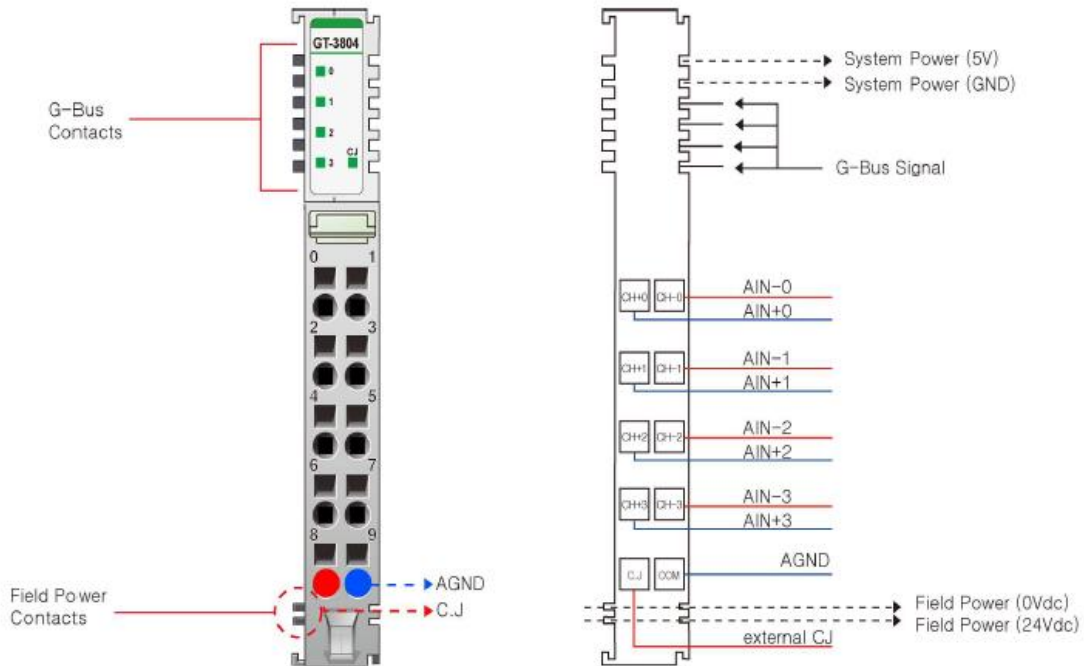


URS-04TC (S04TC) - 4 Thermocouple / mV

Items	Specification																																																			
Inputs per module	4 Channels																																																			
Indicators(Logic side)	4 Green Input status , 1 Green Input CJ status																																																			
Sensor Types	<table border="1"> <thead> <tr> <th colspan="3">Thermal Couple Input Range</th> </tr> <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>	Thermal Couple Input Range			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>C/D type Recommend Input Range $\pm 0.3\%$ Recommended Scale @ 40°C to 70°C (-40°F to 158°F) 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 < 200ms																																																			
Data Format	16bits Integer (2' complement)																																																			
Cold junction temperature	Internal - TMP275AIDGKR : -40°C to 125°C (-40°F to 257°F) External - PT100 : -45°C to 95°C (-40°F to 203°F)																																																			
Calibration	Not Required																																																			
Diagnostic	Sensor open or range over, then conversion data = 0x8000(-32768) * Connected External CJ : CJ LED On. Not Connected External CJ : CJ LED Off.																																																			
Power dissipation	Max. 130mA @ 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	CJ	AGND	9

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
CJ	Input CJ	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 CJC enable