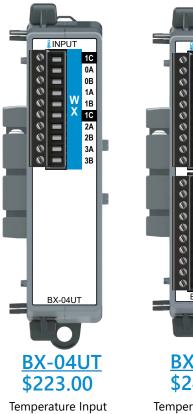
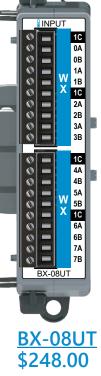
# 1-800-633-0405 For the latest prices, please check AutomationDirect.com. BX-xxUT Universal Temperature Input





Temperature Input Expansion Module 4-pt Universal Temperature Input

Temperature Input Expansion Module 8-pt Universal Temperature Input

### BX-RTB10 Terminal Blocks Included. The <u>BX-RTB10-1</u> or <u>BX-RTB10-2</u> (purchased separately) can also be used.



**NOTE:** This device does not support **ZIP**Link Wiring Systems

#### **IMPORTANT!**



BX-04UT         BX-08UT           Input Channels         4 Differential         8 Differential           Commons         1           Input Impedance         -5MQ           Resolution         24-bit, 0.1*(C or F) See Data Range Specifications table         2s max (8 thermocouples enabled) 700ms max (4RTDNTX/mV enabled)         2s max (8 thermocouples enabled)           All Channel Update Rate         1s max (4 thermocouples enabled)         2s max (8 thermocouples enabled)         2s max (8 thermocouples enabled)           Sample Duration Time         1/15ms         2s max (8 thermocouples enabled)         2s max (8 thermocouples enabled)           Sample Duration Time         -0.3 V to +5.3 V.         15mA           Common Mode Range         -0.3 V to +5.3 V.         5mA           Common Mode Regetion         10008@0C.130dB@0Hz         Conversion Method           Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Input Ranges         Type J: -210* to 1200*C [-346* to 2102*F] Type R: -265* to 100*C [-445* to 1322*F] Type R: -265* to 100*C [-445* to 1322*F]           Type B: -40* to 1820*C [104* to 3308*F] Type R: -50* to 1768*C [-58* to 321*F] <type -50*="" 1768*c="" 321*f]<="" [-58*="" r:="" td="" to=""></type>	Universal Tem	perature Input Spec	cifications	
Commons         1           Input Impedance         >55MΩ           Resolution         24-bit, 0.1°(C or F)           See Data Range Specifications table         2s max (8 thermocouples enabled)           All Channel Update Rate         1s max (4 thermocouples enabled)         2s max (8 thermocouples enabled)           Sample Duration Time         175ms         2s max (8 thermocouples enabled)           Open Circuit Detection Time         Wthin 5s           Maximum Ratings         -0.3 V to +5.3 V, <15mA           Common Mode Range         -0.3 V to +5.3 V           Common Mode Rejection         100dB@00-Lz           Conversion Method         Sigma-Delta, 24-bit           Backplane Power Consumption         1.5 W           Heat Dissipation         1.5 W           Weight         98g [3.5 c2]           Agency Approvals         UL 6101-2 File E185989, Canada and USA           Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Input Ranges         Type K: -265' to 1307°C [-445' to 2502°F]           Type K: -265' to 1000°C [-445' to 2512°F]         Type K: -265' to 1300°C [-445' to 2512°F]           Type B: -400' to 1820°C [104' to 3308°F]         Type B: -265' to 1000°C [-445' to 752°F]           Type B: -500' to 1768°C [-58° to 3214°F]         Type B: -265' to 100°C [-445' t		BX-04UT BX-08UT		
Input impedance         >5MQ           Resolution         24-bit 0.1°(C or F) See Data Range Specifications table           All Channel Update Rate         1s max (4 thermocouples enabled) 700ms max (4RTDNTX/mV enabled)         2s max (8 thermocouples enabled)           Sample Duration Time         175ms         2s max (8 thermocouples enabled)           Sample Duration Time         175ms         2s max (8 thermocouples enabled)           Sample Duration Time         0.3 V to +5.3 V         -0.3 V to +5.3 V           Common Mode Range         -0.3 V to +5.3 V         -0.3 V to +5.3 V           Common Mode Range         -0.3 V to +5.3 V         -0.3 V to +5.3 V           Conversion Method         Sigma-Delta, 24-bit         Backplane Power Consumption         1.5 W           Heat Dissipation         1.5 W         -0.3 V to +5.3 V         -0.3 V to +5.3 V           Software Version Required         Do-morel Designer 2.7 or later         -0.3 V to +5.3 V           Thermocouple Input Ranges         Type J: -210° to 1200°C [-445° to 2192°F] Type K: -265° to 1030°C [-445° to 2322°F] Type K: -265° to 1030°C [-445° to 2322°F] Type R: -265° to 1000°C [-445° to 2322°F] Type R: -265° to 100°C [-445° to 2321°F] Type R: -265° to 100°C [-445° to 321°F] Type R: -265° to 100°C [-445° to 321°F] Type R: -265° to 100°C [-445° to 320°F]           Linear Voitage Input Ranges <th>Input Channels</th> <th>4 Differential</th> <th>8 Differential</th>	Input Channels	4 Differential	8 Differential	
Resolution         24-bit, 0.1°(C or F) See Data Range Specifications table           All Channel Update Rate         1s max (4 thermocouples enabled)         2s max (8 thermocouples enabled)         2s max (8 thermocouples enabled)           Sample Duration Time         175ms         2s max (4 RTD/NTX/mV enabled)         14 s max (4RTD/NTX/mV enabled)           Sample Duration Time         175ms         0         0.3 V to +5.3 V, <15mA           Common Mode Rage         -0.3 V to +5.3 V, <15mA         0         0.3 V to +5.3 V, <15mA           Common Mode Rejection         100dB@0C, 130dB@60Hz         0         0.3 V to +5.3 V, <15mA           Common Mode Rejection         100dB@0.1 Store         0.3 V to +5.3 V, <15mA           Common Mode Regiection         100dB@0.1 Store         0.3 V to +5.3 V, <15mA           Common Mode Regiection         100dB@0.1 Store         0.3 V to +5.3 V, <15mA           Common Mode Regiection         1.5 W         Weight         98g [35 cc]           Agency Approvals         UL 61010-2 File E185989, Canada and USA         Software Version Required         Do-morel Designer 2.7 or later           Thermocouple Input Ranges         Type 1: -210° to 1200°C [-445° to 2302°F] Type 8: -50° to 178°C [-58° to 3214°F] Type 8: -50° to 178°C [-68° to 2314°F] Type 9: -265° to 1000°C [-445° to 2327°F]         10.5 10 100°C [-445° to 2308°F]           Cold Junction Compensation         Autom	Commons			
Resolution         24-bit, 0.1°(C or F) See Data Range Specifications table           All Channel Update Rate         1s max (4 hermocouples enabled) 700ms max (4(RTD/NTX/mV) enabled)         2s max (8 hermocouples enabled)         2s max (8 hermocouples enabled)           Sample Duration Time         175ms         2s max (8 hermocouples enabled)         1.4 s max (4RTD/NTX/mV enabled)           Sample Duration Time         175ms         0.3 V to +5.3 V.         1.4 s max (4RTD/NTX/mV enabled)           Common Mode Rage         -0.3 V to +5.3 V.         1.5 mX         2           Common Mode Rejection         100dB@DC, 130dB@60Hz         2         2           Conversion Method         Sigma-Delta, 24-bit         3         3         3           Backplane Power Consumption         1.5 W         Weight         98g [55 cc]         3           Meat Dissipation         1.5 W         1.8 Sigma-Delta, 24-bit         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         4         3         3         3         4         3         3         3         4         3         3         3         3         3         3         3 <th>Input Impedance</th> <th>&gt;5</th> <th>δΜΩ</th>	Input Impedance	>5	δΜΩ	
See Data Range senabled)         See Data Range Sectifications table           Sample Duration Time Open Circuit Detection Time Maximum Ratings         1.5 W         Within 5s         See Data Range Sectifications table         As and (ARTD/NTX/mV enabled)         1.4 s max (4 RTD/NTX/mV enabled)           Common Mode Range         -0.3 V to +5.3 V         Common Mode Range         Common Mode Rape Randers         Common Mode R	_ • _ •	24-bit, 0.	1°(C or F)	
All Channel Update Rate         enabled) 700ms max (4RTDNTX/WU enabled)         enabled) 1.4 s max (4RTDNTX/WU enabled)           Sample Duration Time         175ms           Open Circuit Detection Time         Within 5s           Maximum Ratings         -0.3 V to +5.3 V           Common Mode Rage         -0.3 V to +5.3 V           Conversion Method         Sigma-Delta, 24-bit           Backplane Power Consumption         1.5 W           Heat Dissipation         1.5 W           Weight         98g [35 cz]           Agency Approvals         UL 61010-2 File E18989, Canada and USA           Software Version Required         Do-morel Designer 2.7 or later           Thermocouple Parameters         Type 1: -210° to 1200°C [-445° to 2302°F]           Type R: -255° to 1000°C [-445° to 2332°F]         Type R: -256° to 100°C [-445° to 2332°F]           Type R: -50° to 1768°C [-58° to 33214°F]         Type R: -50° to 1768°C [-58° to 33214°F]           Type R: -50° to 1768°C [-445° to 3338°F]         Type R: -50° to 1768°C [-445° to 3338°F]           Type R: -50° to 1768°C [-445° to 3338°F]         Type R: -50° to 1768°C [-445° to 3338°F]           Type R: -50° to 1768°C [-445° to 3338°F]         Type R: -50° to 1768°C [-445° to 3338°F]           Type R: -50° to 1768°C [-445° to 18330°F]         Type R: -50° to 1768°C [-445° to 3338°F]           Type R: -50° to 1768°C [-445	Resolution			
Open Circuit Detection Time         Within 5s           Maximum Ratings         -0.3 V to +5.3 V.           Common Mode Range         -0.3 V to +5.3 V           Common Mode Rejection         1004B@DC, 1304B@60Hz           Conversion Method         Sigma-Delta, 24-bit           Backplane Power Consumption         1.5 W           Heat Dissipation         1.5 W           Weight         98g [3.5 oz]           Agency Approvals         UL 61010-2 File E185989, Canada and USA           Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Input Ranges         Type J: -210° to 1200°C [-445° to 2202°F]           Type K:         -265° to 100°C [-445° to 2302°F]           Type R:         -265° to 100°C [-445° to 2322°F]           Type R:         -265° to 100°C [-445° to 2322°F]           Type R:         -265° to 100°C [-445° to 2322°F]           Type R:         -265° to 100°C [-445° to 23214°F]           Type R:         -265° to 100°C [-445° to 250°F]           Type R:         -265° to 100°C [-445° to 250°F]           Type R:         -265° to 100°C [-445° to 2527°F]           Type R:         -265° to 100°C [-445° to 752°F]           Type R:         -265° to 100°C [-445° to 752°F]           Stof 0250°C [-445° to 752°F]         125 to 31	All Channel Update Rate	enabled) 700ms max (4RTD/NTX/mV	enabled) 1.4 s max (4RTD/NTX/mV	
Maximum Ratings         -0.3 V to +5.3 V, <15mA           Common Mode Range         -0.3 V to +5.3 V           Common Mode Rejection         1004B@DC, 1304B@60Hz           Conversion Method         Sigma-Delta, 24-bit           Backplane Power Consumption         1.5 W           Heat Dissipation         1.5 W           Weight         98g [3.5 oz]           Agency Approvals         UL 61010-2 File E185989, Canada and USA           Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Input Ranges         Type 4: -246° to 132°C (-446° to 230°F)           Type K:         -246° to 1372°C (-445° to 250°F)           Type R:         -266° to 100°C (-1446° to 2332°F)           Type R:         -266° to 100°C (-1446° to 2302°F)           Stope R:         -50° to 1768°C (-58° to 3214°F)           Type R:         -266° to 100°C (-144° to 3302°F)           Automatic         -31.25 to 31.25 mVDC           Cold Junction Compensation         Auto	Sample Duration Time	17	5ms	
Common Mode Range         -0.3 V to +5.3 V           Common Mode Rejection         100dB@DC, 130dB@60Hz           Conversion Method         Sigma-Delta, 24-bit           Backplane Power Consumption         1.5 W           Heat Dissipation         1.5 W           Weight         98g [3.5 oz]           Agency Approvals         UL 61010-2 File E185989, Canada and USA           Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Input Ranges         Type J: -210° to 1200°C [-346° to 2192°F]           Type K: -265° to 1307°C [-445° to 2502°F]         Type K: -265° to 1300°C [-445° to 2502°F]           Type K: -265° to 1000°C [-445° to 2502°F]         Type K: -265° to 1300°C [-445° to 2372°F]           Type K: -265° to 1000°C [-445° to 2372°F]         Type K: -265° to 1000°C [-445° to 2372°F]           Type R: -50° to 1768°C [-58° to 3214°F]         Type R: -50° to 1768°C [-58° to 3214°F]           Type R: -50° to 1768°C [-58° to 3214°F]         Type R: -50° to 1768°C [-58° to 3214°F]           Type B: 40° to 1820°C [04° to 3308°F]         Type S: -50° to 1000°C [-445° to 752°F]           Linear Voltage Input Ranges         -31.25 to 31.25 mVDC - 31.25 to 152 mVDC           Cold Junction Compensation         Automatic           Thermocouple Linearization         Automatic           Max. Inaccuracy-Thermocouple         ±(0.2°C + 3% of	Open Circuit Detection Time	With	nin 5s	
Common Mode Rejection         100dB@DC; 130dB@60Hz           Conversion Method         Sigma-Delta, 24-bit           Backplane Power Consumption         1.5 W           Heat Dissipation         1.5 W           Weight         98g [3.5 oz]           Agency Approvals         UL 61010-2 File E185989, Canada and USA           Software Version Required         Don-more! Designer 2.7 or later           Thermocouple Parameters         Type J: -200° to 1200°C [-346° to 2192°F]           Type K: -265° to 1307°C [-445° to 2502°F]         Type K: -265° to 1300°C [-445° to 2502°F]           Type R: -265° to 1300°C [-445° to 23272°F]         Type R: -265° to 1000°C [-445° to 23272°F]           Type R: -50° to 1768°C [-58° to 3214°F]         Type R: -50° to 1768°C [-58° to 3214°F]           Type R: -50° to 1768°C [-58° to 3214°F]         Type R: -50° to 1768°C [-445° to 3238°F]           Type B: 40° to 1820°C [104° to 3308°F]         Type R: -50° to 1768°C [-58° to 3214°F]           Type B: 40° to 1820°C [-1445° to 752°F]         31.25 to 125mVDC -31.25 to 125mVDC -31.25 to 125mVDC -31.25 to 125mVDC -31.25 to 62.5 mVDC -01.0 VDC           Cold Junction Compensation         Automatic           Maximum Inaccuracy-Thermocouple         ±(0.2°C + 3% of °C reading)           Maximum Inaccuracy-Voltage         10, 50, 100, 200, 500, 10000 Pt           Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 150°C°F]	Maximum Ratings	-0.3 V to +5	5.3 V, <15mA	
Conversion Method         Sigma-Delta, 24-bit           Backplane Power Consumption         1.5 W           Heat Dissipation         1.5 W           Weight         98g [3.5 oz]           Agency Approvals         UL 61010-2 File E185989, Canada and USA           Software Version Required         Do-morel Designer 2.7 or later           Thermocouple Parameters         Type J: -210° to 1200°C [-346° to 2192°F]           Type K: -265° to 1372°C [-445° to 2502°F]         Type K: -265° to 1300°C [-445° to 2372°F]           Type R: -50° to 1768°C [-58° to 3214°F]         Type R: -50° to 1768°C [-58° to 3214°F]           Type R: -50° to 1768°C [-58° to 3214°F]         Type R: -50° to 1768°C [-58° to 3214°F]           Type S: -50° to 1768°C [-58° to 3214°F]         Type S: -50° to 1768°C [-58° to 3214°F]           Type R: -50° to 1768°C [-58° to 3214°F]         Type S: -50° to 1768°C [-58° to 3214°F]           Type S: -50° to 1768°C [-58° to 3214°F]         Type S: -50° to 1768°C [-445° to 752°F]           Linear Voltage Input Ranges         -31.25 to 125mVDC           Cold Junction Compensation         Automatic           Max. Inaccuracy—Thermocouple         ±(0.2°C + 3% of °C creading)           Maximum Inaccuracy—Voltage         ±250µV           RTD Input Ranges         10, 50, 100, 200, 500, 10000 Pt	Common Mode Range	-0.3 V 1	to +5.3 V	
Backplane Power Consumption         1.5 W           Heat Dissipation         1.5 W           Weight         98g [3.5 oz]           Agency Approvals         UL 61010-2 File E185989, Canada and USA           Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Parameters         Type J: -210° to 1200°C [-346° to 2192°F]           Type K: -265° to 1300°C [-445° to 2302°F]         Type K: -265° to 1300°C [-445° to 2372°F]           Type R: -50° to 1768°C [-58° to 3214°F]         Type R: -50° to 1768°C [-58° to 3214°F]           Type B: 40° to 1820°C [104° to 3308°F]         Type B: 40° to 1820°C [-04° to 3308°F]           Type B: 40° to 1820°C [-445° to 752°F]         Type R: -265° to 400°C [-445° to 752°F]           Linear Voltage Input Ranges         -31.25 to 62.5 mVDC 0 to 1.0 VDC 0 to 1.0 VDC           Cold Junction Compensation         Automatic           Maximum Inaccuracy-Voltage         ±250µV           RTD Input Ranges         10, 50, 100, 200, 500, 1000Ω Pt           Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 150°C]         -302°F]           Thermistor Input Ranges         10, 50, 100, 200, 500, 1000Ω Pt           RTD Input Ranges         10, 50, 100, 200, 500, 1000Ω Pt           Platinum RTD 0.00385 European Curve: -200° to 850°C [-40° to 302°F]           SKQ @ 25°C: -40° to 150°C [-40° to 302°F] <t< th=""><th>Common Mode Rejection</th><th>100dB@DC,</th><th>130dB@60Hz</th></t<>	Common Mode Rejection	100dB@DC,	130dB@60Hz	
Heat Dissipation         1.5 W           Weight         98g [3.5 oz]           Agency Approvals         UL 61010-2 File E185989, Canada and USA           Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Parameters         Type J: -260° to 1200°C [-346° to 2192°F]           Type K: -265° to 1372°C [-445° to 2502°F]         Type K: -265° to 1372°C [-445° to 2327°F]           Type N: -265° to 1300°C [-445° to 2327°F]         Type N: -265° to 1300°C [-445° to 2312°F]           Type S: -50° to 1768°C [-58° to 3214°F]         Type S: -50° to 1768°C [-58° to 3214°F]           Type B: 40° to 1820°C [104° to 3308°F]         Type T: -265° to 400°C [-445° to 752°F]           Linear Voltage Input Ranges         -31.25 to 31.25 mVDC -31.25 to 125 mVDC -31.25 to 120 mVE           Kine Thermoscouple Linearization         Automatic           Max. InaccuracyVoltage         ±250 µV	Conversion Method	Sigma-D	elta, 24-bit	
Weight         98g [3.5 oz]           Agency Approvals         UL 61010-2 File E185989, Canada and USA           Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Parameters         Type J: -210° to 1200°C [-346° to 2192°F] Type K: -265° to 1307°C [-445° to 2502°F] Type K: -265° to 1300°C [-445° to 2502°F] Type R: -50° to 1768°C [-58° to 3214°F] Type S: -50° to 1768°C [-58° to 3214°F] Type S: -50° to 1768°C [-58° to 3214°F] Type S: -50° to 1768°C [-445° to 752°F]           Linear Voltage Input Ranges         -31.25 to 31.25 mVDC -31.25 to 1325mVDC -31.25 to 125mVDC -31.25 to 125mVDC -31.25 to 125mVDC -31.25 to 10 VDC           Cold Junction Compensation         Automatic           Maximum Inaccuracy–Voltage         ±250µV           RTD Input Ranges (RTD Types)         10, 50, 100, 200, 500, 10000 Pt Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 1562°F]           Stop 200° C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Stop 200° C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Stop 200° to 850°C [-328° to 150°C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Stop 200° to 850°C [-328° to 150°C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Stop 225 kQ @ 25°C: -40° to 150°C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Thermistor Input Ranges         RTD 10, 100, 120, 200: 1mA RTD 50°C [-40° to 302°F]         10 kAN Type 3 @	Backplane Power Consumption	1.	5 W	
Agency Approvals         UL 61010-2 File E185989, Canada and USA           Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Parameters         Type J: -210° to 1200°C         [-346° to 2192°F]           Type K: -265° to 1372°C         [-445° to 2502°F]         Type E: -265° to 1300°C         [-445° to 2372°F]           Type R: -50° to 1768°C         [-58° to 3214°F]         Type S: -50° to 1768°C         [-58° to 3214°F]           Type B:         -40° to 1820°C         [1047 to 3308°F]         Type S: -50° to 1768°C         [-58° to 3214°F]           Type B:         -50° to 1768°C         [-58° to 3214°F]         Type S: -50° to 1768°C         [-58° to 3214°F]           Type B:         -40° to 1820°C         [104 to 3308°F]         -31.25 to 62.5 mVDC         -31.25 to 125mVDC           Cold Junction Compensation         Automatic         -31.25 to 62.5 mVDC         -31.25 to 125mVDC         -31.25 to 62.5 mVDC           Maximum Inaccuracy-Thermocouple         ±(0.2°C + 3% of °C reading)         Maximum Inaccuracy-Voltage         -200° to 850°C [-320 V           RTD Input Ranges         10, 50, 100, 200, 500, 1000.0 Pt         Platinum RTD 0.00355 European Curve: -200° to 850°C [-40° to 302°F]         3 KQ @ 25°C:         -40° to 150°C [-40° to 302°F]           Thermistor Input Ranges         2.252 kQ @ 25°C:         -40° to 150°C [-40° to 302°F]	Heat Dissipation	1.	5 W	
Software Version Required         Do-more! Designer 2.7 or later           Thermocouple Parameters         Type J: -210° to 1200°C [-346° to 2192°F] Type K: -265° to 1372°C [-445° to 2502°F] Type K: -265° to 1300°C [-445° to 1232°F] Type R: -50° to 1768°C [-58° to 2372°F] Type R: -50° to 1768°C [-58° to 2372°F] Type R: -50° to 1768°C [-58° to 3214°F] Type S: -50° to 1768°C [-58° to 3214°F] Type R: -50° to 1768°C [-445° to 782°F]           Linear Voltage Input Ranges         -31.25 to 31.25 mVDC -31.25 to 400°C [-445° to 782°F]           Linear Voltage Input Ranges         -31.25 to 31.25 mVDC -31.25 to 62.5 mVDC         -31.25 to 125mVDC 0 to 1.0 VDC           Cold Junction Compensation Thermocouple Linearization         Automatic           Max. Inaccuracy–Thermocouple ±(0.2°C + 3% of °C reading)         Automatic           Maximum Inaccuracy–Voltage         ±250µV           RTD Input Ranges (RTD Types)         10, 50, 100, 200, 500, 10000 Pt Platinum RTD 0.00385 European Curve: -200° to 850°C [-112° to 500°F]           RTD Input Ranges (RTD Types)         10, 50, 200, 500, 10000 Pt Platinum RTD 0.00372 Curve: -80° to 260°C [-112° to 500°F]           SkQ @ 25°C:         -40° to 150°C [-40° to 302°F] 3 kQ @ 25°C:         -40° to 150°C [-40° to 302°F] 30 kQ @ 25°C:         -40° to 150°C [-40° to 302°F] 30 kQ @ 25°C:           RTD Excitation Current         RTD 10, 100, 120, 200:         1mA RTD 1000:         250µA           RTD 1000:         250µA         500µA	Weight	98g [	3.5 oz]	
Thermocouple Parameters         Type J: -210° to 1200°C [-346° to 2192°F] Type K: -265° to 1372°C [-445° to 2502°F] Type K: -265° to 100°C [-445° to 1832°F] Type R: -265° to 100°C [-445° to 1822°F] Type R: -50° to 1768°C [-58° to 3214°F] Type R: -50° to 1768°C [-445° to 752°F]           Linear Voltage Input Ranges         -31.25 to 31.25 mVDC -31.25 to 125mVDC -31.25 to 125mVDC -31.25 to 125mVDC -31.25 to 2.5 mVDC 0 to 1.0 VDC           Cold Junction Compensation         Automatic           Thermocouple Linearization         Automatic           Maximum Inaccuracy-Thermocouple ±(0.2°C + 3% of °C reading)         ±250µV           RTD Input Ranges (RTD Input Ranges (RTD Types)         10, 50, 100, 200, 500, 10000 Pt Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 1502°F]           Sto @ 25°C:         -40° to 150°C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Sto @ 25°C:         -40° to 150°C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Sto @ 25°C:         -40° to 150°C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Sto @ 25°C:         -40° to 150°C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Sto @ 25°C:         -40° to 150°C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 302°F]           Sto @ 25°C:         -40° to 150°C [-40° to 302°F]         3 kQ @ 25°C: -40° to 150°C [-40° to 30	Agency Approvals	UL 61010-2 File E185	5989, Canada and USA	
Type J:         -210° to         1200°C         [-346° to         2192°F]           Type K:         -265° to         1372°C         [-445° to         2502°F]           Type K:         -265° to         1300°C         [-445° to         1832°F]           Type R:         -50° to         1768°C         [-58° to         3214°F]           Type R:         -50° to         1768°C         [-58° to         3214°F]           Type R:         -50° to         1768°C         [-58° to         3214°F]           Type B:         40° to         1820°C         [104° to         3308°F]           Type T:         -265° to         400°C         [-445° to         752°F]           Linear Voltage Input Ranges         -31.25 to         31.25 to         125 mVDC         -31.25 to         125 mVDC           -31.25 to         62.5 mVDC         -31.25 to         10.0 VDC         0 to         10.0 VDC           Cold Junction Compensation         Automatic         -400° to         10.0 VDC         -445° to         752°F]           Maximum InaccuracyVoltage         ±250µV         -200° to         850°C [-40° to         200°T]           RTD Input Ranges         10, 50, 100, 200, 500, 10000 Pt         Platinum RTD 0.00385 European Curve:	Software Version Required	Do-more! Desi	igner 2.7 or later	
Type K:         -265° to         1372°C         [-445° to         2502°F]           Type E:         -265° to         1000°C         [-445° to         1832°F]           Type R:         -265° to         1300°C         [-445° to         2332°F]           Type R:         -50° to         1768°C         [-58° to         3214°F]           Type R:         -50° to         1768°C         [-58° to         3214°F]           Type R:         -50° to         1768°C         [-445° to         3308°F]           Type R:         -50° to         1768°C         [-445° to         752°F]           Linear Voltage Input Ranges         -31.25 to         31.25 mVDC         -31.25 to         125 mVDC           -31.25 to         25.0 mVDC         -31.25 to         10.0 VDC         -31.25 to         10.0 VDC           Cold Junction Compensation         Automatic	Thermocouple Parameters			
Linear Voitage Input Ranges         -31.25 to 62.5 mVDC         0 to 1.0 VDC           Cold Junction Compensation         Automatic           Thermocouple Linearization         Automatic           Max. Inaccuracy-Thermocouple         ±(0.2°C + 3% of °C reading)           Maximum Inaccuracy-Voltage         ±250µV           RTD/Thermistor Parameters         10, 50, 100, 200, 500, 1000Ω Pt           Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 1562°F]         -200° to 850°C [-328° to 1562°F]           RTD Input Ranges (RTD Types)         120Ω Ni N120 Nickel RTD 0.00672 Curve: -80° to 260°C [-112° to 500°F]           Linearization Current         2.252 kΩ @ 25°C: 3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F] 3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F] 3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F] 30 kΩ @ 25°C: -40° to 150°C [-	Thermocouple Input Ranges	Type K:         -265° to         1372           Type E:         -265° to         1000           Type N:         -265° to         1300           Type R:         -50° to         1768           Type S:         -50° to         1768           Type B:         40° to         1820	2°C [-445° to 2502°F] 0°C [-445° to 1832°F] 0°C [-445° to 2372°F] 3°C [-58° to 3214°F] 3°C [-58° to 3214°F] 0°C [104° to 3308°F]	
Thermocouple Linearization         Automatic           Max. Inaccuracy–Thermocouple         ±(0.2°C + 3% of °C reading)           Maximum Inaccuracy–Voltage         ±250µV           RTD/Thermistor Parameters         10, 50, 100, 200, 500, 1000Ω Pt           Platinum Ranges         10, 50, 100, 200, 500, 1000Ω Pt           (RTD Input Ranges         10, 50, 100, 200, 500, 1000Ω Pt           (RTD Types)         120Ω Ni           120Ω Ni         120Ω Ni           N120 Nickel RTD 0.00672 Curve:         -80° to 260°C [-112° to 500°F]           -80° to 260°C [-112° to 500°F]         3 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           Thermistor Input Ranges         2.252 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           Thermistor Input Ranges         SkΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]         30 kΩ @ 25°C:           30 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]         30 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           8RTD Excitation Current         RTD 10, 100, 120, 200:         1mA           RTD 100:         250µA         NTC 2.252k, NTC 3k:         10µA           RTD 1000:         250µA         NTC 5k, NTC 10k:         5µA	Linear Voltage Input Ranges			
Max. Inaccuracy-Thermocouple         ±(0.2°C + 3% of °C reading)           Maximum Inaccuracy-Voltage         ±250µV           RTD/Thermistor Parameters         10, 50, 100, 200, 500, 1000Ω Pt           RTD Input Ranges (RTD Types)         10, 50, 100, 200, 500, 1000Ω Pt           Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 1562°F]           120Ω Ni (RTD Types)         120Ω Ni           N120 Nickel RTD 0.00672 Curve: -80° to 260°C [-112° to 500°F]           2.252 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           30 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           30 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           30 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           800 tΩ 25°C:         -40° to 150°C [-40° to 302°F]           800 tΩ 25°C:         -40° to 150°C [-40° to 302°F]           900 tΩ         1000:         1000°C	Cold Junction Compensation	Auto	omatic	
Maximum Inaccuracy–Voltage         ±250μV           RTD/Thermistor Parameters         10, 50, 100, 200, 500, 1000Ω Pt Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 1562°F]           RTD Input Ranges (RTD Types)         120Ω Ni N120 Nickel RTD 0.00672 Curve: -80° to 260°C [-112° to 500°F]           Thermistor Input Ranges         2.252 kΩ @ 25°C: S kΩ @ 25°C: 10k-AN Type 3 @ 25°C: 30 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           RTD Excitation Current         RTD 10, 100, 120, 200: RTD 1000: 250µA           RTD 10, 100, 120, 200: RTD 1000: 250µA           NTC 2.252k, NTC 3k: NTC 5k, NTC 10k: 5µA	Thermocouple Linearization	Auto	omatic	
RTD/Thermistor Parameters           RTD/Thermistor Parameters           ID, 50, 100, 200, 500, 1000Ω Pt Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 1562°F]           120Ω Ni N120 Nickel RTD 0.00672 Curve: -80° to 260°C [-112° to 500°F]           2.252 kΩ @ 25°C: -80° to 260°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           8 RTD Excitation Current           RTD 10, 100, 120, 200: RTD 1000: 250µA           NTC 2.252k, NTC 3k: NTC 5k, NTC 10k: 5µA	Max. Inaccuracy–Thermocouple	±(0.2°C + 3%	o of °C reading)	
RTD Input Ranges (RTD Types)         10, 50, 100, 200, 500, 1000Ω Pt Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 1562°F]           120Ω Ni N120 Nickel RTD 0.00672 Curve: -80° to 260°C [-112° to 500°F]           2.252 kΩ @ 25°C: -80° to 260°C [-112° to 500°F]           2.252 kΩ @ 25°C: -80° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           10k-AN Type 3 @ 25°C: -40° to 150°C [-40° to 302°F]           10k-AN Type 3 @ 25°C: -40° to 150°C [-40° to 302°F]           RTD Excitation Current           RTD 10, 100, 120, 200: RTD 1000: 250µA           NTC 2.252k, NTC 3k: NTC 5k, NTC 10k: 5µA	Maximum Inaccuracy–Voltage	±25	50µV	
RTD Input Ranges (RTD Types)         Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 1562°F]           120Ω Ni N120 Nickel RTD 0.00672 Curve: -80° to 260°C [-112° to 500°F]         120Ω Ni N120 Nickel RTD 0.00672 Curve: -80° to 260°C [-112° to 500°F]           Thermistor Input Ranges         2.252 kΩ @ 25°C: 3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           10k-AN Type 3 @ 25°C: -40° to 150°C [-40° to 302°F]           3 kΩ @ 25°C: -40° to 150°C [-40° to 302°F]           10k-RN Type 3 @ 25°C: -40° to 150°C [-40° to 302°F]           RTD 10, 100, 120, 200: RTD 10, 100, 120, 200: RTD 1000: 250µA           Thermistor Excitation Current           NTC 2.252k, NTC 3k: NTC 5k, NTC 10k:         10µA	RTD/Thermistor Parameters			
-80° to 260°C [-112° to 500°F]           Image: Constraint of the parameter		Platinum RTD 0.00385 European Curve: -200° to 850°C [-328° to 1562°F] 120Ω Ni		
30 kΩ @ 25°C:         -40° to 150°C [-40° to 302°F]           RTD Excitation Current         RTD 10, 100, 120, 200: RTD 500:         1mA 500µA RTD 1000:           Thermistor Excitation Current         NTC 2.252k, NTC 3k: NTC 5k, NTC 10k:         10µA 5µA	Thermistor Input Ranges	2.252 kΩ @ 25°C: - 3 kΩ @ 25°C: - 5 kΩ @ 25°C: -	-40° to 150°C [-40° to 302°F] -40° to 150°C [-40° to 302°F] -40° to 150°C [-40° to 302°F]	
Thermistor Excitation Current         NTC 5k, NTC 10k:         5µA	RTD Excitation Current	30 kΩ @ 25°C: - RTD 10, 100, 120, 200: RTD 500:	-40° to 150°C [-40° to 302°F] 1mA 500μA	
NTC 30κ: 1μΑ	Thermistor Excitation Current			
Thermistor Linearization Automatic	Thermistor Linearization	Automatic		
Maximum Inaccuracy ±0.2°C	Maximum Inaccuracy			

## **BX-xxUT Universal Temperature Input,** continued

Data Range Specifications					
Thermocouple Selection	Temperature Range	Resolution			
Thermocouple Selection	Temperature nanye	WXn	RXn		
Туре Ј	−210 to 1200 °C −346 to 2192 °F				
Туре К	−265 to 1372 °C −445 to 2502 °F				
Туре Е	−265 to 1000 °C −445 to 1832 °F				
Type R	−50 to 1768 °C −58 to 3214 °F	Degrees x10 (One Implied Decimal) <sup>1</sup>	24-Bit Floating <sup>1</sup>		
Type S	−50 to 1768 °C −58 to 3214 °F				
Туре В	40 to 1820 °C 104 to 3308 °F <sup>3</sup>				
Туре Т	−265 to 400 °C −445 to 752 °F				
Voltage Selection	Voltage Range	WXn <sup>2</sup>	RXn		
-31.25 to 31.25 mVDC	Bipolar 31.25 mVDC	0.95 µV per count (−32768 to 32767)			
-31.25 to 62.5 mVDC	Bipolar 62.5 mVDC	1.9 µV per count (−16384 to 32767)			
-31.25 to 125 mVDC	Bipolar 125 mVDC	3.8 µV per count (-8192 to 32767)	User Scaled		
0 to 1.0 VDC	Unipolar 1.0 VDC	30.5 µV per count (0 to 32767)			
RTD Selection	Temperature Range	WXn	RXn		
10, 50, 100, 200, 500, 1000Ω Pt Platinum RTD 0.00385 European Curve	−200 to 850 °C −328 to 1562 °F	Degrees x10 (One Implied	24-Bit Floating <sup>1</sup>		
120Ω Ni N120 Nickel RTD 0.00672 Curve	−80 to 260 °C −112 to 500 °F	Decimal) <sup>1</sup>	24-bit Fioaling		
Thermistor Selection	Temperature Range	WXn	RXn		
Thermistor 2.252 kΩ @25°C					
Thermistor 3kΩ @25°C	40 4 450 00				
Thermistor 5kΩ @25°C	−40 to 150 °C −40 to 302 °F	Degrees x10 (One Implied Decimal) <sup>1</sup>	24-Bit Floating <sup>1</sup>		
Thermistor 10k-AN Type 3 @25°C		Doomary			
Thermistor 30kΩ @25°C					

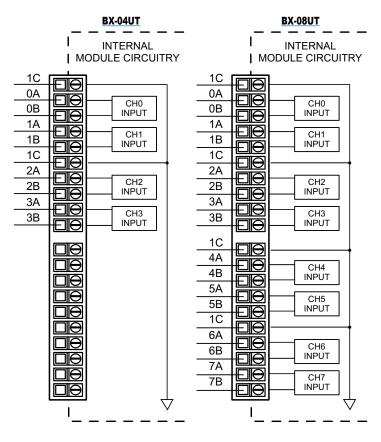
1. Temperatures reported in rounded integer to WXn and as scaled floating point 24bits resolution to RXn.

2. Raw Counts = -32768 to 32767.

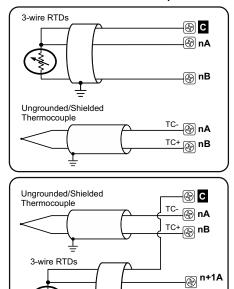
3. Maximum value displayed in WXn is 32767. RXn will display the full range of 3308.0.

# BX-xxUT Universal Temperature Input, continued

#### Analog Thermocouple/Voltage Input Wiring



**Mixed Resistive and Thermocouple Sensors** 





#### Notes for maximum accuracy:

- 1. All wires to an RTD must be equal length and type. Refer to RTD manufacturer's recommendations.
- **2.** Do not use cable shield as sensing wire.
- When applicable, connect shield to RTD common only, otherwise connect to module common only. Do not connect shield to both ends.

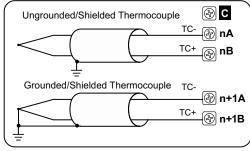


🚱 n+1B

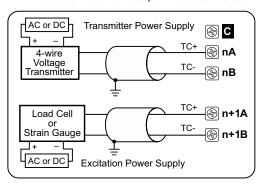
4. Jumper unused inputs.

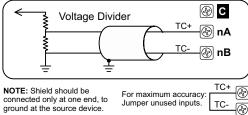
### 1-800-633-0405 **BX-xxUT Universal Temperature Input,** continued

#### Thermocouple and Voltage Sensors



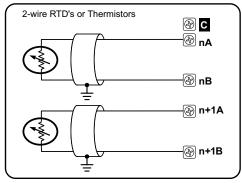
NOTE: Thermocouple extension wire and proper thermocouple terminal blocks must be used to extend thermocouples. AutomationDirect thermocouple wire is recommended.

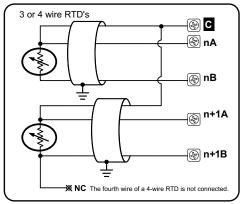




connected only at one end, to ground at the source device.

**Resistive and Thermistor Sensors** 





## 1-800-633-0405 For the lates BRX Analog Expansion Modules

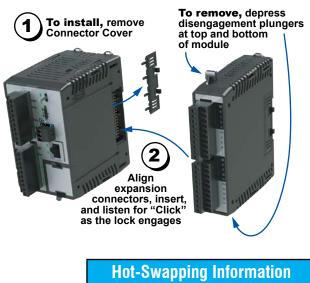
### Overview

One of the unique features of the BRX platform is its ability to expand its capability to fit your application solution. One of the ways the BRX platform can do this is by using expansion modules that conveniently "snap-on" to the side of any BRX MPU. Once the expansion module has been snapped in place and is added to the project, it instantly adds I/O to the MPU with little to no additional setup required.

The analog expansion modules give you the ability to add analog I/O as needed and are identified as an analog input module, temperature input module, or analog output module. On the front panel of the analog I/O expansion modules, a color scheme and a symbol are used to denote the module type.

Analog modules are available with current inputs or outputs, unipolar/bipolar voltage inputs or outputs, thermocouple inputs, RTD inputs and thermistor inputs. Input/output combination modules are also available.

With the exception of temperature input modules, the modules ship without wiring terminals. This allows you to select the termination style that best fits your application. Several wiring options are available, including screw terminal connectors, spring clamp terminal connectors and pre-wired **ZIP**Link cable solutions.



Note: This device cannot be Hot Swapped.

### **General Specifications**

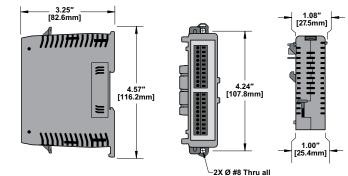
All BRX analog input and output modules and temperature input modules have the same general specifications listed in the table below.

General Specifications					
Storage Temperature	-20° to 70°C [-4° to 158°F]				
Humidity	5% to 95% (non-condensing)				
Environmental Air	No corrosive gases permitted				
Vibration	IEC60068-2–6 (Test Fc)				
Shock	IEC60068-2-27 (Test Ea)				
Enclosure Type	Open Equipment				
Noise Immunity	NEMA ICS3-304				
EU Directive	See the "EU Directive" topic in the BRX Help File				
Agency Approvals (unless otherwise noted on individual module specifications)	UL 61010-1 and UL 61010-2-201 File E139594, Canada and USA CE (EN 61131-2 EMC, EN 61010-1 and EN 61010-2-201 Safety)				

Operating	Temperature I	Range
Operating Temperature	0° to 45°C [32° to 113°F]	0° to 60°C [32° to 140°F]
Module	Module R	evision*
BX-08AD-1		
BX-08AD-2B	Rev A	Rev B
<u>BX-04THM</u>	(Prior to May 2018)	(After May 2018)
BX-08DA-1		
<u>BX-08DA-2B</u>	Rev B (Prior to May 2018)	Rev C (After May 2018)
All other Analog and Temperature Expansion Module part numbers	N/A	Rev A (After May 2018)

\* Module Revision can be found in the last letter (last or second-to-last character) of the module serial number.

### Dimensions



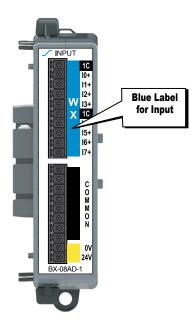


**NOTE:** When removing an expansion module, make sure there is room for the module to slide away from the system. Failure to do so will result in difficulty removing the module.

# BRX Analog Expansion Modules

### **Analog Input Modules**

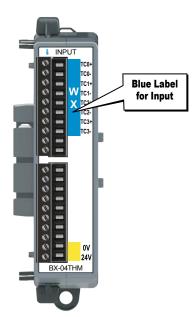
Nine (9) analog input modules are available, with current or voltage inputs. Analog input module faceplates have a blue terminal bar to distinguish them as inputs, with symbols  $\checkmark$  or  $\checkmark$  to signify current or voltage, respectively.



Analog Input Modules						
Part Number	Points	Input Type	Resolution	Price		
<u>BX-04ADM-1</u>	4	Current Sink 0–20 mA, 4–20 mA	14-bit	\$182.00		
<u>BX-04AD-1</u>	4			\$230.00		
<u>BX-08AD-1</u>	8	Current Sink 0–20 mA. 4–20 mA	16-bit	\$255.00		
<u>BX-16AD-1</u>	16	0 20 110 (, 4 20 110 (		\$363.00		
BX-04AD-2B	4	Voltage	16-bit	\$230.00		
BX-08AD-2B	8	± 10VDC, ± 5VDC,		\$255.00		
<u>BX-16AD-2B</u>	16	0–5 VDC, 0–10 VDC		\$363.00		
<u>BX-04AD-3</u>	4	Current Sink 0–20mA, 4–20mA	16-bit	\$193.00		
<u>BX-08AD-3</u>	8	Voltage ±10VDC, ±5VDC, 0–5VDC, 0–10VDC	TO-DIL	\$225.00		

### **Temperature Input Module**

Six (6) temperature input modules are available, with thermocouple, RTD, and/or thermistor inputs. The thermocouple input modules can also be configured for millivolt-level voltage inputs, and the RTD input module can also be configured for resistance input. Temperature module faceplates have a blue terminal bar to distinguish them as inputs, and \$ symbol to signify temperature.



Temperature Input Modules				
Part Number	Points	Input Type	Price	
BX-04THM	4	Thermocouple	\$241.00	
<u>BX-08THM</u>	8	Thermocouple	\$269.00	
BX-06RTD	6	RTD	\$255.00	
<u>BX-08NTC</u>	8	Thermistor	\$269.00	
<u>BX-04UT</u>	4	Universal Temperature (Thermocouple, RTD, Thermistor supported)	\$223.00	
<u>BX-08UT</u>	6	Universal Temperature (Thermocouple, RTD, Thermistor supported)	\$248.00	

# BRX Analog Expansion Modules

### Temperature/Analog Combo Module

Three (3) combination modules are available, with thermocouple, RTD or universal temperature inputs and current sourcing outputs. The thermocouple input modules can also be configured for millivolt-level voltage inputs, and the RTD input module can also be configured for resistance input. The Input/Output faceplate terminal bar is in blue and red, making it easy to distinguish between inputs and outputs, and the l and  $\checkmark$  symbols signify temperature and current, respectively.

En Te	Temperature Input / Analog Output Combo Modules					
	F	oints	frank Trans	- · · -		
R0+ Part Number R0-	Input	Output	Input Type	Output Type	Price	
10 R1+ R1- 20	<b>-1</b> 4	4	Resistance Temperature Detector (RTD)	Current Source 0–20mA, 4–20mA	\$472.00	
R2+ R2- 3C	<b>-1</b> 4	4	Thermocouple	Current Source 0–20mA, 4–20mA	\$472.00	
R3- R3- 4C	<u>8</u> 4	4	Universal Temperature	Current Source: 0–20mA, 4–20mA Voltage:±10VDC, ±5VDC, 0–5VDC, 0–10VDC	\$436.00	



12+

13+

 S
 5C

 0V
 0V

 24V

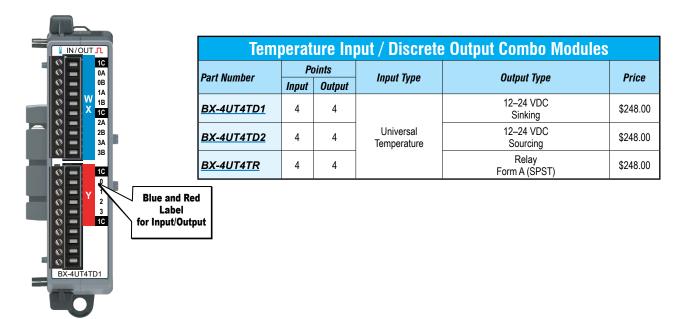
 BX-4RTD4DA-1

Blue and Red

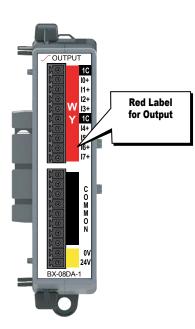
Label

for Input/Output

Three (3) combination modules are available with universal temperature inputs and DC sinking, sourcing or relay outputs. The thermocouple inputs can also be configured for millivolt-level voltage inputs, and the RTD inputs can also be configured for resistance input. The Input/Output faceplate terminal bar is in blue and red, making it easy to distinguish between inputs and outputs, and the  $\$  and  $\Pi$  symbols signify temperature and discrete signals, respectively.



## 1-800-633-0405 For the lates BRX Analog Expansion Modules



### **Analog Output Modules**

Six (6) analog output modules are available, in current and voltage outputs. Analog output module faceplates have a red terminal bar to distinguish them as outputs, with symbols  $\checkmark$  or  $\checkmark$  to signify current or voltage, respectively.

	Analog Output Modules						
Part Number	Points	Output Type	Price				
<u>BX-04DA-1</u>	4	Current Source	\$269.00				
BX-08DA-1	8	0–20 mA, 4–20 mA	\$350.00				
BX-04DA-2B	4	Voltage	\$269.00				
<u>BX-08DA-2B</u>	8	± 10VDC, ± 5VDC, 0–5 VDC, 0–10 VDC	\$350.00				
<u>BX-04DA-3</u>	4	Current Source 0–20mA, 4–20mA	\$244.00				
<u>BX-08DA-3</u>	8	Voltage ±10VDC, ±5VDC, 0–5VDC, 0–10VDC	\$311.00				

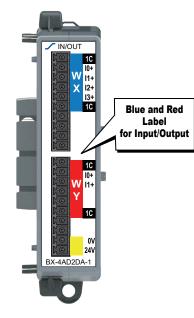
### Analog Combo Input / Output Modules

Six (6) analog input/output combo modules are available with current or voltage inputs and outputs. The Input/Output faceplate terminal bar is in blue and red, making it easy to distinguish between inputs and outputs. Symbols  $\checkmark$  and  $\checkmark$  signify current and voltage, respectively.

Analog Combo Input / Output Modules					
Part Number	Poi	ints	Innut Tuno	Output Tuno	Drico
Part Number	Input	Output	Input Type	Output Type	Price
<u>BX-2AD2DA-1</u>	2	2	Current Sink	Current Source	\$309.00
BX-4AD2DA-1	4	2	0–20mA, 4–20mA	0–20mA, 4–20mA	\$378.00
BX-2AD2DA-2B	2	2	Voltage	Voltage	\$309.00
BX-4AD2DA-2B	4	2	±10VDC, ±5VDC, 0–5VDC, 0–10VDC	±10VDC, ±5VDC, 0–5VDC, 0–10VDC	\$378.00
<u>BX-2AD2DA-3</u>	2	2	Current Source 0–20mA, 4–20mA	Current Source 0–20mA, 4–20mA	\$284.00
BX-4AD4DA-3	4	4	Voltage ±10VDC, ±5VDC, 0–5VDC, 0–10VDC	Voltage ±10VDC, ±5VDC, 0–5VDC, 0–10VDC	\$349.00

Expansion Module Support by Controller				
Controller Type	# Expansion Modules			
BX-DM1E-M	8			
BX-DM1-10	8			
BX-DM1E-10	8			
BX-DM1-18	8			
BX-DM1E-18	8			
BX-DM1-36	8			
BX-DM1E-36	8			
BX-DMIO*	8			
BX-EBC100*	8			
BX-MBIO*	8			

\* Remote I/O controllers do not support Motion Control and Communications Modules.



# BRX Wiring Termination Options

### **Terminal Block Connectors**

The terminal block connectors are provided in kits of multiple connectors that are ordered as a single part number. There are 2 different types of kits to choose from; one kit for the five (5), eight (8) and 12-point discrete, and one kit for the analog modules and 16-point discrete modules. The five (5), eight (8) and 12-point discrete module kits each have (3) 5-pin 5mm connectors. The 8-point modules will use only 2 of the 5-pin connectors. The five (5) and 12-point modules will use all three connectors. The analog and 16-point digital module kits include (2) 10-pin 3.81 mm connectors.

### Terminal Block Connectors, 5, 8 and 12-Point Discrete Modules

Terminal Block Kits for 5-point, 8-point and 12-point Expansion Modules



BX-RTB08 (Kit - 3 pieces)



BX-RTB08-1 (Kit - 3 pieces)



BX-RTB08-2 (Kit - 3 pieces)

Terminal Block Specifications 5-, 8- & 12-Point Type							
Part Number Single Block Set of 3 Blocks	<u>BX-RTB05</u> BX-RTB08	<u>BX-RTB05-1</u> BX-RTB08-1	<u>BX-RTB05-2</u> BX-RTB08-2				
Price (Single Block)	\$9.00	\$7.50	\$8.50				
Price (Kit)	\$16.00	\$15.00	\$16.00				
Connector Type	Screw Type - 90-degree	Spring Clamp Type - 180-degree	Screw Type - 180-degree				
Wire Exit	180-degree	180-degree	180-degree				
Pitch	5.0 mm	5.0 mm	5.0 mm				
Screw Size	M2.5	N/A	M2.5				
Screw Torque Recommended	< 3.98 lb∙in [0.45 N∙m]	N/A	< 3.98 lb∙in [0.45 N∙m]				
Screwdriver Blade Width	3.5 mm	3.5 mm	3.5 mm				
Wire Gauge (Single Wire)	28–12 AWG	28–14 AWG	28–12 AWG				
Wire Gauge (Dual Wire)	28–16 AWG	28–16 AWG (Dual Wire Ferrule Required)	28–16 AWG				
Wire Strip Length	0.3 in [7.5 mm]	0.37 in [9.5 mm]	0.3 in [7.5 mm]				
Equiv. Dinkle P/N	5ESDV-05P-BK	5ESDSR-05P-BK	5ESDF-05P-BK				

### Terminal Block Connectors, Analog Modules and 16-Point Discrete Modules

Termin	Terminal Block Specifications 16-Point Type							
Part Number	<u>BX-RTB10</u>	<u>BX-RTB10-1</u>	BX-RTB10-2					
Price (Kit)	\$22.50	\$25.00	\$23.50					
Connector Type	Screw Type 90-degree	Spring Clamp Type 180-degree	Screw Type 180-degree					
Wire Exit	180-degree	180-degree	180-degree					
Pitch	3.81 mm	3.81 mm	3.81 mm					
Screw Size	M2	N/A	M2					
Screw Torque Recommended	<1.77 lb∙in [0.2 N∙m]	N/A	<1.77 lb·in [0.2 N·m]					
Screwdriver Blade Width	2.5 mm	2.5 mm	2.5 mm					
Wire Gauge (Single Wire)	28–16 AWG	26–18 AWG	30–16 AWG					
Wire Gauge (Dual Wire)	28–18 AWG	30–20 AWG (Dual Wire Ferrule Required)	30–18 AWG					
Wire Strip Length	0.24 in [6mm]	0.35 in [9mm]	0.26 in [6.5 mm]					
Equiv. Dinkle P/N	EC381V-10P-BK	ESC381V-10-BK	EC381F-10P-BK					

**NOTE:** <u>BX-RTB10</u> terminal blocks are included with Temperature Input modules.

Terminal Block Kits for Analog and 16-point Discrete Expansion Modules



BX-RTB10 (Kit - 2 pieces)



BX-RTB10-1 (Kit - 2 pieces)



BX-RTB10-2 (Kit - 2 pieces)