

Temperature Sensor MBT 3270

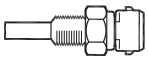
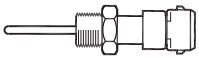
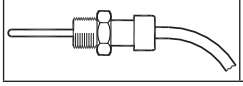
Technical brochure

Features



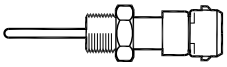
- OEM Temperature Sensor program
- Various sensor elements available (RTD, NTC, PTC)
- Robust, high protection against moisture
- Fixed measuring insert
- Brass or stainless steel
- Very low response times
- Temperature range up to 300°C
- Avaiable with cable or integrated plug (Delphi Metri Pack, AMP junior power Timer, Deutch DT04)

Ordering, standard program

Symbol	Temperature range	Sensor element	Insertion		Thread	Code number	
			Length	Ø		Plug integrated	
			mm	mm		AMP	Deutsch
	-50 to +150°C	Pt 100	24	6	M10 x 1	**084Z2014**	**084Z2015**
		Pt 1000	28	4.2	G1/4A	**084Z2012**	**084Z2013**
		PTC 2000 (KTY 81-210)	24	6	M10 x 1	**084Z2010**	**084Z2011**
	-50 to +300°C	Pt 100	40	3	M10 x 1	**084Z2018**	**084Z2019**
						2 m cable, Without plug, Silicone, screened **084Z2021**	

Protection tube = Stainless steel

Technical data, Integrated Plug version



Performance

Sensor Element	PT100, PT1000, NTC, PTC
Process Connection	Refer to product specification key page 4
Sensor insertion length	Max 100 mm
Electrical Connection	AMP Junior Power Timer Delphi Metri Pack Deutsch DT04 Other on request
Connection	2-wire

Materials

Protection tube in contact with media	AISI 316 Brass
Process connection	AISI 316 Brass
Gasket	Viton, NBR (other on request)
Plug	PPS (Ryton 4)

Mechanical and environmental specifications

Sensor Tolerances	PT 1000 / Pt 100 NTC PTC 2000 (KTY 81-210)	EN 60751 Class B On request +/- 1% of span
Vibration stability	Shock	50g / 6 ms
	Vibrations, x-y-z directions	15.3g sine, 20 - 2000 Hz, 8 hours
Enclosure	AMP Junior Power Timer Delphi Metri Pack Deutsch DT04	IP 65 according to IEC 529

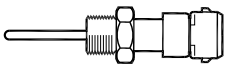
Technical data

Ambient temperature	Plug	-40°C - + 125°C
Media temperature	PT 1000, Pt 100 NTC PTC	-50°C - + 300°C -50°C - + 300°C -50°C - + 150°C
Max. external pressure	Operating pressure	500 bar
	Burst pressure	> 900 bar
Max. tightening torque	M10 M14	17 Nm 24 Nm

Indicative response times

Material protection tube	Protection tube	Indicative response times according to VDI/VDE 3522	
		Water 0,2 m/s	
		$t_{0.5}$	$t_{0.9}$
Stainless Steel	Ø 6 mm	6 s	18 s
	Ø 4 mm	2 s	6 s
	Ø 3 mm	0.5 s	1.5 s

Ordering, Integrated Plug version



Type **MBT 3270-** ☐☐☐☐ + ☐☐ + ☐☐☐

Measuring range

-50 to 150°C	0
-50 to 200°C	1
-50 to 300°C	2
-50 to 250°C	5
Other	9

Resistance value

1 x Pt100	0
1 x Pt1000	2
1 x PTC 2000 (KTY 81-210)	4
1 x NTC 1000	5
Other	9

Tolerance

EN 60751 Class B	0
±1%	1
±2%	2
±3%	3
Other	9

NTC Characteristic

No NTC	0
Other	9

Protection Tube

Brass	0
Acid-Proof Steel, AISI 316	1
Other	9

Insertion length (100mm max)

24 mm	0 2 4
28 mm	0 2 8
40 mm	0 4 0
Other	x x x

Connection

0	2-wire
9	Other

Plug

0	None
3	AMP Junior Power Timer
4	Delphi Metri-pack Integrated - 102
C	Deutsch integrated DT04 - 2 pin
9	Other

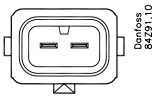
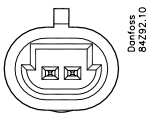
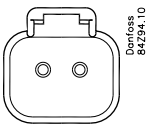
Insert

0	Fixed

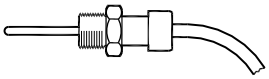
Process connection

0	G1/4A
1	G3/8A
2	G1/2A
3	M10 x 1
B	M14 x 1,5
9	Other

Electrical connections

AMP Junior Power Timer	Delphi Metri Pack 102	Deutsch DT04
		

Technical data, Cable version



Performance

Sensor Element	PT100, PT1000, NTC, PTC
Process Connection	Refer to product specification key page 6
Insertion length	Max 100 mm
Electrical Connection	Cut-off Cable with AMP spade (6,35) Cable with AMP Junior Power Timer Cable with Delphi Metri Pack 102 Cable with Deutsch DT04-3P-2P Other on request
Connection	2, 3 or 4 wire (depending on electrical connection)

Materials

Protection tube in contact with media	AISI 316 Brass
Process connection	AISI 316 Brass
Cable	PVC, Silicon, Teflon (Other on request)
Gasket	Viton, NBR (Other on request)
Plug	PPS (Rycon 4)

Mechanical and environmental specifications

Sensor Tolerances	PT 1000 / Pt 100 NTC PTC 2000 (KTY 81-210)	EN 60751 Class B: ± (0.3 + 0.005 × t) On request +/- 1% of span
Vibration stability	Shock	50g / 6 ms
	Vibrations, x-y-z directions	15.3g sine, 20 - 2000 Hz, 8 hours
Enclosure	Sensor only Cable with AMP spade Cable with AMP Junior Timer Cable with Delphi Metri Pack 102 Cable with Deutsch	IP 67 according to IEC 529 IP 00 according to IEC 529 IP 65 according to IEC 529 IP 65 according to IEC 529 IP 65 according to IEC 529

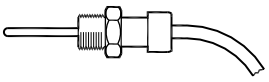
Technical data

Ambient temperature	**Cable** PVC Silicon Teflon Polyolefin (oil resistant) **Plug** AMP spade AMP Junior Power Timer Delphi Metri Pack 102 Deutsch DT04-3P	 -40°C - +100°C -40°C - + 200°C -40°C - + 200°C -40°C - + 150°C -40°C - + 200°C -40°C - + 125°C -40°C - + 125°C -40°C - + 125°C
Media temperature	PT 100 NTC PTC	-50°C - + 300°C -50°C - + 300°C -50°C - + 150°C
Max. external pressure	Operating pressure	500 bar
	Burst pressure	> 900 bar
Max. tightening torque	M10 M14	17 Nm 24 Nm

Indicative response times

Material protection tube	Protection tube	Indicative response times according to VDI/VDE 3522	
		Water 0,2 m/s	
		$t_{0.5}$	$t_{0.9}$
Stainless Steel	Ø 6 mm	6 s	18 s
	Ø 4 mm	2 s	6 s
	Ø 3 mm	0.5 s	1.5 s

Ordering, Cable version



Type MBT 3270-

Measuring range

-50 to 150°C	0
-50 to 200°C	1
-50 to 300°C	2
-50 to 250°C	5
Other	9

Resistance value

1 x Pt100	0
1 x Pt1000	2
1 x PTC 2000 (KTY 81-210)	4
1 x NTC 1000	5
Other	9

Tolerance

EN 60751 Class B	0
±1%	1
±2%	2
±3%	3
Other	9

NTC Characteristic

No NTC	0
Other	9

Protection Tube

Brass	0
Acid-Proof Steel, AISI 316	1
Other	9

Insertion length (100mm max)

24 mm	024
28 mm	028
40 mm	040
Other	xxx

Process connection

0	G1/4A
1	G3/8A
2	G1/2A
3	M10 x 1
B	M14 x 1,5
9	Other

Insert

0	Fixed

Plug

0	None
1	AMP (Spade 6,35)
3	AMP Junior Power Timer
5	Deutsch Flying DT04 - 3 pin
D	Deutsch Flying DT04 - 2 pin
E	Delphi Metri Pack flying - 102
9	Other

Connection

0	2-wire
1	3-wire
2	4-wire

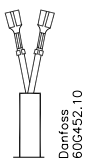
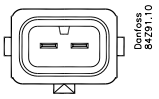
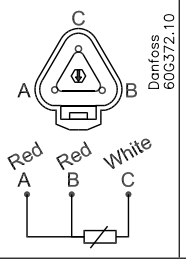
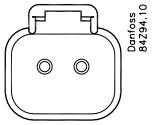
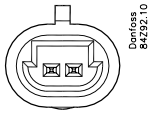
Cable

1	Silicone
2	Silicone, screened
3	Teflon
4	Teflon, screened
5	PVC
6	PVC, screened
7	Polyolefine, screened
8	Polyolefine, screened 80°C
9	Other

Cable length

050	0,5 m
100	1,0 m
200	2,0 m
xxx	x,x m

Electrical connections

AMP spade (6,35)	AMP Junior Power Timer	Deutsch DT04 3 pin	Deutsch DT04 2 pin	Delphi Metri Pack 102
				

Dimensions

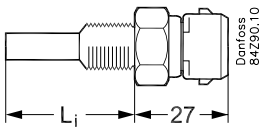
Examples

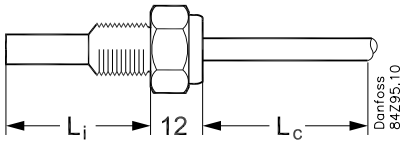
Insertion length:
L_i = 21 - xx (max.100 mm)

Cable length:
L_c = 0.5 m - x.xx m

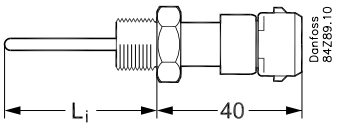
Tube diameter depends on response time and sensor type.

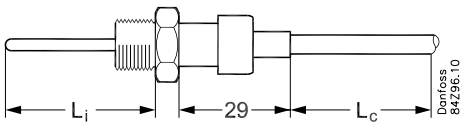
-50°C - + 150°C





-50°C - + 300°C





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