

Trumeter 49 Series Electromechanical Counter

**P2-4906**

The Trumeter 49 Series of economically priced 6-figure pushbutton reset electromechanical counters is designed for use where limited space is a factor and when reliability is critical. Rugged operating mechanisms require no lubrication or maintenance. Compact size and minimum space requirements make the 49 Series ideally suited for use in control panels, business machines, and test equipment.

Features

- Compact
- No maintenance
- Quick reset
- Multiple voltage options

Applications

- Test Equipment
- Control Panels
- Business Machines
- Medical devices

Trumeter 49 Series Electromechanical Counter Selection Guide

Part Number	Price	Description	Drawing
P2-4906	\$60.00	Electromechanical counter, 115VAC, 6 figure, panel mount	PDF
P8-4906	\$62.00	Electromechanical counter, 24VDC, 6 figure, panel mount	PDF
P9-4906	\$62.00	Electromechanical counter, 12VDC, 6 figure, panel mount	PDF

Trumeter 49 Series Electromechanical Counter Specifications

Part Number	P2-4906	P8-4906	P9-4906
Figures	6 figures, white on black, 0.16 in [4mm] high		
Reset	Pushbutton		
Speed	600 counts/minute (minimum 50ms on, 50ms off)		
Voltage	115VAC (+10% to -15%)	24VDC (+10% to -15%)	12VDC
Power	AC: 115VAC, 3.5 VA; DC: 24/12 VDC 3 watts		
Mounting	Panel		
Termination	Two #22 AWG 105°C wire leads, 10in [254mm] long		
Operating Life	Beyond 100 million counts		
Temperature Range	-15°F to +140°F [-26°C to +60°C]		
Approvals	UL file E36690, UL Recognized, CE Compliant		
Weight	5 oz. [142g]		

Trumeter 722 Series Electromechanical Hour Meters

**722-0003**

The 722 Series of electromechanical hour meters provides AC hour meters with an operating range of 90-264VAC 50/60 Hz, eliminating the need for two separate meters (one for 115VAC and one for 230VAC). Housing options include 2-Hole Rectangular, Flush-Rectangular, Flush-Round, and 3-Hole Round. The quartz time base ensures accurate long-term time keeping, and the totally sealed case protects against the environment and provides years of reliable service. All models are NEMA 4X, 12 rated when mounted with optional gasket.

Features

- Operating voltage 90-264VAC, 50/60Hz
- Totally sealed
- UL/cUL recognized, CE & RoHS Compliant
- 6-figure display (99999.9)
- Quartz accuracy
- Available options:
 - Gasket kit (for NEMA 4X, 12 rating)

Applications

- Medical equipment
- Control panels
- Office equipment
- Test equipment
- Generators

Trumeter 722 Series Electromechanical Hour Meters Selection Guide

Part Number	Price	Description	Drawing
722-0001	\$23.50	Electromechanical hour meter, 2-hole rectangular, 90-264VAC 50/60Hz, 0.25 in [6.3mm] spade terminals, hours & tenths of hours	PDF
722-0002	\$23.50	Electromechanical hour meter, flush rectangular, 90-264VAC 50/60Hz, 0.25 in [6.3mm] spade terminals, hours & tenths of hours	PDF
722-0003	\$23.50	Electromechanical hour meter, flush round, 90-264VAC 50/60Hz, 0.25 in [6.3mm] spade terminals, hours & tenths of hours	PDF
722-0004	\$23.50	Electromechanical hour meter, 3-hole round, 90-264VAC 50/60Hz, 0.25 in [6.3mm] spade terminals, hours & tenths of hours	PDF

Trumeter 722 Series Electromechanical Hour Meters Specifications

Part Number	722-0001	722-0002	722-0003	722-0004
Figures	6 digits (99999.9), 0.14 in [3.6 mm] high Hours and indicator: white on black – Decimal: black on white			
Display	Hours and tenths of hours			
Reset	None			
Voltage	90-264 VAC			
Frequency	50/60 Hz			
Power	1W max			
Mounting	2-hole rectangular	Flush rectangular	Flush round	3-hole round
Terminations	0.25 in [6.3 mm] spade terminals			
Accuracy	± 0.02% over entire range			
Case	Black polymer			
Lens	Polymer			
Environmental Protection	Totally sealed			
Front Panel	NEMA 4X, 12 rated with optional gasket			
Temperature range	-40°F to +185°F [-40°C to + 85°C]			
Humidity	95% (SAE J1378)			
Vibration	10-80 Hz, 20g max. (SAE J1378)			
Shock	55g @ 9 - 13msec (SAE J1378)			
Approvals	UL file E123666, UL/cUL Recognized, CE & RoHS Compliant, SAE & NEMA 4X, 12 Compliant			
Weight	2 oz. [57g]			

Mounting Gaskets for Trumeter 722 Series Electromechanical Hour Meters

Part Number	Price	Description	Drawing
5003-008	\$2.00	NEMA 4X, 12 Gasket for Models 722-0003	PDF
5003-009	\$2.00	NEMA 4X, 12 Gasket for Models 722-0002	PDF
5003-010	\$2.00	NEMA 4X, 12 Gasket for Models 722-0001	PDF
5003-011	\$2.00	NEMA 4X, 12 Gasket for Models 722-0004	PDF

**5003-008**

Trumeter 732 Series Electromechanical Hour Meters

**732-0001**

The 732 Series of electromechanical hour meters provides a DC hour meter with an operating range of 10-80VDC. Models are protected for 2 times battery voltage and/or reverse polarity. Models are available in 3-Hole Round, Flush-Rectangular, Flush-Round and 2-Hole Rectangular housings. The quartz time base ensures accurate long-term time keeping, and the totally sealed case protects against the environment for years of reliable service. These units are NEMA 4X, 12 rated when mounted with the optional gasket.

Features

- Operating voltage 10-80VDC
- Totally sealed
- UL/cUL Recognized, CE & RoHS Compliant
- 6 figure, 99999.9
- Quartz accuracy
- Options include gasket kit (for NEMA 4X, 12 rating)

Applications

- Material handling
- Farming equipment
- Outdoor power equipment
- Construction equipment
- Utility vehicles

Trumeter 732 Series Electromechanical Hour Meters Selection Guide

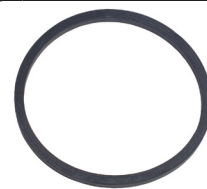
Part Number	Price	Description	Drawing
732-0001	\$23.00	Electromechanical hour meter, 3-hole round, 10-80VDC, 0.25 in [6.3mm] spade terminals, hours & tenths of hours	PDF
732-0002	\$23.00	Electromechanical hour meter, flush rectangular, 10-80VDC, 0.25 in [6.3mm] spade terminals, hours & tenths of hours	PDF
732-0003	\$23.00	Electromechanical hour meter, flush round, 10-80VDC, 0.25 in [6.3mm] spade terminals, hours & tenths of hours	PDF
732-0004	\$23.00	Electromechanical hour meter, 2-hole rectangular, 10-80VDC, 0.25 in [6.3mm] spade terminals, hours & tenths of hours	PDF

Trumeter 732 Series Electromechanical Hour Meters Specifications

Part Number	732-0001	732-0002	732-0003	732-0004
Figures	6 digits (99999.9), 0.14 in [3.6 mm] high. Hours and indicator: white on black. Decimal: black on white.			
Display	Hours and tenths of hours			
Reset	None			
Voltage	10-80 VDC			
Power	1W max			
Mounting	3-hole round	Flush rectangular	Flush round	2-hole rectangular
Terminations	0.25 in [6.3 mm] spade terminals			
Accuracy	± 0.02% over entire range			
Bezel	Stirrup and cup mount have metallic bezels			
Case	Black polymer			
Lens	Stirrup and cup : glass – All other models: polymer			
Transient Protection	± 6 times normal for 300msec			
Overvoltage & Reverse Polarity	Protected for 2 times battery voltage and/or reverse polarity			
Environmental Protection	Totally sealed			
Front Panel	NEMA 4X, 12 rated with optional gasket			
Temperature Range	-40°F to +185°F [-40°C to + 85°C]			
Humidity	95% (SAE J1378)			
Vibration	10-80 Hz. 20g max. (SAE J1378)			
Shock	55g @ 9 - 13msec (SAE J1378)			
Approvals	UL file E123666, UL/cUL Recognized, CE, SAE, & RoHS Compliant. All models are NEMA 4X, 12 Compliant except the Cup and Stirrup mount			
Weight	2 oz. [57g]			

Mounting Gaskets for Trumeter 732 Series Electromechanical Hour Meters

Part Number	Price	Description	Drawing
5003-008	\$2.00	NEMA 4X, 12 Gasket for Models 732-0003	PDF
5003-009	\$2.00	NEMA 4X, 12 Gasket for Models 732-0002	PDF
5003-010	\$2.00	NEMA 4X, 12 Gasket for Models 732-0004	PDF
5003-011	\$2.00	NEMA 4X, 12 Gasket for Models 732-0001	PDF

**5003-008**

Trumeter 3400 Series LCD Counter/Preset Counter



The 3400 Series LCD Counter/Preset Counter provides a large display with 0.28 in [7mm] high characters and is offered in a range of industry-standard housings.

These counter count and display the number of pulses that appear at the input terminal at a rate of 40 pulses per second (Hz). The input interface handles AC or DC inputs. These Counters are available in several different housings.

A wide operating voltage range (10-300VDC and 20-300VAC) adds versatility. All models are NEMA 4/4X, 12 & IP66 rated when used with the optional gasket and have a polarized lens which assures high visibility in outdoor environments.

Features

- Totally sealed from moisture and dirt
- AC and DC voltage input in the same unit
- Compact depth
- Fits in existing panel openings
- Always-on display
- Self-powered (battery life 10+ years)
- Options include:
 - Optional remote reset
 - Multiple housing options

Applications

- Medical devices
- Test equipment
- Control panels
- Production equipment
- Office equipment
- Secondary equipment

Trumeter 3400 Series LCD Counter/Preset Counter Selection Guide

Part Number	Price	Description	Drawing
3400-0000	\$22.50	AC/DC counter, 2-hole case, 0.25 in spade terminal, non-reset	PDF
3400-0010	\$23.00	AC/DC counter, 2-hole case, 0.25 in spade terminal, remote reset	PDF
3400-2000	\$22.50	AC/DC counter, flush rectangular case, 0.25 in spade terminals, non-reset	PDF
3400-2010	\$23.00	AC/DC counter, flush rectangular case, 0.25 in spade terminals, remote reset	PDF

Trumeter 3400 Series LCD Counter/Preset Counter Specifications

Part Number	3400-0000	3400-0010	3400-2000	3400-2010
Figures	8 digit (99999999), 0.28 in [7mm] figures, black on light background			
Display	LCD			
Reset	Non-reset	Remote	Non-reset	Remote
Voltage	10-300 VDC and 20-300 VAC - 50/60Hz, <2mA			
Power	Self-powered - battery life 10+ years (battery life reduced to 5 years for temps above 100°F [37.8°C])			
Mounting	2-hole rectangular	2-hole rectangular	Flush rectangular	Flush rectangular
Terminations	0.25 in [6.4 mm] spade terminals			
Accuracy	± 0.02% over specified temperature range			
Case	Black polymer			
Lens	Stirrup and cup : glass – All other models: polymer			
Transient Protection	± 6 times normal for 300msec			
Overvoltage & Reverse Polarity	Protected for 2 times battery voltage and/or reverse polarity			
Environmental Protection	Totally sealed			
EMC Compliance	EN61326			
Front Panel	NEMA 4/4X, 12 and IP66 compliant from the front when properly mounted using the optional gasket			
Operating Temperature Range	-10°C to +60°C [-14°F to +140°F]			
Storage Temperature Range	-20°C to +70°C [-4°F to +158°F]			
Humidity	95% (SAE J1378)			
Shock	44 to 55g per SAE J1378			
Dielectric	1000VAC 50/60 Hz for 1 minute			
Environmental Compliance	To European WEEE and RoHS Directives			
Approvals	UL & cUL recognized (file # ELIY2.E36690), CE, SAE, NEMA 4/4X/IP66 compliant (not including snap-in models)			
Weight	1 oz [28g]			

Mounting Gaskets for Trumeter 3400 Series LCD Counter/Preset Counters

Part Number	Price	Description	Drawing
5003-009	\$2.00	NEMA 4X gasket flush rectangular and SAE round mount	PDF
5003-010	\$2.00	NEMA 4X gasket two hole mount	PDF



5003-009

Trumeter 3410 Series LCD Hour Meter



The 3410 Series LCD Hour Meters provide a large display with 0.28 in [7mm] high characters and is available in several different housings. A wide operating voltage range (10-300VDC and 20-300VAC) makes the 3410 Series versatile for indoor and outdoor applications. All models are NEMA 4/4X, 12 & IP66 rated when used with the optional gasket and have a polarized lens which assures high visibility in outdoor environments.

Features

- Totally sealed from moisture and dirt
- AC and DC voltage input in the same unit
- Compact depth
- Fits in existing panel openings
- Always-on display
- Self-powered (battery life 10+ years)
- Options include:
 - Optional remote reset
 - Multiple housing options

Applications

- Medical devices
- Generators
- Control panels
- Production equipment
- Garden tractors
- Marine equipment

Reset Instructions

- 1) Remove AC/DC input from Terminals 1 and 2
- 2) Close dry contact reset on Terminals 3 and 4. Reset will perform within 400mS.
- 3) Timing/Counting can resume 200mS after reset is released.

Trumeter 3410 Series LCD Hour Meter Selection Guide

Part Number	Price	Description	Drawing
3410-0000	\$23.50	AC/DC hour meter, 2-hole case, 0.25 in spade terminal, non-reset	PDF
3410-0010	\$24.50	AC/DC hour meter, 2-hole case, 0.25 in spade terminal, remote reset	PDF
3410-2000	\$23.50	AC/DC hour meter, flush rectangular case, 0.25 in spade terminals, non-reset	PDF
3410-2010	\$24.50	AC/DC hour meter, flush rectangular case, 0.25 in spade terminals, remote reset	PDF

Trumeter 3410 Series LCD Hour Meter Specifications

Part Number	3410-0000	3410-0010	3410-2000	3410-2010
Figures	8 digit (999999.9 hours and tenths); 0.28 in [7mm] figures, black on light background			
Run Indicator	Blinking decimal point			
Reset	Non-reset	Remote (dry contact between terminals 3 and 4)	Non-reset	Remote (dry contact between terminals 3 and 4)
Inputs	10-300VDC and 20-300VAC, 50/60 Hz, <2mA VIH 20VAC or 10VDC minimum – VIL 3VAC or 3VDC maximum			
Power	Self-powered. Battery life 10+ years (battery life reduced to 5 years for temps above 100°F [37.8°C]).			
Mounting	2-hole rectangular	2-hole rectangular	Flush rectangular	Flush rectangular
Terminations	0.25 in [6.4 mm] spade terminals			
Accuracy	± 0.1% @ room temperature; ± 0.2% over the specified temperature range			
Transient Protection	± 6 times normal for 300msec			
Overvoltage & Reverse Polarity	Protected for 2 times battery voltage and/or reverse polarity			
Environmental Protection	Totally sealed			
EMC Compliance	EN61326			
Enclosure	Totally sealed from moisture and dirt. NEMA 4/4X, 12 & IP66 compliant from the front when properly mounted using the optional gasket.			
Operating Temperature Range	-10°C to +60°C [14°F to +140°F]			
Storage Temperature Range	-20°C to +70°C [-4°F to +158°F]			
Humidity	95% (SAE J1378)			
Vibration	20g @ 10 to 80 Hz per SAE J1378			
Shock	44 to 55g per SAE J1378			
Dielectric	1000VAC 50/60 Hz for 1 minute			
Environmental Compliance	To European WEEE and RoHS Directives			
EMC Compliance	EN61326			
Protection Against	Alternator load dump: 150V EMI (Electromagnetic Interface): +400V @ 500Hz inductive switching and reverse polarity			
Approvals	UL & cUL recognized (file # ELIY2.E36690), CE, SAE, NEMA 4/4X/IP66 compliant			
Weight	1 oz [28g]			

Notes

1. When interfacing with a solid state relay or AC sensor, the leakage current needs to be considered.
2. Operation beyond the Absolute Voltage Range or the Absolute Maximum Voltage may result in damage to the unit.

Mounting Gaskets for Trumeter 3410 Series LCD Counter/Preset Counters

Part Number	Price	Description	Drawing
5003-009	\$2.00	NEMA 4X gasket flush rectangular and SAE round mount	PDF
5003-010	\$2.00	NEMA 4X gasket two hole mount	PDF



5003-009

Trumeter 4916 Series

6-Digit Non-Reset Counter

**RV2-4916**

The 4916 Series incorporates the latest manufacturing technology together with basic design to achieve high performance over a wide temperature range with low power consumption. These counters can be mounted by two front flange styles, base mount or behind the panel (front mount). The 4916 has UL approvals and can operate over a wide voltage range of DC or AC power.

The compact design and various mounting styles make it the ideal counter for almost all counting applications. This electro-mechanical counter will not lose its count during power failures or from electrical noise.

Features

- Low cost
- Patented high-performance mechanism
- UL and cUL approved
- Rugged plastic package
- Wide range of voltages available
- Long life

Applications

- Mail equipment
- Photo machines
- Vending machines
- Gaming machines
- Elevators
- Copy machines
- Ticket machines

Trumeter 4916 Series 6-Digit Non-Reset Counter Selection Guide

Part Number	Price	Description	Drawing
<u>RV2-4916</u>	\$26.00	6 digit non-reset counter, 120VAC, 6 figures, front & V-base mount	PDF
<u>RV8-4916D</u>	\$25.00	6 digit non-reset counter, 24VDC, 6 figures, front & V-base mount	PDF
<u>RV9-4916D</u>	\$25.00	6 digit non-reset counter, 12VDC, 6 figures, front & V-base mount	PDF

Trumeter 4916 Series 6-Digit Non-Reset Counter Specifications

Part Number	<u>RV2-4916</u>	<u>RV8-4916D</u>	<u>RV9-4916D</u>
Figures	6 figures, white on black, 0.16 in [4mm] high		
Reset	None		
Speed	10CPS, standard. 50/50 ratio on/off.		
Maximum ON Time	Infinite		
Voltage	120VAC	24VDC	12VDC
Power	AC: 115VAC, 3.5 VA; DC: 24/12 VDC, 3 watts		
Mounting	Base/panel (removable base)		
Termination	UL/cUL wire leads, 11in [279.4 mm] long, standard		
Temperature Range	Storage: 14°F to 122°F [-10°C to +50°C] Operating: 23°F to 104°F [-5°C to +40°C]		
Approvals	UL and cUL (E36690)		
Weight	4 oz [113g]		

Trumeter 6300 LCD Counter



6300-0000-0000

The Trumeter 6300 LCD Counter offers a range of features such as a high-contrast 8-digit LCD display with 0.32 in [8mm] digits. Dry contact, low voltage DC, and high voltage DC and AC inputs are available on the back of the unit.

The 6300 is designed with a rugged plastic housing that is NEMA 4/4X rated when properly installed using the optional gasket. In addition, the unit is compliant with CE's EMC standards to EN61326:2001 for industrial applications, recognized by UL for U.S. and Canadian safety standards, and is compliant with European RoHS and WEEE standards.

Features

- Dual range
- Reflective LCD Display with 8 large (8mm) digits
- Choice of I/O complement that includes:
 - Switch Input (no voltage)
 - Low DC Voltage (3-30VDC) <2mA
 - High Voltage (20-300VAC or 10-300VDC) <2mA
- Internal 10+ year battery
- NEMA 4/4X, 12, and IP66 rated
- EMC Compliant to EN61326:2001 for industrial environments
- CE compliant, UL and cUL recognized
- European WEEE & RoHS Compliant

Trumeter 6300 LCD Counter Selection Guide

Part Number	Price	Description	Drawing
6300-0000-0000	\$35.50	Dual-range LCD counter, 40/500 Hz, dry contact input, remote reset	PDF
6300-1000-0000	\$35.50	Dual-range LCD counter, 40/500 Hz, 3-30 VDC input, remote reset	PDF
6301-2000-0000	\$35.50	Dual-range LCD counter, 40/500 Hz, 10-300/20-300 VDC/VAC input, remote reset	PDF

Trumeter 6300 LCD Counter Specifications

Part Number	6300-0000-0000	6300-1000-0000	6301-2000-0000
Display	8 LCD digits 0.32 in [8mm] high		
Reset	Remote		
Speed ³	Low speed: 0-40 counts per second (min. 12.5 ms on, 12.5 ms off) – High speed: 0-500 counts per second (min. 1.0 ms on, 1.0 ms off)		
Input	Dry contact input	3-30 VDC input	10-300/20-300 VDC/VAC input
Inputs	Switch (no voltage) DC voltage: Absolute Voltage Range -0.5 VDC min to 30.0 VDC max; VIH 3.0 VDC max; VIL 1.0 VDC min High voltage AC/DC: Absolute Maximum Voltage 300 VAC/VDC; VIH 10VDC/20VAC max; VIL 3VDC/3VAC min		
Power	Internally powered by lithium battery. Battery life 10 years (reduced to 5 years for temps above 100°F [37.8°C])		
Mounting	Panel with clip (1/32 DIN panel cutout)		
Terminations	Terminal block		
Weight	2 oz [57g]		
Storage and Operating Temp	-20°C to +60°C [-4°F to +140°F]		
Humidity	0 to 95% RH, non-condensing		
Vibration	Operating: 10 to 55 Hz, 0.01 in [0.25 mm] double amplitude – Non-operating: 10 to 55 Hz, 0.03 in [0.75 mm] double amplitude		
Shock	Operating: 10G; Non-operating: 30G		
Dielectric	1000VAC 50/60 Hz for 1 minute		
Accuracy	100% provided signal meets stated parameters		
EMC Compliance:	EN61326:1997 with A1:1998 and A3:2001 for industrial environments		
Enclosure	NEMA 4/4X, 12 & IP66 compliant from the front when properly mounted using the optional gasket.		
Approvals	CE compliant, UL and cUL recognized, UL file #E36690		
Environmental Compliance	Compliant to European WEEE and RoHS		

Notes

1. When interfacing with a solid state relay or AC sensor, the leakage current needs to be considered.
2. Operation beyond the Absolute Voltage Range or the Absolute Maximum Voltage may result in damage to the unit.
3. Once the unit is wired for low speed or high-speed count, then that unit is set for life – it cannot be changed.

Mounting Gasket for Trumeter 6300 LCD Counter

Part Number	Price	Description	Drawing
5003-013	\$2.00	Gasket	PDF



5003-013

Trumeter 6300 LCD Counter - Operations



Counter Operation

Any of four different counting methods may be specified in each unit. These counting methods are factory set.

Dual Range: In the Dual Range Mode, the counter waits for a pulse on either Input A or Input B. The first input to have a pulse is recognized and its pulses are counted. The other input is ignored until the counter is reset. The rated speed for one of the inputs is 40 Hz and for the other input it is 500 Hz. This mode is best for single up-counter operation.

- Units are dispatched in a factory reset state.
- Once the unit is wired for low speed or high-speed count, then that unit is set for life – it cannot be changed.

I/O Functions

The I/O functions can be mixed and matched to maximize the functionality of the counter. There are three types of inputs that the counter can accept. The interfaces for each are factory set. The inputs can be:

- Switch – open circuit or switch closure
- Low Voltage DC – Low input is less than 1VDC and High Input is 3 – 30VDC.
- High Voltage DC or AC – Low is less than 3VDC or 3VAC. A High Input is either 10 – 300VDC or 20-300VAC.

For the Switch and Low Voltage DC Counters, there are six screw terminals for all of the I/O. For the High Voltage Counters, there are four screw terminals for the I/O. The combinations of the I/O and power supply are factory set.

Pulse Inputs: The pulse inputs are those inputs that are counted.

Remote Reset: When the remote reset is at a high level, the counter will reset.

Resets

A reset returns the display to zero.

Remote Reset: A model with Remote reset has a dedicated terminal for performing the reset function. The unit resets when the remote reset signal is at a high level. When the reset signal is at a low level, accumulating counts can occur.

Trumeter 6320 LCD Hour Meter

**6320-2000-0000**

The 6320 Series of electronic hour meters features self-powered electronic LCD counters. These meters utilize a high-contrast 8-digit LCD with 0.32 inch [8mm] digits and seven icons. Dry Contact, Low Voltage DC, and High Voltage DC and AC Inputs are available on the rear panel.

The Model 63 family is designed with a rugged plastic housing that is NEMA 4/4X rated when properly installed using the optional gasket. In addition, the unit is compliant with CE's EMC standards to EN61326:2001 for industrial applications, recognized by UL for U.S. and Canadian safety standards, and it is compliant to European RoHS and WEEE standards.

Features

- Reflective LCD Display with 8 large (8mm) digits
- Choice of I/O:
 - Switch Input (no voltage)
 - Low DC Voltage (3-30VDC) <2mA
 - High Voltage (20-300 VAC or 10-300 VDC) <2mA
- Control Inputs
 - External Electronic Reset
- 1/32 DIN panel cutout
- NEMA 4/4X, 12, and IP66 rated
- EMC Compliant to EN61326:2001 for industrial environments
- CE compliant, UL and cUL recognized European WEEE & RoHS Compliant

Trumeter 6320 LCD Hour Meter Selection Guide

Part Number	Price	Description	Drawing
6320-0000-0000	\$36.50	LCD hour meter, dry contact input, remote reset	PDF
6320-1000-0000	\$36.50	LCD hour meter, 3-30 VDC input, remote reset	PDF
6320-2000-0000	\$36.50	LCD hour meter, 20-300 VAC / 10-300 VDC input, remote reset	PDF

Trumeter 6320 LCD Hour Meter Specifications

Part Number	6320-0000-0000	6320-1000-0000	6320-2000-0000
Display	8 LCD digits 0.32 in [8mm] high		
Reset	Remote		
Input	Dry contact input	3-30 VDC input	10-300/20-300 VDC/VAC input
Inputs	Switch (no voltage) DC voltage: Absolute Voltage Range -0.5 VDC min to 30.0 VDC max; VIH 3.0 VDC max; VIL 1.0 VDC min High voltage AC/DC: Absolute Maximum Voltage 300 VAC/VDC; VIH 10VDC/20VAC max; VIL 3VDC/3VAC min		
Power	Internally powered by lithium battery. Battery life 10 years (reduced to 5 years for temps above 100°F [37.8°C])		
Mounting	Panel with clip (1/32 DIN panel cutout)		
Terminations	Terminal block		
Weight	2 oz [57g]		
Storage and Operating Temp	-20°C to +60°C [-4°F to +140°F]		
Humidity	0 to 95% RH, non-condensing		
Vibration	Operating: 10 to 55 Hz, 0.01 in [0.25 mm] double amplitude – Non-operating: 10 to 55 Hz, 0.03 in [0.75 mm] double amplitude		
Shock	Operating: 10G; Non-operating: 30G		
Dielectric	1000VAC 50/60 Hz for 1 minute		
Accuracy	100% provided signal meets stated parameters		
EMC Compliance:	EN61326:1997 with A1:1998 and A3:2001 for industrial environments		
Enclosure	NEMA 4/4X, 12 & IP66 compliant from the front when properly mounted using the optional gasket.		
Approvals	CE compliant, UL and cUL recognized, UL file #E36690		
Environmental Compliance	Compliant to European WEEE and RoHS		

Notes

- When interfacing with a solid state relay or AC sensor, the leakage current needs to be considered.
- Operation beyond the Absolute Voltage Range or the Absolute Maximum Voltage may result in damage to the unit.

Mounting Gasket for Trumeter 6320 LCD Hour Meter

Part Number	Price	Description	Drawing
5003-013	\$2.00	Gasket	PDF

5003-013

Trumeter 6320

LCD Hour Meter – Capabilities

Hour Meter Operation

Hour counting method only. This counting method is factory set.

Hour Meter: The Hour Meter displays hours and tenths of hours.

I/O Functions

The I/O functions can be mixed and matched to maximize the functionality of the Hour Meter. There are three types of inputs that the Hour Meter can accept. The interfaces for each are factory set. The inputs can be as follows:

- **Switch:** Open circuit or switch closure
- **Low Voltage DC:** Low input is less than 1VDC and High Input is 3-30VDC.
- **High Voltage DC or AC:** Low is less than 3VDC or 3VAC. A High Input is either 10-300 VDC or 20-300 VAC.

For the Switch and Low Voltage DC Hour Meters, there are six screw terminals for all of the I/O. For the High Voltage Hour Meters, there are four screw terminals for the I/O. The combinations of the I/O and power supply are factory set.

Enable Inputs: The enable inputs are those inputs that enable the accumulation of time.

Remote Reset: When the remote reset is at a high level, the Hour Meter will reset.

Resets

Remote Reset: A model with Remote reset has a dedicated terminal for performing the reset function. The unit resets when the remote reset signal is at a high level. When the reset signal is at a low level, accumulating time can occur.

Trumeter 7111/7111HV LCD Counter

**7111**

The 7111/7111HV counter is a compact, self-powered counter with bi-directional counting and screw terminals to ensure fast wiring.

Features

- Latest CMOS circuitry for an expected battery life of 10 years
- Built-in screw terminals simplify installation
- 9mm black high-contrast LCD display
- 5-30 VDC externally powered backlight, requires resistor for voltages above 5VDC
- Counting up to 10kHz (7111)
- The 7111HV permits triggering from any voltage between 10-240 VAC or 10-110 VDC $\pm 10\%$
- Contact closure/open collector low speed count input with integral de-bounce circuitry (7111 model)
- 1/32 DIN panel cutout
- Choice of mounting available – front panel with supplied bezel or rear mounting clip
- Front panel can be sealed to IP65 using included gasket
- CE, UL and cUL approved

Applications

- Replacement for electro-mechanical counters
- Applications where external power is not readily available
- Position, length, rotation and distance measuring applications
- Event counting
- Water meter remote display

Trumeter 7111/7111HV LCD Counter Selection Guide

Part Number	Price	Description	Drawing
7111	\$38.50	8-digit self-powered totalizing counter	PDF
7111HV	\$46.50	8-digit self-powered totalizing counter with high-voltage inputs	PDF

Trumeter 7111/7111HV LCD Counter Specifications

Part Number	7111	7111HV
Battery	Non-replaceable lithium battery, expected life 10 years at 20°C [68°F]	
Display	8 digit black LCD, 9mm characters, leading zero blanking. 5-30 VDC externally powered backlight, requires resistor for voltages above 5VDC. Configurable decimal place: up to 3 decimal places (jumper link configured).	
Count Range	99999999 - rollover to 0	
Connections	Finger-proof screw connections for cables up to 1.5 mm ²	
Operating temperature	-10°C to +60°C [14°F to 140°F]	
Storage temperature	-20°C to +60°C [-4°F to 140°F]	
Altitude	Up to 2000m [6562ft]	
Relative Humidity	80% max up to 31°C, decreasing to 50% max at 40°C	
Sealing	IP65 / NEMA4X	
Mounting	Either with clip mount (supplied) or two front screws with bezel (supplied). 1/32 DIN panel cutout.	
Manual Reset Enable	Configured by jumper link	
Weight	62g [2.2 oz]	
Direction Input	Dry contact closure or electronic input TTL/CMOS compatible. Add=no connection or >2.4v (logic 1); Subtract=connect to COMMON or <0.7v (logic 0). Direction input must precede count input by 5 μ S (minimum) for valid operation.	Dry contact closure or electronic input TTL/CMOS compatible. Add=no connection or >2.4v (logic 1); Subtract=connect to COMMON or <0.7v (logic 0). Direction input must precede count input by 5 μ S (minimum) for valid operation. Max 18VDC.
External Reset	Contact closure/open collector, negative edge triggered, 0.7v threshold, 15ms minimum closure time.	10-110 VDC $\pm 10\%$, 10-240 VAC $\pm 10\%$, 50ms minimum length.
Count Input	Low speed: Contact closure/open collector with integral de-bounce circuitry. 30Hz maximum, negative edge triggered, 0.7v threshold, 15ms minimum closure time. Max 18VDC. High speed: Electronic input 10kHz maximum, negative edge triggered, 0.7v threshold 50 μ s minimum pulse length, TTL/CMOS compatible. Max 18VDC.	10-110 VDC $\pm 10\%$, 10-240 VAC $\pm 10\%$, 50ms minimum pulse width, 10Hz.
Agency Approvals	UL file #E36690	

Trumeter 7511/7511HV Self-Powered LCD Timer

**7511HV**

The Trumeter 7511/7511HV Self-Powered LCD Timer is a compact LCD timer designed for many applications and offering an optional high-voltage input. It features an 8-digit liquid crystal display timer and is self-powered with a 10-year battery life. Screw terminals ensure fast wiring. Additional features include backlighting (external 5VDC supply required), 4 timing modes, timing direction indication and 9mm high digits.

The High Voltage (HV) version accepts input voltages of 5-110 VDC or 10-240 VAC.

Features

- Latest CMOS circuitry for an expected battery life of 10 years
- 9mm black high-contrast LCD display
- 5-30 VDC externally powered backlight, requires resistor for voltages above 5VDC
- Minimum contact closure time 1 second
- Four timing modes
- Times up or down
- External reset input
- Choice of mounting available – front panel with supplied bezel or rear mounting clip
- Front panel can be sealed to IP65 with included gasket
- 1/32 DIN panel cutout
- Simplified installation – all models have screw connections on rear for quick and simple connection
- CE, UL and cUL approved
- 7511HV permits triggering from any voltage from 10-240 VAC or 5-110 VDC $\pm 10\%$.

Trumeter 7511/7511HV Self-Powered LCD Timer Selection Guide

Part Number	Price	Description	Drawing
7511	\$38.50	8-digit self-powered totalizing timer	PDF
7511HV	\$46.50	8-digit self-powered totalizing timer with high-voltage input	PDF

Trumeter 7511/7511HV Self-Powered LCD Timer Specifications

Part Number	7511	7511HV
Battery	Non-replaceable lithium battery, expected life 10 years at 20°C	
Display	8 digit black LCD, 9mm characters, leading zero blanking. 5-30 VDC externally powered backlight, requires resistor for voltages above 5VDC. Configurable decimal place: up to 3 decimal places (jumper link configured).	
Timing Ranges	Seconds, minutes and seconds; hours and 1/100ths and hours and minutes	
Timing Input	Sink signal (NPN) 18VDC maximum threshold, 1VDC negative edge trigger	10-240 VAC $\pm 10\%$, 5-110 VDC $\pm 10\%$, Opto-isolated
Direction Input	Up not connected, down connected to common	
Operating temperature	-10°C to +60°C [14°F to 140°F]	
Storage temperature	-20°C to +70°C [-4°F to 158°F]	
Material	Clear polycarbonate	
Environmental Protection	IP65 / NEMA 4X	
Accuracy (at 25°C)	$\pm 0.002\%$	
Temperature Drift	0.034 PPM/°C	
Aging	< 2 PPM/year	
Weight	62g [2.2 oz]	
External Reset	Sink signal (NPN) or contact closure minimum 15 mS	
Agency Approvals	UL file #E36690	