

Description.....

The Model 210-R DC Volt Display is to be used to measure 0-5V outputs from flow measurement devices, or other low voltage measurement applications. Generally the output will be used for measuring 0 to 5 V, with various display Indications - such as 0-100, 0-200 & 0-500 with the **0-5VDC input signal**. Dip Switch to set choice of indication- see DIP SWITCH SETTINGS
Power to the Display is from a separate external source (or battery) and can be from 5VDC up to 24 VDC @ approximately 2.5 mA. The Display can be mounted in a panel in any relatively dry (non-condensing), clean environment.
Two simple 2 wire connections are all that is required to use the Display. Use PN 110-01-13 cable for power connection (RED to V+, BLK to -) & PN 110-01-16 cable for signal input. (ORG for +, YEL. for -)
(Both short cables are included with 210-R Kit)

SPECIFICATIONS.....

DISPLAY TYPE: 3.5 Digits LCD, 0.4" Digit height, Auto-zero

Display region dimensions: 0.53" x 1.33"

Panel mounted for most applications

Panel Opening size 1.67" x 0.92" typical

Attach to panel with 2 small drops of RTV

POWER INPUT:

Power Requirements: 6 to 15 VDC @ 2.5 mA typical

Can use most any DC power from 6 VDC to 24 VDC (best to be transformer isolated if possible)

If battery power is used: Typical life of 9V Alkaline approx. 200 hrs, or 4 "AA" Alkaline batteries (6V) 1 year
Use a switch to turn power off for longer times.

INPUT (to MEASURE):

Voltage input range: 0 to 5 VDC typical

Resistance of the input Approx. 5000 ohms

Dip switch to select reading output options (see chart)

For decimal points use DIP switch and cut tiny board trace per chart

Internal trippot: Minor span adjust for exact readings if req'd

Accuracy: + 0.1% plus 1 digit

Overrange Indication: Displays "1" with blanks after the 1

Reading update: 2.5 readings per second typical

Response time: 1.5 seconds to settle for step input

RETURN INFORMATION.....

If it is necessary to return a McMillan Company product for service or repair, please contact us at: see web site www.mcmflow.com for RMA or

Customer Service Department

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McMillan
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MANUFACTURERS OF AFFORDABLE
FLOW SENSORS, METERS & CONTROLLERS

OPERATING MANUAL

Model 210-R Digital Display Meter

*for 0 - 5 Volt Input
Measurement*

Printed in U.S.A.

Literature Request No.:

Last Revision Date:

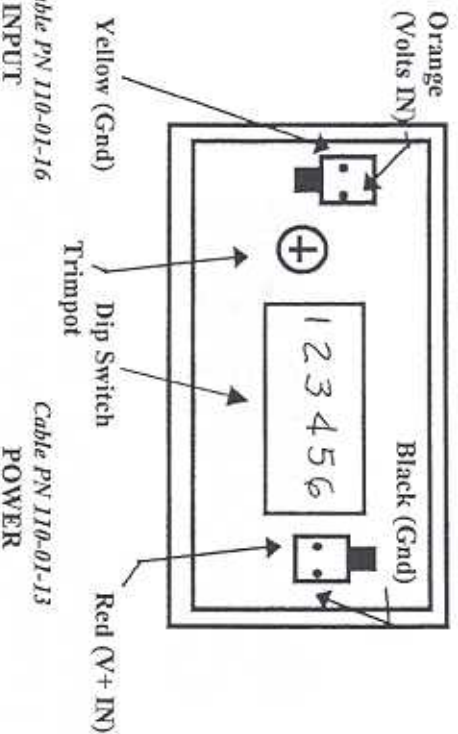
MCM-210R Rev. B

March 31, 2001

INSTALLATION.....

For panel cutout mounting details - please see SPECIFICATIONS

Rear View of Display 210-R



Attach power and input connections as per above drawing.

Caution:

DO NOT REVERSE POWER SOURCE WIRING, and DO NOT APPLY OVER ISVDC source to INPUT or

DAMAGE WILL RESULT.

Cables noted above are not long lengths - but user can extend them as needed upon installation.

Please note that *internal* to DISPLAY the Input Gnd does have connection to the Power Gnd. For very long cable runs between the Flow Sensor and the 210-R Display it is best to power the Display with a floating (transformer-type) isolated power source - or Battery if desired. *Long runs are considered to be over 4 meters (13 feet).*

Power source can be DC from 6 up to 24 volts.

HANDLING PRECAUTIONS.....

The Model 210-R contains CMOS devices and must be handled in a way to prevent exposure to static discharges - high transient discharges may cause damage.

MAINTENANCE.....

The Model 210-R requires no maintenance when operated in environment similar to a laboratory with moderate environmental exposure to dust and moisture (always non-condensing).

Guarantees

If at any time within one year after shipment, but not thereafter, it is proved that any part of the equipment furnished McMillan Company was defective when shipped by McMillan Company, we will repair or replace the same free of charge, F.O.B. our plant. Notice of this claim must be made to us within one year after delivery. Our liability is limited to replacement or repair of such defective parts or equipment. There are no guarantees or warranty expressed or implied other than those herein specifically mentioned. McMillan Company shall herein not in any event be liable for any consequential damages, secondary charges, expenses for erection or disconnecting, or losses resulting from any alleged defect in the apparatus.

It is understood that corrosion or erosion of materials is not covered by our guarantee.

DIP SWITCH SETTINGS

#1, 2, 3 for display indication
#4, 5, 6 for Decimal point
(also cut decimal pt. Trace)

Decimal x.xxx #4 ON & cut trace C
Decimal xx.xx #5 ON & cut trace B
Decimal xxx.x #6 ON & cut trace A
For no Decimal Keep #4,5,6 OFF

INDICATION

0-200 #1 ON only - for 0-5V input
0-500 #2 ON only - for 0-5V input
0-1000 #3 ON only - for 0-5V input

