

Digital Clock / Elapsed Timer

with dual row display and 3/4" LED characters



ZT1490



Clock / Elapsed Timer ZT1490

- UL recognized
- Overload protection with automatic reset
- Microprocessor design with special quartz timing circuitry for ultimate stability and repeatability
- No harness between PC boards, potential for maintenance at board level
- Power outage backup for at least 24 hours, no batteries
- Protected against HF interference and transient voltages
- Code blue output
- Serial bus RS485, with a twisted pair shielded cable
- Up to 32 Clock/Elapsed Timer (ZT1490/1491) and/ or Surgical Chronometer (ZT1494) can be connected in a Master/Slave arrangement, via approximately 3200 feet of cable

Product Description

The Clock/Elapsed Timers are complete microprocessor based units that displays both time of day and elapsed time information. The ZT1490 has a dual row 4 digit 7 segment display with large bright red LED characters that are easily read in high ambient light. A Master/Slave Clock configuration is possible. With this arrangement, the time of day is set at the Master Clock. Only one Clock can serve as a Master.

The BENDER ZT1490 operates independent of line frequency. These units have unique power backup systems that requires

no battery so there is no need for battery monitoring and replacement. In the event of power outage, both clock and timer functions will continue to work for at least 24 hours. However, the displays are not visible during this time interval.

The Timer may be activated from the Clock/Elapsed Timer itself, from the remote control accessory or an external contact (code blue or other monitoring output). A count may be interrupted, resumed and reset at the Clock/Elapsed Timer itself or externally with the remote MK1450. The remote MK1450 is optional and has the same button functions as the ZT1490.

Operational Information Clock

The ZT1490 has a dual row digital 7 segment LED display. The displays indicate the time of day and elapsed time. Use a reference clock to set the time of day in hours and minutes.

Similar buttons on the ZT1490 and on the Remote Control MK1450 and MK1450C are used to set the time.

In the Master/Slave configuration, the time setting can only be done at the master clock.

Operational Information Timer

The timer display on the ZT1490 is off when no timing procedure has been initiated.

Similar buttons on the ZT1490 and on the Remote Control MK1450 are used to set the timer.

Design Description

The Clock / Elapsed Timer is enclosed in a durable phenolic housing 7" x 4-7/16" x 2-1/2" (W x H x D). There are no protruding switches on the front foil.

The connector plate model #927776 is required for installation.

The 12/24 hour display mode is easily changed by means of a DIP switch located on the PC board inside the unit. Please refer to catalog data sheet "Setting the Operation Mode for BENDER Clocks" for information on this procedure.

Clock/Elapsed Timer & Accessories

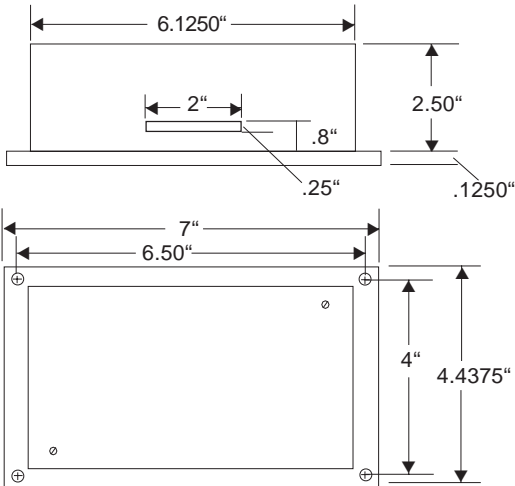
Type	Model No.
Clock/Elapsed Timer	ZT1490
Remote Control	MK1450-G1
Remote Control	MK1450-G2
Connector Plate	927776

Technical Data for ZT1490

Supply voltage V_N	100V to 277V
Frequency range of F_N	48Hz to 62Hz
Maximum power consumption	12VA @ 120V AC
Ambient temperature when operating	+32°F to +122°F 0°C to +50°C
when stored	+14°F to +158°F +10°C to +70°C
Timing accuracy	max. deviation 50ppm
Data management after power outage	>24h
Character height	>3/4"
Character color	red
Connection	via 20 pin Molex Connector and cable to 16 pole terminal strip (Molex P/N 6471)

Serial bus	EIA RS485
Height	4-7/16"
Width	7"
Depth	2-1/2"
Weight	approx. 1.3 lb

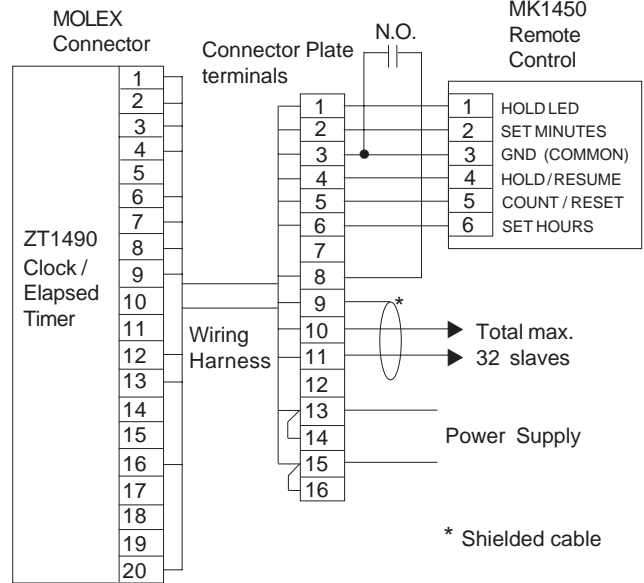
Dimension Diagram(inch)



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Wiring Diagram



Terminal Functions

Connector Plate Terminal	Molex Connector ZT1490	Function
1	3	Hold LED
2	6	Set Minutes
3	12	GND (Common)
4	8	Hold / Resume
5	9	Count / Reset
6	7	Set Hours
8	4	Code Blue
9	13	Shield Ground
10	1	T x D
11	2	R x D
13, 14	16	L1(Power supply)
15, 16	20	L2 (Power supply)

Safety Instructions



Electrical equipment shall only be installed by qualified personnel in consideration of the applicable safety regulations.