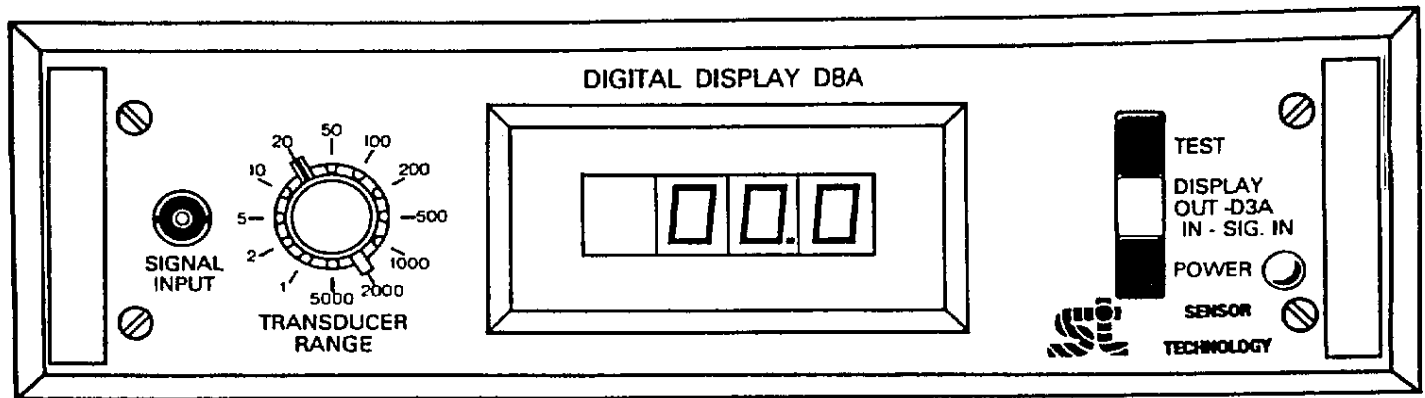


D8A Multi-range digital display



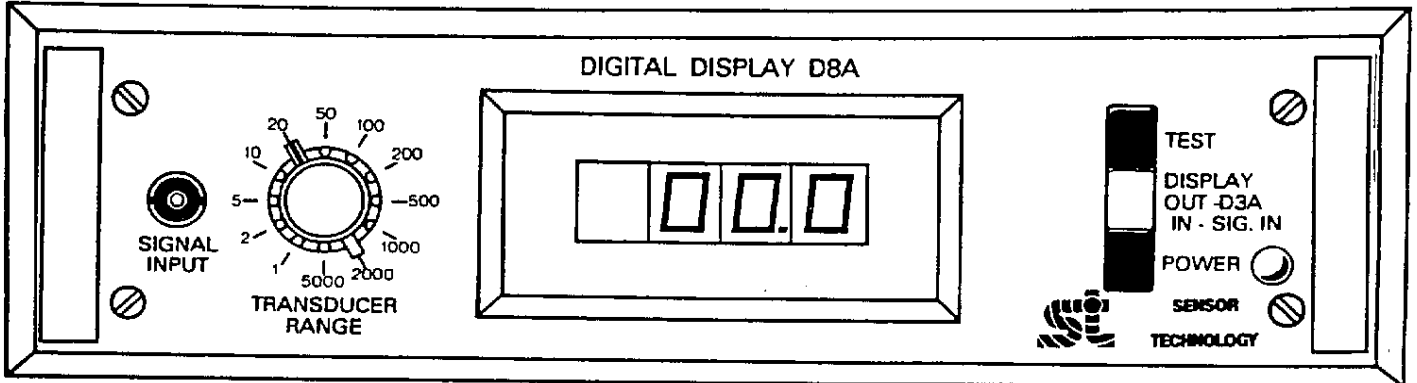
HANDBOOK

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D8A Multi-range digital display

STL 8
Issue 2



The D8A Digital Display Module is designed to accept an output from the D3A/B Transducer Display Module, D6A/B R.P.M. or D5A/B Power Indicator Modules. The reading is indicated on a clearly read .5in LED 3.5 digital display, with a maximum indication of 1999. The input range required by the transducer is selected by a 12 position switch on the front panel, the ranges being as follows:

0-1.000	0-20.00	0-500
0-2.000	0-50.0	0-1000
0-5.00	0-100.0	0-2000
0-10.00	0-200.0	0-500(0)

The decimal point is automatically displayed in the correct position.

Input. The unit will accept either the 0 to +1 volt d.c. f.s.d. signal from the D3A/B Transducer Display via the Auxiliary Service input or a 0 to ± 1 volt d.c. f.s.d. signal from the external display socket on D3A/B, D5A/B Power Indicator or D6A/B R.P.M. Indicator.

Sensitivity.

According to basic range:-
 0-2 ranges 0.05% max
 0-1 ranges 0.1% max
 0-5 ranges 0.2% max

Accuracy. $\pm 0.25\%$ of full scale (any range).

Case Dimensions.

Width 305mm
 Depth 203mm
 Height 76mm

Allow 50mm at rear for plug access.

Panel Dimensions.

Width 279mm
 Height 76mm

Note: This unit is designed to fit standard module cases with other units in the 'D' range.

1. Introduction.

The D8A Digital Display is a high-precision multi range digital panel meter designed for use with the D3A Transducer Display units, from which it derives its power, to give a bipolar digital indication of the signal output from the transducer to which the D3A is connected.

In addition, external signal inputs are provided for connection to the signal outputs of either the D5 Power Meter or D6 Tachometer to give digital indication of the outputs of these instruments if required.

The instrument has a twelve position range selection switch which gives direct readout in mechanical units of the standard transducer ranges; the full-scale sensitivity and decimal point position of the digital display is controlled by this switch.

A front-panel "Test" button is provided to check the accuracy of the display on each of the ranges.

2. General Specifications.

Power requirements:	+6.85v (Derived from D3A).	
Length:	29.2 cm.	11.5 ins.
Width:	21.6 cm.	8.5 ins.
Height:	7.62 cm	3.0 ins.
Input Sensitivity:	$\pm 1.00v$. all ranges.	
	$\pm 0.05\%$ on ranges 2,20,200,2000.	
	$\pm 0.1\%$ on ranges 1,10,100,1000.	
	$\pm 0.2\%$ on ranges 5,50,500,5000.	

3. Description of Controls.

(Item 3.1 - 3.5 refer to the front panel of the instrument; item 3.6 and 3.7 refer to the rear panel).

3.1. Power Button and Indicator Lamp.

When the instrument is connected to a working D3A by means of the rear-mounted socket (3.7) this button switches on and off the power to the D8A Digital Display. When the button is engaged the power is on and the indicator lamp will light up.

3.2. Signal Button.

This control routes the signal into the instrument from either the front and rear panel B.N.C. sockets or from the rear panel "Aux Services" socket which is connected to the D3A. When the button is pressed in the signal input from the D3A is disconnected and any signal from either of the BNC sockets is routed in to the instrument (this signal may be from the D5 Power Meter or D6A Tachometer, or from a second D3A). When the button is pressed again, and thus in the "out" position, the BNC sockets are internally disconnected from the input of the instrument and the signal from the D3A is reconnected for display. Note that the front and rear BNC sockets are wired together, and either may be used instead of the other, but it is unacceptable to have both sockets connected to different instruments simultaneously.

3.3. Test Button.

When the instrument is switched on, pressing this button replaces any signal input with a +1.00v signal level which enables the operator to check the accuracy of the instrument on the various ranges.

3.4. Transducer Range Selector.

This control sets the F.S.D. of the panel meter by dividing the input voltage by 1, 2 or 5 and setting the decimal point to the appropriate position, enabling the standard transducer ranges to be read directly on the meter. The displayed readings for a +1.00v input level on the various ranges are as follows.

<u>Range</u>	<u>Reading.</u>
1	1.000
2	2.000
5	5.00
10	10.00
20	20.00
50	50.0
100	100.0
200	200.0

3.4 Transducer Range Selector (cont.)

<u>Range</u>	<u>Reading</u>
500	500.
1000	1000.
2000	2000.
5000	500

3.5. Input Socket.

This socket is for connection to the signal outputs of D-range instruments other than the D3A from which the D8A is powered. It is identical to, and may be used instead of, the rear panel input socket (section 3.6 below) and is selected by pressing in the front-panel signal button (see section 3.2.).

3.6. Input Socket (Rear Panel)

This socket is identical to the front panel input socket described above.

3.7. "Auxiliary Services" Socket.

This 10 pin socket is for connection to a D3A Transducer Display Module and supplies power and signal from that unit to the D8A Digital Display.

4. Operating Instructions.

Connect the Auxiliary Services Socket (see 3.7 above) on the rear panel of the instrument to the similar socket on the D3A rear panel. Switch on the D3A and the D8A. Allow five minutes for the instruments to reach thermal equilibrium. Press the test button on the D8A front panel and check that the displayed reading corresponds to the table given in section 3.4. above. Select the desired transducer range as described in section 3.4. Ensure that the "signal" control is in the "out" position. The instrument is now ready to display the signal output from the D3A. If it is required to display the output from some other instrument, connect the signal output from that instrument (as described in the appropriate section of the Handbook) to either the front or rear panel "Input" sockets of the D8A, ensuring that only one of these sockets is in use at one time. Press in the "Signal" button on the D8A front panel. The instrument is now ready to display the output signal to which its "Input" socket is attached.