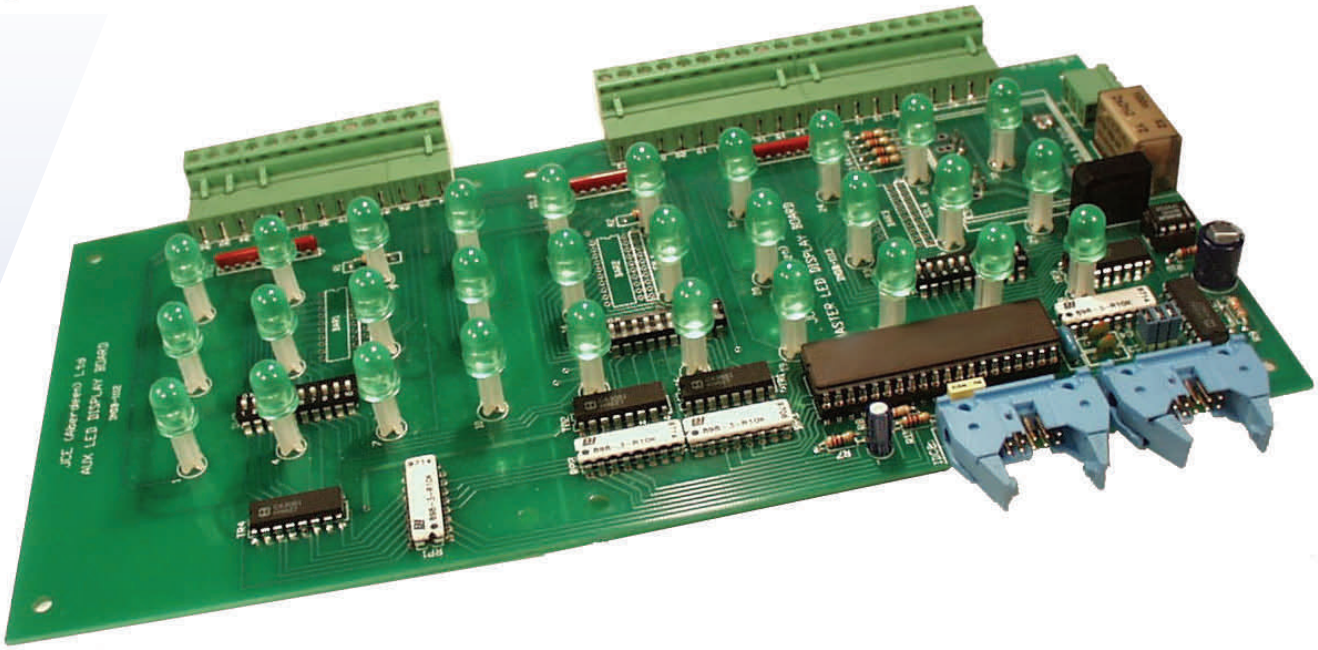
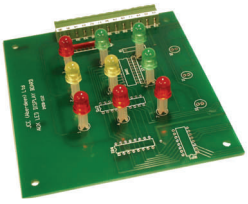
INDB-1112/1113 LED Indication Board

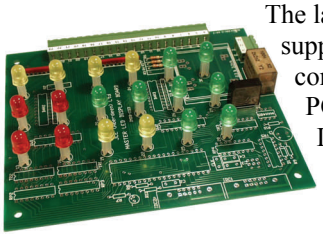


The INDB is a multi-purpose indication PCB. Fundamentally it is capable of supporting up to thirty LEDs, either in discrete form or as three 10 segment LED bar graph modules. The flexibility of the design is due to the large number of options and adjustments that can be made to the physical, electrical, and control facilities of the INDB. The picture above shows an INDB configured for a 240 Volt AC supply to power thirty discrete 8mm green LEDs. The control of each LED is accomplished in this case through the use of an RS485 microprocessor communications bus, thereby reducing wiring (only supply and bus wires required), and eliminating the need for expensive output channels on the controller device being wasted on annunciation.

The INDB1112/1113 Split



The INDB PCB can be split in two. The smaller half (named the INDB1112) can support up to nine LEDs which must have power supplied externally. The picture to the right shows an INDB1112 with nine 8mm LEDs ready to be powered from the field wiring.



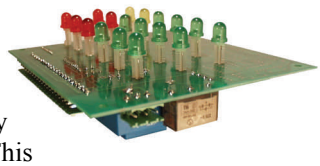
The larger half (named the INDB1113) can support up to 18 LEDs and has all the control and supply options of the full PCB. The picture to the left shows an INDB1113 with a 240V AC PSU, but with control coming from volt-free contacts external to the board.

Manual Control

Each of the LEDs can be controlled by simply supplying an external voltage to the appropriate field wiring terminal. Alternatively the onboard PSU can be used and the LEDs can be controlled using external volt-free contacts.

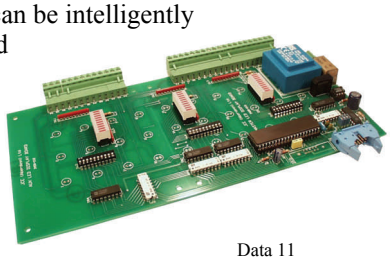
LEDs

There are many options as to the type, colour, and size of the LEDs which can be used on the boards; 3mm, 5mm, 8mm, 10mm, and 20mm LEDs all fit into the standard configuration. They can be mounted on either side of the PCB (component or solder side). Most current requirements (to vary LED brightness) can be met simply by modifying component values. This picture shows an INDB1113 with eighteen 8mm LEDs mounted on the solder side of the PCB, and using microprocessor bus control.



LED Bar Graph Modules

Three 10 segment LED bar graph modules can be fitted on the full PCB. These modules can be intelligently controlled from the onboard microprocessor, or individually by manual inputs from field wiring.



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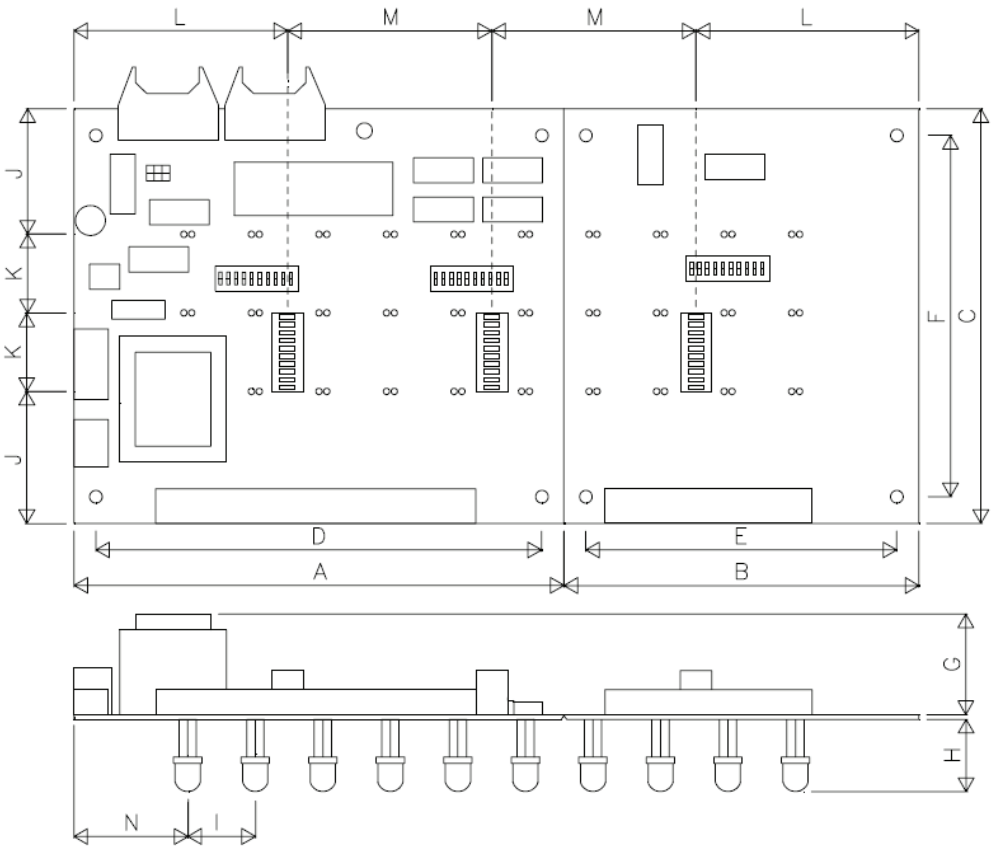
Dimensions



A	B	C	D	E	F	G	H	I	J	K	L	M	N
156	112	132	142	98	115	22	24	21.5	40	25.5	69	65	36.5

Note 1: Field wiring connectors not shown
Note 2: PCB thickness 1.6mm
Note 3: Mounting hole diameter 3.5mm
Note 4: Shown with 8mm LEDs

Specification

Nominal Supply Voltage:	240 or 110 Volts AC
Direct LED supply: [1]	5, 12, 24 VDC
Typical Power Consumption:	5 Watts
Max. Operational Ambient Temp: [2]	50 Degrees centigrade
Min. Operational Ambient Temp: [2]	0 Degrees centigrade
Communications Standard:	Half duplex RS485
Max. Clock Frequency:	20 Mhz
Typical:	3.579545 Mhz
Programming Language:	Derivative of ANSI 'C'
Available LED Sizes:	3 to 20 mm dia.
LED Height above PCB:	4.8 to 22.2 mm
Signaling Configurations: [3]	Onboard PSU and microprocessor control, Onboard PSU with direct control, or external PSU with direct control.

1 Other voltage specifications available on specially modified INDB. Contact technical support for details.
2 Extended Temperature range PCBs available on request.
3 Various mixed signaling configurations available on request.

JCE Digital Ltd, Blackburn Buissiness Park, Aberdeen, AB21 0PS
Tel: +44 (0) 1224 798600 Fax: +44 (0) 1224 798601
Email: info.digital@jcegroup.com

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