

**DESIGN PROPOSAL IMO-MI4L20C**  
**4 X 20 CHARACTER MODULES**

AUTHOR FOR WATERSIDE SOLUTIONS.

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Specification	Description
Display	4 lines by 20 character FSTN. Character height approx. 6mm
– <i>Backlight</i>	Reflective or LED backlight options. LED backlight option is permanently on.
– <i>Window</i>	Clear Polyester with anti-glare finish. No polycarbonate window behind membrane.
– <i>Contrast control</i>	Manual adjustment via potentiometer accessible from rear of enclosure. No temperature compensation.
Processor	16 bit Intel 186 architecture compatible.
Power Supply	Wide input DC (9 to35V). No AC input capabilities. Protection provided for reverse polarisation.
– <i>Connection</i>	Physical connection for power source is via screw terminals accessible at rear of enclosure.
Memory	
– <i>FLASH</i>	128K bytes. Used to hold firmware, database and protocols.
– <i>SRAM</i>	32K bytes solely for variable data. The SRAM is volatile with no support for battery backup capabilities.
Serial Ports	Single serial port, accessible at rear of enclosure via a standard 9-way female D-type connector. Serial port shall be software configurable to support RS232 and both 2-wire and 4-wire RS485 / RS422, including multi-drop.
RTC	No real time clock option.
Membrane	
– <i>Keys</i>	A total of 10 tactile membrane keys, using chemically resistant Polyester. The keys will consist of the following: 6 keys for system navigation: – 4 direction keys; up, down, left and right. – Escape. – Enter. 4 keys for user programmable functions. These keys are not re-legendable.
– <i>Expanded keyboard</i>	Option for product variant with extended number of keys. To provide full range of alpha-numeric keys (10 keys, telephone style) and 8 additional user programmable function keys (relegendable)
– <i>Status Indicators</i>	2 LEDs provided on membrane: – Serial port activity. – User configurable alarm. – Expanded keyboard version to also provide a software configurable bi-colour LED on each of the 8 programmable function keys.
Sounder	Internal buzzer provided for key presses and other alternative events, as determined by application software.
Expansion	No expansion capabilities.
Enclosure	Two part plastic injection moulded case.
– <i>Dimensions</i>	10 key version: approx. 150mm x 85mm x 50mm 28 key version: approx. 240mm x 160mm x 100mm
– <i>Weight</i>	10 key version: approx. 300g 28 key version: approx 750g
– <i>Mounting</i>	Panel mounting. No mounting studs, unit fixed into place using clips.
Environmental	
– <i>Temperature</i>	Operating 0 – 50C, non-operating –20 to 60C
– <i>Relative Humidity</i>	5 to 90%.
– <i>Vibration</i>	Operating 5 to 250Hz 1G.
– <i>Enclosure</i>	Designed to meet IP65 / NEMA4/12 in front of panel only.
CE compliance	
– <i>Emissions</i>	EN50081-1 Class A radiated and conducted emissions.

- Immunity	EN50082-1 Light industry immunity.
- Safety	EN60950 Low Voltage Directive.

