

SERIES 35 TEMPERATURE MONITOR  
3 Wire

Using 10 Ohm Resistance Detectors

Part No.

Model No. 3W 2076A36H01 with Trip Only  
Model No. 3W 2076A36H02 with Alarm and Trip

2188A42H15  
2188A42H16

Using 100 Ohm Platinum Temperature Detectors

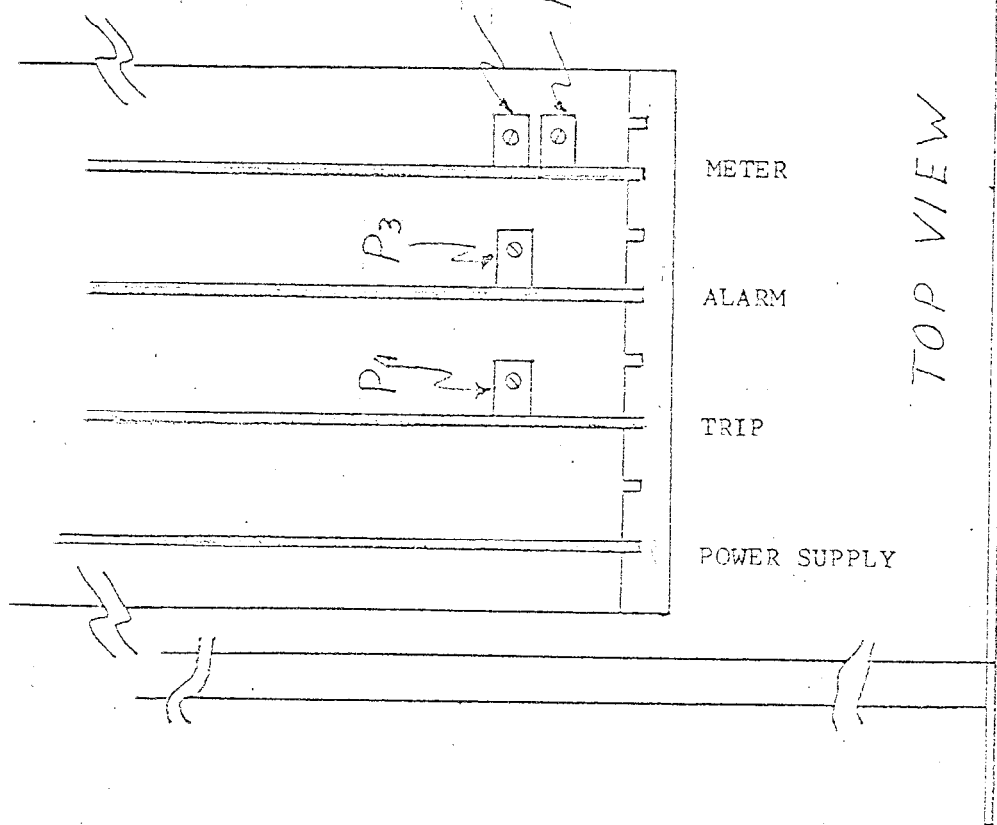
Model No. 3W 2076A36H03 with Trip Only  
Model No. 3W 2076A36H04 with Alarm and Trip

2188A42H17  
2188A42H18

Using 120 Ohm Nickel Temperature Detectors

Model No. 3W 2076A36H05 with Trip Only  
Model No. 3W 2076A36H06 with Alarm and Trip

2188A42H19  
2188A42H20



TOP VIEW

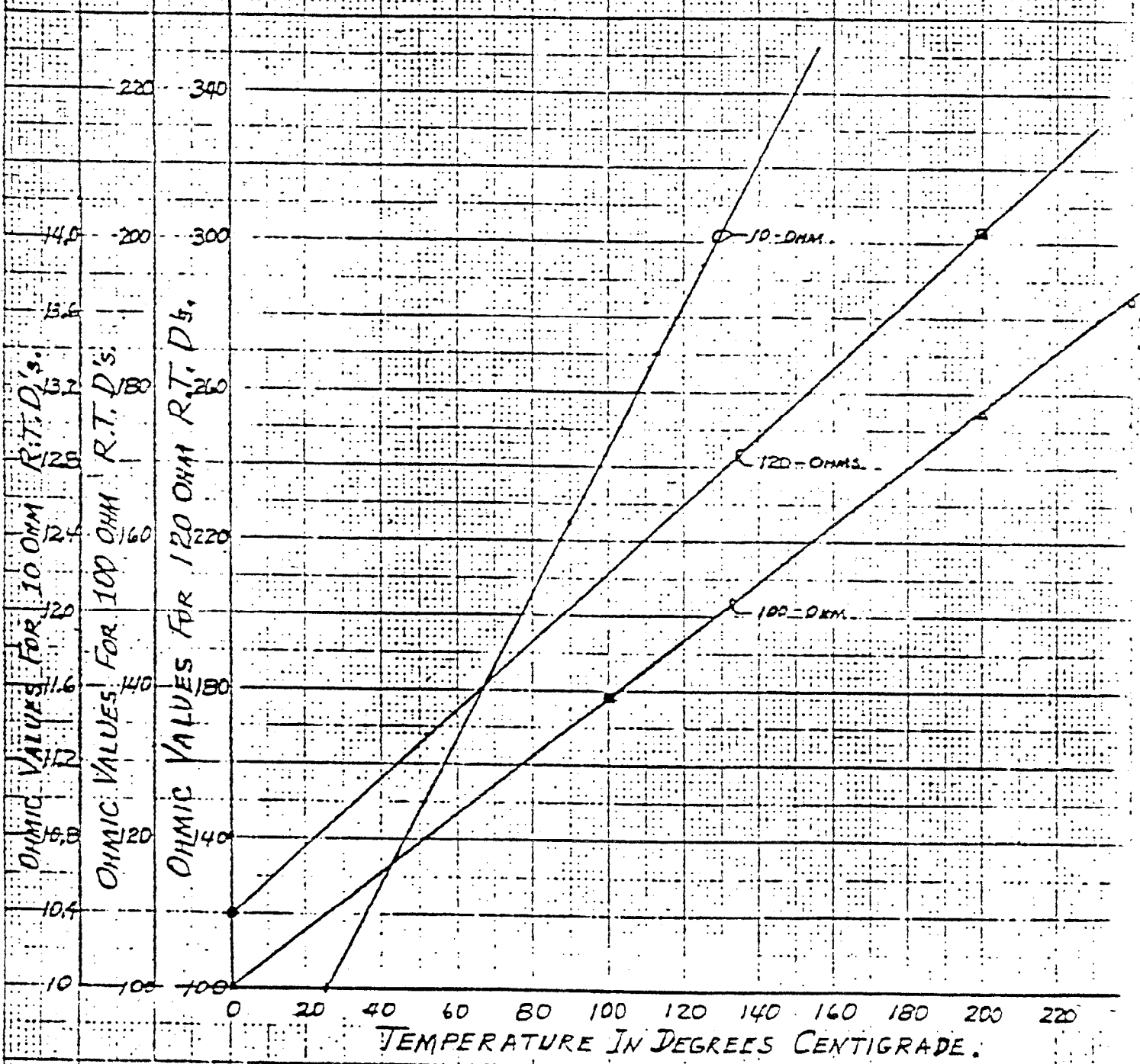
REVISIONS									
DATE									

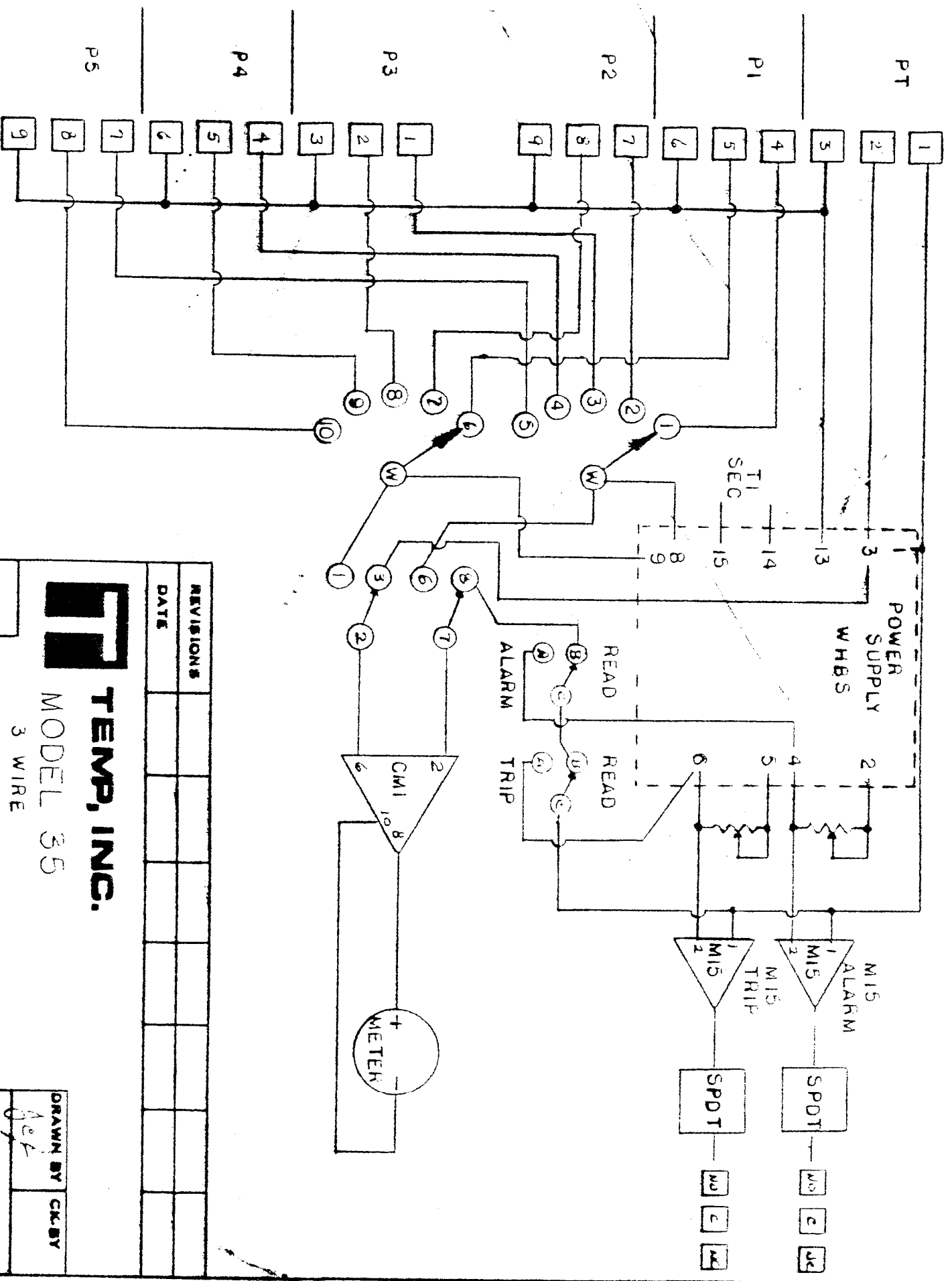
TEMP, INC.

Calibration Adjustments  
for Wash Temp Mon.

DRAWN BY	CK:BY
BV	BV
2076A-36-42	
Temp - 535-2	

# RESISTANCE-TEMPERATURE CURVES FOR DIFFERENT RESISTANCE-TEMPERATURE DETECTORS





REVISIONS	DATE								



**TEMP, INC.**

MODEL 35

3 WIRE

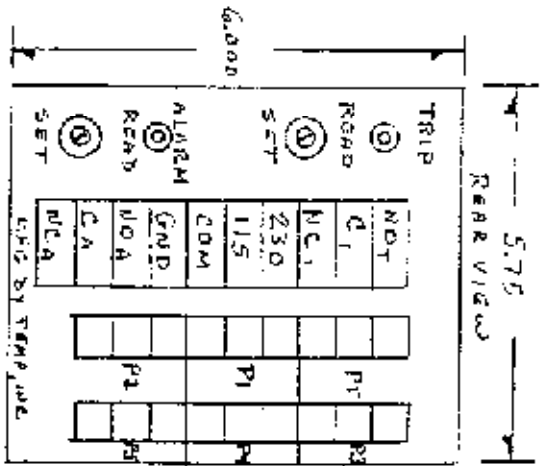
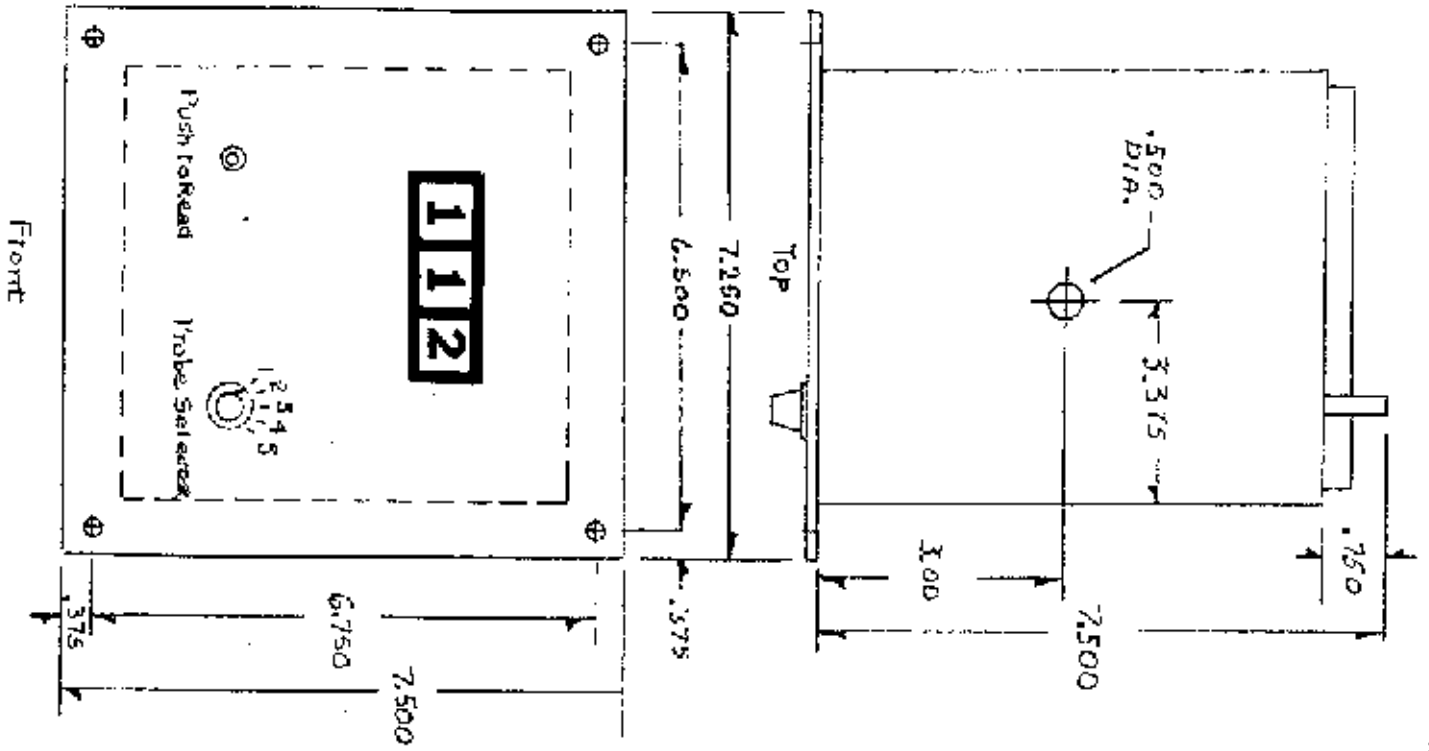
WIRING DIAGRAM

DRAWN BY  
Aet

CK. BY

INSTALLATION  
INSTRUCTIONS

1. Connect AC to Terminals.
2. Connect all Probes To the Instrument and Determine Which Probe Runs Hottest Then Connect This Probe To Terminals Marked P1.
3. Temp. Monitor Will Alarm If This Probe Temperature Exceeds The Alarm Card Set Points.
4. Connect Load To Output Relay.



REVISIONS	DATE								



**TEMP, INC.**

MODEL 35

2076A3G - H02, 446

DRAWN BY CK-BY

The three wire RTD's have three input connections per point supplied on the rear of the monitor. The two common wires are connected to terminals 2 and 3 of the particular point. The other wire is connected to terminal 1. Should less than six RTD's be connected to the monitor, it is necessary to jumper the unused terminals of each point together. This is to prevent open circuiting the instrument, resulting in burnout or up scale pegging when the pushbutton is depressed.

This industrial type of control is designed to be installed, operated, and maintained by adequately trained workmen. These instructions do not cover all details, variations, or combinations of the equipment, its storage, delivery, installation, checkout, safe operation or maintenance. Care must be exercised to comply with local, state, and national regulations as well as safety practices, for this class of equipment.

CAUTION: DO NOT TRY TO "RING-OUT LEADS WITH THEM  
CONNECTED TO THE INSTRUMENT. IT WILL BURN OUT  
OR DAMAGE THE LOW VOLTAGE COMPONENTS. ALSO DO  
NOT "HI-POT" THE (RTD) CIRCUIT.

No routine maintenance is required and should the instrument appear defective, call the factory.

the second wire side of the probes and the other side connected between (R3) and the (RTD) connected on (PT) terminals. One input goes through the normally closed side of pushbutton switches (PB-1), (PB-2), and (PB-3) before connecting to the meter indicator card.

If it is desired to read the temperature of an (RTD) other than the one connected to (PT) terminal it is necessary to set the selector switch to the one desired, then press the read pushbutton on the front of the instrument. When the read pushbutton is released the indicator transfers and control is returned to the (RTD) connected to the (PT) terminals, regardless of the switch position.

The instrument will monitor correctly even though the meter has friction or is sticking. The monitoring is independent of the meter reading.

Refer to sheet (4) of Dwg. 2076A36 for typical connection diagram. The outline is shown on sheets (2) and (3) of the same drawing.

Model No. 3W 2076A36H01 is a single Alarm Unit for 10 Ohm RTD  
Model No. 3W 2076A36H02 is a dual Alarm Unit for 10 Ohm RTD  
Model No. 3W 2076A36H03 is a single Alarm Unit for 100 Ohm RTD  
Model No. 3W 2076A36H04 is a dual Alarm Unit for 100 Ohm RTD  
Model No. 3W 2076A36H05 is a single Alarm Unit for 120 Ohm RTD  
Model No. 3W 2076A36H06 is a dual Alarm Unit for 120 Ohm RTD

The single or dual units have set points, individually adjustable. Once the instrument is aligned re-connect the leads to the temperature detectors and check operation.

When it is desired to know where the alarm point is set the (PB-2) pushbutton, on the rear of the instrument, is depressed and held until the set point temperature is read on the meter. Likewise when it is desired to know where the shutdown point is set the (PB-3) pushbutton is depressed and read on the meter. NOTE: If the (PT) temperature detector is at something above ambient it introduces a small error and may read in error a few degrees. Normally the trip points adjustments are made on the initial startup and only checked occasionally. If it is desirable to change a particular set point it is only necessary to rotate the screw driver adjustment on the respective set point potentiometer until the set point reads the desired value, then release the pushbutton, when the (PT) temperature sensor is at ambient condition.

When neither pushbutton is depressed the meter reads the temperature of the (RTD) connected to the (PT) terminals, therefore it is necessary to locate the highest temperature (RTD) and connect to this point on the temperature monitor. The indicating circuit consists of one side of the meter card being connected to

INSTRUCTIONS FOR SERIES 35  
TEMPERATURE MONITOR

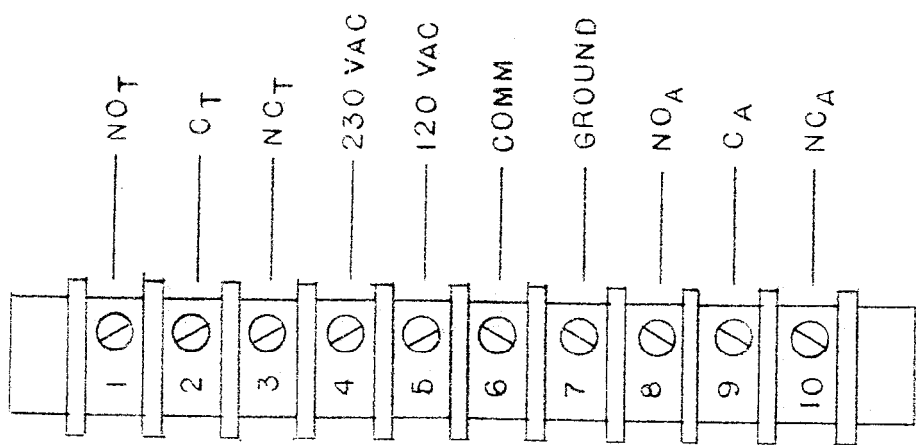
The temperature monitor is a solid state system used for indications and alarm (alarms) on RTD inputs. The unit consists basically of three or four plug-in printed circuit cards, dependent upon whether the unit is single or dual alarm:

1. Alarm Card #1, M15A-1 (0005) - For single alarm units
2. Alarm Card #2, M15A-1 (0005) - plus card #1 for dual alarm unit
3. Meter, Indicator Card, CMI (0078)
4. Power Supply Card, WHBS (0135)

The unit incorporates a front panel mounted indicator, selector switch and pushbutton for indications.

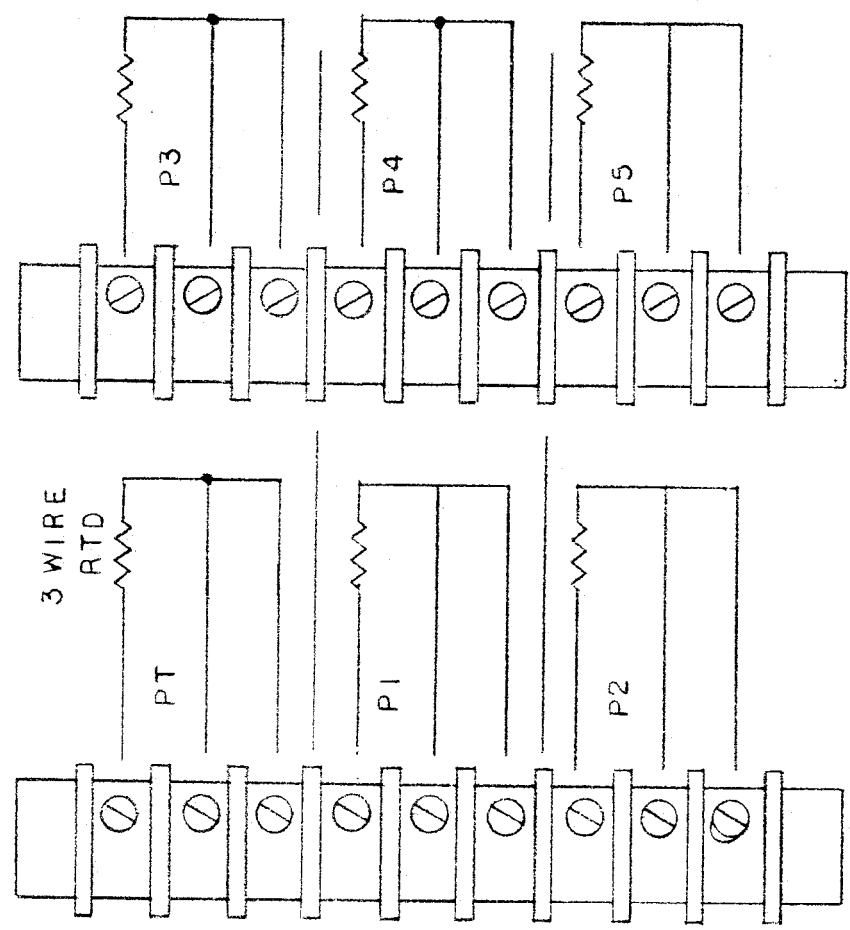
The temperature is sensed by means of (RTD's) Resistance Temperature Detectors, one of which (PT) is used in a bridge circuit consisting of resistor (R1) on the Power Supply Card and (PT) in one leg of the bridge and resistors R2 (R2A), R3 (R3A), and P1 potentiometer (P1) in the other leg of the bridge. The output of this bridge feeds the alarm card (#1). The alarm card (#1) operates the Trip Temperature Relay providing a single pole double throw contact for customers use. See Figure 1 schematic for Temperature Monitor. Figure 2 is the schematic for the dual alarm unit.

The temperature set points for the Alarm and Trip circuits are (P1) and (P2) potentiometers, if dual units. These potentiometers are located on the rear of the instrument. The set point potentiometers are uncalibrated and must be set for appropriate set points, Alarm and Trip, by the customer to suit the machine safe operating temperature.



240VAC Operation----Connect  
Power to 4 and 6

120VAC Operation----Connect  
Power to 5 and 6



PT HOTTEST PROBE

REVISIONS	DATE								



DRAWN BY CK.BY

FIG. 5 - LINEARITY CALIBRATION

Style No.	Connect A Resistor on (PT) Terminals at Motor	Remove Cover Over (P1) Pot. on Top of the Instrument	Connect a Resistor on (P1) Leads and Set Sel. Sw. to Position No. 1	Depress Pushbutton on Front of Inst. and Rec Adjust (P2) Po
2076A36H01 2076A36H02	Use 10 Ohm Resistor in the Motor on (PT)	Adjust (P1) for Meter Reading 25°C	Use 13.5 Ohm Resistor	Meter Should Read 115°C
2076A36H03 2076A36H04	Use 100 Ohm Resistor in the Motor on (PT)	Adjust (P1) for Reading 0°C	Use 170 Ohm Resistor	Meter Should Read 180°C
2076A36H05 2076A36H06	Use 120 Ohm Resistor in the Motor on (PT)	Adjust (P1) for Reading 0°C	Use 300 Ohm Resistor	Meter Should Read 195°C