



M1150-M10 Series Digital Shut-Height Monitor for just \$995, + Resolver

Resolver based Shut-Height Monitor

The M1150-M10 Series Shut-Height Monitor from Autotech is the most cost effective as well as most rugged Shut-Height monitoring system. Press Shut-Height can be measured either with a resolver coupled to the Shut-Height motor or with a linear position measuring ultrasonic rod. Resolver system has proven to be the most reliable Shut-height monitoring system used by the most automated and sophisticated press room. In addition, M1150-M10 has high-end advanced functionality such as shut-height drift monitoring.

Precise Shut Height Indication

The M1150-M10 measures shut-height to an accuracy of 4096 counts per turn of the resolver connected to the shut-height motor, thus providing accuracy of better than 0.001”

Drift Monitoring

Shut-height can drift over a period of time. This unique feature from Autotech generates an alarm output if shut-height falls out of a preset programmed range.

Easy Calibration

The M1150-M10 scales decoded position into user friendly engineering units.

The calibration of unit is extremely simple

and does not require any computations. All users have to do is to move ram to two distinct positions

and enter the Shut

Height corresponding to those positions. The unit computes scaling parameters automatically.

Absolute Position

The M1150-M10 shut-height monitor, unlike incremental encoder systems, is absolute.

Because of the absolute nature of the resolver, the position is retained even during power loss. In addition, it is highly immune to electrical noise interference.



Upper and Lower Travel Limits

M1150-M10 has a provision for monitoring upper and lower shut-height limits. Alarm will be generated if an operator tries to set shut-height outside his programmed range.

Self-Diagnostics & Broken Resolver Cable

The M1150-M10 constantly monitors internal circuitry and resolver. In case a fault occurs or resolver cable is broken, the unit goes into a Fault mode and activate alarm outputs to provide fail-safe operation.

The Most Versatile Small Footprint Resolver-to-Digital Shut-Height Monitor

The M1150-M10 is a multi-turn programmable Shut-Height Monitor. It takes the input from a single turn resolver like Autotech's series E7R or RL100 which is coupled to the shaft of the shut-height motor. The M1150-M10 decodes the resolver signals using highly noise immune ratiometric decoding technique, scales the digital data based on the programmed scale factor and displays it on the front panel. The position information is continuously compared to two programmable preset limits and the outputs are activated when limit conditions are satisfied. All outputs of the M1150-M10 are optically isolated and the resolver inputs are differential, ensuring extremely reliable operation of the unit even in the harshest of industrial conditions.

The M1150-M10 will decode the shaft angle to 1/4096th of a revolution (12 bits) and keep track of multiple revolutions. The ShutHeight Monitor also features tachometer and motion detector, fractional scaling, preprogrammed preset value with an external trigger, full decimal point control and 2 channels of position based alarm outputs.

Prescalable, Presetable; Yet Absolute

A wide range of easy to set programmable scale factors (0.3 - 4095.999) eliminates the need of mechanical gear trains and prescales the display to readout directly in engineering units. Any preset number can be jammed

into the position "counter" by an external signal, thus "offsetting" or "re-zeroing" the machine in no time. As described earlier scale factor can be automatically calculated for easy calibration of the M1150-M10 shut-height monitor.

Simple Front Panel Programming

The M1150-M10 is fully front panel programmable for all variables and yet secure against any unauthorized program changes. Opening of an external user-provided keyswitch inhibits any program changes on the front panel.

No Batteries, Nonvolatile Memory

Nonvolatile EEROM memory retains information indefinitely after power loss or machine shutdown, eliminating batteries and related hazards.

Reliable Under Extreme Environments

The M1150-M10 combines the ruggedness of a brushless resolver and reliability of a solid-state control. The resolver can be mounted on a machine shaft in any hostile environments such as mechanical shock, vibrations, extreme humidity and temperature changes, oil mists, coolants, solvents, etc., and the programmable unit M1150-M10 can be mounted up to 2500 feet away in control panel.

Detailed Specifications

INPUT POWER

AC: 120 VAC \pm 10%, 7 VA; Optional 220, 240 VAC

DC: 11-28 VDC, 100 mA (typical) exclusive of load

Operating Temperature: -10 to +130°F (-23 to +55°C)

Position Transducer:

Autotech's series RL100, E7R resolvers

Signal Resolution: 4096 counts/turn

Scale Factor: 0.300 - 4095.999, programmable

Output Update Rate: 1.4 ms

Preset: 6 digits

Decimal Point: Fully Programmable

Resolver Cable length: 2500 ft. (max) shielded

OUTPUTS (All outputs have to be same type)

P: PNP source transistor;

Logic True: Transistor ON, 1.7 V drop @100 mA;

Logic False: Transistor OFF, 0.2 mA leakage@ 50 V

Output Isolation:

All outputs optically isolated up to 2500 Volts

INPUTS

Program Enable Input, Output Enable Input for P

Output Units:

Enable: 0.8 V max@ 5 mA;

Disable: 4V - 28 VDC or No Connection

M1150-M10 Digital Shut-Height Monitor

Resolver based Shut-Height Monitor - M1150-M10

E7R or RL100 resolver for ShutHeight measurement and 2 PNP (Sourcing) alarm Outputs

\$995

M1150-M10 Features

- Shut-Height indication, 0.001" accuracy
- Prescalable, Presetable
- Automatic calculation of scale factor
- Simple front panel programming
- Built-in self Diagnostics
- Programmable Drift Monitor
- Programmable Over & Under travel Monitor

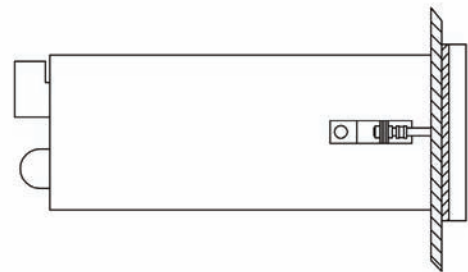
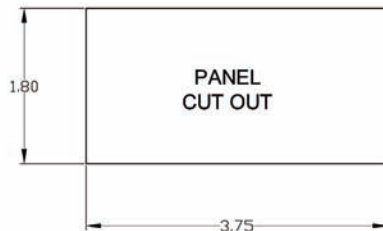
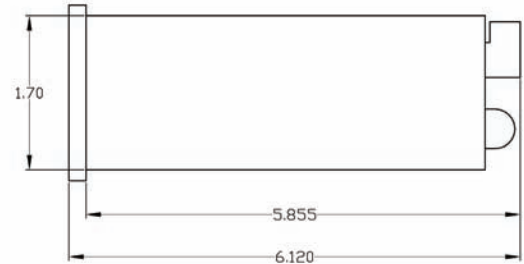
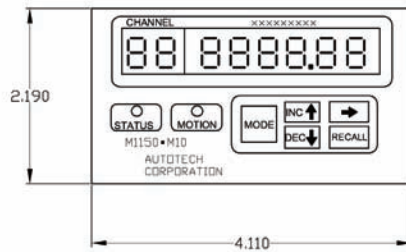


Part Number	Description	Price
SHT-M1150-M10P0	Standard Unit, Rotary ShutHeight Monitor with PNP (Sourcing) outputs	\$995
SHT-M1150-E7R	Rotary ShutHeight Monitor with PNP output, E7R Resolver, 30ft. resolver cable	\$1595
SHT-M1150-RL100	Rotary ShutHeight Monitor with PNP output, RL100 Resolver, 30ft. resolver cable	\$1995

Note: For Part Numbers and Price of individual components, cables & accessories, and other product variations such as PLS outputs or different resolver housings **CALL THE FACTORY**

M1150-M10 unit with cut-out, side and front dimensions

The unit does not require mounting holes. It has two keyholes, one on each side, for sliding (factory supplied) right angle mounting bracket.



For Resolver dimensions see page 5