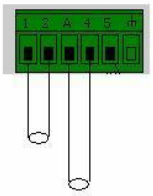
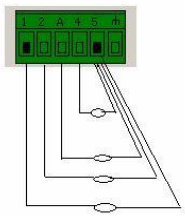
SQ2020 1F8 channel inputs

The SQ2020 1F8 Squirrel data logger has a single analogue to digital converter (A/D) which corresponds to inputs on blocks A through to D (see below). Each connection block will accept up to 2 differential inputs or up to 4 single ended inputs (it is ***not*** possible to mix single ended and differential inputs on a block).



Differential Inputs



Single Ended Inputs

Input blocks A, B, C and D

Mains rejection – what is it?

With mains rejection activated, the Squirrel data logger compensates for any interference from the local mains electricity supply (at either 50 or 60 Hz). This can be set in the logger setup screen in SquirrelView.

For higher logging speeds, the mains rejection can be turned off. However, this will have the effect of reducing the reading accuracy dependant upon the level of interference then experienced by the Squirrel data logger.

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Reference No: 29/07 V1.0

With Mains Rejection turned on (default setting)
The SQ2020 1F8 can take up to 10 readings per second, this can be 10 readings on a single channel or 10 readings spread across multiple channels.

When wanting to log once a second or faster with mains rejection turned on the SQ2020 1F8 can have any ***ONE*** of the following configurations across the blocks A, B, C and D.

	Samples per Second			
	10	5	2	1
Configuration 1	1			
Configuration 2		2		
Configuration 3			5	
Configuration 4				10
Configuration 5		1	2	1
Configuration 6		1	1	3
Configuration 7		1		5
Configuration 8			4	2
Configuration 9			3	4
Configuration 10			2	6
Configuration 11			1	8

Note: Each configuration refers to the number of inputs possible with the selected sample speed.

For example: Configuration 5 has 1 input at 5 samples per second, 2 inputs at 2 samples per second and 1 input at 1 sample per second. Therefore the maximum number of channels that can be sampled is 4.

With Mains Rejection turn Off

The SQ2020 1F8 can take up to 20 readings per second, this can be 20 readings on a single channel or 20 readings spread across multiple channels.

When wanting to log once a second or faster with mains rejection turned off the SQ2020 1F8 can have any ***ONE*** of the following configurations across the blocks A, B, C and D.

	Samples per Second				
	20	10	5	2	1
Configuration 1	1				
Configuration 2		2			
Configuration 3			4		
Configuration 4				10	
Configuration 5					16
Configuration 6		1	2		
Configuration 7		1	1	2	1
Configuration 8		1	1		5
Configuration 9		1		5	
Configuration 10		1		4	2
Configuration 11		1		3	4
Configuration 12		1		2	6
Configuration 13		1		1	8
Configuration 14		1			10
Configuration 15			3	2	1
Configuration 16			3		5
Configuration 17			2	5	
Configuration 18			2	4	2
Configuration 19			2	3	4
Configuration 20			2	2	6
Configuration 21			2	1	8
Configuration 22			2		10
Configuration 23				9	2
Configuration 24				8	4
Configuration 25				7	6
Configuration 26				6	8
Configuration 27				5	10
Configuration 28				4	12
Configuration 29				3	13
Configuration 30				2	14
Configuration 31				1	15

Note: Each configuration refers to the number of inputs possible with the selected sample speed.

For example: Configuration 18 has 2 inputs at 5 samples per second, 4 inputs at 2 samples per second and 2 inputs at 1 sample per second. Therefore the maximum number of channels that can be sampled is 8.