Installation, Operation and Maintenance Manual

MODEL L100DX

AC CURRENT / HP SENSOR

MODEL L100DX AC CURRENT/HP SENSOR

The Model L100DX Sensor is designed to protect AC electrical powered equipment from possible damage due to equipment malfunction or abnormal operating conditions. The L100DX monitors input line current, or horsepower, to such equipment, and in the event the current or horsepower exceeds either upper or lower preset limits, indicating abnormal conditions, the L100DX will automatically shut down the protected equipment before possible damage can occur, providing such conditions continue beyond preset time limits. Protection can therefore be provided for process control type systems, AC motors and machinery, pumps, conveyor systems, etc. The detection of a dry-run condition for pumps is a common application.

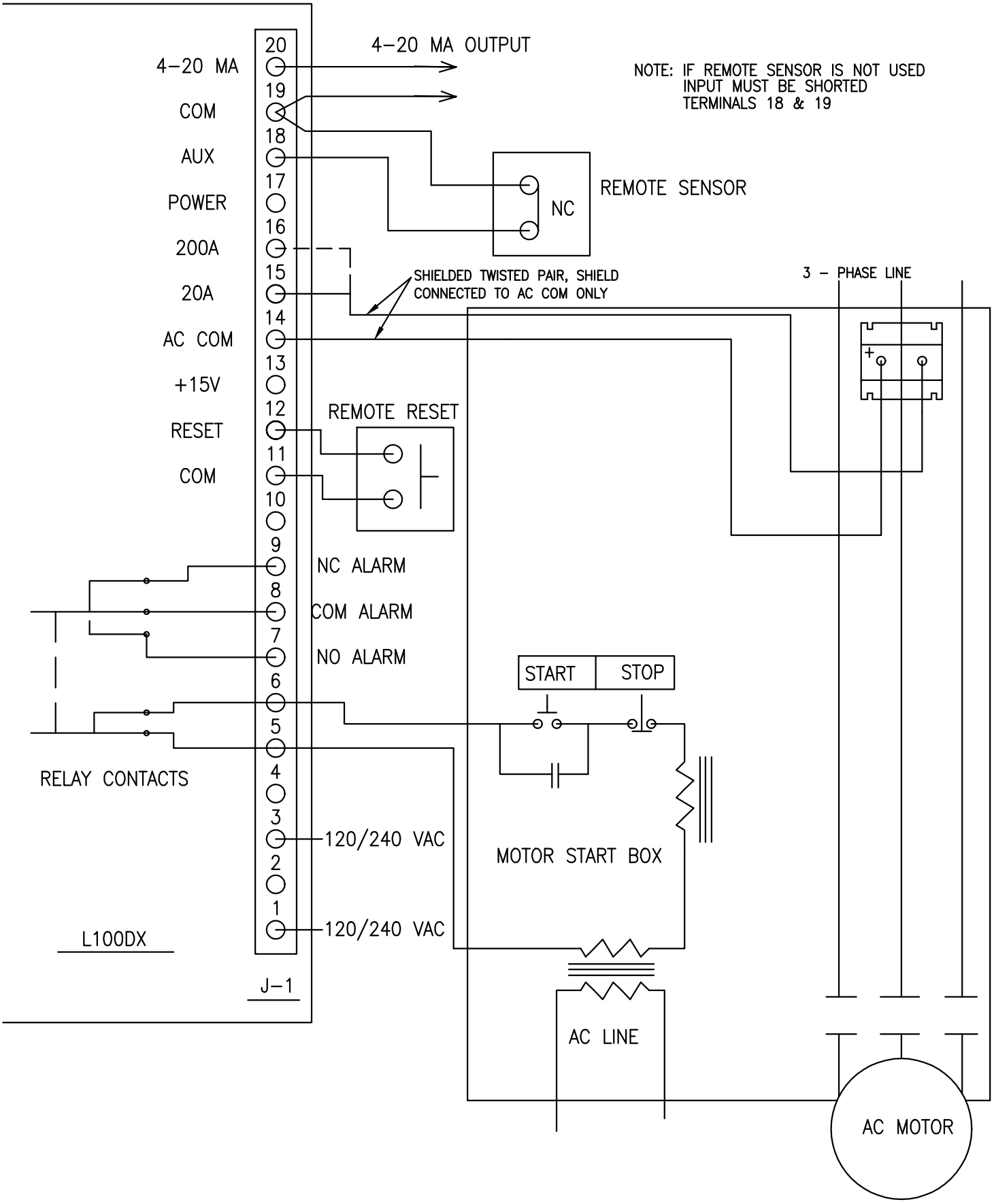
AC current is monitored by a toroidal type sense transformer, a nonintrusive type sensor, not requiring the need to break or make contact (connections) with the power line. Consequently, power dissipation losses are negligible. Current is sensed by passing one leg of a power line, through the window of the sense transformer. AC horsepower is monitored by an optional interface device, the KP-1 AC Power Sensor. This device senses 3-phase real power.

Detection of both an upper and lower (preset) trip point is therefore provided. A 10 second start-up delay circuit is incorporated to prevent initial inrush start current from triggering the L100DX unit. The absence of line current, or cycling of equipment, will not result in triggering the L100DX.

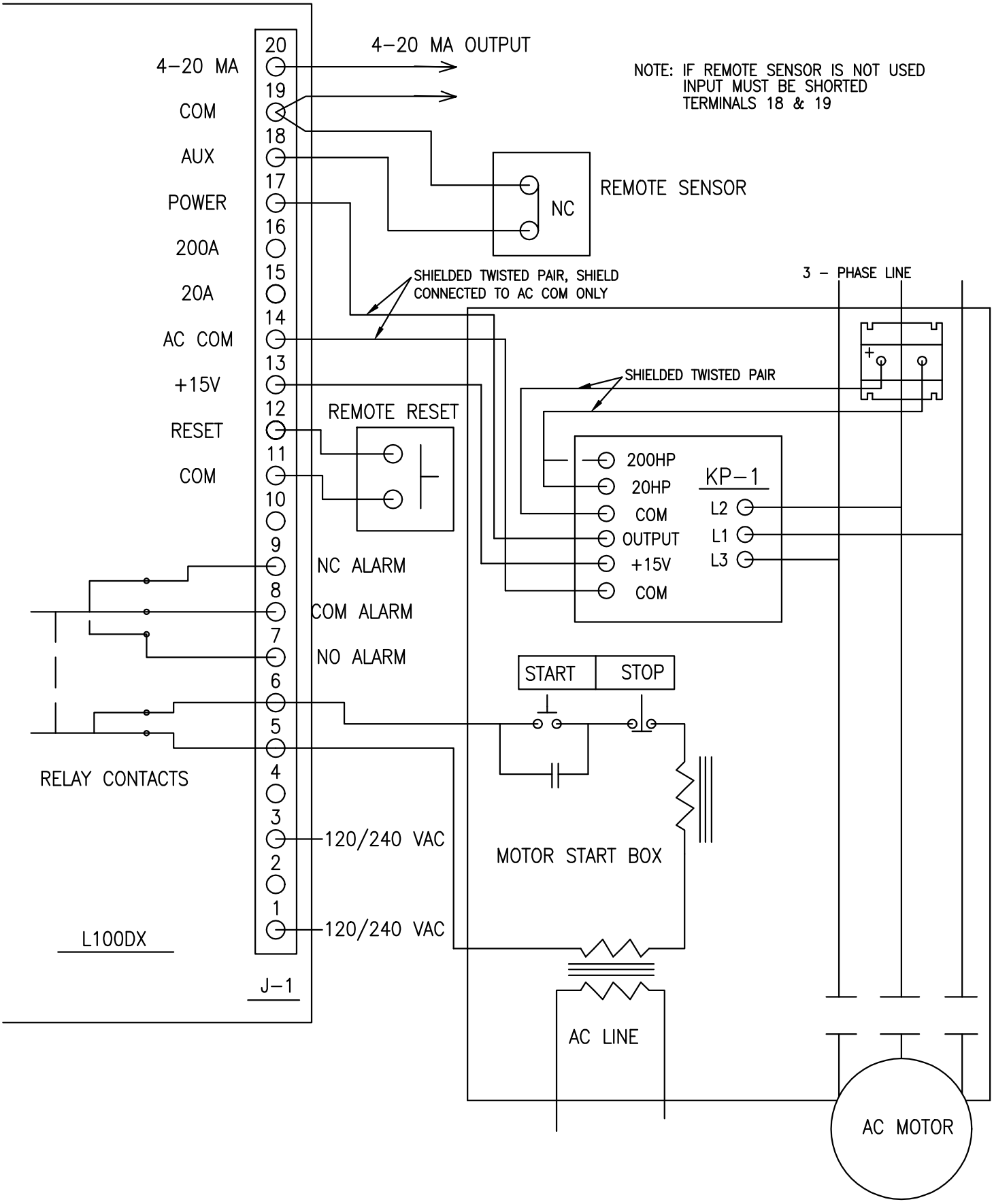
An auxiliary input is provided for accommodating fixed-setpoint type sensors, such as a thermostat, pressure switch, level detector, etc., thereby providing additional protection. Four LED status indicators are located on the front panel, and when a fault occurs the appropriate indicator, or indicators, will flash, and will remain in their actuated state until the L100DX is manually reset. A digital LCD meter is provided for setting setpoint levels, and for monitoring the input current or power level.

A 4-20 ma (or 0-20 ma) current output is provided, proportional to AC current or HP, for remote monitoring, computer interface, etc.

The L100DX is housed in a 6.5 x 6.5 x 4.0” polycarbonate, NEMA-4X type enclosure, UL/CSA approved. The enclosure has a window through which the indicators and digital meter can be viewed. The cover is hinged, and the reset switch is mounted on the cover.

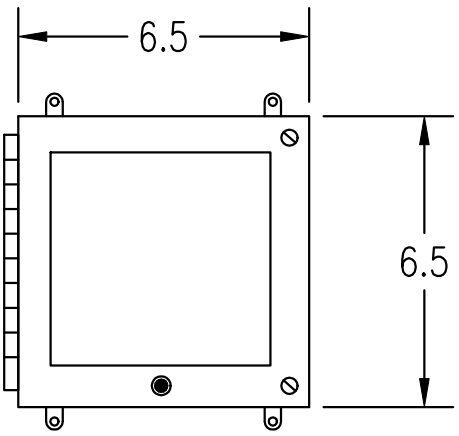


MODEL L100DX AC CURRENT/HP SENSOR WIRING DIAGRAM AC POWER CONFIGURATION	*LaBour Pumps*		
	DWG. No. L100DX IOM FIG. 1	DATE 11/11/96	REV. A

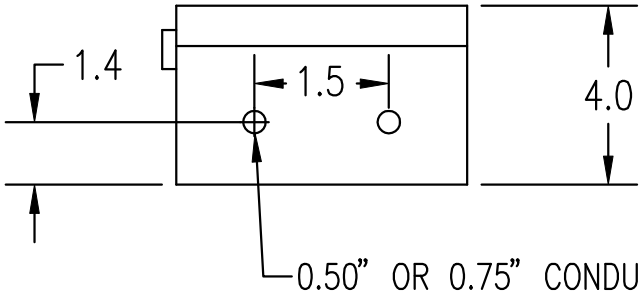


MODEL L100DX AC CURRENT/HP SENSOR WIRING DIAGRAM AC POWER CONFIGURATION	*LaBour Pumps*		
	DWG. No. L100DX IOM FIG. 2	DATE 11/11/96	REV. A

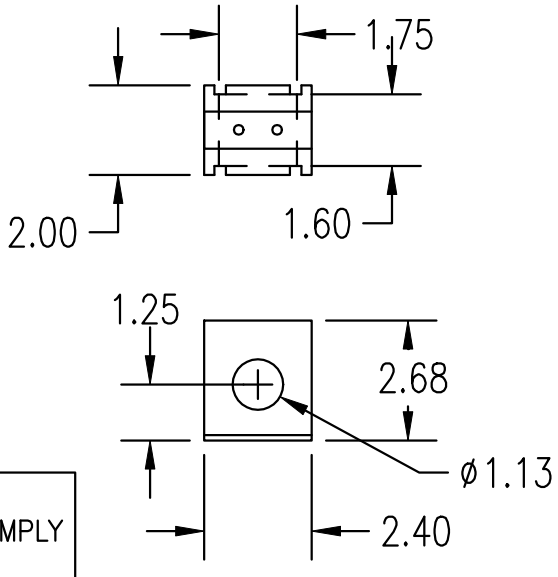
POLYCARBONATE ENCLOSURE



MTG FEET: 4 x 6.94"
REAR MTG: 4.00 x 4.12

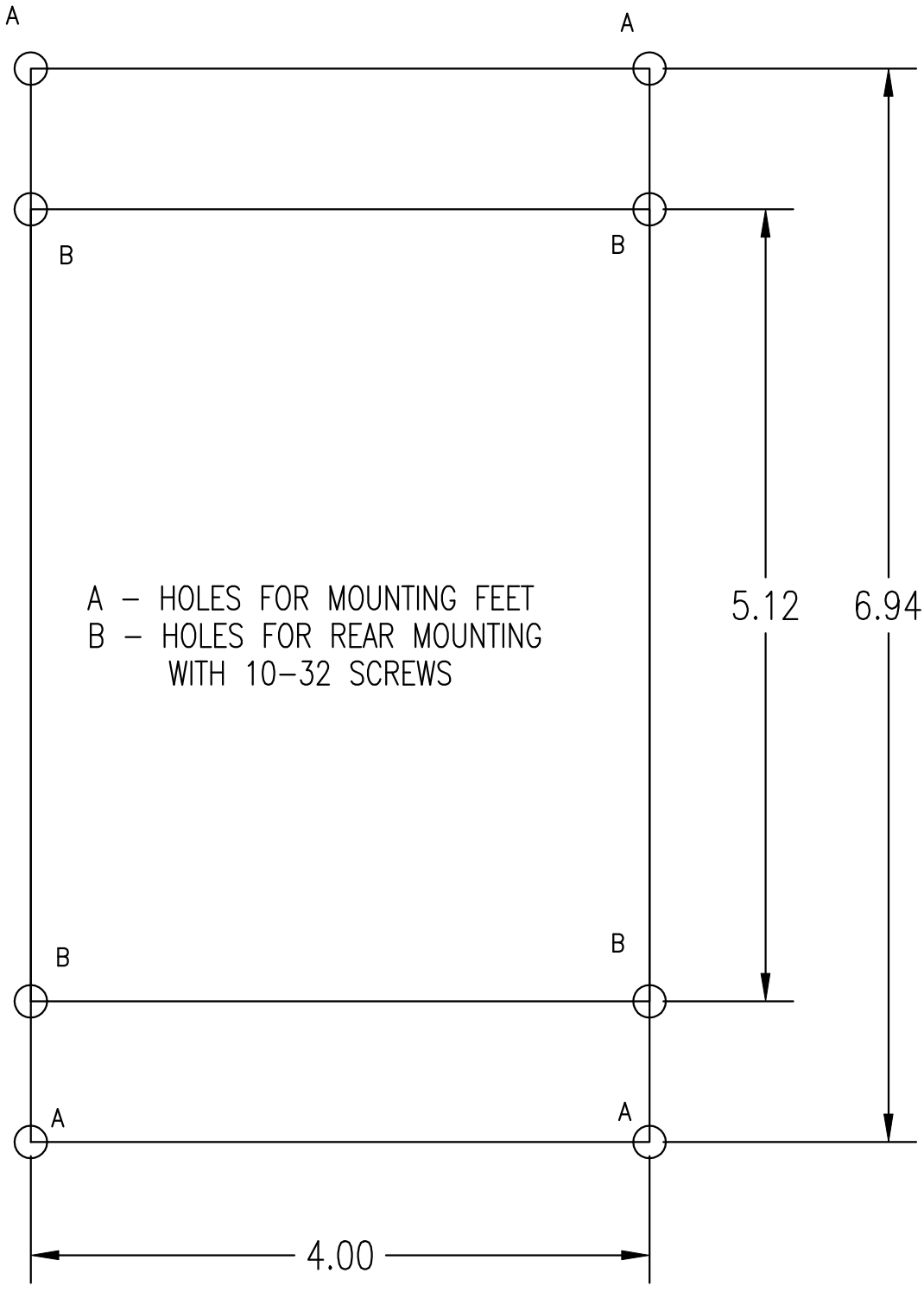


SENSE TRANSFORMER



NOTE: BOTH ENCLOSURES COMPLY WITH NEMA 4X/UL STANDARDS

L100DX & SENSE TRANSFORMER ENCLOSURES	*LaBour Pumps*		
	DWG. No. L100DX IOM FIG. 3	DATE 11/21/96	REV. B



L100DX DRILL TEMPLATE MOUNTING FEET	*LaBour Pumps*		
	DWG. No. L100DX IOM FIG. 4	DATE 11/11/96	REV. A

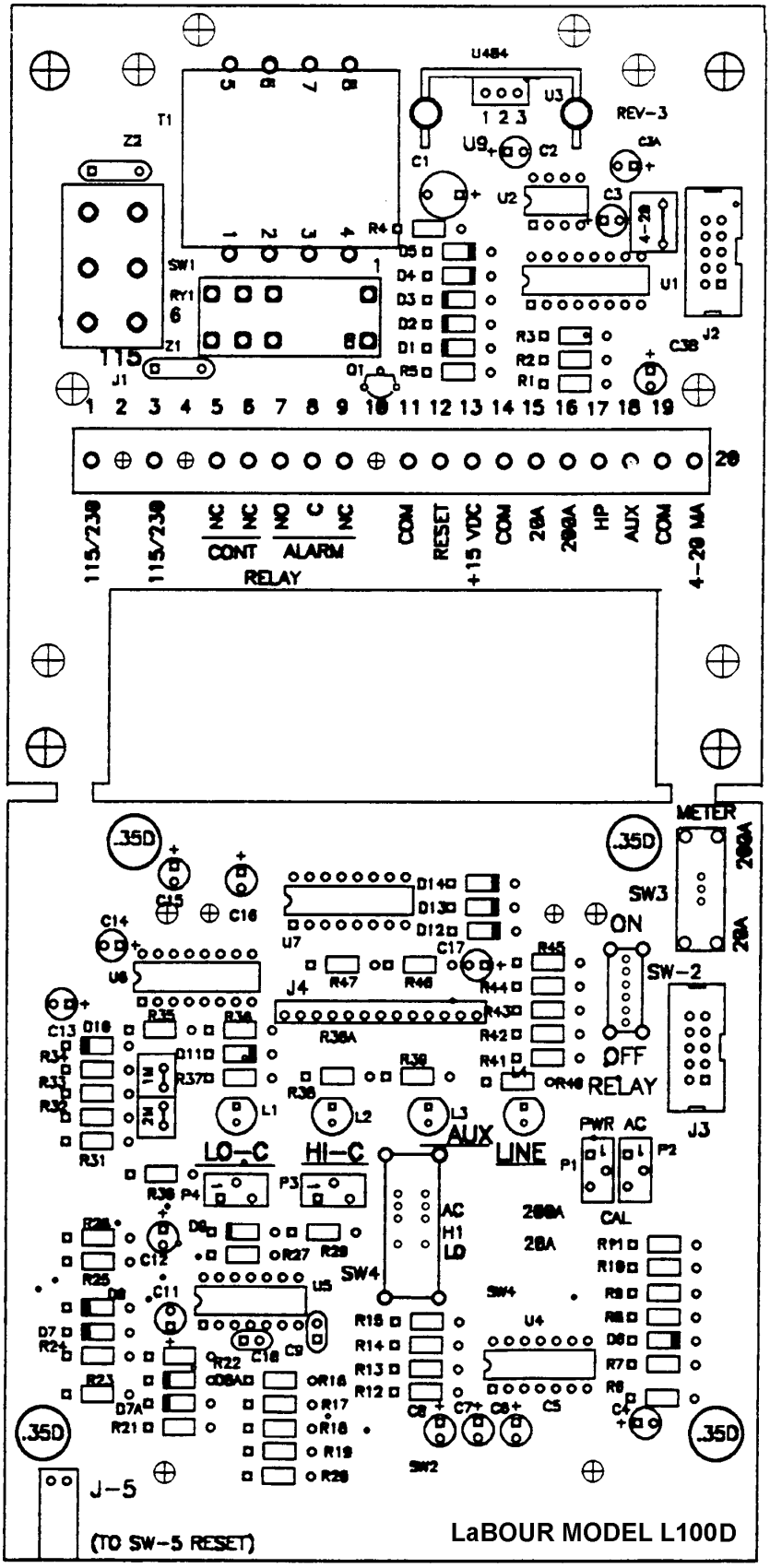
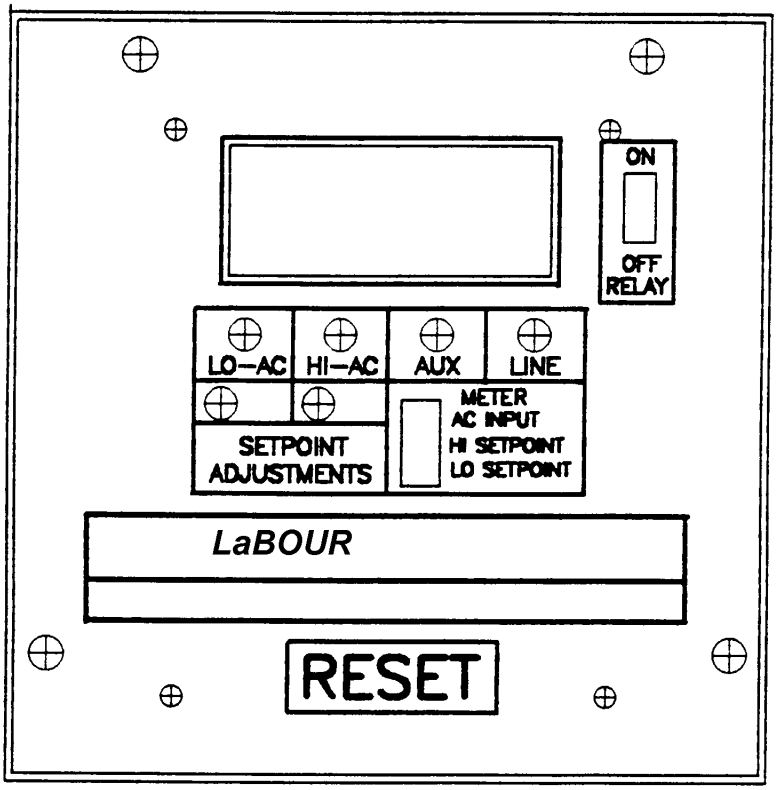


FIG. 5

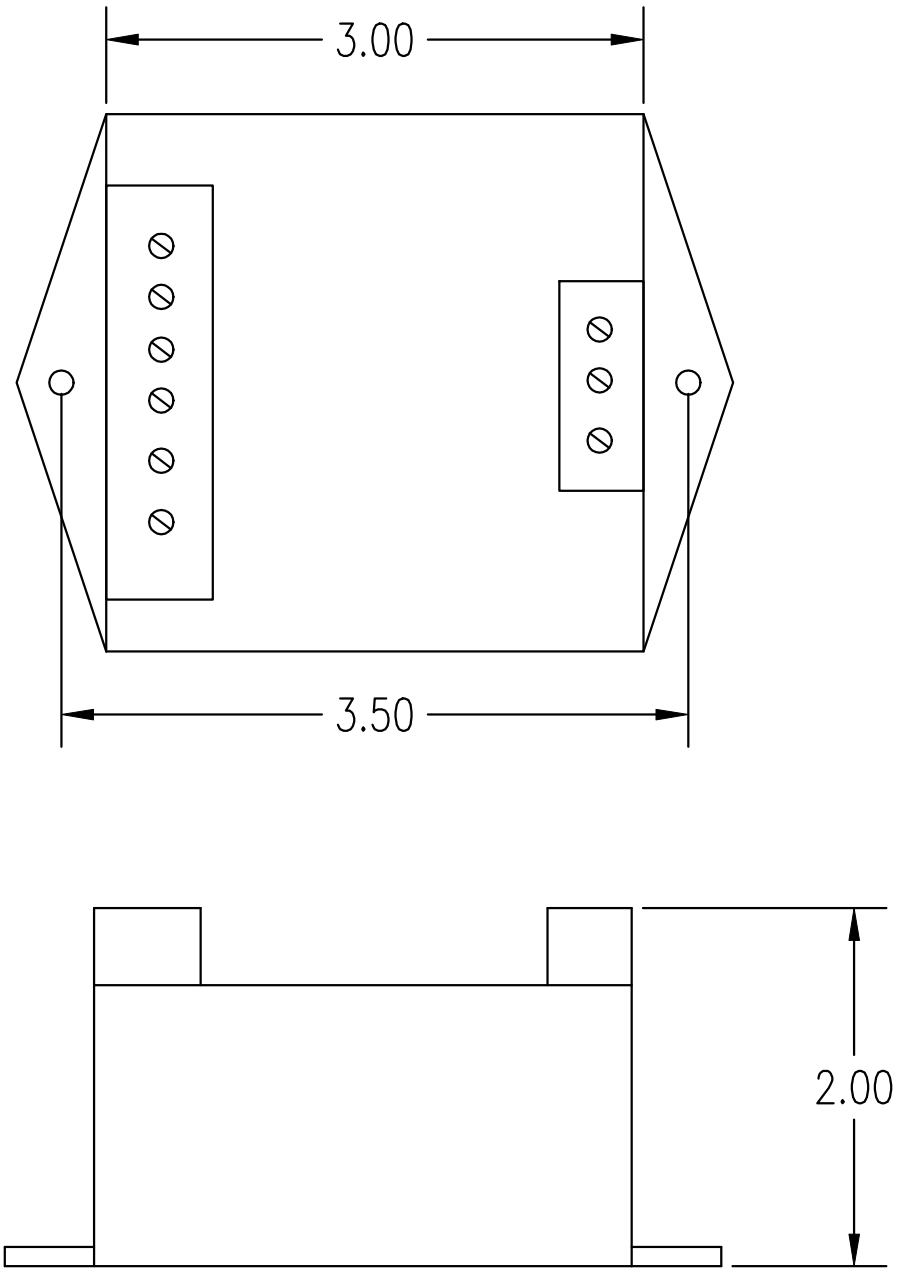
L100DX BOARD	*LaBour Pumps*		
	DWG. No.	DATE	REV.
	L100DX IOM FIG. 5	07/10/95	--



FRONT PANEL

FIG. 6

L100DX FRONT PANEL	*LaBour Pumps*		
	DWG. No.	DATE	REV.
	L100DX IOM FIG. 6	07/10/95	--



KP-1 POWER SENSOR

LaBour Pumps

DWG. No.	DATE	REV.
L100DX IOM FIG. 7	11/11/96	--