



Features

- Robust, compact design
- Improved overall reliability
- Fast response time
- Integrated clip
- Temperature range -40°C to +125°C

Applications

- Heating and air conditioning
- Hot water appliances

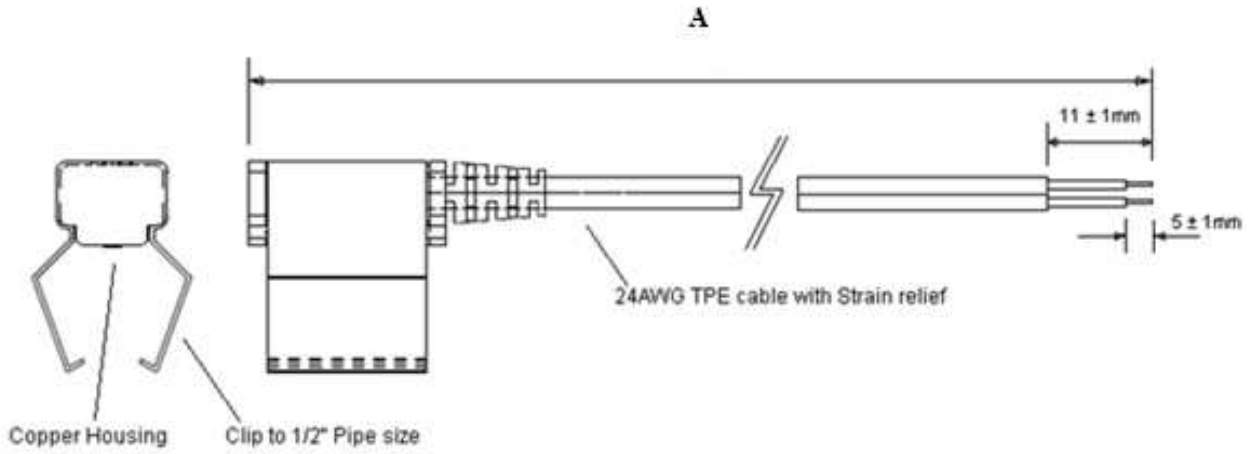
FAST TIME RESPONSE NTC PIPE PROBE P/no. 20027935-XX

Description

This probe consists of a NTC thermistor soldered to a 24 AWG Stranded TPE cable and potted in a copper housing. The assembly is over molded leaving the copper housing exposed. A metal clip is attached to the final assembly

Parameters	Type	Details
Thermistor	Glass NTC	Optional 5K, 10K, 30K or 100K (Ohmic Resistance at +25°C)
Wire	24 AWG	Stranded (7/32) SPC with Black TPE Insulation
Housing	Copper	Closed Tube Housing with Brass Collar
Pipe Clip	Carbon Steel	Zinc plated ½" Clip

Dimensional Information:



	A	A
Dimensions	Refer to Page 4 (1000 -3000)	Refer to Page 4 (10000)
Tolerance	± 25	± 50

All dimensions in millimeters

Performance Specifications:

Parameters	Value	Units
Resistance and corresponding Beta Options	Nominal Resistance at +25°C	Beta Value (25-85)
	5K	3976
	10K	3976
	10K	3435
	30K	3942
	100K	4000
Beta Tolerance (25/85)	± 2.0	%
Dissipation Constant	2.0	mW/°C
Time Response on Pine Surface (63.2% of Temperature Span)	≈5	Seconds
Insulation Resistance (500VDC)	≥100	Mega Ohms (MΩ)

Resistance v Temperature Table

Temp (°C)	Resistance in Ohms				
	5K (3976)	10K (3976)	10K (3435)	30K (3942)	100K (4000)
-40	168500	337100	186000	925000	3216000
-35	121600	243200	143100	675500	2342000
-30	88660	177300	110800	498100	1721000
-25	65330	130700	86390	370600	1277000
-20	48620	97240	67790	278300	955400
-15	36530	73060	53530	210700	721100
-10	27000	55400	42540	160900	548800
-5	21190	42370	34010	123900	421100
-0	16340	32680	27350	96090	325555
+5	12710	25410	22130	75090	253600
+10	9956	19910	18000	59100	198900
+15	7859	15720	14720	46840	157100
+20	6247	12490	12100	37370	125000
+25	5000	10000	10000	30000	100000
+30	4028	8055	8304	24230	80530
+35	3265	6530	6929	19690	65230
+40	2662	5325	5809	16090	53140
+45	2184	4367	4891	13220	43540
+50	1801	3602	4137	10920	35860
+55	1493	2986	3513	9070	29680
+60	1244	2488	2996	7568	24690
+65	1042	2084	2565	6344	20640
+70	876.8	1753	2204	5343	17330
+75	741.1	1482	1901	4519	14620
+80	629.1	1258	1645	3838	12380
+85	536.3	1073	1429	3274	10530
+90	459.1	918.1	1245	2803	8996
+95	394.5	789	1089	2409	7712
+100	340.3	680.6	954.9	2078	6636
+105	294.6	589.2	840	1799	5730
+110	255.9	511.9	741.1	1563	4966
+115	223.1	446.2	655.6	1362	4317
+120	195.1	390.2	581.7	1191	3766
+125	171.2	342.3	517.4	1045	3295

Ordering Information:

Part Number	Resistance at +25°C	Resistance Tolerance	Beta Value (25-85)	Wire Insulation	Length (mm) (Dimension A)
20027935-01	5,000 Ω	±1% @ +25°C	3976	TPE	1000
20027935-02					3000
20027935-03					10000
20027935-11	10,000 Ω	±1% @ +25°C	3976	TPE	1000
20027935-12					3000
20027935-13					10000
GA10K3D1217	10,000 Ω	±1% @ +25°C	3435	TPE	1000
GA10K3D1271					3000
GA10K3D1303					10000
20027935-31	30,000 Ω	±1% @ +25°C	3942	TPE	1000
20027935-32					3000
20027935-33					10000
20027935-41	100,000 Ω	±1% @ +25°C	4000	TPE	1000
20027935-42					3000
20027935-43					10000

Example of Customization Options available for high volume enquires:

- Various Nominal resistance Values and material systems available
- Various wire lengths available

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