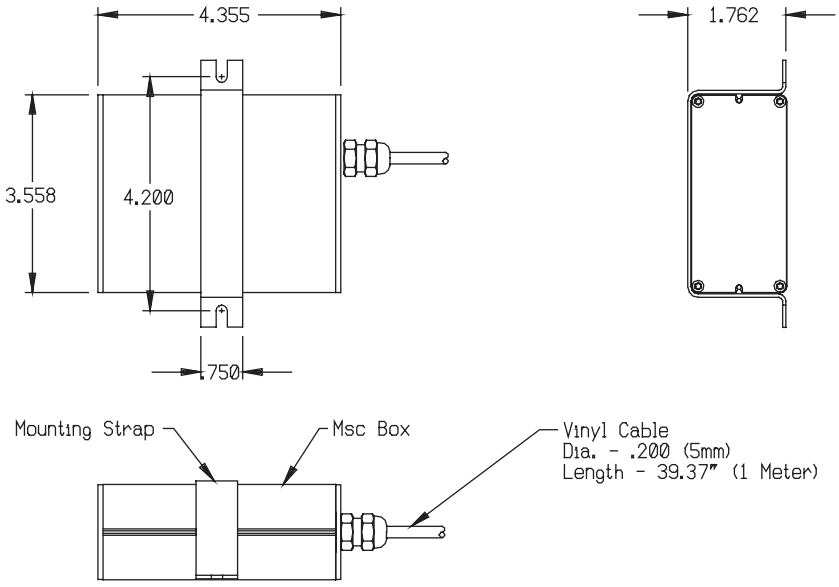
Technical Information

Multiple Scale Coupling

MSC Single Ended - P/N 683652-01 (Old P/N 388010-001)
MSC Differential Ended w/D9 - P/N 683653-01 (Old P/N 388010-002)
MSC Differential Ended w/Amp Shell Size 17 Pin - P/N 683654-01 (Old P/N 388010-003)



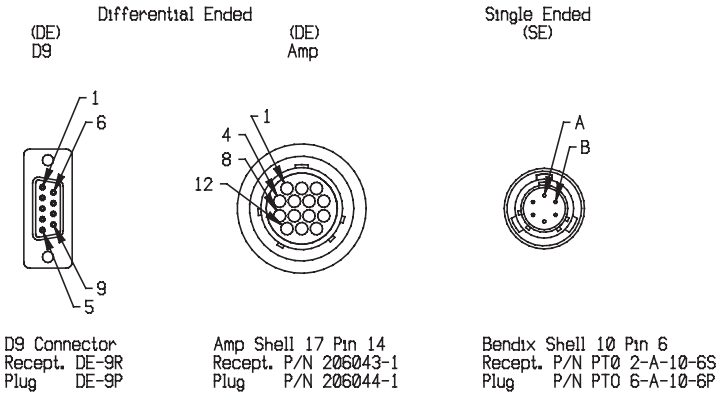
INTRODUCTION

General Description

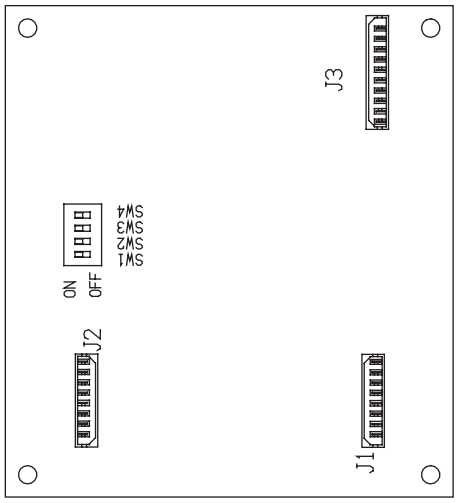
The Multiple Scale Coupling (MSC) interface is ACU-RITE's answer to providing an external accessory which allows MSC capabilities to existing digital readouts in the field. The MSC hardware, when retrofitted to an ACU-RITE digital readout, provides the mathematic combination of two ACU-RITE linear encoders (scales) mounted in the same axis, resulting in one combined reading. This is accomplished by the addition (or subtraction) of both encoders' output signals, resulting in the combined display of one output on the readout's axis.

Specifications	
Operating Temperature	0° to 60°C 25% to 95% (non-condensing)
Storage Temperature	-40° to 70° C 25% to 95% (non-condensing)
Operating Voltage	5.1 ±0.1 VDC (measured inside the unit)
Operating Current (maximum)	40mA + Encoder Load
Input Frequency	Combined input channel frequency62.5 kHz
Output Signals	62.5kHz Max.
Signal Levels	TTL

Connector



The multiple scale coupling box allows count direction, and reference mark (R) enable to be selectable. To select these parameters per axis, a 4 switch module is located on the board.

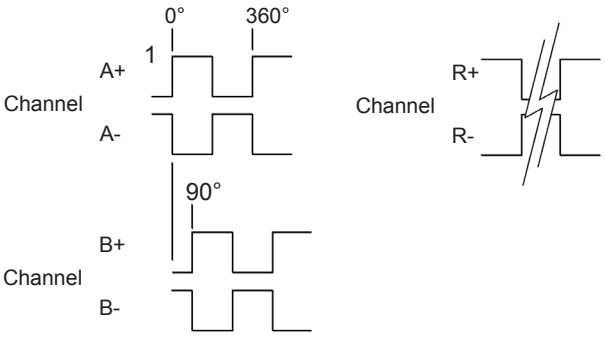


Connector Pin-out

DE (D9)	DE (Amp)	SE Pin	Signal
1			N/C
2	3	A	Channel A+
3	1		Channel A-
4	14	B	Channel B+
5	12		Channel B-
6	13	D	Ground
7	2	C	Vcc, +5.1 ± 0.1 VDC
8		F	CH R+ (Reference Mark)
9			CH R- (Reference Mark)
	9, 10, 11	E	Shield

Switch Setting		
	OFF	**ON**
SW1	CH1 R Enabled	CH1 R Disabled
SW2	CH1 Count Up	CH1 Count Down
SW3	CH2 R Enabled	CH2 R Disabled
SW4	CH2 Count Up	CH2 Count Down

Digital Signals



I_{OH}=(High level output current) = 20mA
V_{OH}=(High level output voltage) < 2.5Vdc

I_{OL}=(Low level output current) = 48mA
V_{OL}=(Low level output voltage) < 0.5Vdc