

8.4 Auxiliary Output Calibration

Introduction

Calibrate the controller so that the Auxiliary output provides the proper amount of current over the desired range. The controller can provide an auxiliary output current range of from 0 to 21 milliamperes and can be calibrated at 4 mA for 0% of output and 20 mA for 100% of output or any other values between 0 and 21 mA.

Equipment needed

You will need a standard shop type milliammeter with whatever accuracy is required, capable of measuring 0 to 20 milliamps.

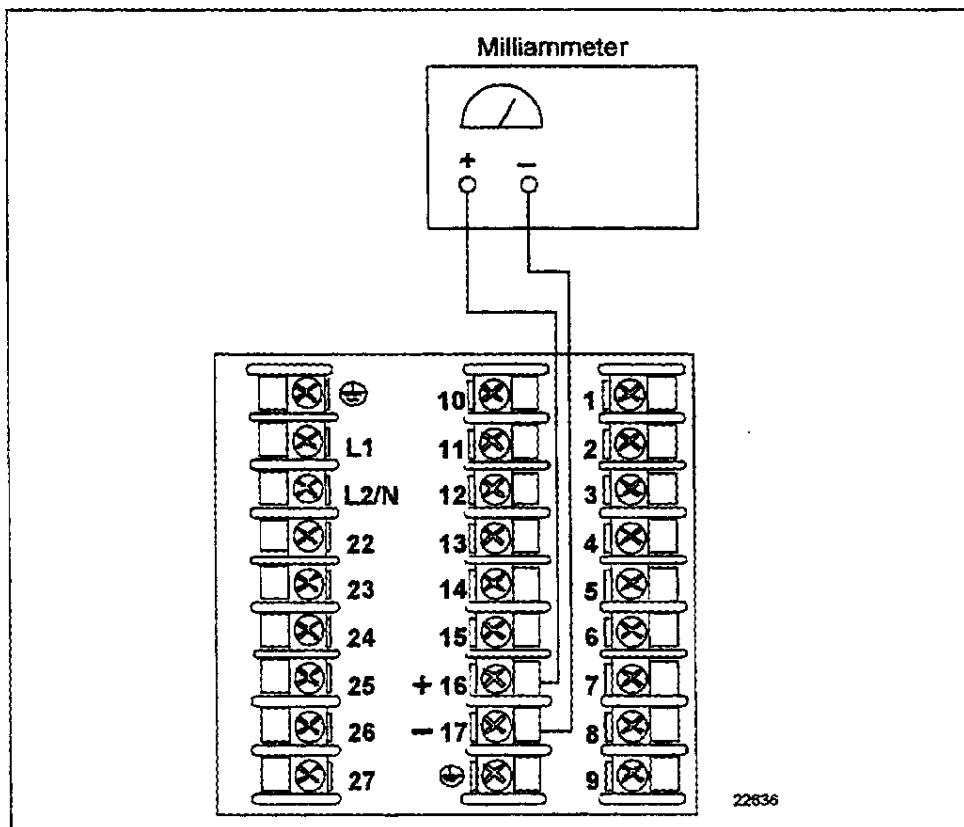
Calibrator connections

Referring to Figure 8-2, wire the controller according to the procedure given in Table 8-4.

Table 8-4 Set Up Wiring Procedure for Auxiliary Output

Step	Action
1	Apply power and allow the controller to warm up 30 minutes before you calibrate.
2	Tag and disconnect the field wiring, at the rear of the controller, from terminals 16 (+) and 17 (-). See Figure 8-2.
3	Connect a milliammeter across these terminals.

Figure 8-2 Wiring Connections for Calibrating Auxiliary Output






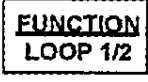

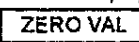




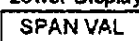


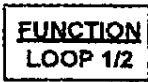

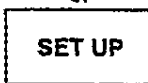
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8.4 Auxiliary Output Calibration, Continued

Procedure

The procedure for calibrating the Auxiliary Output is listed in Table 8-5. Make sure LOCKOUT in the Tuning Set Up group is set to NONE. See *Section 3 – Configuration*.

Table 8-5 Auxiliary Output Calibration Procedure

Step	Description	Press	Action
1	Enter Calibration Mode		until you see Upper Display  Lower Display 
2	Calibrate 0%		You will see: Upper Display  ← a value between 0 and 4095 Lower Display 
		 or 	until the desired 0% output is read on the milliammeter. Use the values shown below depending on the action of your valve. 0 mA For 0 to 20 mA Direct Action * 20 mA For 0 to 20 mA Reverse Action 4 mA For 4 to 20 mA Direct Action 20 mA For 4 to 20 mA Reverse Action
3	Calibrate 100%		This stores the 0% value and you will see: Upper Display  ← a value Lower Display 
		 or 	until the desired 100% output is read on the milliammeter. Use the values shown below depending on the action of your valve. 20 mA For 0 to 20 mA Direct Action 0 mA For 0 to 20 mA Reverse Action* 20 mA For 4 to 20 mA Direct Action 4 mA For 4 to 20 mA Reverse Action
4	Exit the Calibration Mode		The controller will store the span value.
		 or 	To exit the calibration mode.

*When attempting to achieve 0 mA, always adjust the output to about 0.5 mA, and slowly decrease until the output just goes to zero. Further decrementing will not change the output current (since the circuit cannot produce negative current) but will affect the accuracy of the output by creating a dead zone where no current flows.