5B Module Selection Guide



for the DBK & WBK Signal Conditioning Options

5B modules allow you to employ IOtech PC-based data acquisition systems in applications with a diverse range of signal conditioning requirements. These applications include LVDT, potentiometer, isolated current loop inputs, ± 10 mV to ± 40 V

inputs, linearized RTD, thermocouple, frequency-to-voltage inputs, and all popular strain gage configurations. The following is a listing of the 5B modules available for IOtech products.

IOtec SC-5B	Itage-Input Mo	dules, (4-Hz BW)		
SC-5B	9 1	, ,	Outrut Bar	
		Input Range	Output Ran	ge
CC CD		±10 mV	±5V	
	30-02	±50 mV	±5V	
	30-03	±100 mV	±5V	
	30-04	±10 mV	0 to +5V	
	30-05	±50 mV	0 to +5V	
	30-06	±100 mV	0 to +5V	
SC-5B	31-01	±1V	±5V	
SC-5B	31-02	±5V	±5V	
	31-03	±10V	±5V	
	31-04	±1V	0 to +5V	
	31-05	±5V	0 to +5V	
	31-06	±10V	0 to +5V	
	31-07	±20V	±5V	
	31-08	±20V	0 to +5V	
	31-09	±40V	±5V	
SC-5B	31-10	±40V	0 to +5V	
solated Tr	ue RMS Input N	Modules		
	h Part #	Input (RMS)	Output (DC)
	33-01	0 to +100 mV	0 to +5V	
	33-02	0 to +1V	0 to +5V	
	33-03	0 to +10V	0 to +5V	
	33-04	0 to +150V	0 to +5V	
	33-05	0 to +300V	0 to +5V	
	33-06	0 to +300V	0 to +5V	
	33-07	0 to +5A	0 to +5V	
				4 H= \
		TD Input Modules, (0 to		•
	h Part #	Туре	Input Range	
SC-5B			·100 °C to +100 °C	
	34-02	100 Ohm Pt	0 °C to +100 °C	
	34-03	100 Ohm Pt	0 °C to +200 °C	
SC-5B	34-04	100 Ohm Pt	0 °C to +600 °C	C
SC-5B	34-C-01	10 Ohm Cu at 0 °C	0 °C to +120 °C	C
SC-5B	34-C-02	10 Ohm Cu at 25 °C	0 °C to +120 °C	С
	34-C-03	10 Ohm Cu at 0 °C	0 °C to +160 °C	
	34-N-01	120 Ohm Ni	0 °C to +300 °C	
				-
	•	es, (±5V Output, 4-Hz, 1	IO KIIZ DVV)	F. Martin
IOte 0 kHz BW	ech Part # Ir	put Range		Excitation
SC-5B	38-01 +	10 mV full (3 mV/V) 100 to 1	Ok Ohm	3.333V
		30 mV full (3 mV/V) 300 to 1		10.000V
		10 mV half (3 mV/V) 100 to 1		3.333V
		30 mV half (3 mV/V) 300 to 1		10.000V
		20 mV full (2 mV/V) 300 to 1		10.000V
		33.3 mV full (10 mV/V) 100 t		3.333V
	38-07 ±	100 mV full (10 mV/V) 300 to	10k Ohm	10.000V
Hz BW				
SC-5R		10 mV full (3 mV/V) 100 to 1		3.333V
	38-32 ±	30 mV full (3 mV/V) 300 to 1	0k Ohm	10.000V
				3.333V
SC-5B		10 mV half (3 mV/V) 100 to 1	OK OIIIII	
SC-5B SC-5B	38-33 ±	30 mV half (3 mV/V) 300 to 1		10.000V
SC-5B SC-5B SC-5B	38-33 ± 38-34 ±	30 mV half (3 mV/V) 300 to 1	0k Ohm	10.000V
SC-5B SC-5B SC-5B SC-5B	338-33 ± 338-34 ± 338-35 ±	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1	0k Ohm 0k Ohm	10.000V 10.000V
SC-5B SC-5B SC-5B SC-5B SC-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ±	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t	l 0k Ohm 0k Ohm o 10k Ohm	10.000V
SC-5B SC-5B SC-5B SC-5B SC-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ±	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 to	0k Ohm 0k Ohm o 10k Ohm o 10k Ohm	10.000V 10.000V 3.333V 10.000V
SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inp	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 to out Modules, (0 to +5V	0k Ohm 0k Ohm o 10k Ohm o 10k Ohm Output, 4-Hz	10.000V 10.000V 3.333V 10.000V
SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B Linearized	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inph Part #	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 to but Modules, (0 to +5V Type	0k Ohm 0k Ohm o 10k Ohm o 10k Ohm Output, 4-Hz Input Range	10.000V 10.000V 3.333V 10.000V BW)
SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B Linearized IOtec SC-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inph Part # 35-01	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 tc out Modules, (0 to +5V Type 100 Ohm Pt	0k Ohm 0k Ohm 0 10k Ohm 0 10k Ohm Output, 4-Hz Input Range 100 °C to +100 °C	10.000V 10.000V 3.333V 10.000V BW)
\$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inp h Part # 35-01	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 to but Modules, (0 to +5V Type 100 Ohm Pt 100 Ohm Pt	0k Ohm 0k Ohm 0 10k Ohm 0 10k Ohm Output, 4-Hz Input Range 100 °C to +100 °C 0 °C to +100 °C	10.000V 10.000V 3.333V 10.000V BW)
\$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inph Part # 35-01	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 tc out Modules, (0 to +5V Type 100 Ohm Pt	0k Ohm 0k Ohm 0 10k Ohm 0 10k Ohm Output, 4-Hz Input Range 100 °C to +100 °C	10.000V 10.000V 3.333V 10.000V BW)
\$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inp h Part # 35-01	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 to but Modules, (0 to +5V Type 100 Ohm Pt 100 Ohm Pt	0k Ohm 0k Ohm 0 10k Ohm 0 10k Ohm Output, 4-Hz Input Range 100 °C to +100 °C 0 °C to +100 °C	10.000V 10.000V 3.333V 10.000V BW)
\$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B Linearized IOtec \$C-5B \$C-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inp h Part # 35-01 35-02 35-03	30 mV half (3 mV/V) 300 to 1 33.3 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 to but Modules, (0 to +5V Type 100 Ohm Pt 100 Ohm Pt 100 Ohm Pt	Ok Ohm Ok Ohm O 10k Ohm Oth Ohm Output, 4-Hz Input Range 100 °C to +100 °C 0 °C to +100 °C 0 °C to +500 °C	10.000V 10.000V 3.333V 10.000V BW)
\$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inp h Part # 35-01 35-02 35-03 35-04 35-05	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 tc but Modules, (0 to +5V Type 100 Ohm Pt 100 Ohm Pt 100 Ohm Pt 100 Ohm Pt	10k Ohm 0k Ohm 0 10k Ohm 0 °C to +100 °C 0 °C to +200 °C	10.000V 10.000V 3.333V 10.000V BW)
\$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inp h Part # 35-01 35-02 35-03 35-04 35-05 35-0-3	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 tc but Modules, (0 to +5V Type 100 Ohm Pt 100 Ohm Cu at 0 °C	10k Ohm 0k Ohm 0 10k Ohm 0 °C to +100 °C 0 °C to +200 °C 0 °C to +200 °C 0 °C to +120 °C	10.000V 10.000V 3.333V 10.000V BW)
\$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B \$C-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inp h Part # 35-01 35-02 35-03 35-04 35-C-01 35-C-02	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 to 100 mV full (10 mV/V) 300 to but Modules, (0 to +5V Type 100 Ohm Pt 100 Ohm Pt 100 Ohm Pt 100 Ohm Pt 100 Ohm Pt 100 Ohm Pt 100 Ohm Cu at 0 °C 10 Ohm Cu at 25 °C	Ok Ohm O	10.000V 10.000V 3.3333V 10.000V BW)
SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B SC-5B	38-33 ± 38-34 ± 38-35 ± 38-36 ± 38-37 ± 4-Wire RTD Inp h Part # 35-01 35-02 35-03 35-04 35-05 35-0-3	30 mV half (3 mV/V) 300 to 1 20 mV full (2 mV/V) 300 to 1 33.3 mV full (10 mV/V) 100 t 100 mV full (10 mV/V) 300 tc but Modules, (0 to +5V Type 100 Ohm Pt 100 Ohm Cu at 0 °C	10k Ohm 0k Ohm 0 10k Ohm 0 °C to +100 °C 0 °C to +200 °C 0 °C to +200 °C 0 °C to +120 °C	10.000V 10.000V 3.333V 10.000V BW)

Potentiometer-Input Modules, (4-Hz BW)						
IOtech Part #	Input Range	Output Range				
SC-5B36-01	0 to 100 Ohm	0 to +5V				
SC-5B36-02	0 to 500 Ohm	0 to +5V				
SC-5B36-03	0 to 1k Ohm	0 to +5V				
SC-5B36-04	0 to 10k Ohm	0 to +5V				
2-Wire Transmitter Interface Modules, (4-Hz, 100-Hz, 1 kHz BW)						
IOtech Part #	Input Range	Output Range				
4-Hz BW						
SC-5B32-01	4 to 20 mA	0 to +5V				
SC-5B32-02 100-Hz BW	0 to 20 mA	0 to +5V				
SC-5B42-01	4 to 20 mA	+1 to +5V				
Analog Voltage-Input Modules, (10 kHz BW)						
3 3 1	, ,	,				
IOtech Part #	Input Range	Output Range				
SC-5B40-01	±10 mV	±5V				
SC-5B40-02	±50 mV ±100 mV	±5V ±5V				
SC-5B40-03 SC-5B40-04	±100 mV	0 to +5V				
SC-5B40-05	±50 mV	0 to +5V				
SC-5B40-06	±100 mV	0 to +5V				
SC-5B41-01	±1V	±5V				
SC-5B41-02	±5V	±5V				
SC-5B41-03	±10V	±5V				
SC-5B41-04	±1V	0 to +5V				
SC-5B41-05	±5V	0 to +5V				
SC-5B41-06	±10V	0 to +5V +5V				
SC-5B41-07 SC-5B41-08	±20V ±20V	±5V 0 to +5V				
SC-5B41-08	±40V	±5V				
SC-5B41-10	±40V	0 to +5V				
	•	C-LVDT Transducer, (1 kHz BW)				
IOtech Part #	Input Range	Output Range				
SC-5B43-01	±1V	±5V ±5V				
SC-5B43-02 SC-5B43-03	±2V ±3V	±5V				
SC-5B43-04	±4V	±5V				
SC-5B43-05	±5V	±5V				
SC-5B43-06	±6V	±5V				
SC-5B43-07	±7V	±5V				
SC-5B43-08	±8V	±5V				
SC-5B43-09	±9V	±5V				
SC-5B43-10	±10V	±5V				
Frequency-Input Modul	es, (TTL or zero cro	ssing input)				
IOtech Part #	Input Range	Output Range				
SC-5B45-01	0 to 500 Hz	0 to +5V				
SC-5B45-02	0 to 1 kHz	0 to +5V				
SC-5B45-03	0 to 3 kHz	0 to +5V				
SC-5B45-04	0 to 5 kHz	0 to +5V				
SC-5B45-05	0 to 10 kHz	0 to +5V				
SC-5B45-06 SC-5B45-07	0 to 25 kHz 0 to 50 kHz	0 to +5V 0 to +5V				
	U LU JU KIIZ					
SC-5B45-08	0 to 100 kHz					
SC-5B45-08	0 to 100 kHz	0 to +5V				
Linearized Thermocoup	le-Input Modules, (0 to +5V O to +5V Output, 4-Hz BW)				
Linearized Thermocoup	le-Input Modules, (Type	0 to +5V O to +5V Output, 4-Hz BW) Input Range				
Linearized Thermocoup IOtech Part # SC-5B47-J-01	le-Input Modules, (Type J	0 to +5V 0 to +5V Output, 4-Hz BW) Input Range 0 °C to +760 °C				
Linearized Thermocoup IOtech Part # SC-5B47-J-01 SC-5B47-J-02	le-Input Modules, (Type J J	0 to +5V 0 to +5V Output, 4-Hz BW) Input Range 0 °C to +760 °C -100 °C to +300 °C				
Linearized Thermocoup IOtech Part # SC-5B47-J-01 SC-5B47-J-02 SC-5B47-J-03	le-Input Modules, (Type J J	0 to +5V 0 to +5V Output, 4-Hz BW) Input Range 0 °C to +760 °C -100 °C to +300 °C 0 °C to +500 °C				
Linearized Thermocoup IOtech Part # SC-5B47-J-01 SC-5B47-J-02	le-Input Modules, (Type J J	0 to +5V 0 to +5V Output, 4-Hz BW) Input Range 0 °C to +760 °C -100 °C to +300 °C				
Linearized Thermocoup IOtech Part # SC-5847-J-01 SC-5847-J-02 SC-5847-J-03 SC-5847-K-04	le-Input Modules, (Type 	0 to +5V 0 to +5V Output, 4-Hz BW) Input Range 0 °C to +760 °C -100 °C to +300 °C 0 °C to +500 °C 0 °C to +1000 °C				
Linearized Thermocoup IOtech Part # SC-5B47-J-01 SC-5B47-J-02 SC-5B47-J-03 SC-5B47-K-04 SC-5B47-K-05 SC-5B47-T-06 SC-5B47-T-07	le-Input Modules, (Type J J J K K K T	0 to +5V 1 to +5V Output, 4-Hz BW) Input Range 0 'C to +760 'C -100 'C to +300 'C 0 'C to +500 'C 0 'C to +500 'C 0 'C to +500 'C -100 'C to +400 'C 0 'C to +200 'C				
Linearized Thermocoup IOtech Part # SC-5B47-J-01 SC-5B47-J-02 SC-5B47-J-03 SC-5B47-K-04 SC-5B47-T-06 SC-5B47-T-07 SC-5B47-T-07	le-Input Modules, (Type J J K K T T E	0 to +5V 1 to +5V Output, 4-Hz BW) 1 Input Range 0 °C to +760 °C -100 °C to +500 °C 0 °C to +500 °C 0 °C to +500 °C 0 °C to +500 °C -100 °C to +400 °C 0 °C to +200 °C 0 °C to +200 °C 0 °C to +200 °C				
Linearized Thermocoup IOtech Part # SC-5B47-J-01 SC-5B47-J-02 SC-5B47-K-03 SC-5B47-K-05 SC-5B47-T-06 SC-5B47-T-07 SC-5B47-E-08 SC-5B47-E-08	le-Input Modules, (Type J J K K K T T E R	0 to +5V 1 to +5V Output, 4-Hz BW) Input Range 0 °C to +760 °C -100 °C to +300 °C 0 °C to +500 °C 0 °C to +1000 °C 0 °C to +500 °C -100 °C to +400 °C 0 °C to +200 °C 0 °C to +1000 °C 0 °C to +1000 °C +500 °C to +1750 °C				
Linearized Thermocoup IOtech Part # SC-5B47-J-01 SC-5B47-J-02 SC-5B47-K-04 SC-5B47-K-05 SC-5B47-T-06 SC-5B47-T-07 SC-5B47-E-08 SC-5B47-E-08 SC-5B47-S-10	le-Input Modules, (Type J J K K T T T R R S	0 to +5V 1 to +5V Output, 4-Hz BW) 1 Input Range 0 "C to +760 "C -100 "C to +300 "C 0 "C to +500 "C 0 "C to +500 "C -100 "C to +500 "C -100 "C to +400 "C 0 "C to +200 "C 0 "C to +1000 "C +500 "C to +1750 "C +500 "C to +1750 "C				
Linearized Thermocoup IOtech Part # SC-5B47-J-01 SC-5B47-J-02 SC-5B47-K-03 SC-5B47-K-05 SC-5B47-T-06 SC-5B47-T-07 SC-5B47-E-08 SC-5B47-E-08	le-Input Modules, (Type J J K K K T T E R	0 to +5V 1 to +5V Output, 4-Hz BW) Input Range 0 °C to +760 °C -100 °C to +300 °C 0 °C to +500 °C 0 °C to +1000 °C 0 °C to +500 °C -100 °C to +400 °C 0 °C to +200 °C 0 °C to +1000 °C 0 °C to +1000 °C +500 °C to +1750 °C				

-100 °C to +1350 °C 0 °C to +1200 °C

Note: 5B modules must be purchased separately. All sales are final with no right of return.

SC-5B47-K-13

SC-5B47-N-15