Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

CURTIS

Solid State Digital Hourmeters & Counters:

700 Series

HOURS

12345.6

1/10

700 Series

Solid State Digital Hourmeters & Counters

The Curtis 700 Series are highly reliable solid state hour meters and counters that offer an unprecedented combination of patented technology, performance, reliability and value.

MODEL 700: 2-Wire Hour Meter, displays only when powered. Available in AC/DC.
MODEL 701: 3-Wire Hour Meter, has a provision or continuous display. Available in AC/DC and DC-only.
MODEL 703: Pulse Counter. Available in AC/DC and DC-only.

A wide variety of industrial and commercial applications, including scheduled maintenance, warranty and leasing – for medical equipment, transport and industrial vehicles and other industrial equipment.

FEATURES

▶ All-8's LCD function test: each digit displays an eight for one second after power-up.

▶ Attractive 6-digit LCD 5mm or 7mm high digits (7mm with optional backlighting) are much easier to read than electromechanical meters, which have only 3mm high digits.

▶ Silent operation – no moving parts. Eliminates annoying gear and motor noise.

▶ Exceptional reliability due to nonvolatile memory (EEPROM) which retains data for 25+ years.

▶ Wide voltage ranges, for example, one unit can be powered from 75 to 270 VAC anywhere between 48 and 440 Hz – ideal for distribution and worldwide markets without having to stock multiple model types.

▶ Electrical reset (optional).

▶ Available in ten case styles – all fit in standard hour meter/counter cutouts.

▶ Multiple mountings available – Metal U-bracket, "U" clamp/ stud (D, Q, R and S cases), flange mount with hardware (F, T, G, J cases), or mounting clip (G, L, Y, Z, cases).

▶ Backlit units allow external illumination control, i.e., on/off or dimmer (12VDC only).

▶ Flashing hourglass icon indicates when the hour meter is accumulating time.

▶ Memory will arm only when power has been applied for five seconds (with no loss of time or counts).

▶ Low power consumption.

▶ UL and CE recognized.

See a 360° view of the 700 Series at:
curtisinstruments.com/360view

700 Series

Solid State Digital Hourmeters & Counters

SPECIFICATIONS

Case Style	Bezel Shape	Lens Material	Case Material	IP Rating Front/ Rear	Termination	UL5/ CE	Suggested Panel Cutout m
D	Rectangular	Acrylic	ABS	65/50	3/16" Spade	Yes	45.0 x 22.2
F/T	Hexagonal	Acrylic	ABS	65/65	Spade[7]	Yes	36.8 x 24.1
G	Hexagonal	Acrylic	ABS	65/65[1]	Packard (2 pin)[2]	Yes	36.8 x 24.1
J	Hexagonal	Acrylic	ABS	65/65[1]	Packard (4 pin)[3]	Yes	36.8 x 24.1
L	Rectangular	Polycarbonate	Polycarbonate	65/40	Molex[4]	Yes	36.8 x 24.1
Q	Round	Polycarbonate	Polycarbonate	65/50[6]	1/4" Spade	Yes	ø52 (ø2–1/16)
R (5mm)	Round	Glass	Polycarbonate	65/50	3/16" Spade	Yes	ø52 (ø2–1/16)
R (7mm)	Round	Polycarbonate	Polycarbonate	52/50	1/4" Spade	Yes	ø52 (ø2–1/16)
S	Square	ABS	ABS	2.35	1/4" Spade	Yes	45.0 x 45.0
Y	Rectangular	Acrylic	ABS	65/65[1]	Packard (4 pin)[3]	Yes	36.8 x 24.1
Z	Rectangular	Acrylic	ABS	65/65	1/4" Spade	Yes	36.8 x 24.1

700 Series

Solid State Digital Hourmeters & Counters

SPECIFICATIONS

Display	6 digit LCD, 5 or 7mm high, 6 o'clock viewing angle
Range & Resolution	Hour meters: 99,999.9 hours Counters: ±1 count
Accuracy	0.1% Counters: ±1 count
Humidity	95%, non-condensing at 38°C
Operating Temperature	−40°C to +85°C (−40ºF to +185ºF)
Storage Temperature	−50°C to +85°C (−58ºF to +185ºF)
Mechanical Shock	SAE J 1378, 55g
Mechanical Vibration	SAE J 1378, 20g
Operating Frequency (AC powered units)	48 to 440 Hz
Memory	Main power must be applied for 5 seconds to arm memory (with no loss of time/counts). EEPROM, data retained for 25+ years without power
Current Consumption (Power Terminals)	0.5mA max. @ 5VDC (0512D models) 0.8mA max. @ 12VDC (1248D models) 1.0mA max. @ 120VAC 2.0mA max. @ 230VAC
Input Signal (DC-only)	Counters (703 only): 500 Hz. max., 50% duty cycle (1ms low, min., between consecutive highs)
Input Signal (AC/DC)	Hour meters (701 only): Power must be applied for 0.5s, min., to accumulate time
Reset	50ms min. at operating voltage. Main power must be applied for a minimum of 250ms prior to reset signal

NOTES:
1. Mating connector must be installed.
2. Equivalent to Delphi-Packard connector P/N 12162000 2-pin.
3. Equivalent to Delphi-Packard connector P/N 15336035 4-pin.
4. Equivalent to Molex connector P/N 43045–0412.
5. UL files AU1841 and E45175.
6. R(5mm) and Q housings also available in a 65/65 version (see model encodement).
7. F= 1/4", T= 3/16"

700 Series

Solid State Digital Hourmeters & Counters

MODEL NUMBER ENCODING

	❶ Case Style		❸ Additional Features		❺ Operating Voltage
Example .... 700 Series	R	.... R	001	O	**0512D0612A**
		❷ Reset Options		❹ Logo	

700 SERIES

700	(2-wire hour meter, AC/DC only
701	(3-wire hour meter, AC/DC or DC-only
703	(3-wire counter, AC/DC or DC-only)

❶ CASE STYLES

D	Q
F/T	R
G	S
J	Y
L [2]	Z

❷ RESET OPTIONS

R	Electrically resettable
N [2]	Non-resettable

❸ ADDITIONAL FEATURES

001	5mm, non-backlit display (Standard)
091	Epoxy filled unit (moisture resistant, Q, R (5mm), cases only)
601	7mm, backlit display (R or S case only)
701	7mm, non-backlit display (R or S case only)

❹ LOGO

O	Curtis Logo
N [2]	No Logo

❺ OPERATING VOLTAGE

0512D	5–12VDC nom., 4.75–15VDC abs.
1248D	12–48VDC nom., 9–60VDC abs.
48150D	48–150VDC nom., 36–185VDC abs.
0512D0612A	5–12VDC nom., 4.75–15VDC abs., 6–12VAC nom., 5–15VAC abs.
1248D2060A	12–48VDC nom., 9–60VDC abs., 20–60VAC nom., 15–75VAC abs.
48150D100230A	48–150VDC nom., 36–185VDC abs., 100–230VAC nom., 75–270VAC abs.

NOTES:
1. Only model offered: 700GN001N1248D2060A
2. Only models offered: 700LN001N1248D2060A, 700LN001N48150D100230A and 701LN001N1248D
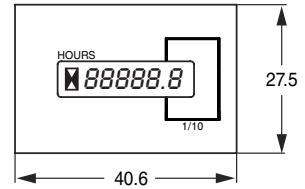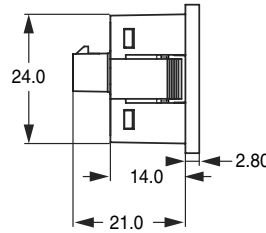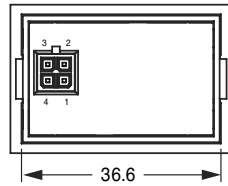* Custom logos are available. Backlight available on 7mm R or S cases only.
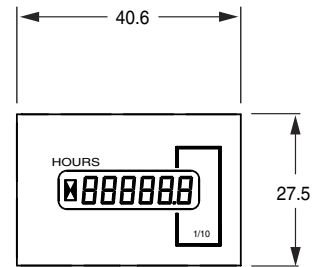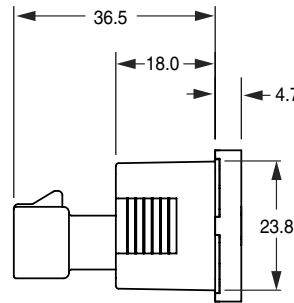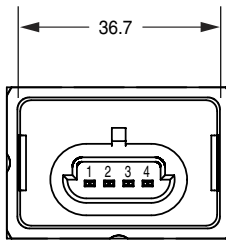
700 Series

Solid State Digital Hourmeters & Counters

WIRING GUIDE

Case Style	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6
D, F, T, J,Q, R (5mm), Y & Z	V+	V–	I	R	N/A	N/A
G	V+	V–	N/A	N/A	N/A	N/A
L	V+	V–	I	N/A	N/A	N/A
R (7mm), S	V+	V–	R	I	L	N/A

V+: Operating voltage

V–: Common (ground)

I: Enable (Optional, use operating voltage to power this pin to record elapsed time (701) or increment count (703).

R: Reset (Optional, supply with operating voltage when unit is to be reset to 0.)

L: Lighting control (Optional, 9–15VDC absolute only, regardless of operating voltage.)

NC: No connection

Solid State Digital Hourmeters & Counters

DIMENSIONS mm

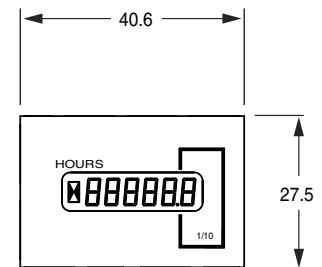**Case Style D**
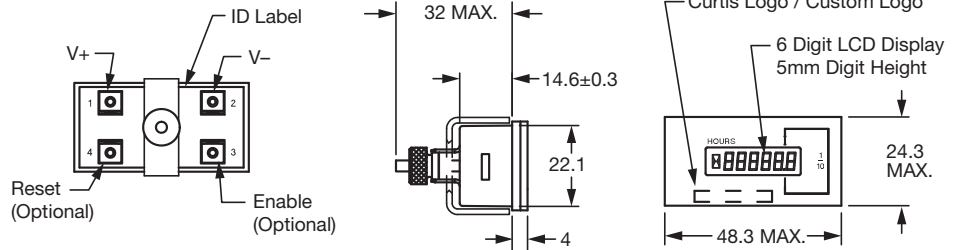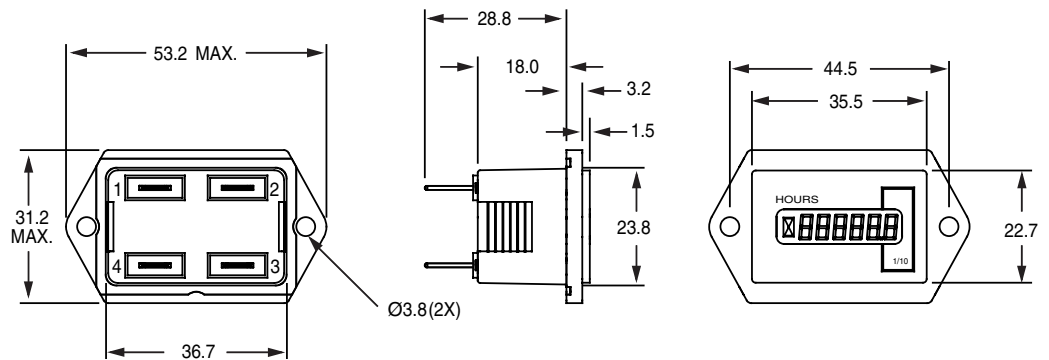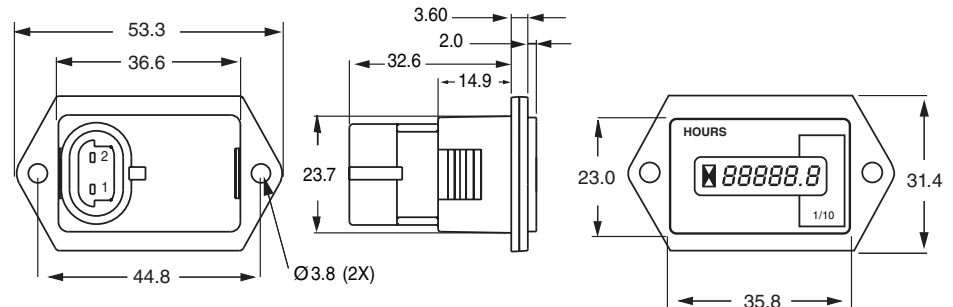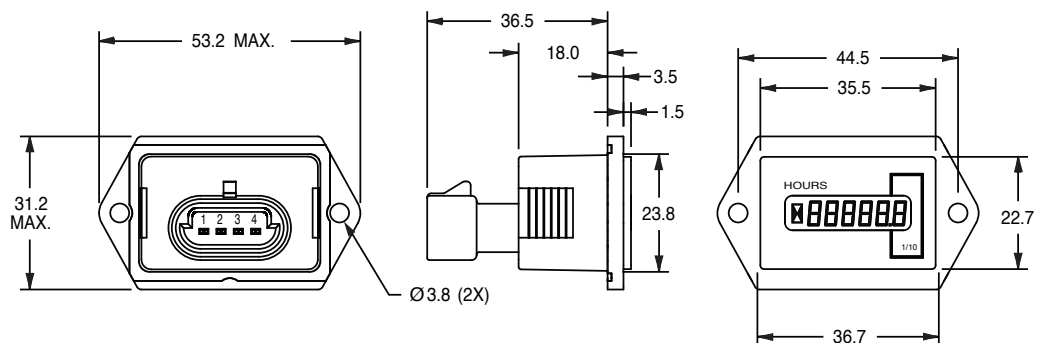
V+
ID Label
V−
1
2
4
3
Reset (Optional)
Enable (Optional)

32 MAX.
14.6±0.3
22.1
4

Curtis Logo / Custom Logo
6 Digit LCD Display 5mm Digit Height
HOURS
24.3 MAX.
48.3 MAX.

Case Style F/T

53.2 MAX.
31.2 MAX.
1
2
4
3
36.7
Ø3.8(2X)

28.8
18.0
3.2
1.5
23.8

44.5
35.5
HOURS
1/10
22.7

Case Style G

53.3
36.6
2
1
44.8
Ø3.8 (2X)

3.60
2.0
32.6
14.9
23.7

HOURS
88888.8
1/10
23.0
31.4
35.8

Case Style J

53.2 MAX.
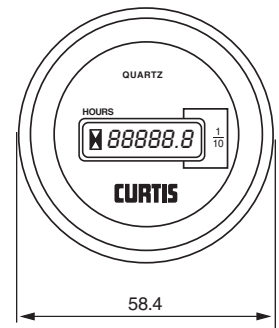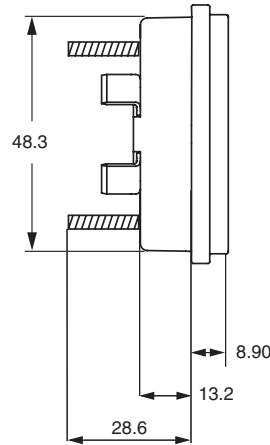31.2 MAX.
1 2 3 4
Ø3.8 (2X)

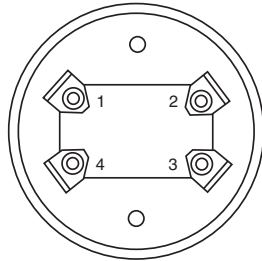36.5
18.0
3.5
1.5
23.8

44.5
35.5
HOURS
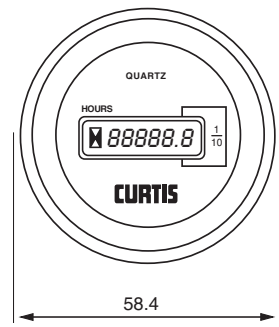1/10
22.7
36.7

700 Series

Solid State Digital Hourmeters & Counters

DIMENSIONS mm   continued

Case Style L

24.0
36.6
14.0
21.0
2.80

HOURS
88888.8
1/10
27.5
40.6

Case Style Y

36.5
36.7
18.0
4.7
23.8

1 2 3 4

HOURS
888888
1/10
40.6
27.5

Case Style Z

28.8
36.7
18.0
4.7
23.8

1   2
4   3

HOURS
888888
1/10
40.6
27.5

Case Style S

1   2
5   6
3   4

44.5
SQUARE
28.0
44.0
4.0

HOURS
888888
1/10
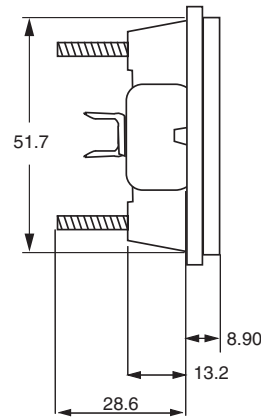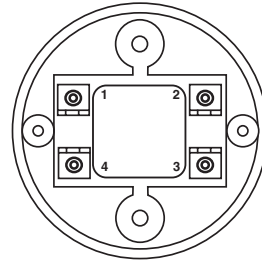CURTIS
48.0
48.0

700 Series

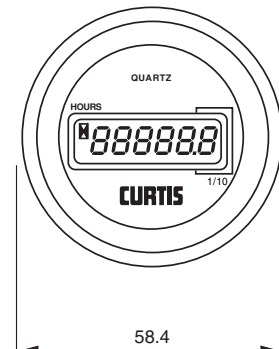## Solid State Digital Hourmeters & Counters

DIMENSIONS mm   continued

Case Style Q

48.3

8.90

13.2

28.6

58.4

Case Style R (5mm)

51.7

8.90

13.2

28.6

58.4

Case Style R (7mm)

9.0

51.5 Ø

28.0

45.0

58.4
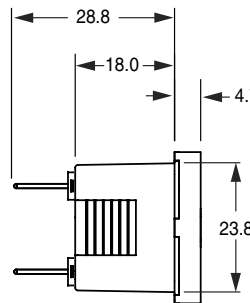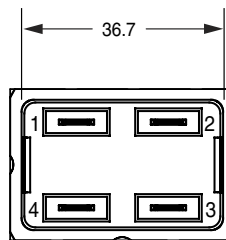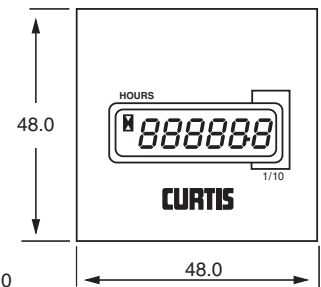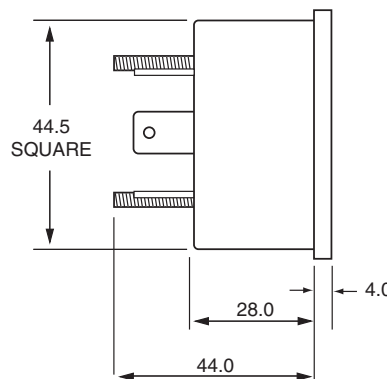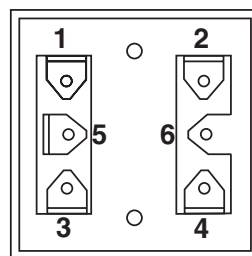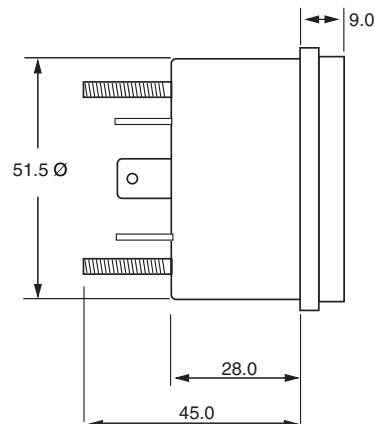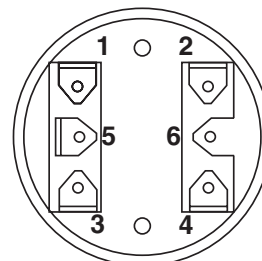
700 Series

Solid State Digital Hourmeters & Counters

700 SERIES HARDWARE

Case Style	F,T		G,J		D,Q,R,S		Y		Z	
Shipping Style	Carton	Bulk	Carton		Bulk	Carton	Bulk	Carton	Bulk	Carton
Steel Slot Screws	2	2	2	2						
Steel Hex Nuts		2		2		2				
Plastic Thumb Nuts	2		2		2					
Lock Washers	2	2	2	2	2	2				
Faston Terminals	4				4				4	
Plastic Bracket							1	1	1	1
Metal U Bracket					1	1				

Note: L case does not require hardware.

ACCESSORIES

Curtis P/N	Description
17607303	Plastic mounting bracket for F, T, G, J, Y & Z models
12237003	External Dash Mounting Bracket for 52mm round gauges
13210001	Meter Guard (1 box of 10 meter guards) R & Q models
13515801	3-Hole Mounting Kit, for Ø2.53" mounting holes
13515905	3-Hole Mounting Kit, for Ø2.44" mounting holes
15336002	Gasket for F, T, G and J cases
15336003	Gasket for R (5mm) case
15336005	Gasket for Q and R (7mm) cases

WARRANTY   Two year limited warranty from time of delivery.

The Curtis Difference
You feel it when you drive it