CURTIS

HOURS

$\boxed{X\ 88888.8}$ 1U

48±0.3 (1.8

DESCRIPTION

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 for continuous display. Available in AC/DC and DC-only.

MODEL 703: Pulse Counter. Available in AC/DC and DC-only.

WARRANTY
Two-year replacement warranty.

Applications

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 electro-mechanical 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 any-where 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, 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.

Case Style	Bezel Shape	Lens Material	Case Material	IP Rating Front/Rear	Termination	UL[5]/CE	Suggested Panel Cutout mm
D	Rectangular	Acrylic	ABS	65/50	3/16" Spade	Yes	45.0 x 22.2 (1.77 x 0.87)
F	Hexagonal	Acrylic	ABS	65/65	1/4" Spade	Yes	36.8 x 24.1 (1.45 x 0.95)
G	Hexagonal	Acrylic	ABS	65/65[1]	Packard (2 pin)[2]	Yes	36.8 x 24.1 (1.45 x 0.95)
J	Hexagonal	Acrylic	ABS	65/65[1]	Packard (4 pin)[3]	Yes	36.8 x 24.1 (1.45 x 0.95)
L	Rectangular	Polycarbonate	Polycarbonate	65/40	Molex[4]	Yes	36.8 x 24.1 (1.45 x 0.95)
Q	Round	Glass	Polycarbonate	65/50[6]	1/4" Spade	Yes	ø52 (ø2-1/16)
R (5mm display)	Round	Glass	Polycarbonate	65/50[6]	3/16" Spade	Yes	ø52 (ø2-1/16)
R (7mm display)	Round	Glass	Polycarbonate	65/50	1/4" Spade	Yes	ø52 (ø2-1/16)
S	Square	Glass	ABS	52/50	1/4" Spade	Yes	45.0 x 45.0 (1.77 x 1.77)
Y	Rectangular	Acrylic	ABS	65/65[1]	Packard (4 pin)[3]	Yes	36.8 x 24.1 (1.45 x 0.95)
Z	Rectangular	Acrylic	ABS	65/65	1/4" Spade	Yes	36.8 x 24.1 (1.45 x 0.95)

Display	6 digit LCD, 5 or 7mm high
Range & Resolution	Hour meters: 99,999.9 hours Counters: 999,999 counts
Accuracy	Hour meters: 0.1% Counters: ±1 count
Humidity	95%, non-condensing at 38°C
Operating Temperature	-40°C to +85°C
Storage Temperature	-50°C to +85°C
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. Counters (703 only): 1 Hz. max., 50% duty cycle (500ms low, min., between consecutive highs)
Reset	5ms 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).

700 MODEL	R Case Style	R Resetability	001 Additional Feature	O Logo*	0512D0612A Operating Voltage
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)	D F G[1] J L[2] Q R S Y Z	R = Electrically resettable N = Non-resettable	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)	O = Curtis Logo N = No Logo	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.

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.

Case Style	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6
D, F, 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.)
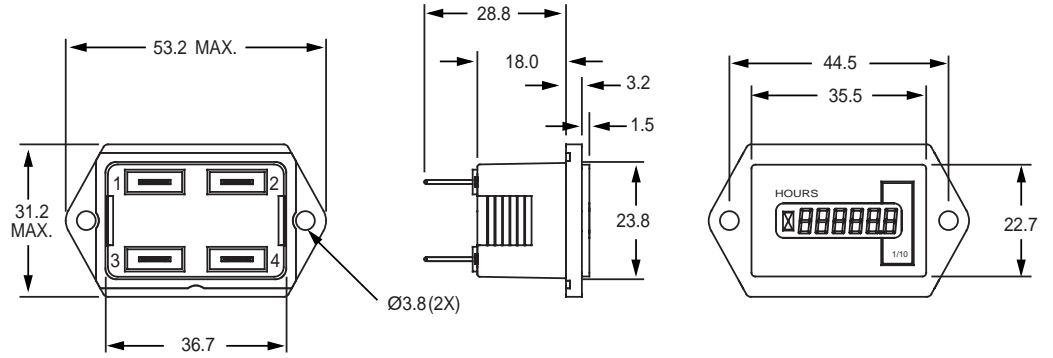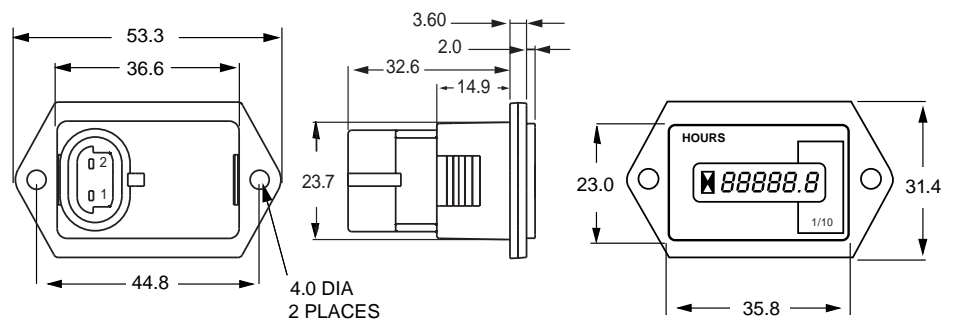NC No connection

D Case:

F Case:

53.2 MAX.
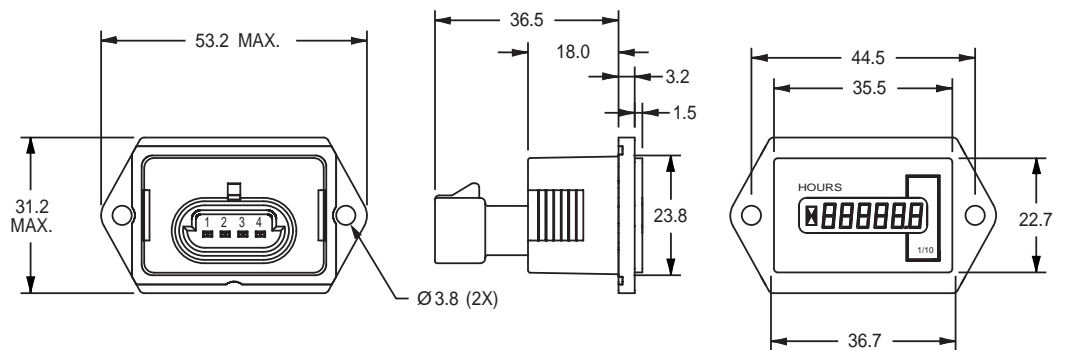
31.2 MAX.

36.7

1 2 3 4

Ø3.8 (2X)

28.8

18.0

3.2

1.5

23.8

44.5

35.5

HOURS

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1/10

22.7

G Case:

53.3

36.6

44.8

2 1

4.0 DIA
2 PLACES

3.60

2.0

32.6

14.9

23.7

23.0

HOURS

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1/10

31.4

35.8

J Case:

53.2 MAX.

31.2 MAX.

1 2 3 4

Ø 3.8 (2X)

36.5

18.0

3.2

1.5

23.8

44.5

35.5

HOURS

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1/10

22.7

36.7

L Case:

24.0

36.6

2.80

14.0

21.0

3 2

4 1

HOURS

88888.8

1/10

27.5

40.6

Y Case:

36.5

18.0

4.7

36.7

1 2 3 4

23.8

40.6

HOURS

888888

1/10

27.5

Z Case:

28.8

18.0

4.7

36.7

1 2

3 4

23.8

40.6

HOURS

888888

1/10

27.5

Q Case:

48.3

8.90

13.2

28.6

58.4

R (5mm) Case:

51.7

8.90

13.2

28.6

58.4

R (7mm) Case:

9.0

51.5 DIA.

28.0

45.0

58.4

S Case:


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1    ○    2
  5      6
3    ○    4
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44.5 SQUARE

28.0

44.0

4.0

48.0

48.0

HOURS

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1/10

CURTIS
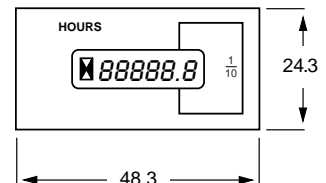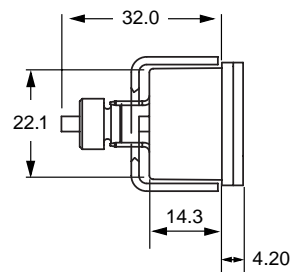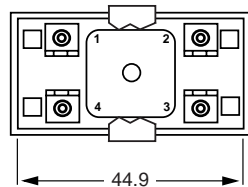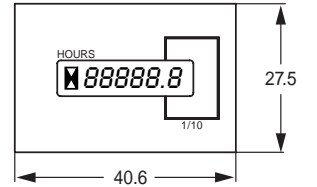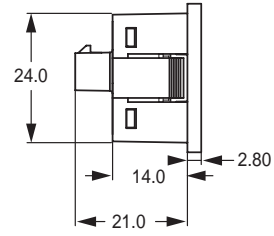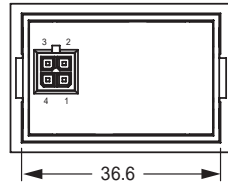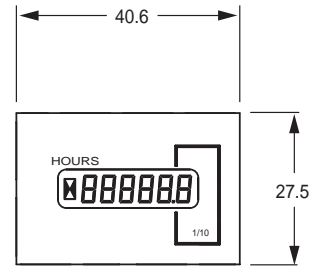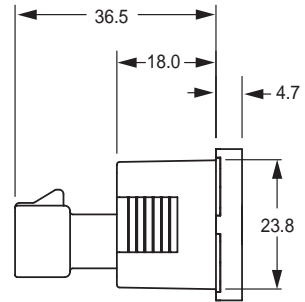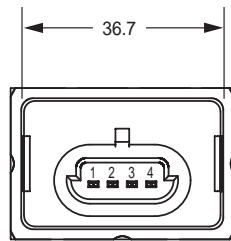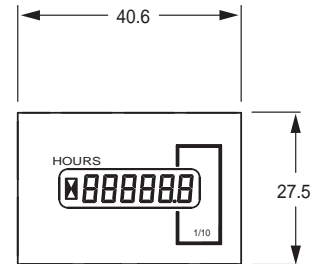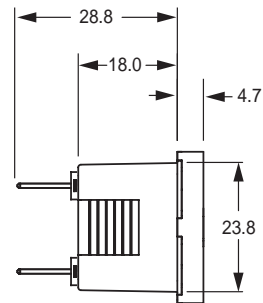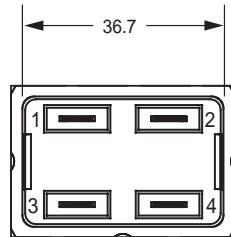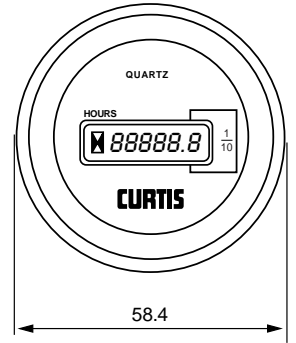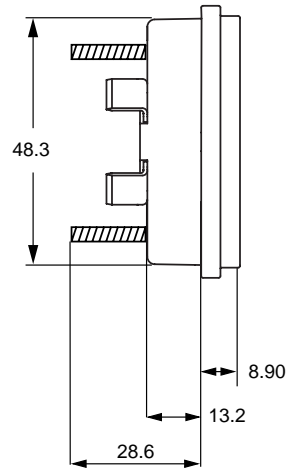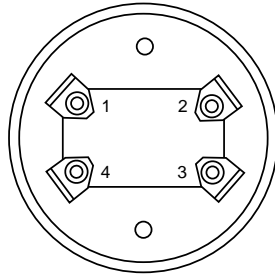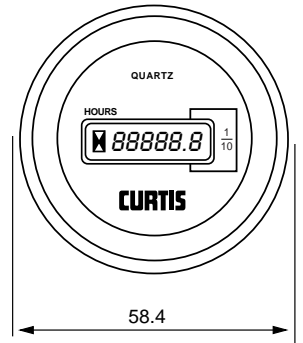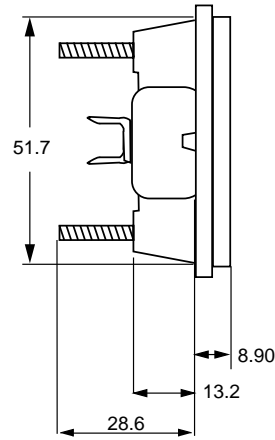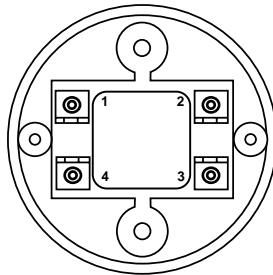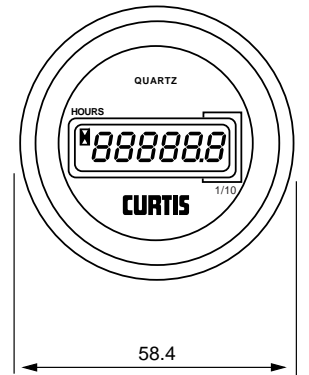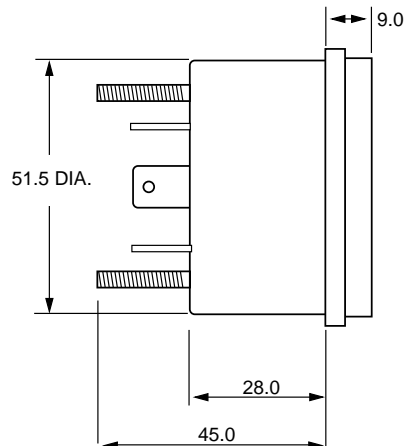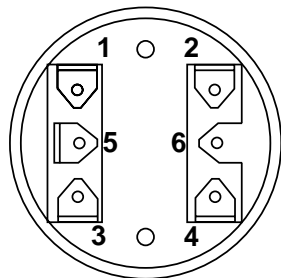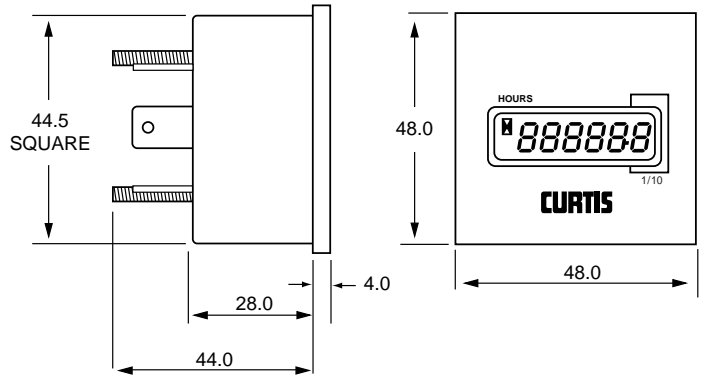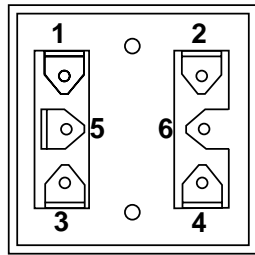
700 Series Hardware

Case Style	F		G, J		D, Q, R, S		Y		Z	
Shipping Style	Carton	Bulk	Carton	Bulk	Carton	Bulk	Carton	Bulk	Carton	Bulk
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, G, J, Y & Z models
17607800	100 mounting clips for F, G, J, Y & Z case
12237003	Dash Mounting Bracket, L-shape
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, G and J cases
15336003	Gasket for R (5mm) case
15336005	Gasket for Q and R (7mm) cases