DAN DIN B
	Material	Light alloy
	Output	1 cable gland M20x1.5
	Cable diam.	5.5 to 7.5 mm
	Equipment	Ceramic terminal strip (standard) Transmitter
	IP	IP54
Accessories	Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	PROTECTIVE TUBE	LENGTH L1 (mm)	OPTION	
CADID	F						TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	
Possible choice		1J 1K 2J 2K	1.5 2.3 3.0	DIN B: DIB DAN: DAN	Pure iron: FF 310: BA 446: BB Inconel 600: CM		LC5334A-100: A LC5331A-321: B LC5335A-100: C	

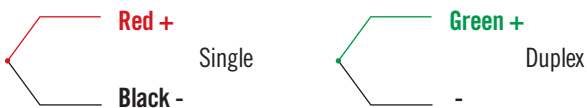
TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	CONDUCTOR type °C		Tolerance values	∅ of wires (mm)
		Min.	Max.		
J	Iron/ Copper- Nickel	-40	+750	1.5°C or 0.4% of t	1.5
K	Nickel- Chrome/ Nickel alloy	-40	+1,000	1.5°C or 0.4% of t	1.5 2.3 3.0

TRANSMITTER (1 TC ONLY) - OPTION

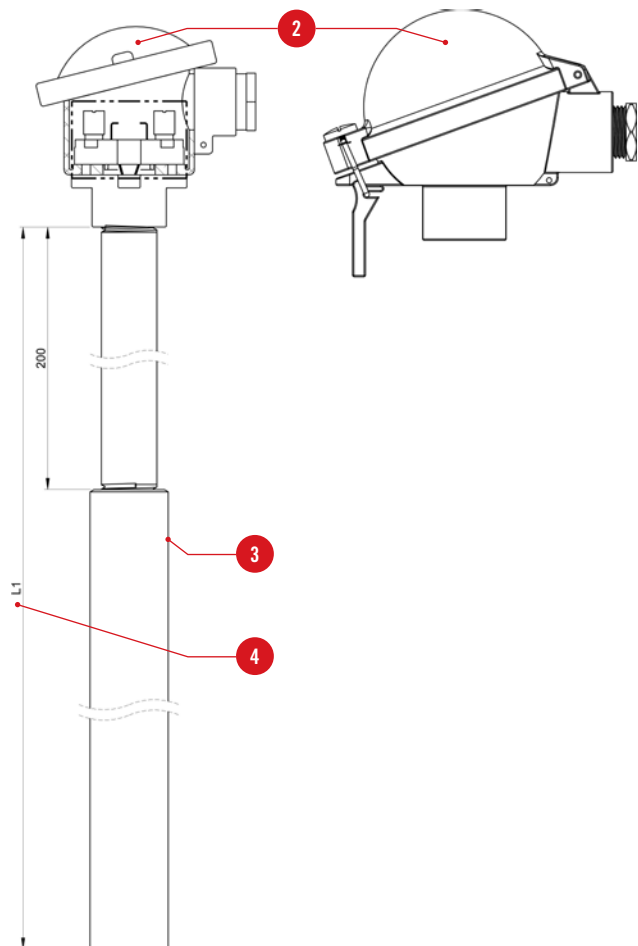
Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



For any other configuration, please contact us.

DIAGRAM





CADID G

THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Demountable straight temperature measurement assembly

SPECIFICATIONS

Model	CADID Type G		
Compliance with standards	IEC 584-1 / NF EN 60584-1		
Type	K	S	
Class	1		
Wire diameter (mm)	2.3	0.35 / 0.5	
TC	Single / Duplex		
TC mounting	Beaded, ceramic beads		
Length L1 Min/Max (mm)	300 to 2,000 mm		
Sleeve	Stainless steel, diam.1/2", length 200mm		
Protective tube	Material	Metal, drilled from bar stock	
	Diameter	Pure iron / 310 / 446 / INCONEL 600	
Internal sheath	Material	30 x 7 mm	
	Diameter	Ceramic 610	
Output	Head type	15 x 2 mm	
	Material	DAN	DIN B
	Output	Light alloy	
	Cable diam.	1 cable gland M20x1.5	
	Equipment	5.5 to 7.5 mm	
	IP	Ceramic terminal strip (standard) Transmitter	
Accessories	IP54		
	Extension cables, compensation cables		

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	PROTECTIVE TUBE	LENGTH L1 (mm)	OPTION	
CADID	- G	-	-	-	-	-	TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	
Possible choice		1K 1S 2K 2S	0.35 0.5 2.3	DIN B: DIB DAN: DAN	Pure iron: FF 310: BA 446: BB Inconel 600: CM		LC5334A-100: A LC5331A-321: B LC5335A-100: C	

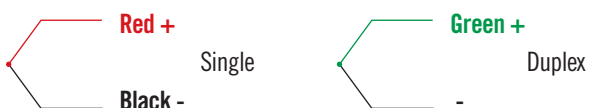
TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	Tolerance values		∅ of wires (mm)
		Min.	Max.	
K Nickel-Chrome / Nickel alloy	-40 / +1,000	1.5°C or 0.4% of t	2.3	
S 10% rhodium-platinum / Platinum	0 / +1,600	1°C for t < 1100°C [1 + 0.003 x (t - 1100)] for t > 1100°C	0.35 0.5	

TRANSMITTER (1 TC ONLY) - OPTION

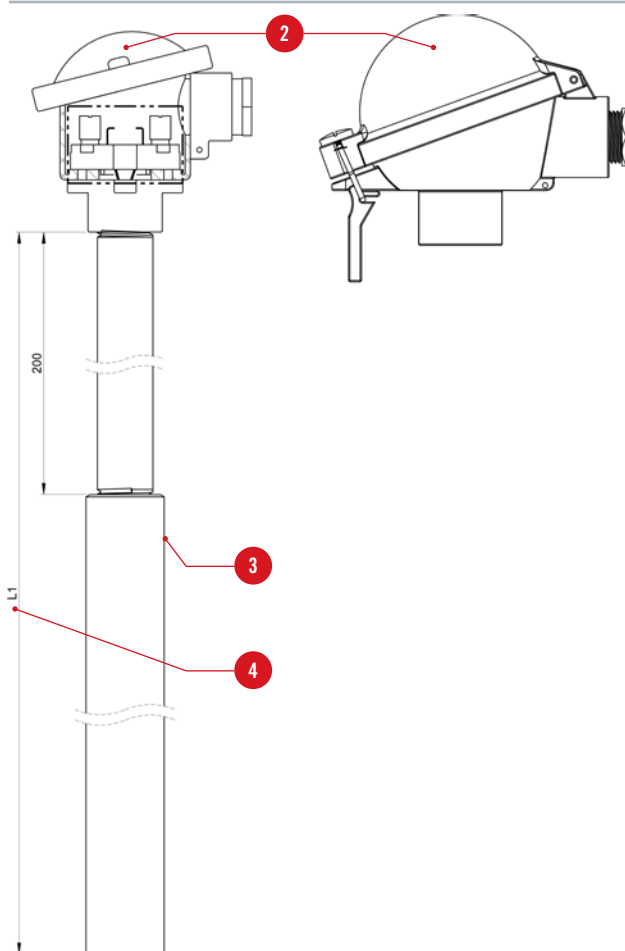
Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



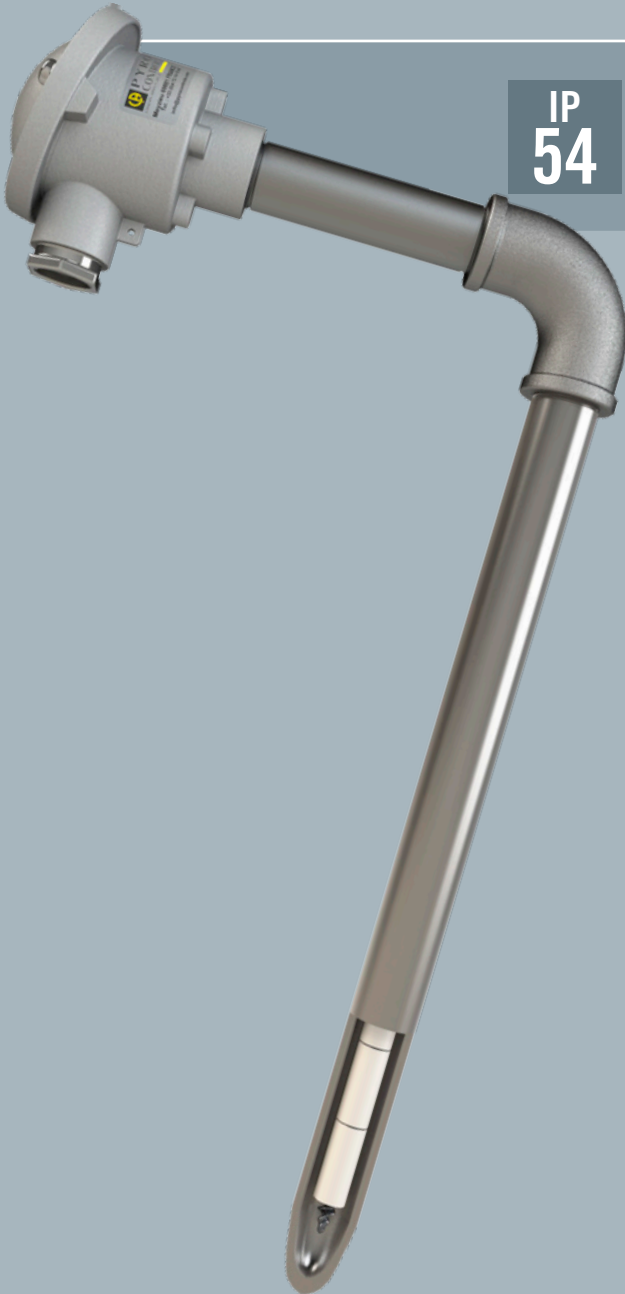
For any other configuration, please contact us.

DIAGRAM



CADID LB

THERMOCOUPLE



IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Demountable elbowed temperature measurement assembly

SPECIFICATIONS

Model	CADID Type LB	
Compliance with standards	IEC 584-1 / NF EN 60584-1	
Type	K	J
Class	1	
Wire diameter (mm)	1.5/ 2.3 / 3.0	1.5
TC	Single / Duplex	
Length L1 Min/Max (mm)	300 to 2,000 mm	
Length L2 Min/Max (mm)	150 to 500 mm	
Support tube	Unalloyed steel, diam.1/2".	
Protective tube	Necked welded	
	Material	304L / 310 / 316 / 446 / INCONEL 600
	Diameter	1/2" - 3/4"
Output	Head type	DAN DIN B
	Material	Light alloy
	Output	1 cable gland M20x1.5
	Cable diam.	5.5 to 7.5 mm
	Equipment	Ceramic terminal strip (standard) Transmitter
	IP	IP54
Accessories	Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	Ø WIRE	HEAD	PROTECTIVE TUBE	Ø PROT.	LENGTH L1 (mm)	LENGTH L2 (mm)	OPTION	
CADID	- LB	-	-	-	-	-	-	-	TRANSMITTER	EXCH. TRANSMIT.
Reference in table and diagram		1	1	2	3	4	5	6	7	
Possible choice		1J 1K 2J 2K	1.5 2.3 3.0	DIN B: DIB DAN: DAN	304L: AB 310: BA 316L: AC 446: BB Inconel 600: CM	1/2" 3/4"			LC5334A-100: A LC5331A-321: B LC5335A-100: C	

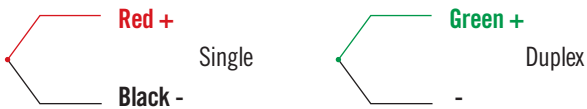
TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	Tolerance values		Ø of wires (mm)
		Min.	Max.	
J Iron / Copper-Nickel	- 40	+ 750	1.5°C or 0.4% of t	1.5
K Nickel-Chrome / Nickel alloy	- 40	+ 1,000	1.5°C or 0.4% of t	1.5 2.3 3.0

TRANSMITTER (1 TC ONLY) - OPTION

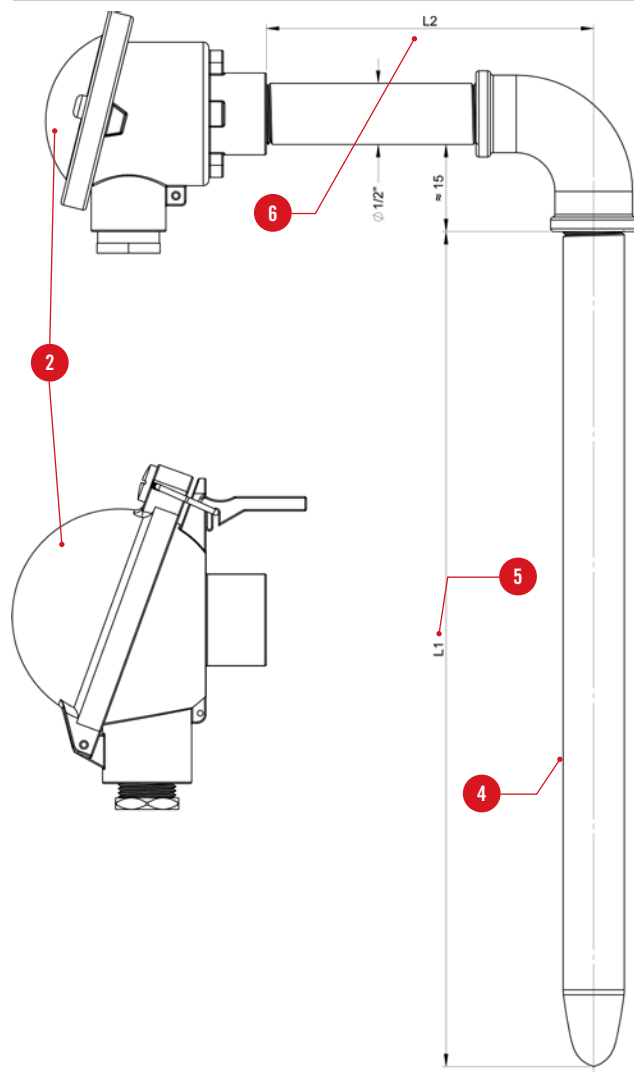
Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



For any other configuration, please contact us.

DIAGRAM



CADID LC

THERMOCOUPLE



IP
54

CLASS
1

IEC
584-1

NF EN
60584-1

up to
1050°C

DESCRIPTION

Demountable elbowed temperature measurement assembly

SPECIFICATIONS

Model	CADID Type LC	
Compliance with standards	IEC 584-1 / NF EN 60584-1	
Type	S	
Class	1	
Wire diameter (mm)	0.35 / 0.5	
TC	Single / Duplex	
Length L1 Min/Max (mm)	300 to 2,000 mm	
Length L2 Min/Max (mm)	150 to 500 mm	
Support tube	Unalloyed steel, diam.1/2"	
Internal sheath	Ceramic 610 Diam.10x1.5 mm	
Protective tube	Necked welded	
	Material	446 / INCONEL 600
	Diameter	1/2" - 3/4"
Output	Head type	DAN DIN B
	Material	Light alloy
	Output	1 cable gland M20x1.5
	Cable diam.	5.5 to 7.5 mm
	Equipment	Ceramic terminal strip (standard) Transmitter
	IP	IP54
Accessories	Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	Ø WIRE	HEAD	PROTECTIVE TUBE	Ø PROT.	LENGTH L1 (mm)	LENGTH L2 (mm)	OPTION	
CADID	LB								TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	6	7	
Possible choice		1S 2S	0.35 0.5	DIN B: DIB DAN: DAN	446: BB Inconel 600: CM	1/2" 3/4"			LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	Tolerance values		Ø of wires (mm)
		Min.	Max.	
S	10% rhodium-platinum / Platinum	0	+ 1,600	0.35 0.5

TRANSMITTER (1 TC ONLY) - OPTION

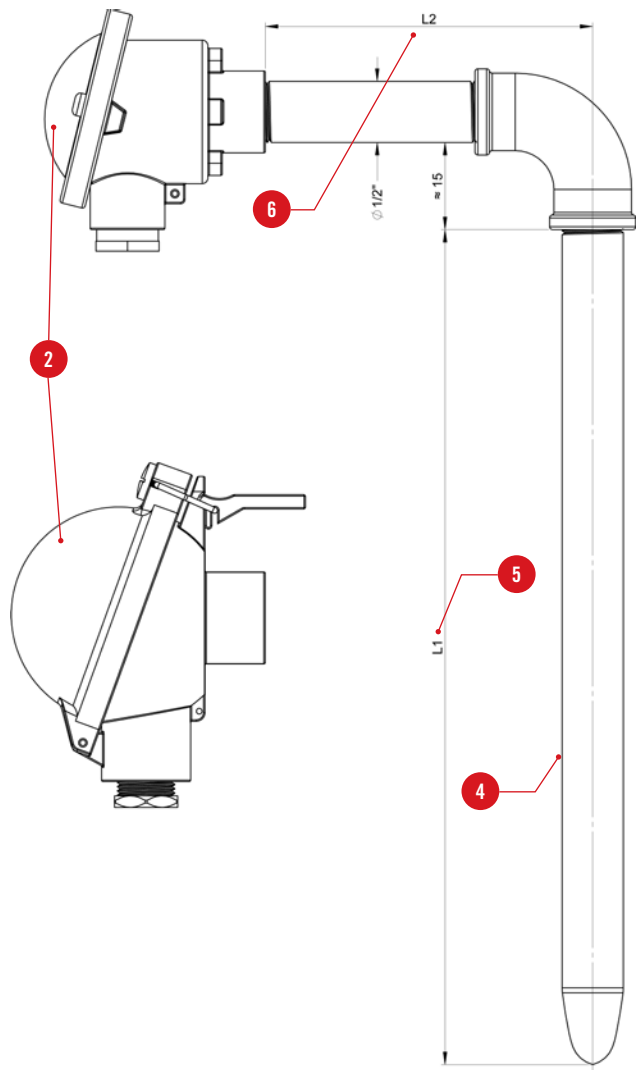
Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



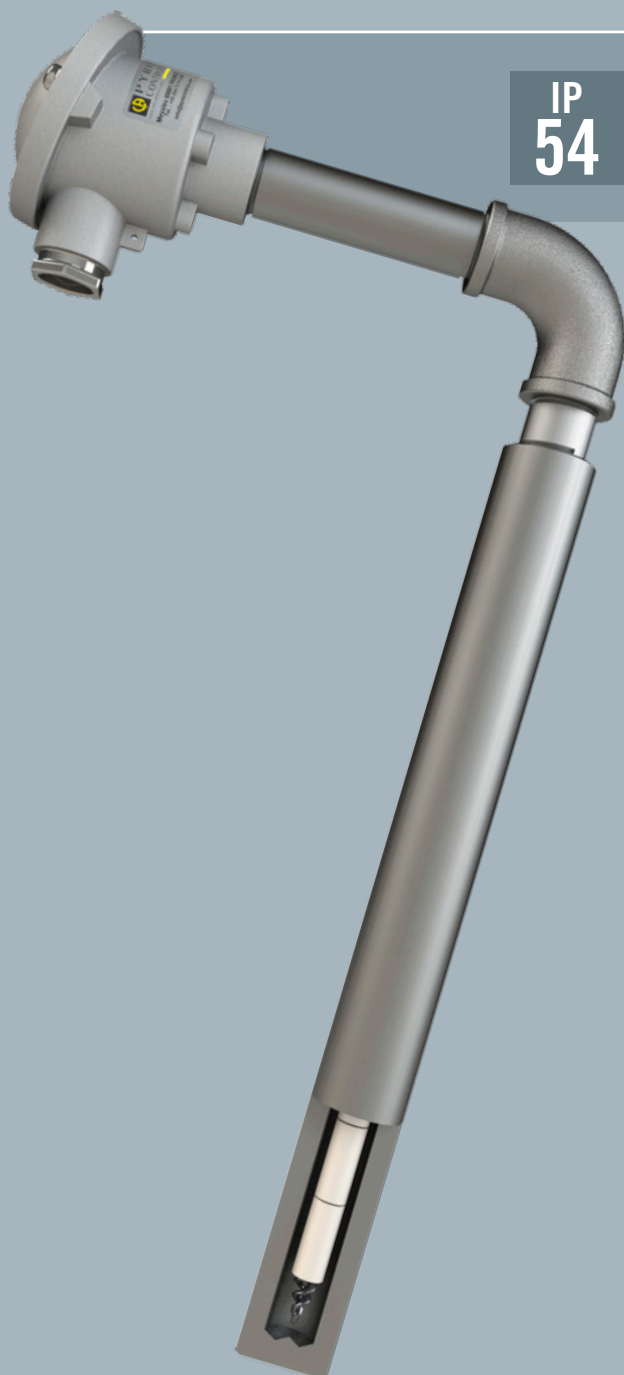
For any other configuration, please contact us.

DIAGRAM



CADID LD

THERMOCOUPLE



IP
54

CLASS
1

IEC
584-1

NF EN
60584-1

 up to
1100°C

DESCRIPTION

Demountable elbowed temperature measurement assembly

CARACTÉRISTIQUES

Model	CADID Type LD		
Compliance with standards	IEC 584-1 / NF EN 60584-1		
Type	K	J	
Class	1		
Wire diameter (mm)	1.5/ 2.3 / 3.0	1.5	
TC	Single / Duplex		
Length L1 Min/Max (mm)	300 to 2,000 mm		
Length L2 Min/Max (mm)	150 to 500 mm		
Support tube	Unalloyed steel, diameter 1/2"		
	Metal, drilled from bar stock		
Protective tube	Material	Pure iron / 310 / 446 / INCONEL 600	
	Diameter	30 x 7 mm	
Output	Head type	DAN	DIN B
	Material	Light alloy	
	Output	1 cable gland M20x1.5	
	Cable diam.	5.5 to 7.5 mm	
	Equipment	Ceramic terminal strip (standard) Transmitter	
	IP	IP54	
Accessories	Extension cables, compensation cables		

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	PROTECTIVE TUBE	LENGTH L1 (mm)	LENGTH L2 (mm)	OPTION	
CADID	- LD							TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	6	
Possible choice		1J / 1K 2J / 2K	1.5 2.3 3.0	DIN B: DIB DAN: DAN	310: BA 446: BB Inconel 600: CM Pure iron: FF			LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	Tolerance values		∅ of wires (mm)	
		Min.	Max.		
J	Iron / Copper-Nickel	- 40	+ 750	1.5°C or 0.4% of t	1.5
K	Nickel-Chrome / Nickel alloy	- 40	+ 1,000	1.5°C or 0.4% of t	1.5 2.3 3.0

TRANSMITTER (1 TC ONLY) - OPTION

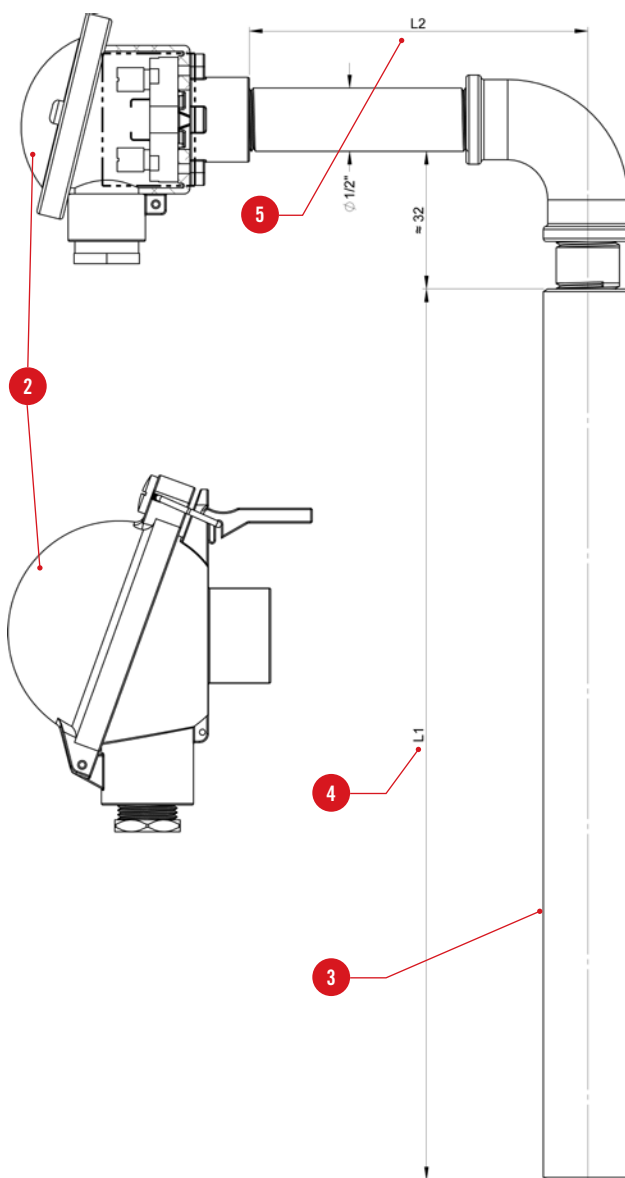
Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



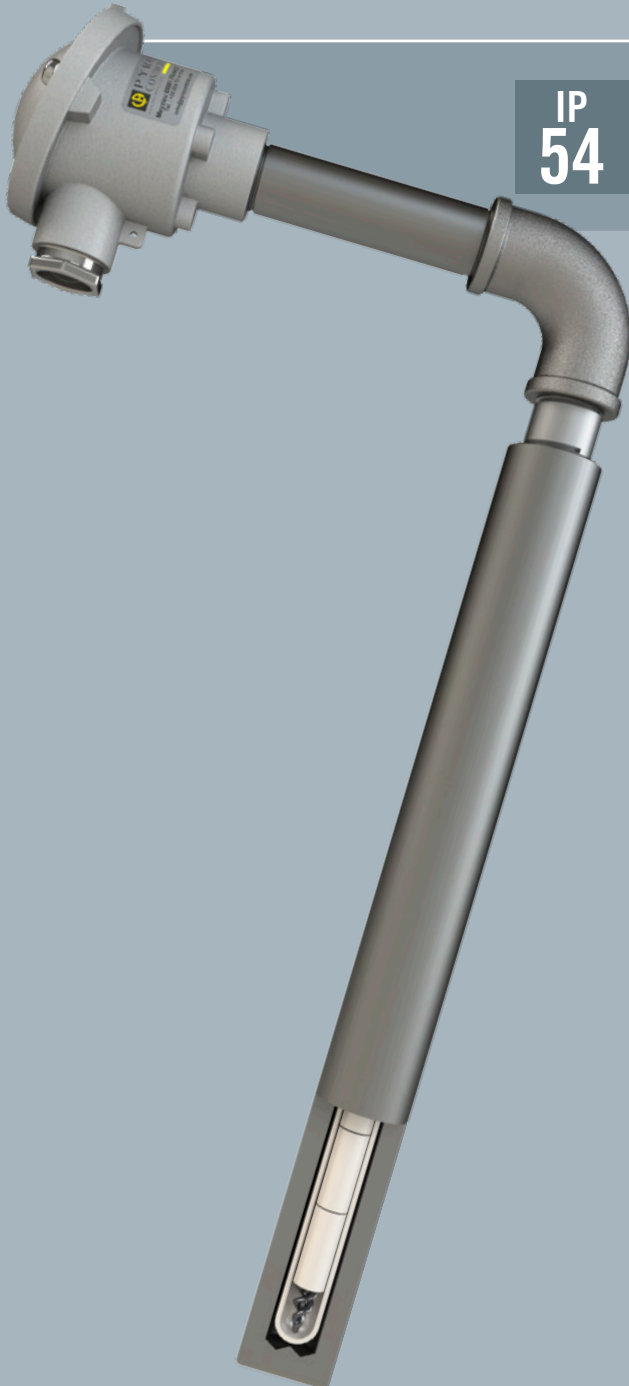
For any other configuration, please contact us.

DIAGRAM



CADID LE

THERMOCOUPLE



IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Demountable elbowed temperature measurement assembly

SPECIFICATIONS

Model	CADID Type LE	
Compliance with standards	IEC 584-1 / NF EN 60584-1	
Type	K	S
Class	1	
Wire diameter (mm)	2.3	0.35 / 0.5
TC	Single / Duplex	
TC mounting	Beaded, ceramic beads	
Length L1 Min/Max (mm)	300 to 2,000 mm	
Length L2 Min/Max (mm)	150 to 500 mm	
Support tube	Unalloyed steel, diameter 1/2"	
	Metal, drilled from bar stock	
Protective tube	Material	Pure iron / 310 / 446 / INCONEL 600
	Diameter	30 x 7 mm
Internal sheath	Material	Ceramic 610
	Diameter	15 x 2 mm
Output	Head type	DAN DIN B
	Material	Light alloy
	Output	1 cable gland M20x1.5
	Cable diam.	5.5 to 7.5 mm
	Equipment	Ceramic terminal strip (standard) Transmitter
	IP	IP54
Accessories	Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	PROTECTIVE TUBE	LENGTH L1 (mm)	LENGTH L2 (mm)	OPTION	
CADID	- LE							TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	6	7
Possible choice		1K / 1S 2K / 2S	0.35 0.5 2.3	DIN B: DIB DAN: DAN	Pure iron: FF 310: BA 446: BB Inconel 600: CM			LC5334A-100: A LC5331A-321: B LC5335A-100: C	

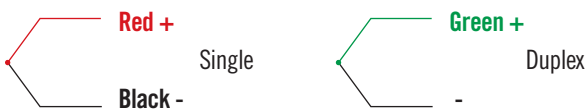
TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C		Tolerance values	∅ of wires (mm)
	Min.	Max.		
K Nickel-Chrome / Nickel alloy	- 40	+ 1,000	1.5°C or 0.4% of t	2.3
S 10% rhodium-platinum / Platinum	0	+ 1,600	1°C for t < 1100°C [1 + 0.003 x (t-1100)] for t > 1100°C	0.35 0.5

TRANSMITTER (1 TC ONLY) - OPTION

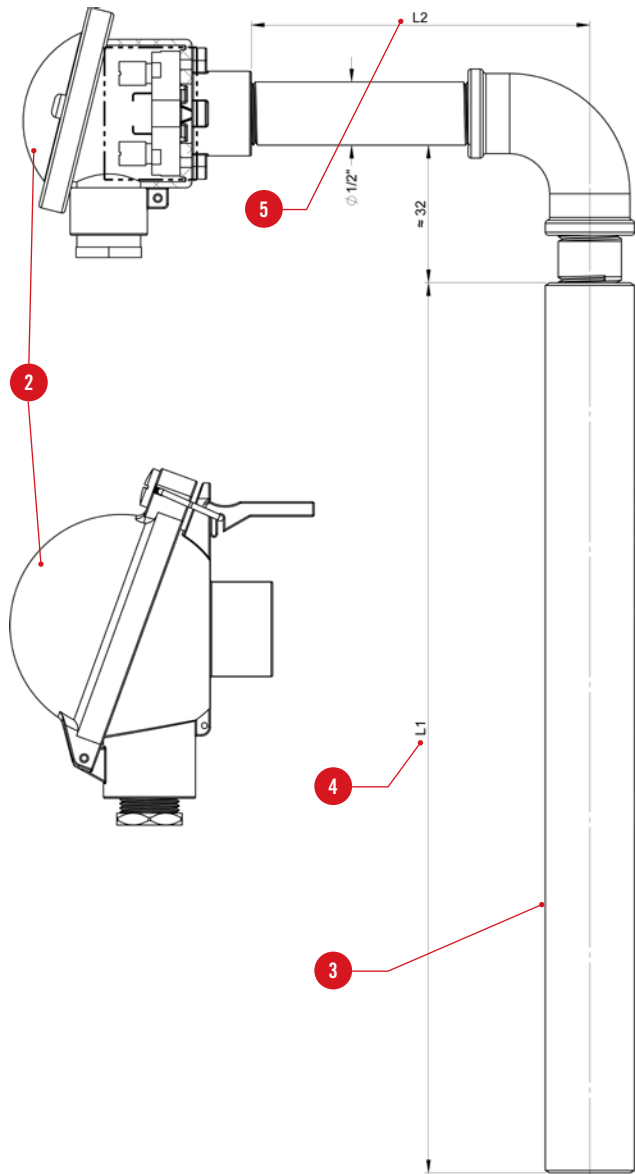
Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



For any other configuration, please contact us.

DIAGRAM



CADID XB

THERMOCOUPLE

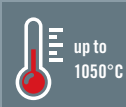


IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Bent temperature measurement assembly

SPECIFICATIONS

Model	CADID Type XB	
Compliance with standards	IEC 584-1 / NF EN 60584-1	
Type	K	J
Class	1	
Wire diameter (mm)	1.5/ 2.3 / 3.0	1.5
TC	Single / Duplex	
Length L1 Min/Max (mm)	300 to 800 mm	
Length L2 Min/Max (mm)	250 to 400 mm	
Length L3 Min/Max (mm)	0 (protective tube diam. 1/2" only) to 505 mm	
Support tube	Unalloyed steel, diam.1/2".	
Protective tube	Necked, welded and bent	
	Bending radius	r=45 for tube diam.1/2" ; r=60 for tube diam.3/4"
	Material	304L / 310 / 446 / INCONEL 600
	Diameter	1/2" - 3/4"
Output	Head type	DAN DIN B
	Material	Light alloy
	Output	1 cable gland M20x1.5
	Cable diam.	5.5 to 7.5 mm
	Equipment	Ceramic terminal strip (standard) Transmitter
	IP	IP54
Accessories	Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	Ø WIRE	HEAD	PROTECTIVE TUBE	Ø PROT.	LENGTH L1 (mm)	LENGTH L2 (mm)	LENGTH L3 (mm)	OPTION		
CADID	- XB	-	-	-	-	-	-	-	-	-	TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	6	7	8		
Possible choice		1J 1K 2J 2K	1.5 2.3 3.0	DIN B: DIB DAN: DAN	304L: AB 310: BA 446: BB Inconel 600: CM	1/2" 3/4"					LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type		CONDUCTOR type °C		Tolerance values	Ø of wires (mm)
		Min.	Max.		
J	Iron / Copper-Nickel	- 40	+ 750	1.5°C or 0.4% of t	1.5
K	Nickel-Chrome / Nickel alloy	- 40	+ 1,000	1.5°C or 0.4% of t	1.5 2.3 3.0

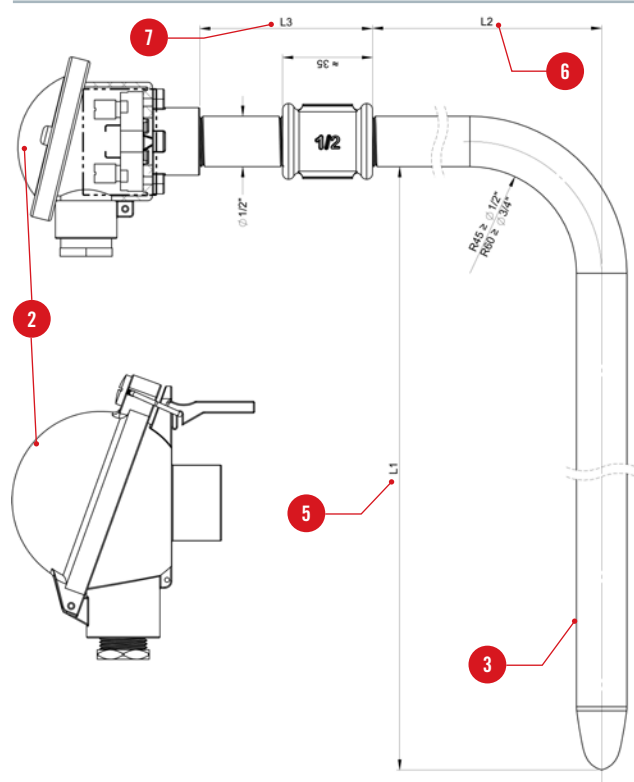
TRANSMITTER (1 TC ONLY) - OPTION

Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

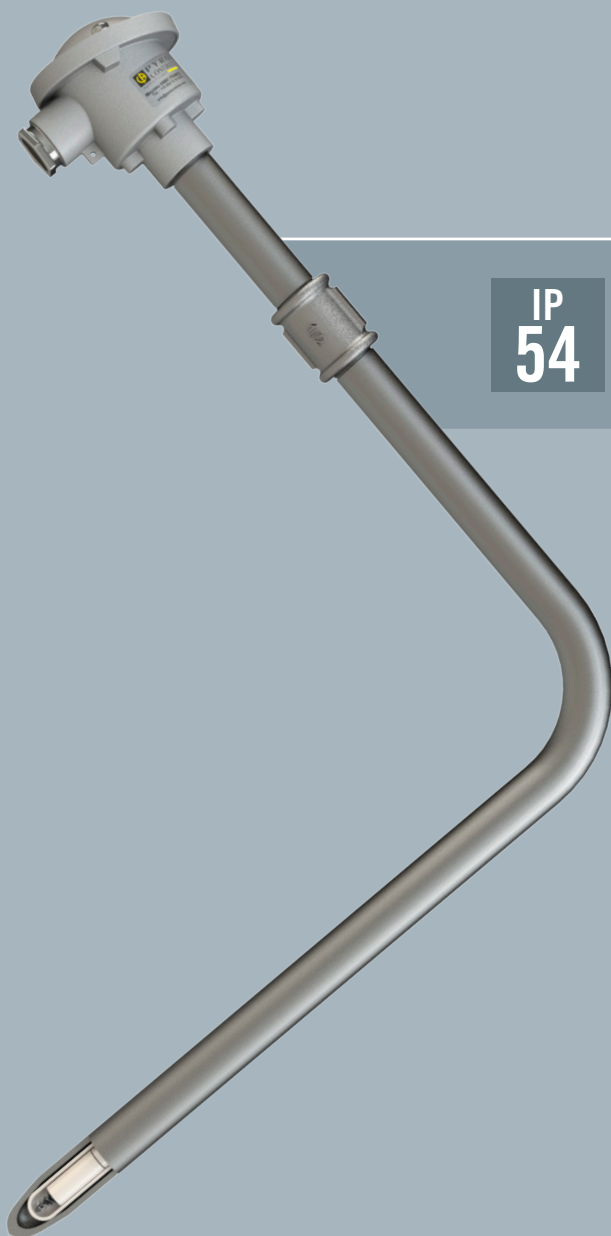
CONNECTION ON TERMINAL STRIP



DIAGRAM



For any other configuration, please contact us.



CADID XC

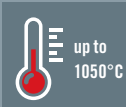
THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Bent temperature measurement assembly

SPECIFICATIONS

Model	CADID Type XC	
Compliance with standards	IEC 584-1 / NF EN 60584-1	
Type	S	
Class	1	
Wire diameter (mm)	0.35 / 0.5	
TC	Single / Duplex	
Length L1 Min/Max (mm)	300 to 800 mm	
Length L2 Min/Max (mm)	250 to 400 mm	
Length L3 Min/Max (mm)	0 (protective tube diam.1/2" only) to 505 mm	
Support tube	Unalloyed steel, diam.1/2".	
Internal sheath	Ceramic 610, diam.10x1.5 mm	
Protective tube	Necked, welded and bent	
	Bending radius	r=45 for tube diam.1/2" ; r=60 for tube diam.3/4"
	Material	304L / 310 / 446 / INCONEL 600
Output	Diameter	1/2" - 3/4"
	Head type	DAN DIN B
	Material	Light alloy
	Output	1 cable gland M20x1.5
	Cable diam.	5.5 to 7.5 mm
	Equipment	Ceramic terminal strip (standard) Transmitter
	IP	IP54
Accessories	Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	WIRE	HEAD	PROTECTIVE TUBE	Ø PROT.	LENGTH L1 (mm)	LENGTH L2 (mm)	LENGTH L3 (mm)	OPTION		
CADID	- XC	-	-	-	-	-	-	-	-	-	TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	6	7	8		
Possible choice		1S 2S	0.35 0.5	DIN B: DIB DAN: DAN	304L: AB 310: BA 446: BB Inconel 600: CM	1/2" 3/4"					LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	CONDUCTOR type °C	Tolerance values		Ø of wires (mm)
		Min.	Max.	
S	10% rhodium-platinum / Platinum	0	+ 1,600	0.35 0.5

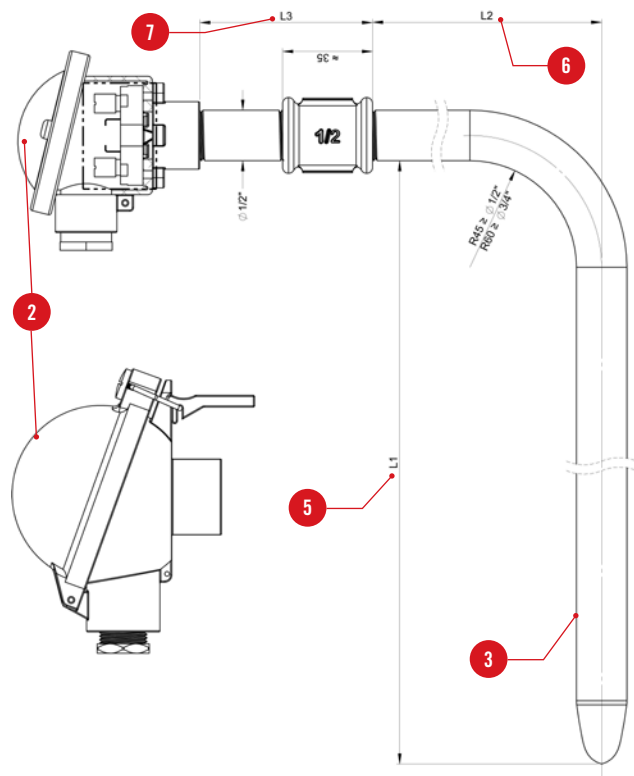
TRANSMITTER (1 TC ONLY) - OPTION

Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

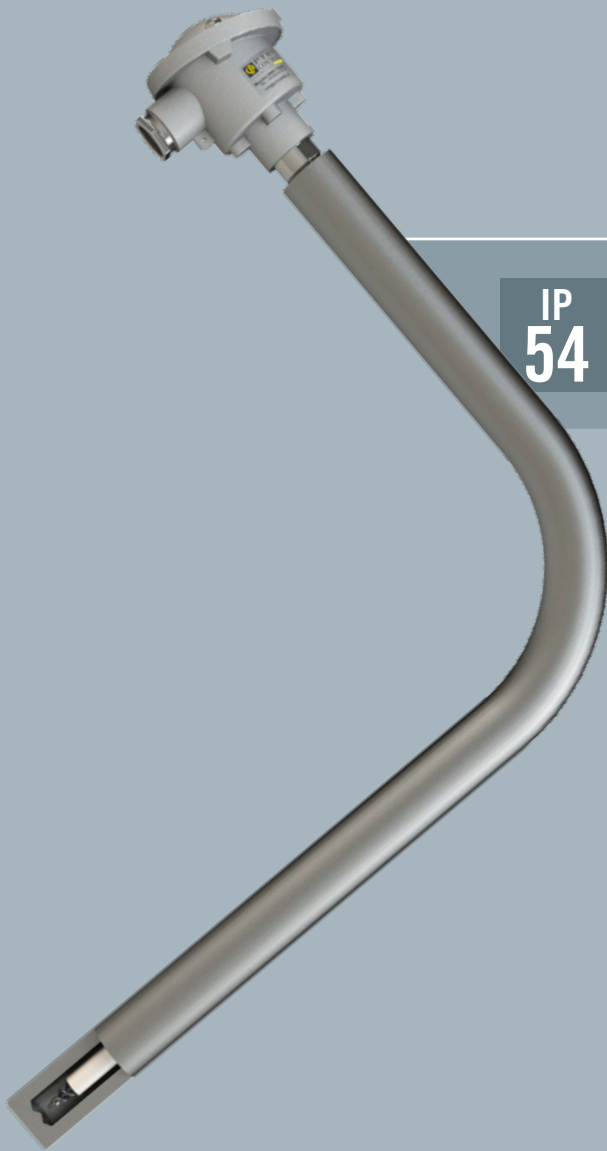
CONNECTION ON TERMINAL STRIP



DIAGRAM



For any other configuration, please contact us.



CADID XD

THERMOCOUPLE

IP
54

CLASS
1

IEC
584-1

NF EN
60584-1



DESCRIPTION

Bent temperature measurement assembly

SPECIFICATIONS

Model	CADID Type XD	
Compliance with standards	IEC 584-1 / NF EN 60584-1	
Type	K	J
Class	1	
Wire diameter (mm)	1.5 / 2.3 / 3.0	1.5
TC	Single / Duplex	
Length L1 Min/Max (mm)	"300 to 800 mm "	
Length L2 Min/Max (mm)	250 to 400 mm	
Length L3 Min/Max (mm)	40 to 470 mm	
Support tube	Unalloyed steel, diam.1/2".	
Protective tube		Bored and bent
	Bend radius	r=70
	Material	PURE IRON / 310 / 446 / INCONEL 600
	Diameter	30 x 7 mm
Output	Head type	DAN DIN B
	Material	Light alloy
	Output	1 cable gland M20x1.5
	Cable diam.	5.5 to 7.5 mm
	Equipment	Ceramic terminal strip (standard) Transmitter
	IP	IP54
Accessories	Extension cables, compensation cables	

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	PROTECTIVE TUBE	LENGTH L1 (mm)	LENGTH L2 (mm)	LENGTH L3 (mm)	OPTION	
CADID	-	XC	-	-	-	-	-	-	-	-
Reference in table and diagram		1	1	2	3	4	5	6	7	
Possible choice		1J 1K 2J 2K	1.5 2.3 3.0	DIN B: DIB DAN: DAN	PURE IRON: FF 310: BA 446: BB Inconel 600: CM				LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type		CONDUCTOR type °C		Tolerance values	∅ of wires (mm)
		Min.	Max.		
J	Iron / Copper-Nickel	- 40	+ 750	1.5°C or 0.4% of t	1.5
K	Nickel-Chrome / Nickel alloy	- 40	+ 1,000	1.5°C or 0.4% of t	1.5
					2.3
					3.0

TRANSMITTER (1 TC ONLY) - OPTION

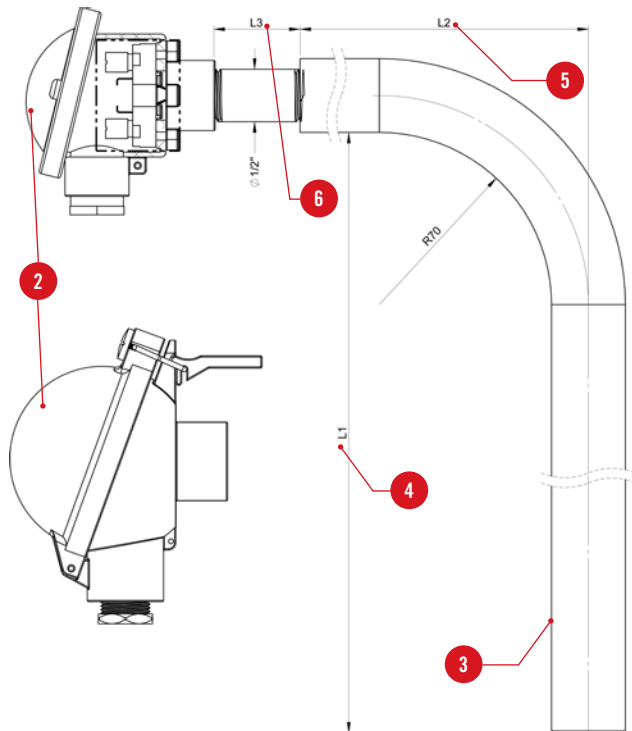
Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

CONNECTION ON TERMINAL STRIP



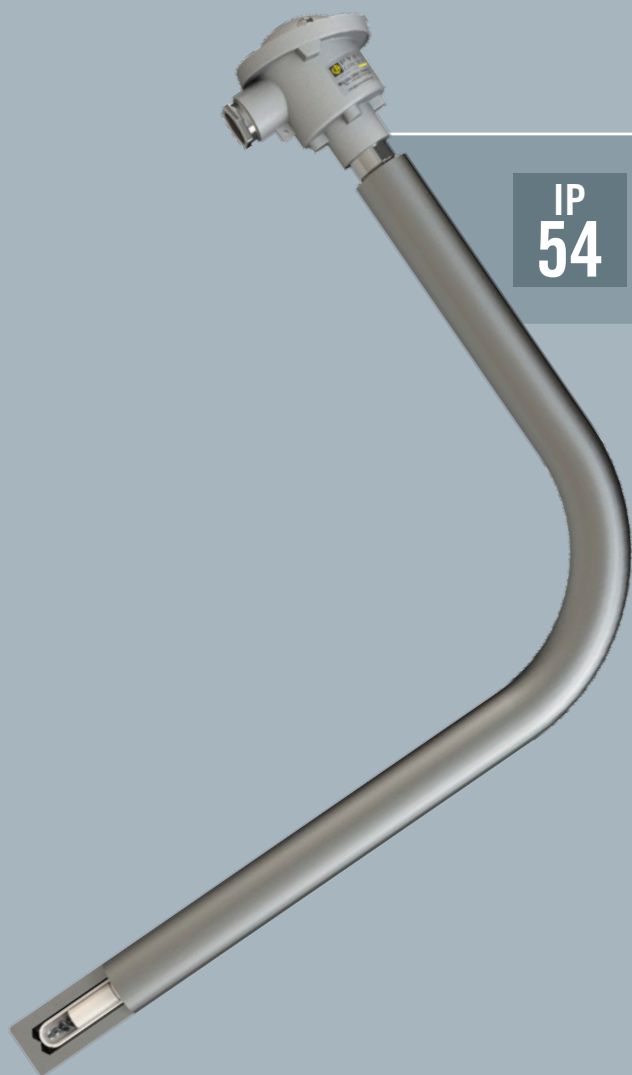
For any other configuration, please contact us.

DIAGRAM



CADID XE

THERMOCOUPLE




IP
54

CLASS
1

IEC
584-1

NF EN
60584-1

 up to
1050°C

DESCRIPTION

Bent temperature measurement assembly

SPECIFICATIONS

Model	CADID Type XE		
Compliance with standards	IEC 584-1 / NF EN 60584-1		
Type	K	S	
Class	1		
Wire diameter (mm)	2.3	0.35 / 0.5	
TC	Single / Duplex		
TC mounting	Beaded, ceramic beads		
Length L1 Min/Max (mm)	300 to 800 mm		
Length L2 Min/Max (mm)	250 to 400 mm		
Length L3 Min/Max (mm)	40 to 470 mm		
Support tube	Unalloyed steel, diam.1/2".		
	Metal, drilled from bar stock		
Protective tube	Material	Pure iron / 310 / 446 / INCONEL 600	
	Diameter	30 x 7 mm	
Internal sheath	Material	Ceramic 610	
	Diameter	15 x 2 mm	
Output	Head type	DAN	DIN B
	Material	Light alloy	
	Output	1 cable gland M20x1.5	
	Cable diam.	5.5 to 7.5 mm	
	Equipment	Ceramic terminal strip (standard) Transmitter	
	IP	IP54	
Accessories	Extension cables, compensation cables		

DESIGN YOUR SENSOR

CONFIGURATOR CODE

Parameters to be indicated when ordering

MODEL	TYPE	TC	∅ WIRE	HEAD	PROTECTIVE TUBE	LENGTH L1 (mm)	LENGTH L2 (mm)	LENGTH L3 (mm)	OPTION	
CADID	- XE								TRANSMITTER	TRANSMITTER SCALE
Reference in table and diagram		1	1	2	3	4	5	6	7	
Possible choice		1K 1S 2K 2S	0.35 0.5 2.3	DIN B: DIB DAN: DAN	PURE IRON: FF 310: BA 446: BB Inconel 600: CM				LC5334A-100: A LC5331A-321: B LC5335A-100: C	

TABLE OF CONDUCTOR TYPE - WIRE DIAMETER

Conductor type	Conductor type °C	Tolerance values		∅ of wires (mm)
		Min.	Max.	
K Nickel-Chrome / Nickel alloy	-40 / +1,000	1.5°C or 0.4% of t	2.3	
S 10% rhodium-platinum / Platinum	0 / +1,600	1°C for t < 1100°C [1 + 0.003 x (t-1100)] for t > 1100°C	0.35 0.5	

TRANSMITTER (1 TC ONLY) - OPTION

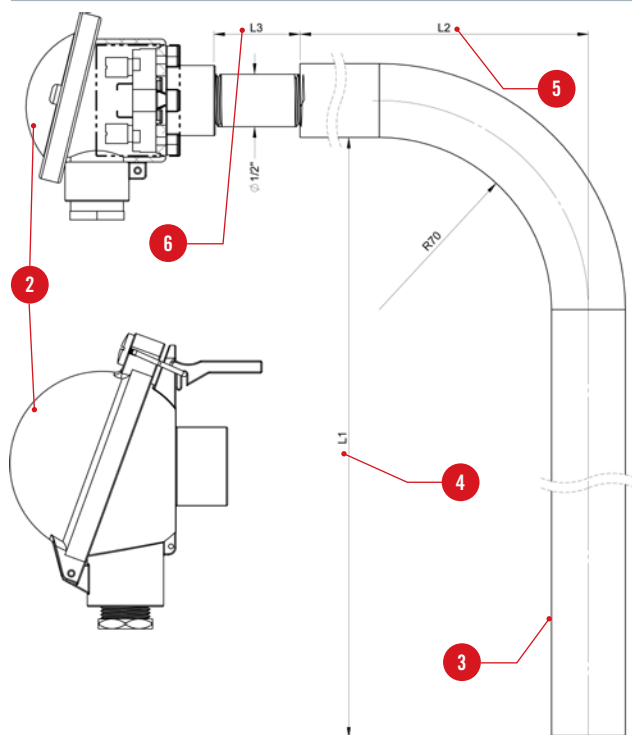
Transmitter			
Input	Output	Galvanic insulation	Reference
TC	4-20mA	1.5kV	LC5334A-100
TC + Pt100	4-20mA	1.5kV	LC5331A-321
TC + Pt100	4-20mA + HART	1.5kV	LC5335A-100

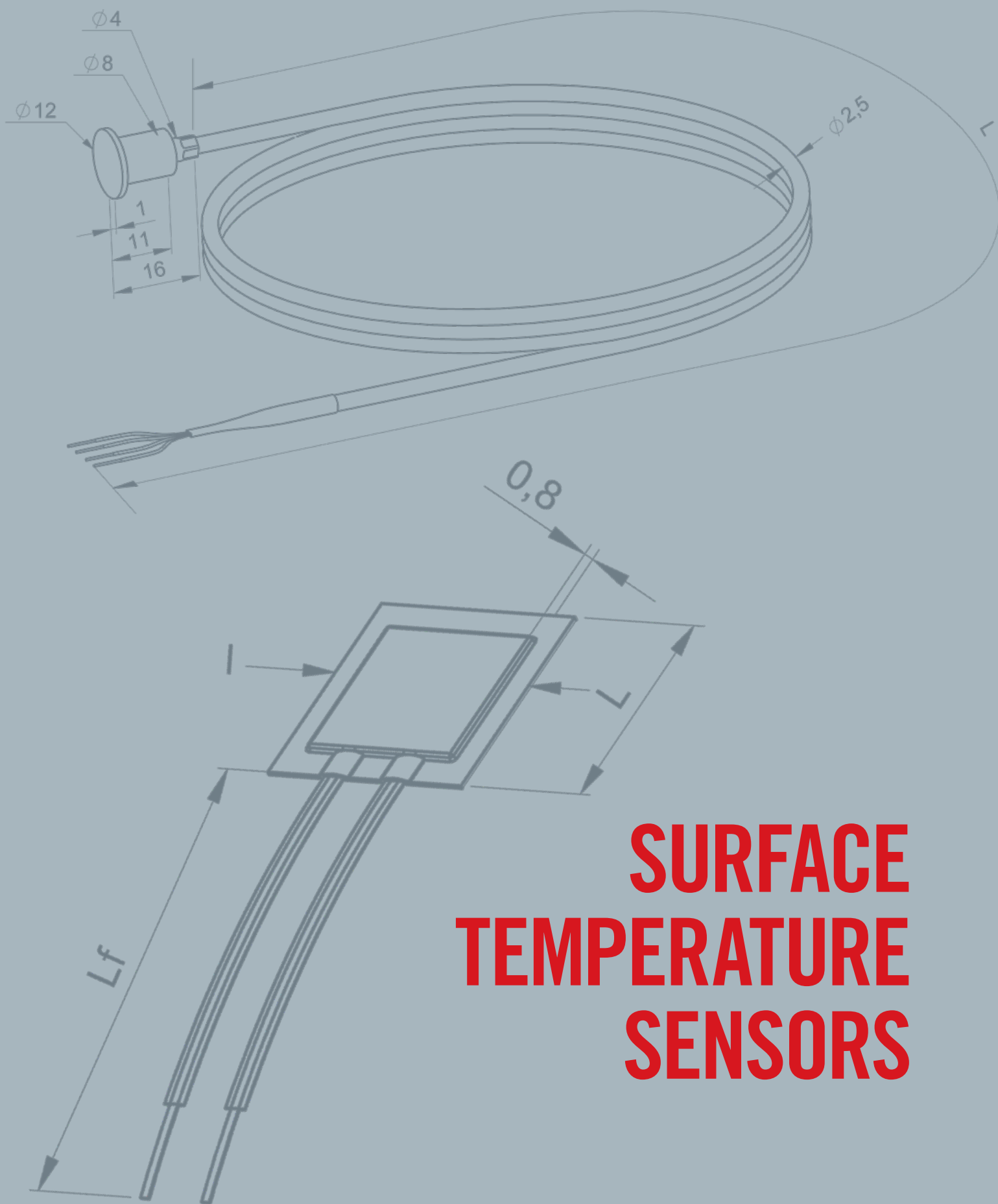
CONNECTION ON TERMINAL STRIP



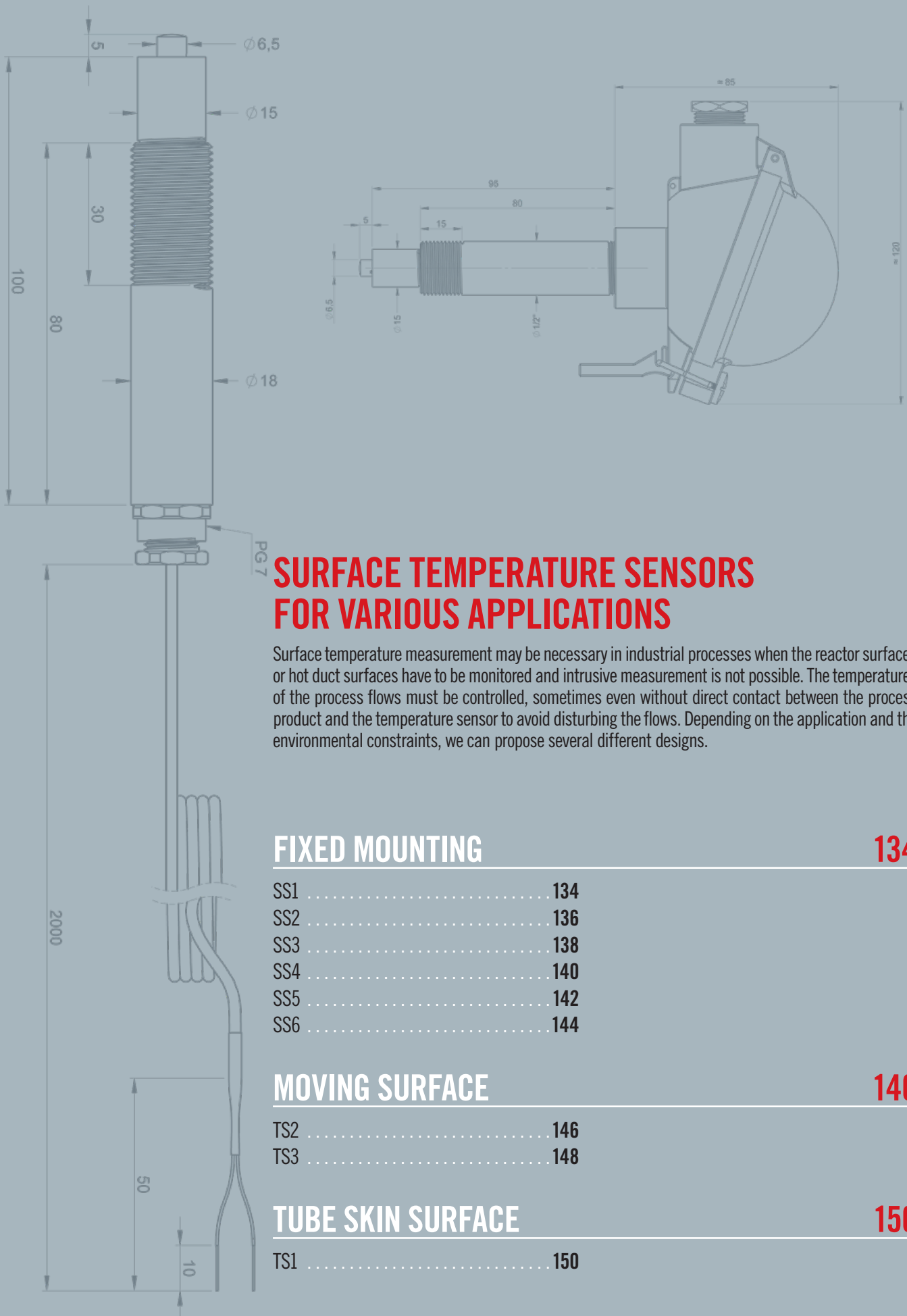
For any other configuration, please contact us.

DIAGRAM





SURFACE TEMPERATURE SENSORS



SURFACE TEMPERATURE SENSORS FOR VARIOUS APPLICATIONS

Surface temperature measurement may be necessary in industrial processes when the reactor surfaces or hot duct surfaces have to be monitored and intrusive measurement is not possible. The temperatures of the process flows must be controlled, sometimes even without direct contact between the process product and the temperature sensor to avoid disturbing the flows. Depending on the application and the environmental constraints, we can propose several different designs.

FIXED MOUNTING

134

SS1	134
SS2	136
SS3	138
SS4	140
SS5	142
SS6	144

MOVING SURFACE

146

TS2	146
TS3	148

TUBE SKIN SURFACE

150

TS1	150
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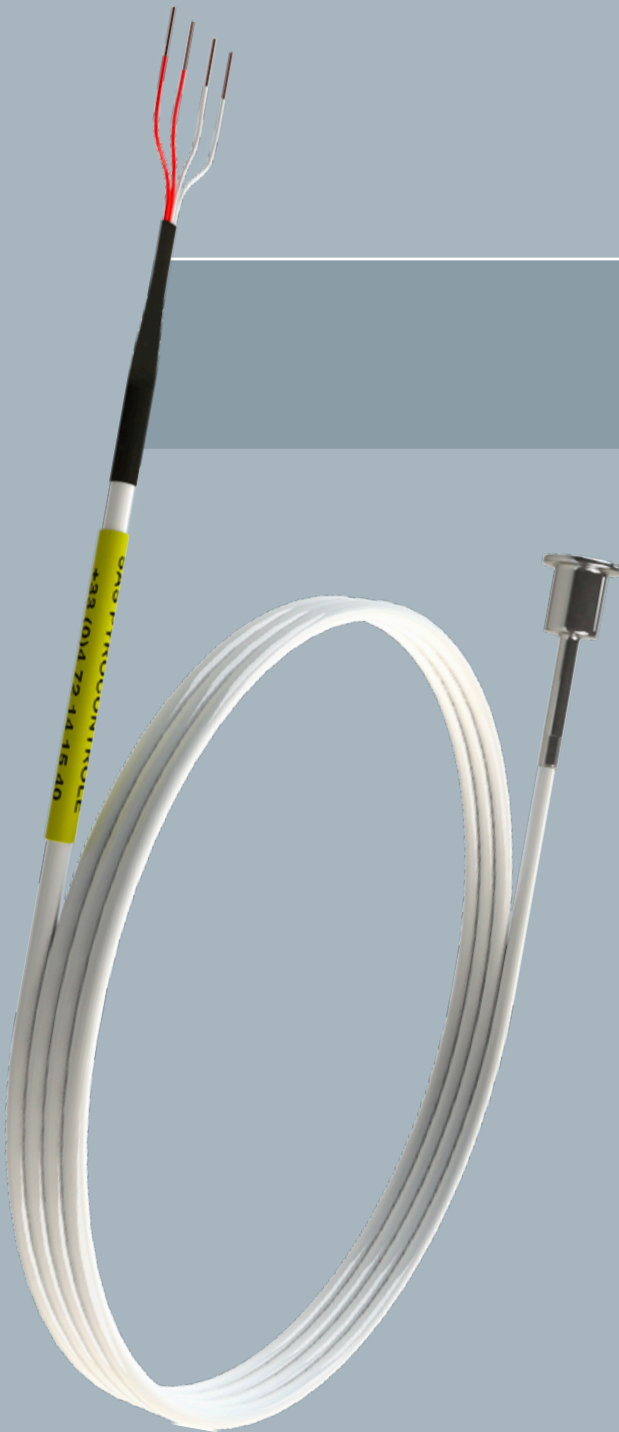
SS1

Pt100

CLASS
B

IEC
60751

DURAL
PLATE

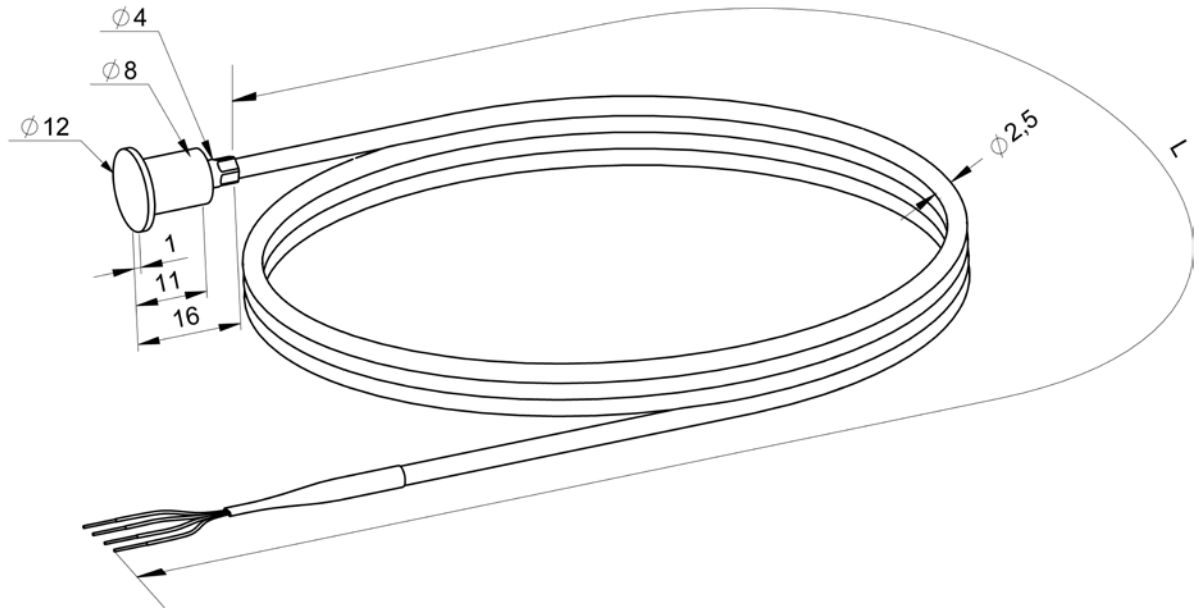


DESCRIPTION

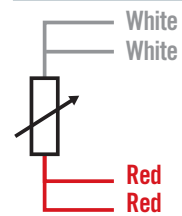
Pt100 sensor, Class B, 4 wires, as per IEC 60751, on Dural plate, output via PTFE cable, for temperature measurement up to 200°C. Fastening by gluing or insertion in the material.

SPECIFICATIONS

Model	SS1	
Compliance with standards	IEC 60751	
Type	Pt100 Ω	
Material	Dural plate, diam.12 mm	
Class	B	
Mounting / Construction	1x4 wires	
Max. surface temp. (°C) (without flow) (theoretical)	200°C	
Output	Sheath	PTFE
	Diameter (mm)	2.5 mm
	Max. temperature	200°C
	Conductors	4 x 0.05 mm ² copper
	Length L (mm)	1,000 / 2,000 / 5,000 mm
	Termination	Insulated bare wires
Fastening	By gluing on the surface or insertion in the material.	

DIAGRAM**REFERENCES**

Cable length L (mm)	Reference
1000	P07604120
2000	P07604121
5000	P07604122

CONNECTION

For any other configuration, please contact us.

SS2

Pt100

CLASS
B

IEC
60751



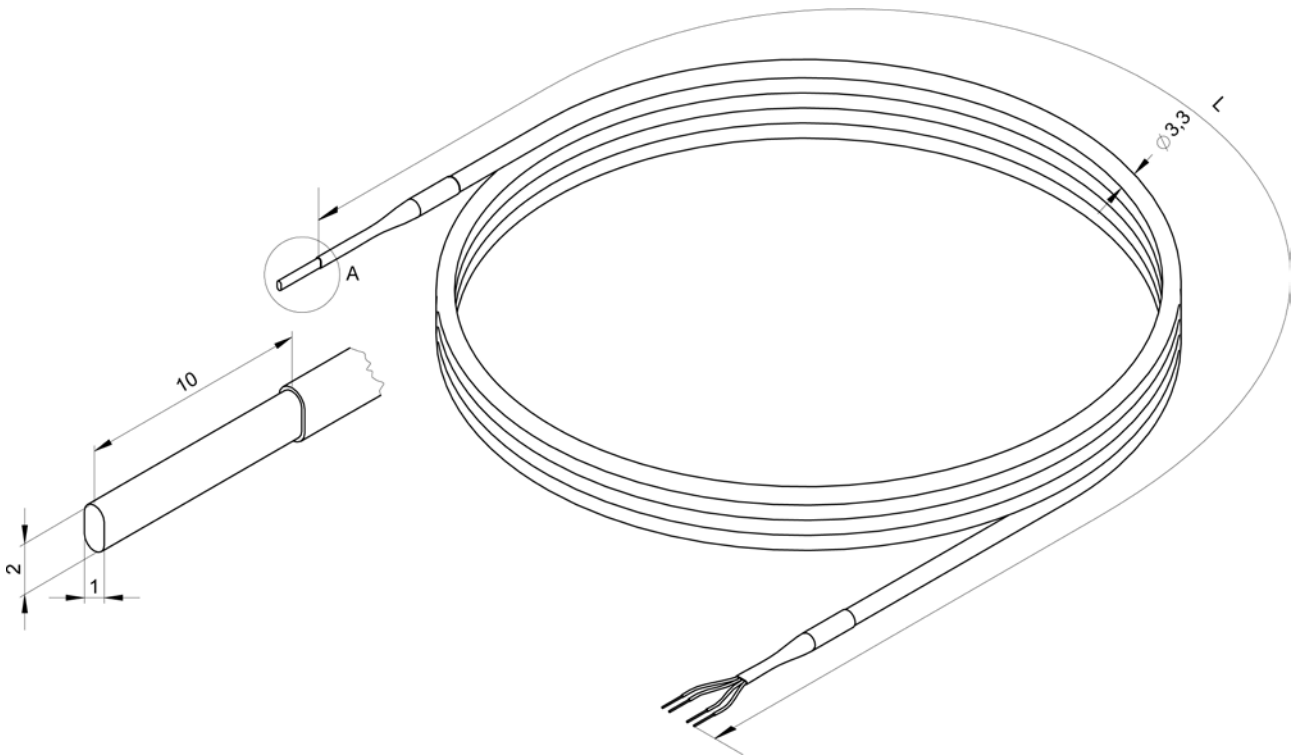
DESCRIPTION

Pt100 sensor, Class B, 4 wires, as per IEC 60751, on alumina substrate, output via PTFE cable, for temperature measurement up to 250°C. Fastening by gluing.

SPECIFICATIONS

Model	SS2	
Compliance with standards	IEC 60751	
Type	Pt100 Ω	
Material	Alumina substrate (10x2x1 mm) (Lxwxh)	
Class	B	
Mounting / Construction	1x4 wires	
Max. surface temp. (°C) (without flow) (theoretical)	250°C	
Output	Sheath	FEP
	Diameter (mm)	3.3 mm
	Max. temperature	200°C
	Conductors	4 x 0.22 mm ² , copper
	Length L (mm)	1,000 / 2,000 / 5,000 mm
	Termination	Insulated bare wires
Fastening	By gluing on the surface	

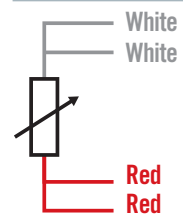
DIAGRAM



REFERENCES

Cable length L (mm)	Reference
1000	P07604115
2000	P07604116
5000	P07604117

CONNECTION



For any other configuration, please contact us.

SS3

Pt100

CLASS
A

IEC
60751



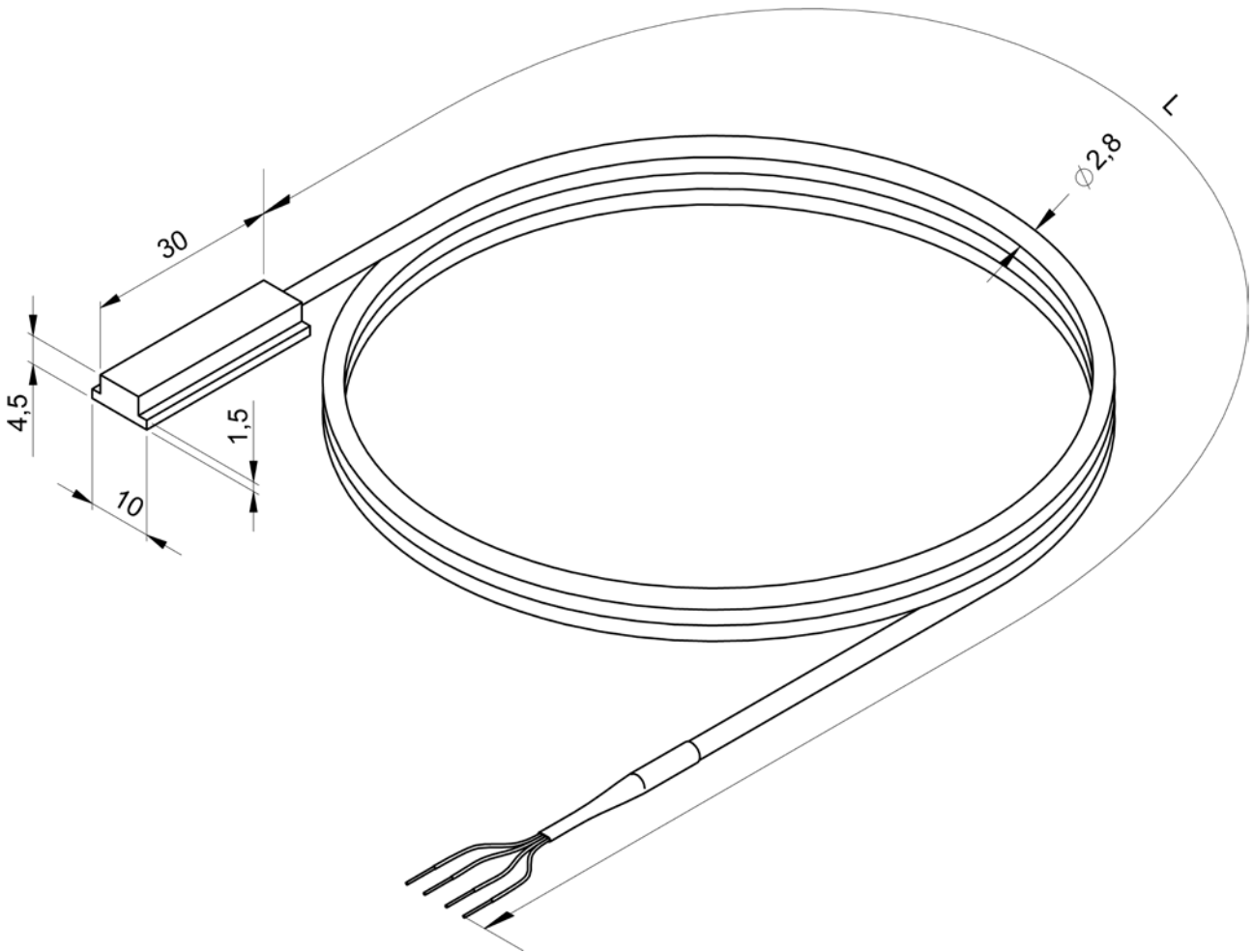
DESCRIPTION

Pt100 sensor, Class A, 4 wires, as per IEC 60751, on Dural plate, output via PTFE cable, for temperature measurement up to 200°C. Fastening by gluing or with clamping screw.

SPECIFICATIONS

Model	SS3	
Compliance with standards	IEC 60751	
Type	Pt100 Ω	
Material	Dural plate, 30x10x4.5mm (Lxwxh)	
Class	A	
Mounting / Construction	1x4 wires	
Max. surface temp. (°C) (without flow) (theoretical)	200°C	
Output	Sheath	PTFE
	Diameter (mm)	2.8 mm
	Max. temperature	200°C
	Conductors	4 x 0.22 mm ² , copper
	Length L (mm)	1,000 / 2,000 / 5,000 mm
	Termination	Insulated bare wires
Fastening	By gluing on surface or with clamping screw.	

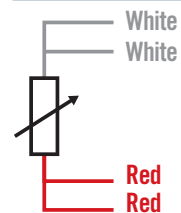
DIAGRAM



REFERENCES

Cable length L (mm)	Reference
1000	P07604123
2000	P07604124
5000	P07604125

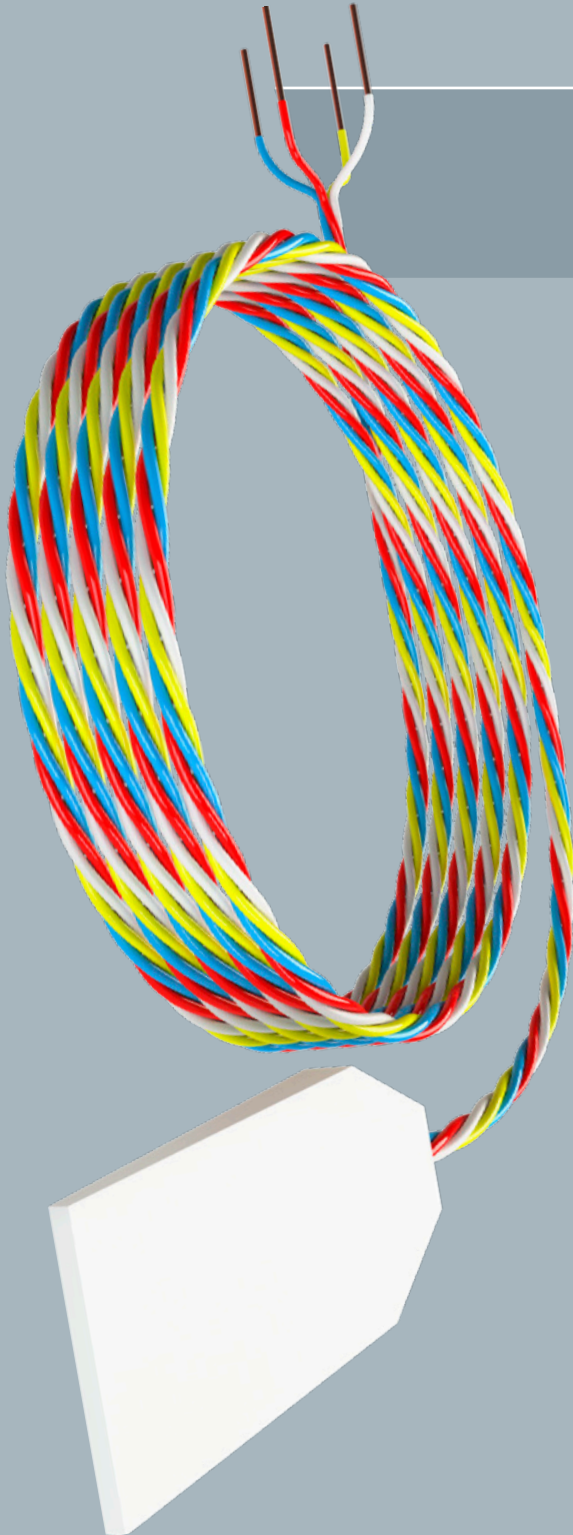
CONNECTION



For any other configuration, please contact us.

SS4

Pt100



CLASS
B

IEC
60751



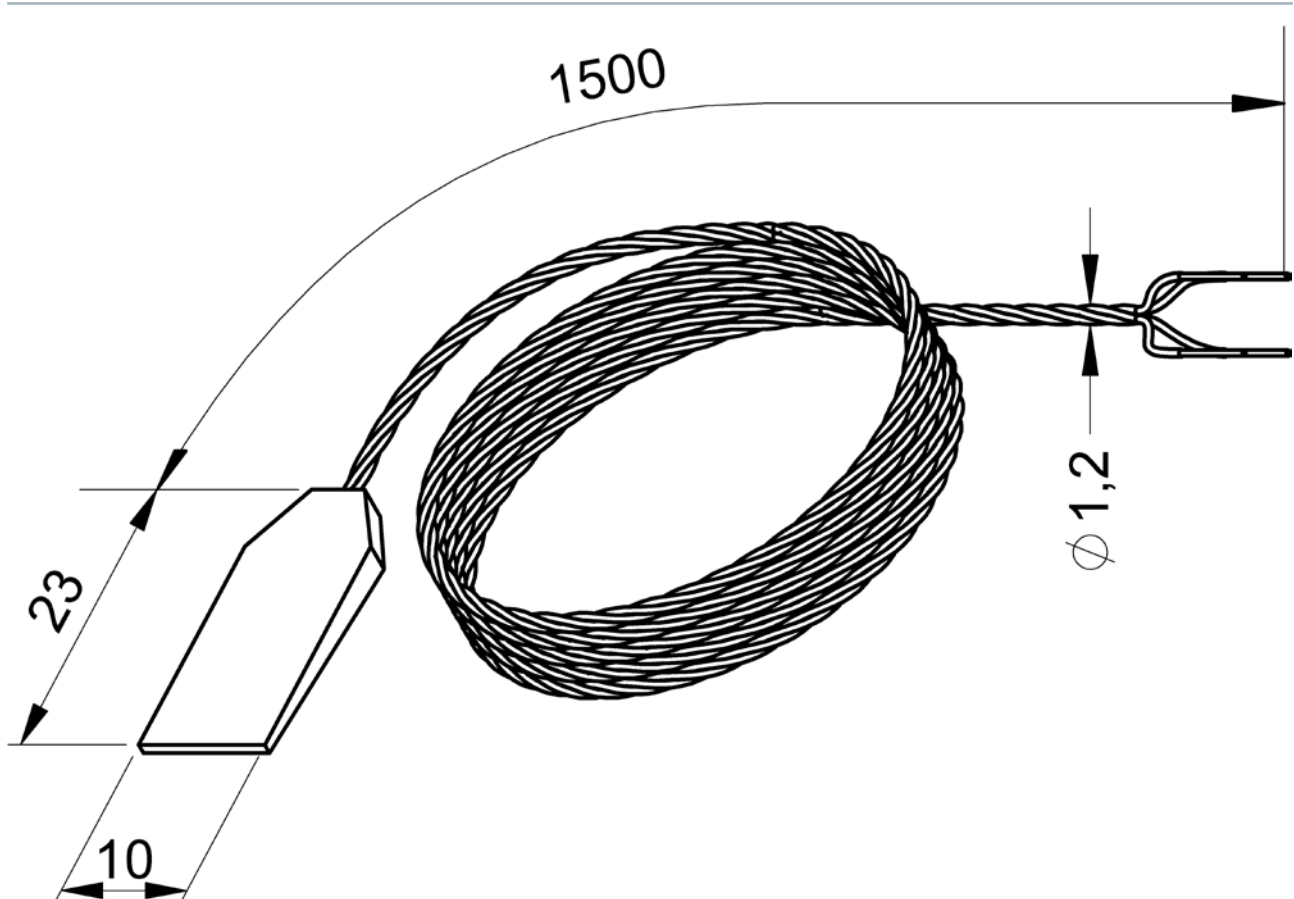
DESCRIPTION

Flat, flexible Pt100 sensor, class B, 4 wires, as per IEC 60751, fastening by gluing.

SPECIFICATIONS

Model	SS4	
Compliance with standards	IEC 60751	
Type	Pt100 Ω	
Material	Silicone elastomer coating, 23x10mm (Lxw)	
Class	B	
Mounting / Construction	1x4 wires	
Max. surface temp. (°C) (without flow) (theoretical)	-70° to +200°C	
Output	Sheath	PTFE / conductor
	Max. temperature	200°C
	Conductors	4 x 0.055 mm ² , silver-plated copper
	Length L (mm)	1,500 mm
	Termination	Insulated bare wires
Fastening	By gluing	

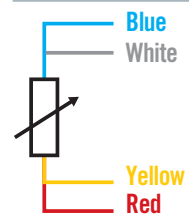
DIAGRAM



REFERENCE

Cable length (mm)	Reference
1500	LOG1822-000

CONNECTION



SS5

Pt100

CLASS
B

IEC
60751



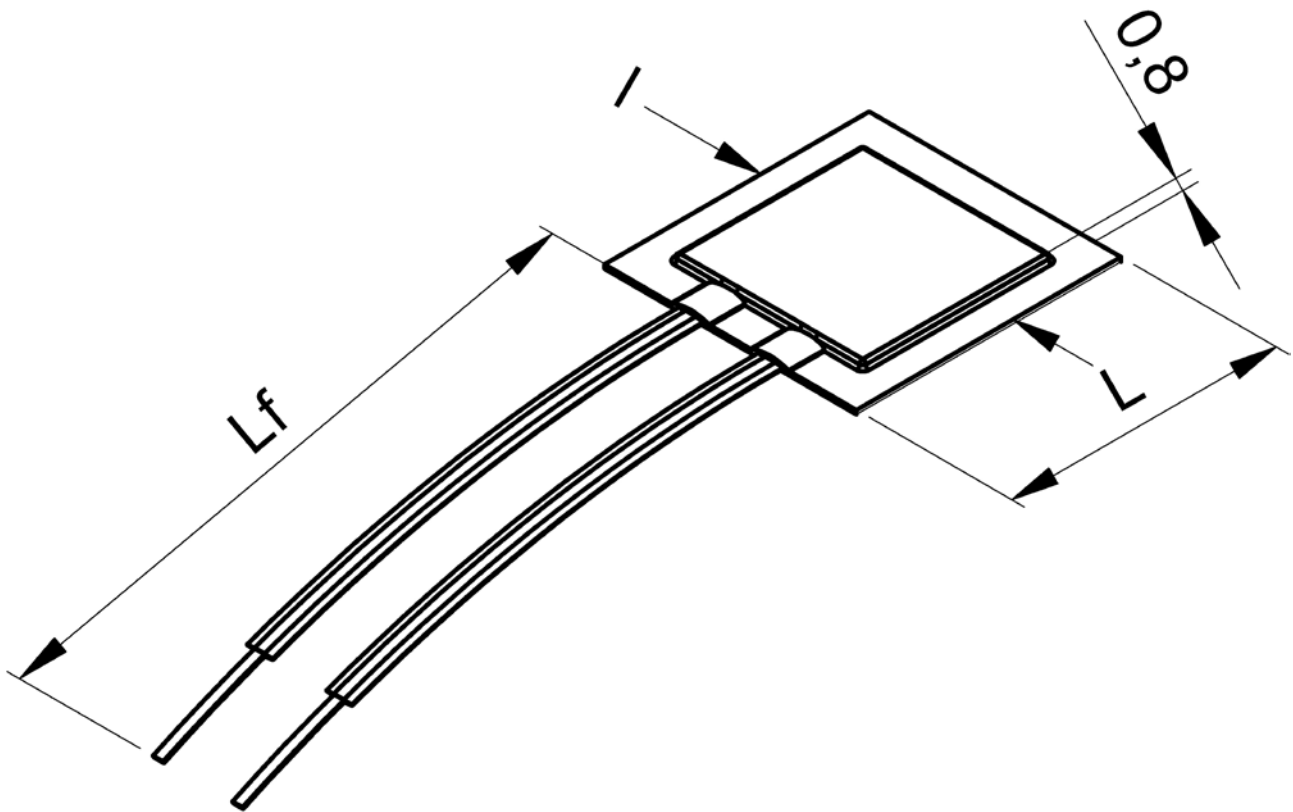
DESCRIPTION

Flat, flexible Pt100 sensor, class B, 2 wires, as per IEC 60751, fastening by gluing.

SPECIFICATIONS

Model	SS5
Compliance with standards	IEC 60751
Type	Pt100 Ω
Material	Glued glass silk coating
Class	B
Mounting / Construction	1x2 wires
Max. surface temp. (°C) (without flow) (theoretical)	-80° to +250°
Output	Silver wire
Fastening	By gluing
Accessories	TBD

DIAGRAM



REFERENCES

Dimensions (Lxwxh)	Length Lf (mm)	Reference
20x20x0.8 mm	40 mm	L061300-000
10x12x0.8 mm	20 mm	L062300-000

For any other configuration, please contact us.



SS6

Pt100

CLASS
A

IEC
60751



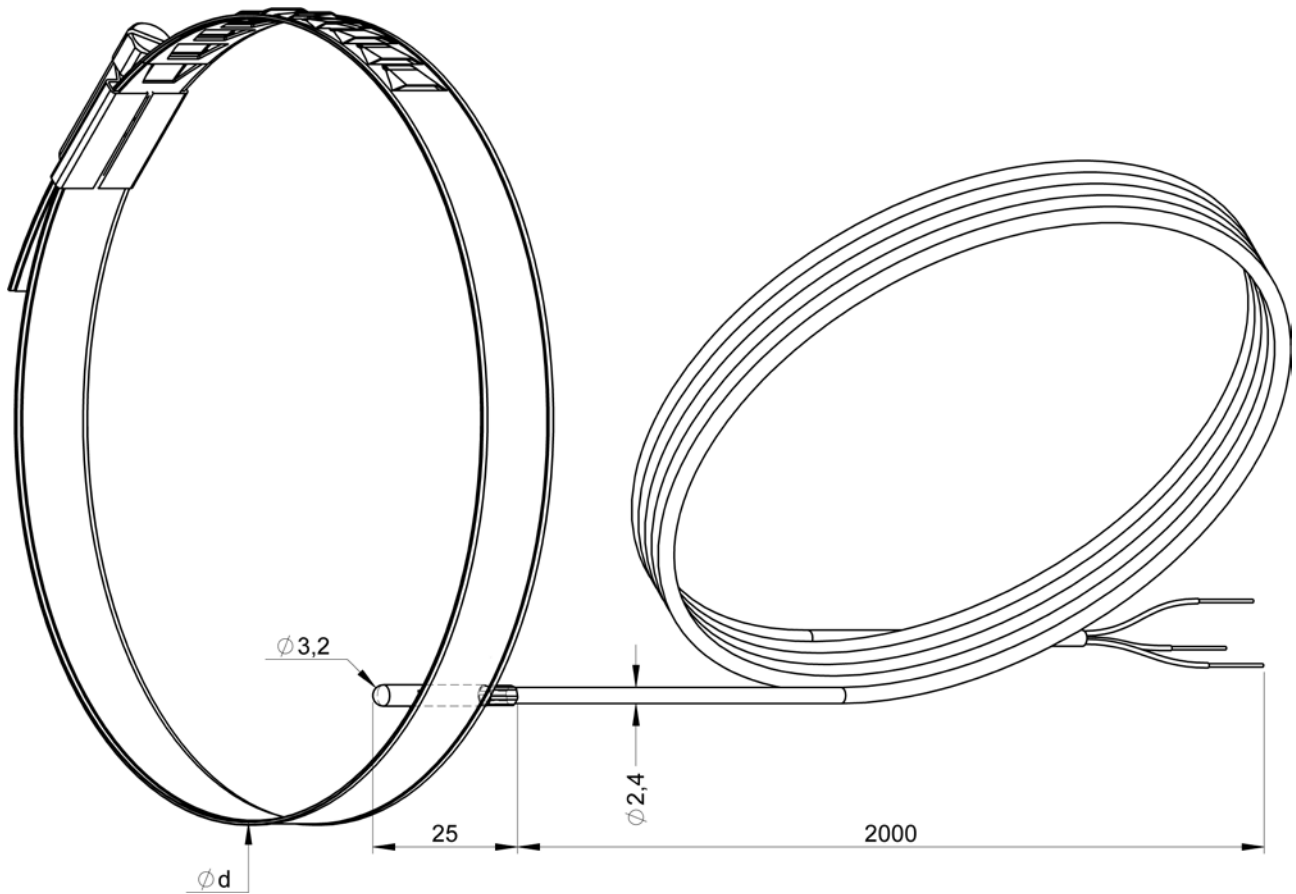
DESCRIPTION

Pt100 sensor, Class A, 3 wires, as per IEC 60751, in stainless-steel 316L sheath, output via PFA cable 2 metres long, for temperature measurement up to 250°C. Fastening on pipe with Serflex clip (supplied).

SPECIFICATIONS

Model	SS6	
Compliance with standards	IEC 60751	
Type	Pt100 Ω	
Material	Stainless-steel 316L tube, diam.3.2 x 25 mm	
Class	A	
Mounting / Construction	1x3 wires	
Max. surface temp. (°C) (without flow) (theoretical)	250°C	
Output	Sheath	PFA
	Diameter (mm)	2.4 mm
	Max. temperature	200°C
	Conductors	3 x 0.05 mm ² , copper
	Length L (mm)	2,000 mm
	Termination	Insulated bare wires
Fastening	By stainless-steel Serflex clip	

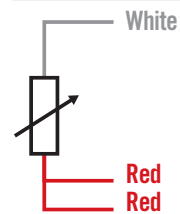
DIAGRAM



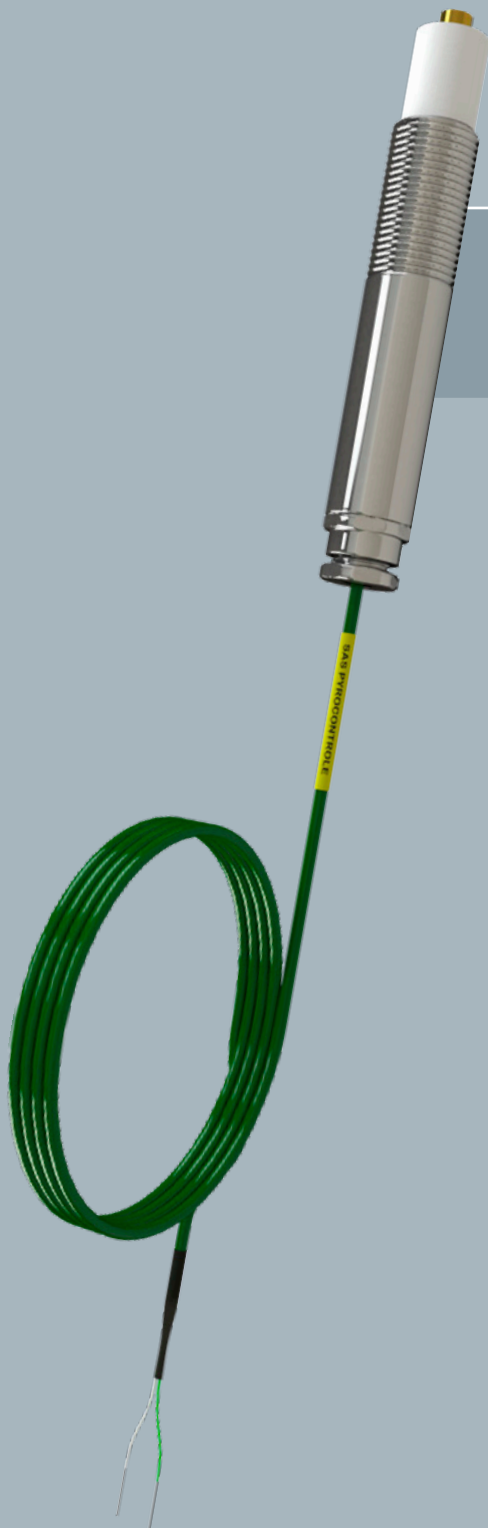
REFERENCES

Pipe diam. (mm)	Reference
10 < d < 15	L918515-001
16 < d < 22	L918515-002
20 < d < 26	L918515-003
26 < d < 34	L918515-004
34 < d < 50	L918515-005
49 < d < 65	L918515-006
64 < d < 80	L918515-007
79 < d < 95	L918515-008

CONNECTION



For any other configuration, please contact us.



TS2

THERMOCOUPLE

CLASS
1

IEC
584-1

NF EN
60584-1

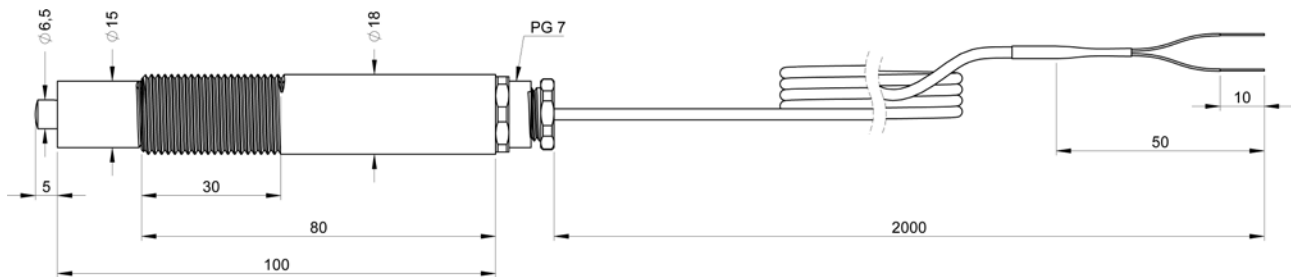


DESCRIPTION

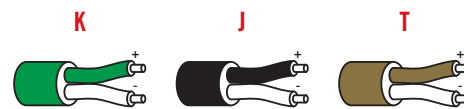
J, K or T thermocouple under brass end-piece and Teflon coating for measurement of moving surface temperatures up to 250°C and a max. linear speed of 5 m/s.

SPECIFICATIONST

Model	TS2		
Compliance with standards	IEC 584-1 / NF EN 60584-1		
Type	J	K	T
Class	1		
Mounting	Brass end-piece diam.7 mm with compression spring (max. travel 5mm) + Teflon coating diam.15 mm. Anti-rotation locking of sensing element.		
Hot junction	Insulated		
Max. surface temp. (°C) (without flow, theoretical)	250°C		
Process connection	Dural extension, diam. 18 mm, length 70 mm.		
Output	Type of cable	Extension	
	Cable sheath	PVC, diam.5 mm	
	Max. temperature	105°C	
	Conductors	2 x 0.2 mm ² , PVC insulation	
	Length Lc (mm)	2,000 mm	

DIAGRAM**REFERENCES**

Thermocouple	Reference
J	P07602313
K	P07602567
T	P07602203

CONNECTION

For any other configuration, please contact us.



TS3

THERMOCOUPLE

CLASS
1

IEC
584-1

NF EN
60584-1



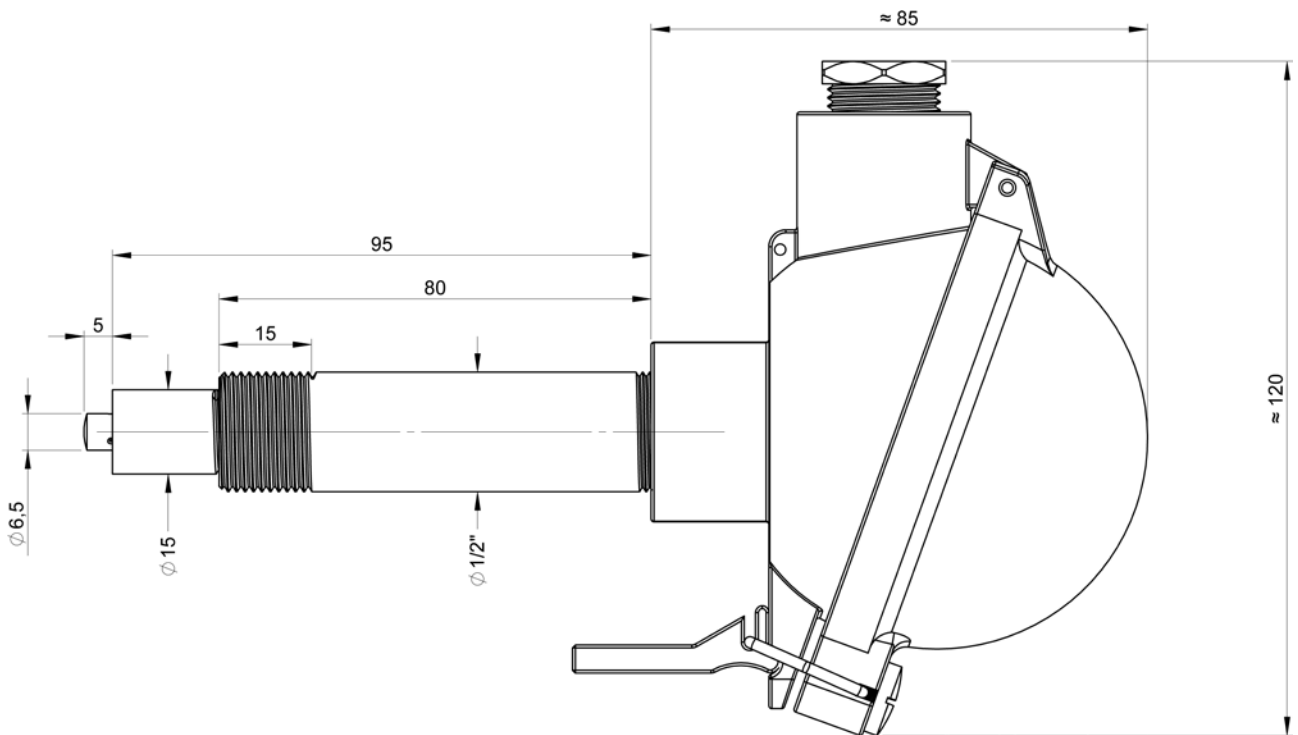
DESCRIPTION

J, K or T thermocouple under brass end-piece with Teflon coating for measurement of moving surface temperatures up to 250°C and a max. linear speed of 5 m/s.

SPECIFICATIONS

Model	TS3		
Compliance with standards	IEC 584-1 / NF EN 60584-1		
Type	J	K	T
Class	1		
Mounting	Brass end-piece, diam. 6.5 mm with compression spring (max. travel 5mm) + Teflon coating diam. 15 mm. Anti-rotation locking of sensing element.		
Hot junction	Insulated		
Max. surface temp. (°C) (without flow, theoretical)	250°C		
Process connection	Dural extension, diam. 21.3 mm, length 80 mm, 1/2"G thread		
Electrical connection	Head type	DAN	
	Material	Light alloy	
	Output	1 cable gland M 20 x 1.5	
	Cable diam.	5.5 mm to 7.5 mm	
	Equipment	Ceramic terminal strip	
	IP	IP54	

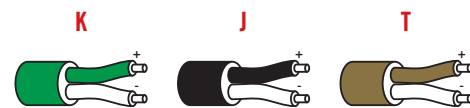
DIAGRAM



REFERENCES

Thermocouple	Reference
J	P07602311
K	P07602565
T	P07602201

CONNECTION



For any other configuration, please contact us.

TS1

THERMOCOUPLE

ATEX

NF EN
60584-1IEC
584-1

DESCRIPTION

Designed to withstand severe environments, this sensor can be used for accurate measurement of the surface temperature of pipes and thereby deduce the temperature of the fluid flowing in it. This non-intrusive contact temperature sensor is equipped with exclusive technology allowing the sensor's sensing element to be changed without unsoldering the blade-shaped support.

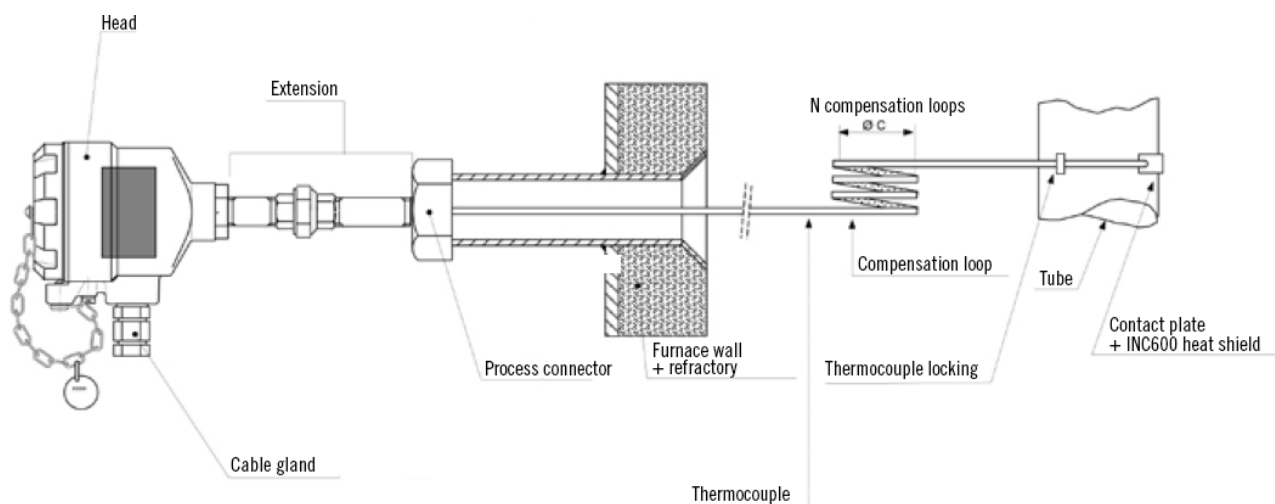
SPECIFICATIONS

Model	TS1	
Compliance with standards	IEC 584-1 / NF EN 60584-1	
Measurement	By contact	
Operating temperature	Up to 1,150°C	
Interchangeable measuring element	Sensor type	Type-K thermocouple
	Sheath metal	Inconel 600
	Protective sheath	Ceramic thimble
	Electrical connection	Transmitter 4/20 mA, Hart®
Connecting head	Head	LSX ADF, made of light alloy and epoxy
	Certification	Complies with ATEX, safety d
	Cable gland	ADF ¼ NPT
Extension	Sleeve	Type M, stainless steel 316L and union joint
	Cable gland	ADF ¼ NPT
Set-up on tube	Protection of sensing element	Contact plate + heat shield
	Locking of sensing element	Hasp - Cable guide

FURNACE AND BOILER APPLICATIONS

For furnaces and boilers requiring this type of sensor, we propose removable systems: the thermocouple is not welded to the contact plate to avoid damaging it when the plate is welded to the surface to be measured. The sensors may be ATEX-compliant, so that they can be used directly in gas furnaces, and are equipped with an insulating protective cover to protect the thermocouple from direct flames and insulate it from the ambient temperature to avoid disturbing the surface measurement. Lastly, we can provide compensation loops to prevent breakage of the sensor when the temperature in the furnace is raised: during heating, the compensation loop expands and the expansion pieces are there to avoid the mechanical stresses linked to this procedure. Our teams of experts are at your disposal to help you design your sensor so that it meets your needs.

SCHEMATIC DIAGRAM



OTHER VERSIONS

Depending on the application, we offer a range of combinations adapted to your requirements, covering the type of measuring element (Type J or N thermocouple), single or duplex mounting, the sheath material (316L, Pyrosil, etc.), the connecting head, etc.

Our R&D team can also develop tailored temperature sensors to match your specifications.

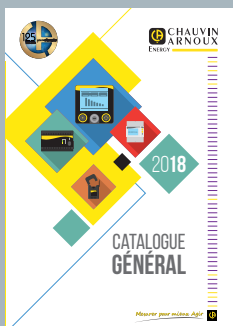
For any other configuration, please contact us.



CHAUVIN ARNOUX
190, rue Championnet
75876 Paris Cedex 18 - France
Tel. : +33 1 44 85 44 85
Fax : +33 1 46 27 07 48
info@chauvin-arnoux.fr
www.chauvin-arnoux.fr



CHAUVIN ARNOUX METRIX
190, rue Championnet
75876 Paris Cedex 18 - France
Tel. : +33 1 44 85 44 85
Fax : +33 1 46 27 07 48
info@chauvin-arnoux.fr
www.chauvin-arnoux.fr



CHAUVIN ARNOUX ENERGY
16, rue Georges Besse
92182 Antony Cedex - France
Tel. : +33 1 75 60 10 30
Fax : +33 1 46 66 62 54
info@enerdis.fr
www.chauvin-arnoux-energy.com



MANUMESURE
9, allée Jean Prouvé
92110 Clichy - France
Tel. : +33 1 75 61 01 80
Fax : +33 1 47 33 28 02
info@manumasure.fr
www.manumasure.fr

YOUR CONTACTS

FRANCE
SOUTH-WEST SECTOR
Telephone: +33 (0)4 72 14 16 31
sud.est@pyrocontrole.com

WEST SECTOR
Telephone: +33 (0)4 81 76 02 55
ouest@pyrocontrole.com

ILE-DE-FRANCE/NORTH-EAST SECTOR
Telephone: +33 (0)4 81 76 02 54
idf.nord.est@pyrocontrole.com

INTERNATIONAL
PYROCONTROLE EXPORT DEPARTMENT
Telephone: +33 (0)4 72 14 15 40
export@pyrocontrole.com

10 SUBSIDIARIES WORLDWIDE

GERMANY
CHAUVIN ARNOUX GMBH
Ohmstraße 1
77694 KEHL / RHEIN
Tel.: +49 7851 99 26-0
Fax: +49 7851 99 26-60
info@chauvin-arnoux.de
www.chauvin-arnoux.de

AUTRICHE
CHAUVIN ARNOUX GES.M.B.H
Slamastrasse 29/2/4
1230 WIEN
Tel. : +43 1 61 61 9 61
Fax : +43 1 61 61 9 61-61
vie-office@chauvin-arnoux.at
www.chauvin-arnoux.at

CHINA
SHANGHAI PU-JIANG ENERDIS INSTRUMENTS CO. LTD
N° 381 Xiang De Road
3 Floor, Building 1
200081 SHANGHAI
Tel. : +86 21 65 21 51 96
Fax : +86 21 65 21 61 07
info@chauvin-arnoux.com.cn

SPAIN
CHAUVIN ARNOUX IBÉRICA SA
C/ Roger de Flor N°293
1a Planta
08025 BARCELONA
Tel. : +34 902 20 22 26
Fax : +34 934 59 14 43
info@chauvin-arnoux.es
www.chauvin-arnoux.es

ITALY
AMRA SPA
Via Sant' Ambrogio, 23
20846 MACHERIO (MB)
Tel. : +39 039 245 75 45
Fax : +39 039 481 561
info@amra-chauvin-arnoux.it
www.chauvin-arnoux.it

MIDDLE EAST
CHAUVIN ARNOUX MIDDLE EAST
PO Box 60-154
1241 2020 JAL EL DIB
(Beirut) - LEBANON
Tel. : +961 1 890 425
Fax : +961 1 890 424
camie@chauvin-arnoux.com
www.chauvin-arnoux.com

UNITED KINGDOM
CHAUVIN ARNOUX LTD
Unit 1 Nelson Ct, Flagship Sq
Shaw Cross Business Pk, Dewsbury
West Yorkshire - WF12 7TH
Tel. : +44 1924 460 494
Fax : +44 1924 455 328
info@chauvin-arnoux.co.uk
www.chauvin-arnoux.com

SCANDINAVIA
CA MÄTSYSTEM AB
Sjöflygvägen 35
SE-183 62 TABY
Tel. : +46 8 50 52 68 00
Fax : +46 8 50 52 68 10
info@camatsystem.com
www.camatsystem.com

SWITZERLAND
CHAUVIN ARNOUX AG
Moosacherstrasse 15
8804 AU / ZH
Tel. : +41 44 727 75 55
Fax : +41 44 727 75 56
info@chauvin-arnoux.ch
www.chauvin-arnoux.ch

USA
CHAUVIN ARNOUX INC
d.b.a AEMC Instruments
15 Faraday Drive
Dover - NH 03820
Tel. : +1 (800) 945-2362
Fax : +1 (603) 742-2346
sales@aemc.com
www.aemc.com

FRANCE
PYROCONTROLE
6 bis, av du Docteur Schweitzer
69881 Meyzieu Cedex - France
Tel. : +33 4 72 14 15 40
Fax : +33 4 72 14 15 41
info@pyrocontrole.com
www.pyrocontrole.com

MIDDLE EAST
Chauvin Arnoux Middle East
P.O. BOX 60-154
1241 2020 JAL EL DIB -
LEBANON
Tel: +961 1 890 425
Fax: +961 1 890 424
camie@chauvin-arnoux.com
www.chauvin-arnoux.com

UNITED KINGDOM
Chauvin Arnoux Ltd
Unit 1 Nelson Ct, Flagship Sq,
Shaw Cross Business Pk
Dewsbury, West Yorkshire -
WF12 7TH
Tel: +44 1924 460 494
Fax: +44 1924 455 328
info@chauvin-arnoux.co.uk
www.chauvin-arnoux.com