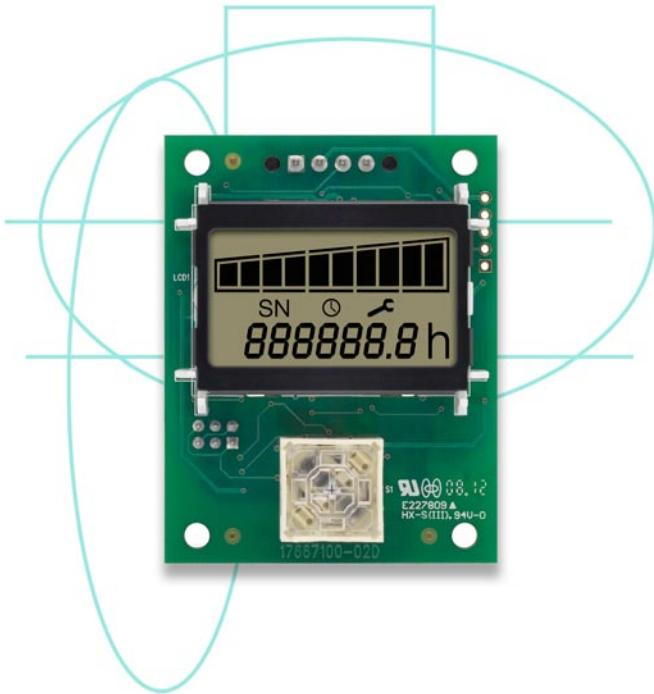


# DUAL CHANNEL HOUR METER & MAINTENANCE MONITOR MODULE

MODEL 760P



CURTIS



## DESCRIPTION

The Curtis Model 760P dual channel solid-state hour meter & maintenance monitor is a highly reliable, PCB mountable module. It includes two separate elapsed time indicators and the ability to program unique serial number data.

## APPLICATION

Ideal for OEMs, contract manufacturers and panel makers for monitoring equipment usage, scheduling maintenance, warranty validation, rental/leasing use and more. Can be used extensively in industrial, agricultural and specialty vehicles, as well as applications such as: vending machines, medical, office equipment and consumer products.

## FEATURES

- One device provides tracking of total and maintenance hours and a means to program a unique serial number for warranty monitoring.
- Microprocessor based design allows OEM authorized programming and presetting of both hour meter channels with an easy-to-use service tool for more accurate, optimized warranty implementation.
- Factory programmed service intervals can be specified to match unique application requirements.
- Integrated push-button for toggling of numeric portion of LCD items: total hours, maintenance hours, serial number.
- “Negative” maintenance hours are tracked to accurately measure beyond preprogrammed maintenance interval.
- Silent operation without gear and motor noises of electro-mechanical devices.
- Conformal coating of PCB provides superior environmental protection from moisture and other contamination.
- Large, easy-to-read, high-contrast, dual function backlit LCD (bar graph and numeric section) assures clear visibility in all lighting conditions.
- LCD based icons clearly identify the nature of data being displayed.
- Large bar-graph portion of LCD allowing fast, accurate “at a glance” viewing of remaining maintenance hours.
- Compact module design allows for versatile installation options within a small area.
- OEM Compatibility – an unparalleled selection of power compatibility, design configurations and functionality for OEM custom designs, panel makers and contract manufacturers.
- Distinctive icons provide clear indicators of hour meter/timer activation and display modes.
- Manufactured under ISO 9001 Certified Quality Management System.

# MODEL 760P

## SPECIFICATIONS

### Operating Specifications

Parameter	Min	Nominal	Max	Units	Conditions
Operating Voltage	9	12/24	35	Volts	Voltage between pin X1-1 and X1-2
Operating Current	-	-	10	mA	max@ B+=35Volts
Rearm Time	5	-	-	sec	-

### Hour Meter Enable/Reset Specifications

Parameter	Min	Nominal	Max	Units	Conditions
Input Current	-	-	3.5	mA	max@ B+=35Volts
Input High	9	-	-	Volts	-
Input Low	-	-	1	Volts	-
Hourmeter Accuracy	0.1	-	-	%	-

### Hour Meter Enable/Reset Specifications

Pin Num	Desc	Setting
1	+VB	N / A
2	GND	N / A
3	Enable	ACTIVE HIGH
4	Reset	ACTIVE HIGH

## Environmental

### Temperature Range

Operating: -40°C to +70°C

Storage: -40°C to +85°C

(Note: display will be legible but will operate with reduced contrast and increased transition time at low temperatures)

### Vibration

10 – 1000 Hz, 0.03...9.6 m/s<sup>2</sup>, 2 hours in each of 3 axes per EN60068-2-6.

### Shock

20g, 11ms duration, 6 shocks in each of 3 axes per EN60068-2-27.

### Humidity

240 hours, @ 12VDC in the humidity chamber temperature set at 38 deg C and relative humidity set at 95%. Details in report-1103.

## EMC

Immunity:

EN61000-6-2:2005, EN61000-4-2:1995, EN61000-4-3:2002, EN61000-4-4:2004, EN61000-4-5:1995, EN61000-4-6:2007.

Emissions:

EN61000-6-4:2007, EN 55011:1998+A1:1999+A2:2002, EN55022:2006 & FCC Part 15

ESD: Designed to withstand contact discharge to HCP: ±4 KV & VCP: ±4 KV.

## Regulatory Approval

RoHS Compliant.

Notes:

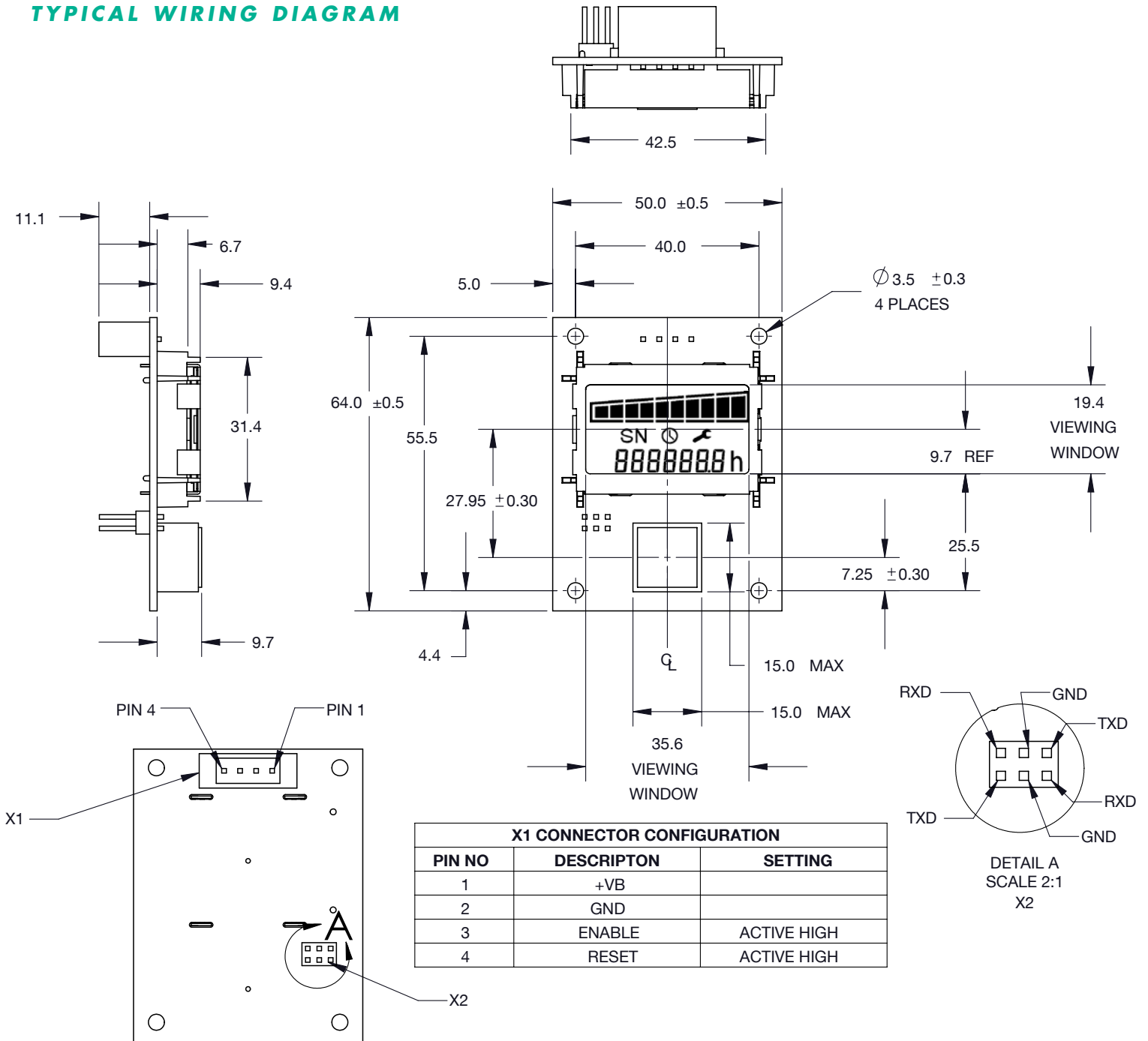
1. All modules are supplied with critical components exposed. If the module is being used in an environment other than specified, the user must take precautions to package the module to provide adequate protection.
2. For proper mechanical support, all module pins should be soldered to the PC-board.
3. To prevent heat damage to components, module face should be 10-20mm minimum away from PC-board when flow soldered.

# MODEL 760P

## MODEL CHART

Model	Reset	Sequence Number
760P	R (toggle & resettable)	-000X

## TYPICAL WIRING DIAGRAM



**WARRANTY** Two year limited warranty (see terms of sale for specifics).

