

**SALES & SERVICE:**

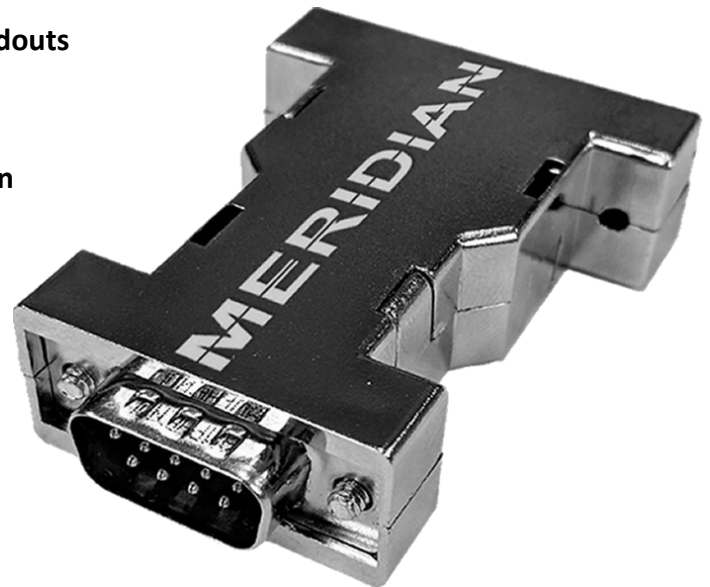
**A Tech Authority, Inc.**  
13745 Stockton Ave.  
Chino CA 91710  
909-614-4522  
sales@atechauthority.com

## PRODUCT DATA SHEET

### Signal Adapter (SA 1xxx)

The SA 1xxx series of adapters are designed to interface 11 $\mu$ App and 1Vpp incremental signals to TTL digital readout systems. Featuring a male D15 input and a male D9 output connector, the SA quickly installs in-line between the measuring device and the display. With eight available interpolation factors, the SA can provide high resolution TTL to the display even when using a low resolution measuring device such as a tape scale.

- **Ideally suited for adapting analog scales to TTL digital readouts**
- **11 $\mu$ App and 1Vpp versions available**
- **Ten interpolation factors to match desired scale resolution**  
0.5x, 1x, 2x, 2.5x, 5x, 10x, 20x, 25x, 50x, 100x
- **TTL output channels will Tri-State upon signal failure**
- **Easy Plug-n-Play installation**
- **Low current draw**



## Technical Specifications

PRODUCT	SA 107x	SA 187x
<b>PRODUCT SPECIFICATIONS</b>		
Input Signal	11 $\mu$ App	1Vpp
Output Signal	TTL	TTL
<b>ELECTRICAL SPECIFICATIONS</b>		
Maximum Input Frequency	55Khz for 0.5x, 1x & 2x	24Khz for 2.5x, 5x, 10x, 20x, 25x, 50x & 100x
Maximum Output Frequency	55Khz for 0.5x, 1x & 2x	83Khz for 2.5x, 5x, 10x, 20x, 25x, 50x & 100x
Useable Input Amplitude	2 $\mu$ A — 32 $\mu$ A	0.2V — 3.2V
TTL Tri-State	Yes (on overspeed or low input amplitude)	
TTL Minimum Edge Separation	4.0 $\mu$ s for 0.5x, 1x & 2x	3.0 $\mu$ s for 2.5x, 5x, 10x, 20x, 25x, 50x & 100x
Reference Pulse Width	90°	
<b>PHYSICAL SPECIFICATIONS</b>		
Dimensions ( L x W x H )	2.46in [62.4mm] x 1.65in [42.0mm] x 0.64in [16.2mm]	
Weight	0.9oz	
IP Rating	IP 30	
<b>POWER SPECIFICATIONS</b>		
Supply Voltage	3.7v — 6.5v DC	
Maximum Current Consumption	120mA	115mA
<b>CONNECTIONS</b>		
Input	D15 Male	
Output	D9 Male	

# SA 1xxx

**INPUT SIGNAL TYPE**

11 $\mu$ App = 0  
1Vpp = 8

**OUTPUT SIGNAL TYPE**

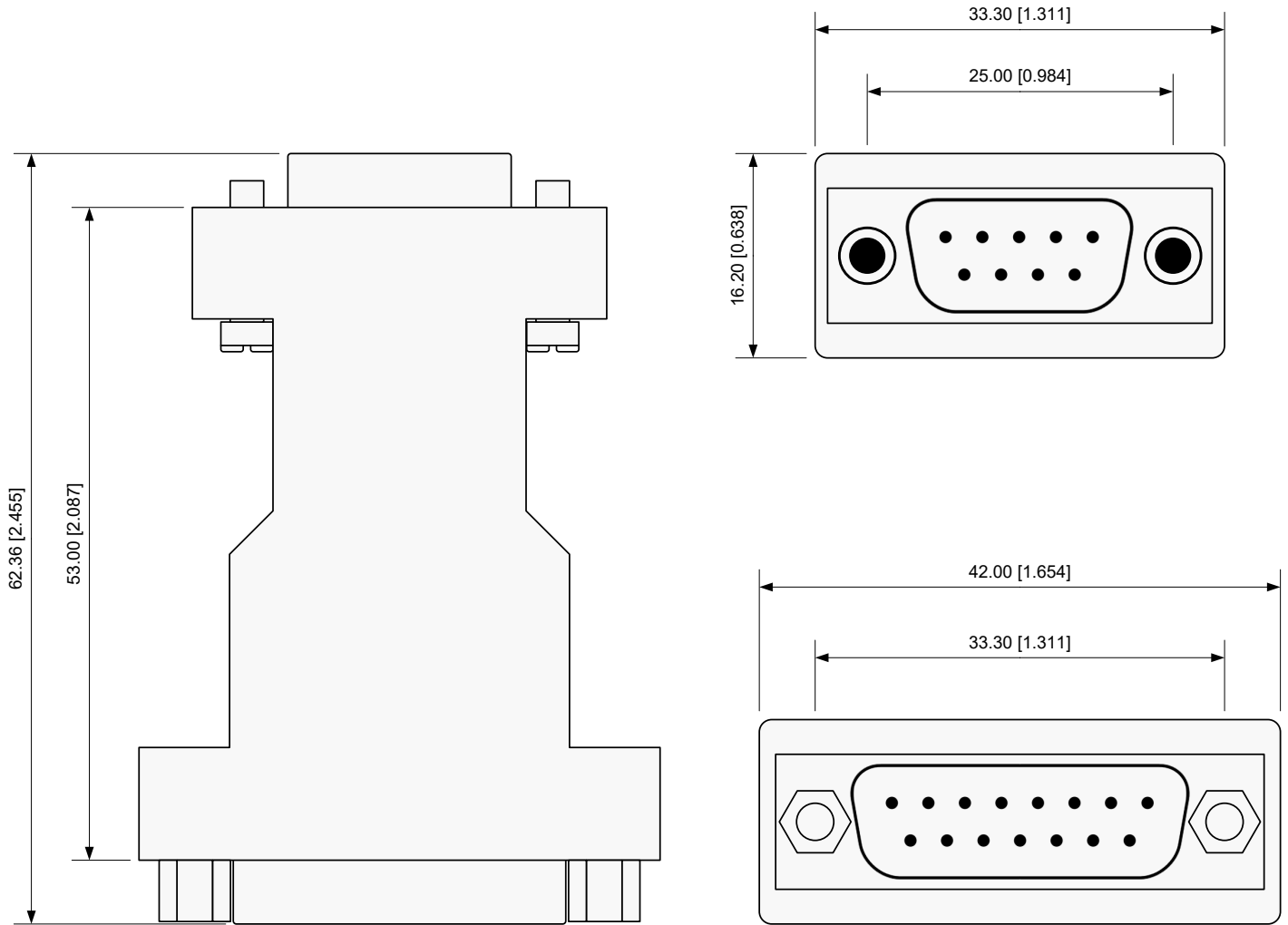
TTL = 7

**INTERPOLATION FACTOR**

1x = 0  
2x = 1  
5x = 2  
10x = 3  
20x = 4  
25x = 5  
50x = 6  
100x = 7  
0.5x = 8  
2.5x = 9

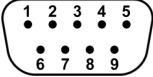
## Dimensions

All dimensions are in mm [in].



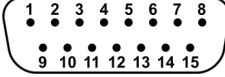
Electrical Connections

**D9 MALE ( TTL )**



1	2	3	4	5	6	7	8	9
NC	A+	A-	B+	B-	0V	5V	R-	R+

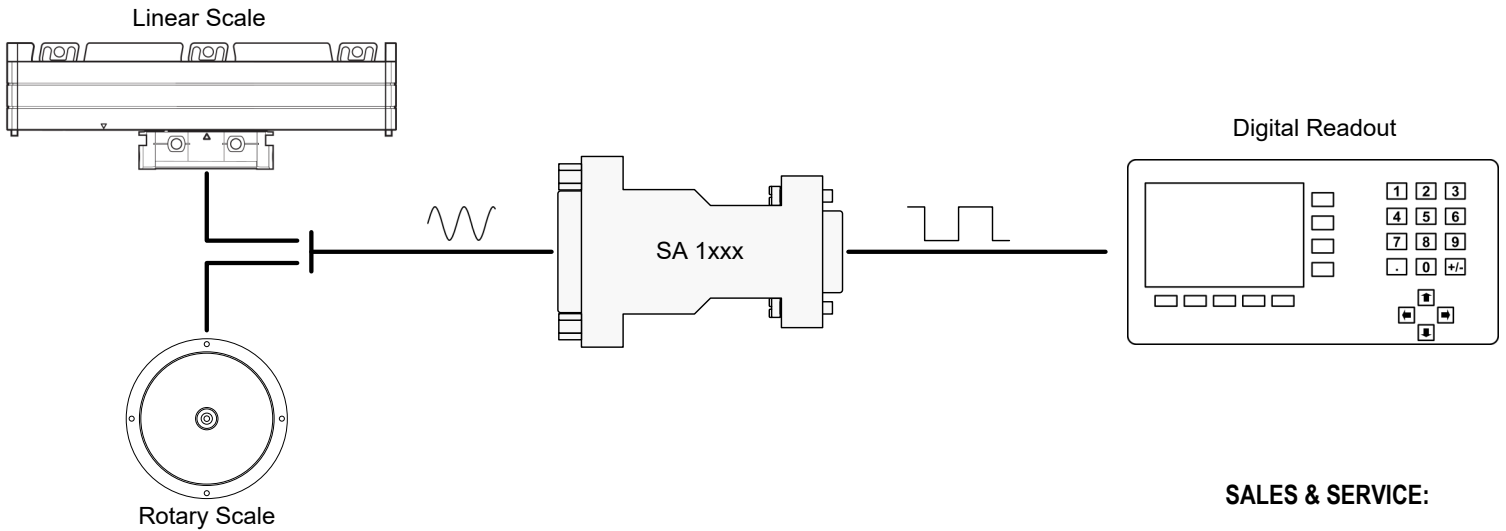
**D15 MALE ( 11 $\mu$ App / 1Vpp )**



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>11<math>\mu</math>App</b>	5V	0V	A+	A-	Internal Shield	B+	B-	$\infty$	NC	R+	NC	R-	$\infty$	NC	$\infty$
<b>1Vpp</b>	5V	0V	A+	A-	NC	B+	B-	$\infty$	NC	R+	NC	R-	$\infty$	NC	$\infty$

$\infty$  = Reserved / Do Not Use

NC = Not Connected



**SALES & SERVICE:**

**A Tech Authority, Inc.**  
 13745 Stockton Ave.  
 Chino CA 91710  
 909-614-4522  
 sales@atechauthority.com