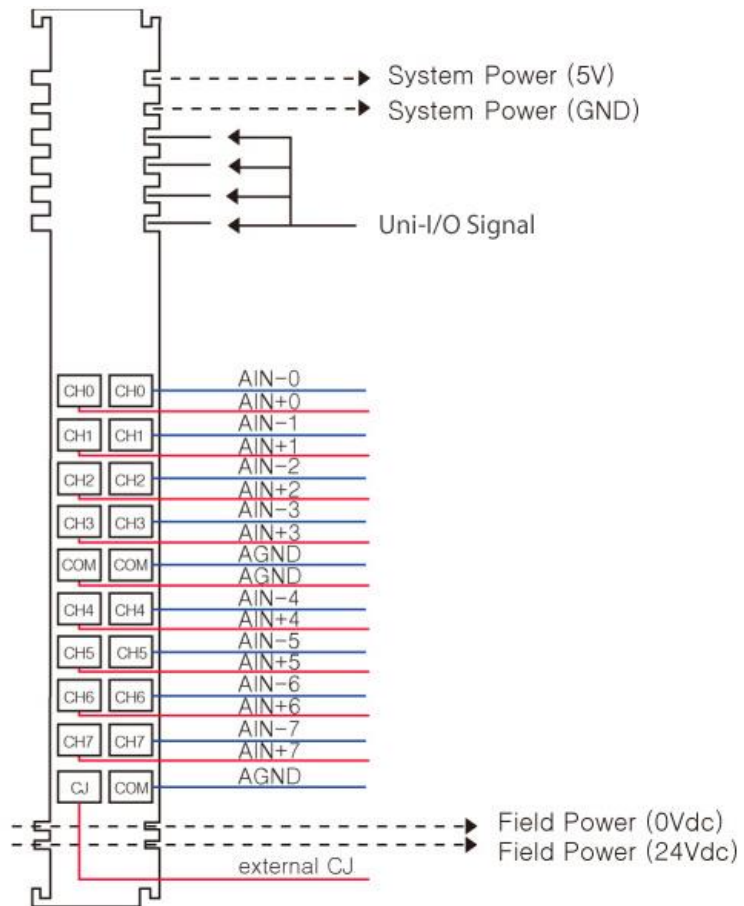
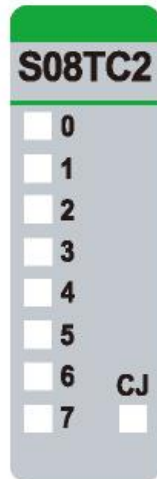


URS-08TC-2 (S08TC2) - 8 Thermocouple / mV

Items	Specification																																																
Inputs per module	8 Channels																																																
Indicators(Logic side)	8 Green Input status , 1 Green Input CJ status																																																
Sensor Types	<p>Thermal Couple Input Range</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Maximum Input Range</th> <th>Recommended Input Range</th> </tr> </thead> <tbody> <tr> <td>K</td> <td>-270 ~ 1372°C (-454°F, 2420.6°F)</td> <td>-200 ~ 1200°C (-328°F, 2192°F)</td> </tr> <tr> <td>J</td> <td>-210 ~ 1200°C (-346°F, 2192°F)</td> <td>-40 ~ 1100°C (-40°F, 2012°F)</td> </tr> <tr> <td>T</td> <td>-270 ~ 400°C (-454°F, 752°F)</td> <td>-200 ~ 350°C (-328°F, 662°F)</td> </tr> <tr> <td>B</td> <td>30 ~ 1820°C (86°F, 3308°F)</td> <td>600 ~ 1700°C (-1112°F, 3092°F)</td> </tr> <tr> <td>R</td> <td>-50~1768°C (-58°F, 3214.4°F)</td> <td>0 ~ 1600°C (-32°F, 2912°F)</td> </tr> <tr> <td>S</td> <td>-50 ~ 1768°C (-58°F, 3214.4°F)</td> <td>0 ~ 1600°C (-32°F, 2912°F)</td> </tr> <tr> <td>E</td> <td>-270 ~ 1000°C (-454°F, 1832°F)</td> <td>-200 ~ 800°C (-328°F, 1472°F)</td> </tr> <tr> <td>N</td> <td>-270 ~ 1300°C (-454°F, 2372°F)</td> <td>-200 ~ 1250°C (-328°F, 2282°F)</td> </tr> <tr> <td>L</td> <td>-200 ~ 900°C (-328°F, 1652°F)</td> <td>-100 ~ 850°C (-148°F, 1562°F)</td> </tr> <tr> <td>U</td> <td>-200 ~ 600°C (-328°F, 1112°F)</td> <td>-100 ~ 550°C (-148°F, 1022°F)</td> </tr> <tr> <td>C</td> <td>0 ~ 2310°C (-32°F, 4190°F)</td> <td>100 ~ 2100°C (212°F, 3812°F)</td> </tr> <tr> <td>D</td> <td>0 ~ 2490°C (-32°F, 4514°F)</td> <td>100 ~ 2200°C (212°F, 3992°F)</td> </tr> <tr> <td>10uV Input</td> <td colspan="2">-81.0 ~ 81.0mV, 10uV/ 1 Count</td> </tr> <tr> <td>1uV Input</td> <td colspan="2">-32.7 ~ 32.7mV, 1uV/ 1 Count</td> </tr> <tr> <td>2uV Input</td> <td colspan="2">-65.5 ~ 65.5mV, 2uV/ 1 Count</td> </tr> </tbody> </table>	Type	Maximum Input Range	Recommended Input Range	K	-270 ~ 1372°C (-454°F, 2420.6°F)	-200 ~ 1200°C (-328°F, 2192°F)	J	-210 ~ 1200°C (-346°F, 2192°F)	-40 ~ 1100°C (-40°F, 2012°F)	T	-270 ~ 400°C (-454°F, 752°F)	-200 ~ 350°C (-328°F, 662°F)	B	30 ~ 1820°C (86°F, 3308°F)	600 ~ 1700°C (-1112°F, 3092°F)	R	-50~1768°C (-58°F, 3214.4°F)	0 ~ 1600°C (-32°F, 2912°F)	S	-50 ~ 1768°C (-58°F, 3214.4°F)	0 ~ 1600°C (-32°F, 2912°F)	E	-270 ~ 1000°C (-454°F, 1832°F)	-200 ~ 800°C (-328°F, 1472°F)	N	-270 ~ 1300°C (-454°F, 2372°F)	-200 ~ 1250°C (-328°F, 2282°F)	L	-200 ~ 900°C (-328°F, 1652°F)	-100 ~ 850°C (-148°F, 1562°F)	U	-200 ~ 600°C (-328°F, 1112°F)	-100 ~ 550°C (-148°F, 1022°F)	C	0 ~ 2310°C (-32°F, 4190°F)	100 ~ 2100°C (212°F, 3812°F)	D	0 ~ 2490°C (-32°F, 4514°F)	100 ~ 2200°C (212°F, 3992°F)	10uV Input	-81.0 ~ 81.0mV, 10uV/ 1 Count		1uV Input	-32.7 ~ 32.7mV, 1uV/ 1 Count		2uV Input	-65.5 ~ 65.5mV, 2uV/ 1 Count	
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Module Accuracy (Need 20 minute preheating to get enhanced accuracy.)	<p>Recommend Input Range $\pm 0.1\%$ Recommended Scale @ 25°C (77°F) ambient $\pm 0.3\%$ Recommended Scale @ 40°C to 70°C (-40°F to 158°F)</p> <p>T,B,R,S,C,D type Recommend Input Range $\pm 0.3\%$ Recommended Scale @ 40°C to 70°C (-40°F to 158°F)</p> <p>External Cold Junction(PT100) $\pm 2\%$ Recommended Scale @ 40°C to 70°C (-40°F to 158°F)</p>																																																
Connection Method	2-Wire																																																
Conversion Time	Average Conversion time < 330 ms																																																
Cold junction temperature	<p>Internal - TMP275AIDGKR : -40°C to 125°C (-40°F to 257°F)</p> <p>External - PT100 : -45°C to 95°C (-40°F to 203°F)</p>																																																
Data Format	16bits Integer (2' complement)																																																
Calibration	Not Required																																																
Power dissipation	Max. 150mA @ 5.0Vdc																																																
Isolation	I/O to Logic : Isolation Field power : Not Connected																																																
Field Power	Not used, Field power bypass to next expansion module																																																
Wiring	I/O Cable Max. 2.0mm ² (AWG 14)																																																
Weight	60g																																																
Module Size	12mm x 99mm x 70mm																																																
Operating temperature	40°C to 70°C (-40°F to 158°F)																																																

1. Wiring Diagram



Pin No.	Signal Description	Signal Description	Pin No.
0	TC 0+	TC 0-	1
2	TC 1+	TC 1-	3
4	TC 2+	TC 2-	5
6	TC 3+	TC 3-	7
8	AGND	AGND	9
10	TC 4+	TC 4-	11
12	TC 5+	TC 5-	13
14	TC 6+	TC 6-	15
16	TC 7+	TC 7-	17
18	Cold Junction Sensor	AGND	19

2. LED Indicators

LED No.	LED Function / Description	LED Color
0	Input 0	Green
1	Input 1	Green
2	Input 2	Green
3	Input 3	Green
4	Input 4	Green
5	Input 5	Green
6	Input 6	Green
7	Input 7	Green

Status	LED	Indication
Not Signal, Normal Operation	Channel LED Off, CJ LED Off	Input Sensor Open or Input Range Over Normal Operation
On Signal Normal Operation	Channel LED Off, CJ LED Off	Sensor Connected and Input Range Valid Normal Operation
On Signal Normal Operation Connected External CJC	Channel LED Off, CJ LED Off	Sensor Connected and Input Range Valid Normal Operation, External CJ enable