LCD Counter and Hour Meter Modules

RS **Stock No.**	**Supply**	**Type**
185-6090	**12-48V ⎓**	**Counter**
185-6107	**12-48V ⎓ / 20-60V ~**	**Hour Meter**

General

Counter and hour meter modules, with a 6-digit, 7-segment, 5mm high LCD display. These single channel modules are designed for PCB mounting.
The LCD of the hour meter module features a flashing hour-glass icon which indicates hour meter activity. The icon flashes at a rate of 3 seconds on followed by 1 second off. During periods of inactivity, the icon remains steady. A decimal point, before the last digit, separates the hours from 1/10 hours.

Installation

The modules must be mechanically supported with all four pins soldered to the board (see Figure 2). Electrical connections are as shown in Figure 1.
Care should be taken during cleaning, after soldering the four interconnection leads into the final assembly. No solvent, fluxes or other chemicals must come in contact with the upper surface of the PCB or the LCD assembly.
Do not use submersion cleaning, vapour degreasing or spray type in-line cleaners.

Function

Counter module

The display is illuminated and the module powered up by applying power between pins N (common) and P, e.g. by closing switch S2 (see Figure 1). To commence or resume counting, power has to be applied between pins N and I, e.g. by closing switch S3.
The reset facility is made available by connecting power between pins N and R, e.g. by momentarily closing switch S4. Thus it can be designed to be easily accessed using a push button, security activated via a key switch or non-active by making no electrical connection, according to the required application.

Hour Meter Module

The display is illuminated and the module powered up by applying power between pins N (common) and P, e.g. by closing switch S2 (see Figure 1). To commence or resume hour counting, power has to be applied between pins N and I, e.g. by closing switch S3.
Power on hour meter applications may be easily catered for by permanently linking P and I.
The reset facility is made available by connecting power between pins N and R. Thus it can be designed to be easily accessed using a push button, security activated via a key switch or non-active, according to the required application.

Figure 1 **Electrical connections**

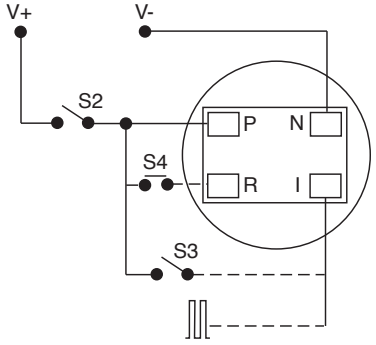
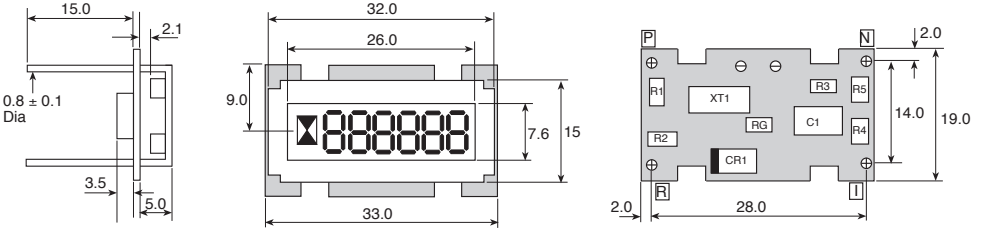


Figure 2 **Dimensions**



Technical specification

Supply voltage	12-24V ⎓/20-60V ~ nominal
	9-60V ⎓ /15-75V ~ min./max.
Operating current	5.1mA max (12-48V ⎓)
	3.5mA max (20-60V ~)
Operating frequency	500Hz maximum
Pulse width	1ms minimum
Reset pulse	10s maximum
Accuracy (hour meter)	±30 seconds per 8 hours.
Temperature limits:	
operating	-40°C to +85°C
storage	-50°C to +90°C
Relative humidity	95% (non condensing at 38°C)
Shock resistance	50g at 9-13μs
Vibration resistance	20g at 10-80Hz
Mounting details:	
pin diameter	0.8 ±0.1mm
centres horizontal/vertical	28mm/14mm