# ⅛ DIN Panel-Mount Programmable Timer

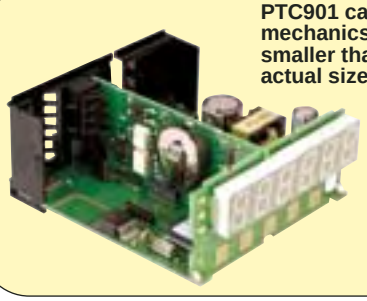
**PTC900/PTC901 Series**
**Starts at**
**$169**

2 YEAR WARRANTY · MADE IN USA · CE · c UL us

- ⅛ DIN (50 x 97 mm)
- 6-Digit, 14.2 mm (0.56") LED Display
- Green Display or Red, Sunlight-Readable Display
- Elapsed Timer with Preset Capability
- Counter with Preset Capability
- Cycle Counting Capability
- Programmable Function Keys and User Inputs
- 4 Setpoint Alarm Outputs
- Communications and Bus Capabilities
- PC Software Available for Meter Configuration
- NEMA 4X (IP65)

PTC901, $211, shown smaller than actual size.

Panel punches available, visit omega.com/panelpunches



PTC901 case and mechanics, shown smaller than actual size.

The PTC900 timer and PTC901 clock/timer offer many features and performance capabilities that suit a wide range of industrial applications. Both can function as an elapsed timer or preset timer, while the PTC901 also offers real-time clock with date capability. The plug-in option cards allow the user to configure the meter for the present application, while providing easy upgrades for future needs. Both models can function as an elapsed-time indicator. By using 2 separate signal inputs and 23 selectable timer ranges, the meters can be programmed to meet most any timing application. With the addition of a plug-in setpoint output card, they can easily become a dual or quad output preset timer. The PTC901 can also operate as a real-time clock with the real-time clock card already installed.

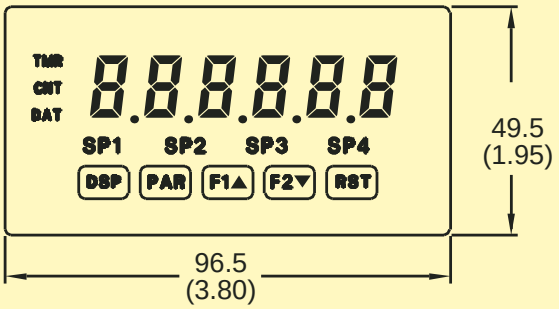
The meters are capable of displaying time in 12- or 24-hour time formats. The 12-hour format can be displayed in hours and minutes, with or without an am/pm indication or in hours, minutes, and seconds. The 24-hour format can be displayed in hours and minutes or in hours, minutes, and seconds.

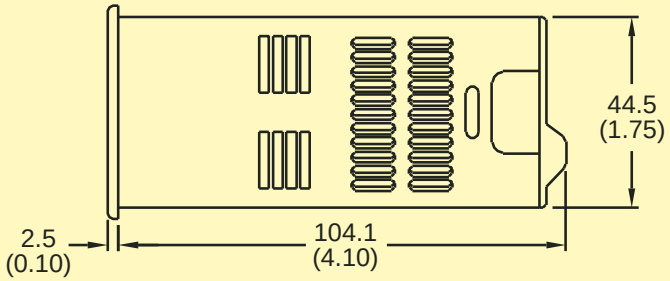
The PTC901 also has a calendar display in which the day, month and/or year can be displayed. The meter will recognize leap years, and can automatically adjust for Daylight Savings time. If the application calls simultaneously for a preset timer and a real-time clock, the PTC901 can handle this requirement as well. A battery-backed real-time clock plug-in card is provided with the PTC901. This card, which includes a lithium coin-cell battery, will maintain the time and date when main power is removed.

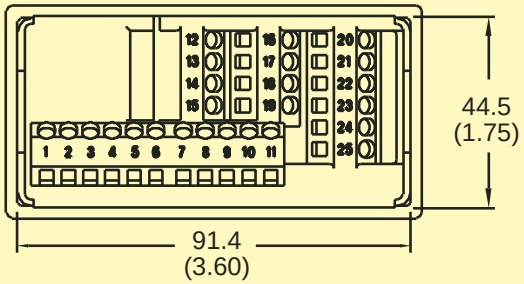
The meters accept inputs from a variety of sources, including switch contacts and outputs from CMOS or TTL circuits. The input can be configured to trigger on the edge or level of the incoming pulse. Internal jumpers are available for selecting sinking inputs (active-low) or sourcing inputs (active-high). The front panel keys and three user inputs are programmable to perform various meter functions. The meters can have up to 4 setpoint outputs, determined by the optional plug-in cards. The setpoint plug-in cards provide dual form “C” relays (5A), quad form “A” relays (3A) or either quad-sinking or quad-sourcing open collector logic outputs. The outputs can be assigned to the timer, counter, RTC date, and RTC time. The outputs can also be independently configured to suit a variety of control and alarm requirements.

Plug-in cards can also provide serial communications. These include RS232, RS485 and MODBUS®. Display values, setpoint alarm values and setpoint states can be controlled through serial communications. Once the meters have been initially configured, the parameter list may be locked out from further modification entirely, or the setpoint, timer start/stop values, counter start/stop values, RTC time “set”, and display intensity can be made accessible. Lockouts are activated through a security code or user input.

Dimensions: mm (in)



## Specifications

**Display:** 6-digit, 14.2 mm (0.56") red sunlight-readable or standard green LED

**Power:**

**AC Versions:**

**AC Power:** 85 to 250 Vac, 50/60 Hz, 18 VA

**Isolation:** 2300 Vrms for 1 min to all inputs and outputs; 300V working

**DC Versions:**

**DC Power:** 11 to 36 Vdc, 14 W (derate operating temperature to 40°C (104°F) if operating <15 Vdc and 3 plug-in cards are installed)

**AC Power:** 24 Vac, ± 10%, 50/60 Hz, 15 VA

**Isolation:** 500 Vrms for 1 min to all inputs and outputs (50V working)

**Sensor Power:** 12 Vdc, ±10%, 100 mA max; short circuit protected

**Keypad:** 3 programmable function keys, 5 keys total

### Timer Display

**Timer Range:** 23 selectable ranges

**Timing Accuracy:** ± 0.01%

**Minimum Digit Resolution:** 0.001 s

**Maximum Least Significant Digit Resolution:** 1 hr

**Maximum Display:** 999999

**Cycle Counter Display:**

**Counter Range:** 0 to 999999

**Digit Resolution:** 1 cycle

**Maximum Count Rate:** 50 Hz

**Real-Time/Date Display (PTC901):**

**Real-Time Display:** 5 display formats—hr/min/second (12 or 24 hr format), hr/min (24 hr), hr/min (12 hr with or without AM/PM indication)

**Date Display:** 7 display formats—month/day or day/month (numeric or 3-letter month format), month/day/year or day/month/year (all numeric), day of week/day (3-letter day of week format)

**Real-Time Clock Card:** Field-replaceable plug-in card

**Time Accuracy:** ± 5 s/month (1 min/year) with end-user calibration

**Battery:** Lithium 2025 coin cell

**Battery Life Expectancy:** 10 years, typical

**Synchronization Interface:** 2-wire multi-drop network (RS485 hardware), 32 units max, operates up to 4000'

**Isolation To Timer and User Input Commons:** 500 Vrms for 1 min

**Working Voltage:** 50V, not isolated from all other commons.

### Timer Inputs A and B

**Type:** Logic inputs configurable as current-sinking (active-low) or curren-sourcing (active-high) via a single plug jumper

**Current Sinking (Active-Low):** $V_{il}$ = 0.9 V max, 22 KW pull-up to 12 Vdc

**Current-Sourcing (Active-High):** $V_{ih}$ = 3.6 V min, 22 KW pull-down, max

**Continuous Input:** 30 Vdc

**Timer Input Pulse Width:** 1 ms minimum

**Timer Start/Stop Response Time:** 1 ms max

**Filter:** Software filtering provided for switch contact debounce; filter enabled or disabled through programming; if enabled, filter results in 50 ms start/stop response time for successive pulses on the same input terminal

### User Inputs

**Type:** 3 programmable user inputs; logic inputs configurable as current-sinking (active-low) or current-sourcing (active-high) through a single plug jumper

**Current Sinking (Active-Low):** $V_{il}$ = 0.9V max, 22 KΩ pull-up to 12 Vdc

**Current-Sourcing (Active-High):** $V_{ih}$ = 3.6V min, 22 KΩ pull-down, max

**Continuous Input:** 30 Vdc

**Isolation To Timer Input Common:** Not isolated

**Response Time:** 10 ms

**Memory:** Non-volatile $E^2$PROM retains all programming parameters and display values

All models shown smaller than actual size.

PTC900, $169.

PTC901, $211.

PTC901-LV, $239.

**Environmental Conditions:**

**Operating Temperature Range:** 0 to 50°C (32 to 122°F) [0 to 45°C (32 to 113°F) with all 3 plug-in cards installed]

**Storage Temperature Range:** -40 to 60°C (-40 to 140°F)

**Operating and Storage Humidity:** 0 to 85% max RH non-condensing

**Altitude:** Up to 2000 meters

**Connections:** High-compression, cage-clamp terminal block

**Construction:** This unit is rated for NEMA 4X (IP65) outdoor use, IP20 touch-safe, Installation Category II, Pollution Degree 2, 1-piece bezel/case, flame-resistant, synthetic rubber keypad—panel gasket and mounting clip included

**Weight:** 286 g (10.1 oz)

**Output Modules:** For complete specifications, see LDP63100 Series, page M-100

**MOST POPULAR MODELS HIGHLIGHTED!**

## To Order *(Specify Model Number)*

| Model No. | Price | Description (Display Meter Only, No Outputs) |
|---|---|---|
| **PTC900** | **$169** | Timer, red display, 85 to 250 Vac, 50/60 Hz |
| **PTC900-LV** | **197** | Timer, red display, 11 to 36 Vdc, 24 Vac |
| **PTC900-GN** | **186** | Timer, green display, 85 to 250 Vac, 50/60 Hz |
| **PTC900-GN-LV** | **213** | Timer, green display, 11 to 36 Vdc, 24 Vac |
| **PTC901** | **211** | Timer/real-time clock, red display, 85 to 250 Vac, 50/60 Hz |
| **PTC901-LV** | **239** | Timer/real-time clock, red display, 11 to 36 Vdc, 24 Vac |
| **PTC901-GN** | **227** | Timer/real-time clock, green display, 85 to 250 Vac, 50/60 Hz |
| **PTC901-GN-LV** | **255** | Timer/real-time clock, green display, 11 to 36 Vdc, 24 Vac |

**Optional Plug-in Output Cards (Field Installable)**

| Model No. | Price | Description |
|---|---|---|
| **Setpoint Alarms (Only 1 Alarm Card Can Be Installed Into Base Meter)** | | |
| **LDP6-CDS10** | **$37** | Dual setpoint relay output card |
| **LDP6-CDS20** | **37** | Quad setpoint relay output card |
| **LDP6-CDS30** | **37** | Quad setpoint sinking open collector output card |
| **LDP6-CDS40** | **37** | Quad setpoint sourcing open collector output card |
| **Communications (Only 1 Communications Card Can Be Installed Into Base Meter)*** | | |
| **LDP6-CDC10** | **$48** | RS485 serial communications output card with terminal block |
| **LDP6-CDC1C** | **48** | Extended RS485 serial communications output card with dual RJ11 connector |
| **LDP6-CDC20** | **48** | RS232 serial communications output card with terminal block |
| **LDP6-CDC2C** | **48** | Extended RS232 serial communications output card with 9-pin D connector |
| **LDP6-CDC40** | **58** | MODBUS communications card |
| **LDP6-CDC4C** | **58** | Extended MODBUS communications card with dual RJ11 connector |

**Accessories (Field Installable)**

| Model No. | Price | Description |
|---|---|---|
| **PTC9-RTC00** | **$42** | Real-Time clock card (replacement) |
| **DPP-5** | **525** | ⅛ DIN panel punch |
| **CS-3785** | **150** | Reference Book: McGraw-Hill Dictionary of Science |

***** *Free DP6-SOFT software download available at* ***omega.com/ptc901***

*Comes complete with operator's manual.*

***Note:*** *Adding option cards—meters can be fitted with up to 2 optional plug-in cards, however, only 1 card from each function type can be installed at a time. The function types include setpoint alarms and communications. The cards can be installed initially or at a later date. Each optional plug-in card is shipped with installation and programming instructions.*

***Ordering Examples: PTC901-GN-LV,*** *timer/real-time clock, green display, 11 to 36 Vdc, 24 Vac,* ***LDP6-CDS10,*** *dual setpoint, relay output card, $255 + 37 =* ***$292.***

***PTC900,*** *timer, red display, 85 to 250 Vac, 50/60 Hz,* ***$169.***

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