

# AN710 – How to Calibrate Current Converters

## Introduction

This is a general guide on how to calibrate the Current converters Part numbers IC-DR-XX where XX is the optional output.

## Connections

Connect the 24Vdc Power +/-, Input Signal +/-, connect an Ammeter to the Output +/- connections and short the Enable terminals.

## Calibration

Turn the Power Supply On.

Step 1: Apply a 20mA signal to the input. If the measured output is  $> I_{max}$  then turn the Span pot counter clockwise until the output is =

$I_{max}$ . If the measured output is  $< I_{max}$  then turn the Span pot clockwise until the output is =  $I_{max}$ .

Step 2: Apply 4mA to the input. If the measured output is  $> I_{min}$  then turn the Zero pot counter clockwise until the output is =  $I_{min}$ . If

the measured output is  $< I_{min}$  then turn the Span pot clockwise until the output is =  $I_{min}$ .

Step 3: Repeat Steps 1 and 2 since the adjustment of the Zero pot may affect the  $I_{max}$  accuracy.

## Factory Output Settings

Each unit has a different output current range with a default  $I_{min}$  and  $I_{max}$  (see page 2 of the datasheet) <https://www.axiomatic.com/current-converter> or refer to the table below.

## LED

The output Led increases in brightness proportionally to the input signal applied.

**Default Current Outputs and Adjustment Ranges:**

MODELS	IOUT MIN RANGE		IOUT MAX RANGE		DEFAULT		DEFAULT	
	MIN [mA]	MAX [mA]	MIN [mA]	MAX [mA]	MIN [+/-2 mA]	MAX [+/-2 mA]	MIN [+/-2 mA]	MAX [+/-2 mA]
IC-DR-11	0	25	155	220	0	200	0	200
IC-DR-12	6	29	116	171	20	160	20	160
IC-DR-14	0	5	38	63	0	50	0	50
IC-DR-18	0.14	43.46	143	172	40	160	40	160
IC-DR-20	0	12	69	105	0	100	0	100
IC-DR-24	0.14	43.46	143	172	0	160	0	160
IC-DR-25	0	25	155	220	20	200	20	200
AX130300	0	25	155	220	15	195	15	195

Version	Date	Author	Comments
1.00	April 3, 2024	Lawrence Durham/ Sue Thomas/Chantalle Menard	Initial release