INSTALLATION • OPERATION • MAINTENANCE

INSTRUCTIONS

K-261 LINE SWITCHBOARD INSTRUMENTS EIGHT AND ONE-HALF INCH CLASSIFICATION FULL-VIEW CIRCULAR SCALE TYPE

GENERAL

Type K-261 instruments are designed and built to meet or exceed the requirements of American Standard C39.1 for electrical indicating switchboard instruments. The rated accuracy class is one per cent.

CASES

The first letter in the Type designation indicates the form of case used. K = Rectangular Flush Case, Flange mounted.

MECHANISMS

The second letter in the type designation indicates the principle of operation.

X = Permanent magnet moving coil
A = Repulsion-Attraction, moving iron
P = Watt transducer plus X
I = Rotating iron vane
C = Rectifier plus X

All of the above mechanisms employ the taut band suspension bearing system except the I type.

CAUTION: When the instrument mechanism is exposed, avoid contact with the tension springs. These springs are precisely made and positioned, and any pressures inadvertently applied to them may cause misalignment of the moving element.

DIAL NOTES

References to type style number, use of external components if required, coil ratings, calibration data etc., are made on the dial mask.

INSTALLATION

Unpack instruments carefully. Terminal and mounting hardware, and any external components may be in separate packages.

Drill panels and connect instruments according to the diagrams in this leaflet, or according to switchboard drawings if instruments are supplied as part of a switchboard.

Before energizing the instrument, adjust the pointer to zero by means of the zero adjuster at the front of the instrument.

CIRCUIT PRECAUTIONS

HIGH VOLTAGE OPERATION

All instruments are insulated for 800 volt maximum service.

When voltmeters are used with external resistors on voltages higher than the insulation rating of the instrument, one terminal of the instrument should be grounded.

Ammeters with external shunts must be used with leads having the resistance specified in the dial notes. If the circuit voltage exceeds the insulation rating of the instrument, the shunt should be in the grounded side of the line.

GROUNDING OF CASES

Instruments, when mounted on grounded metal structures, are considered adequately grounded when secured to the structures by metal hardware. For mounting on insulated structures any one of the three case to base mounting screws may be used as a grounding terminal.

REPAIRS AND RENEWAL PARTS

The usual procedures and practices employed for servicing mechanisms of pivot-jewel type instruments cannot be applied to suspension type instruments. For this reason we recommend that all instruments in need of mechanism servicing be returned to the factory.

Orders for renewal parts should include the name of the part and the style and serial number of the instrument, appearing on the dial mask.

SUPERSEDES I.L. 43-261A
Dated June 1965

EFFECTIVE MARCH 1967

ASEM NO.	TYPE	INSTRUMENT	TERMINALS IN POSITION NO.	TERM. THD.	DIM. A	RESISTOR CAGE	EXTERNAL BOX DWG. NO.
1	KA-261	A. C. VOLTMETER UP TO 600 V.	1-2	.190-32	3.656	USED	NONE
2	KA-261	A. C. AMMETER UP TO & INCLUDING 20 AMP	1-2	.190-32	3.656	NOT USED	NONE
3	KA-261	SYNCHROSCOPE - SINGLE PHASE	1-2-9-10	.190-32	5.218	USED	NONE
4	KA-261	POWER FACTOR METER-SINGLE PHASE	1-2-9-10	.190-32	5.218	USED	NONE
5	KA-261	POWER FACTOR METER- 3 PHASE	1-2-8-9-10	.190-32	5.218	USED	NONE
6	KA-261	D.C. INSTS. INCLUDING AMMETERS UP TO 20 AMP	3-5	.190-32	2.719	NOT USED	NONE
7	KA-261	D.C. AMMETERS 30 & 50 AMP	3-5	1/4-28	2.719	NOT USED	NONE
8	KA-261	RECTIFIER INST. EXCEPT TRANSFORMER TYPE	3-5	.190-32	2.719	NOT USED	NONE
9	KA-261	WATTMETER (POLY PH. 2-CC)	1-2-3-5-6-7-9-10	.190-32	5.218	NOT USED	NONE
10	KA-261	WATTMETER (POLY PH. 3-CC)	1-2-3-4-5-6-7-8-9-10	.190-32	5.218	NOT USED	NONE
11	KA-261	WATTMETER (SINGLE PHASE)	3-5-6-7-	.190-32	5.218	NOT USED	NONE
12	KA-261	TRANSFORMER TYPE RECTIFIER AMMETER	3-5	.190-32	3.656	NOT USED	NONE
13	KA-261	ELECTRICAL RESISTANCE THERMOMETER	1-2-3-4-5-6-7	.190-32	3.656	NOT USED	NONE

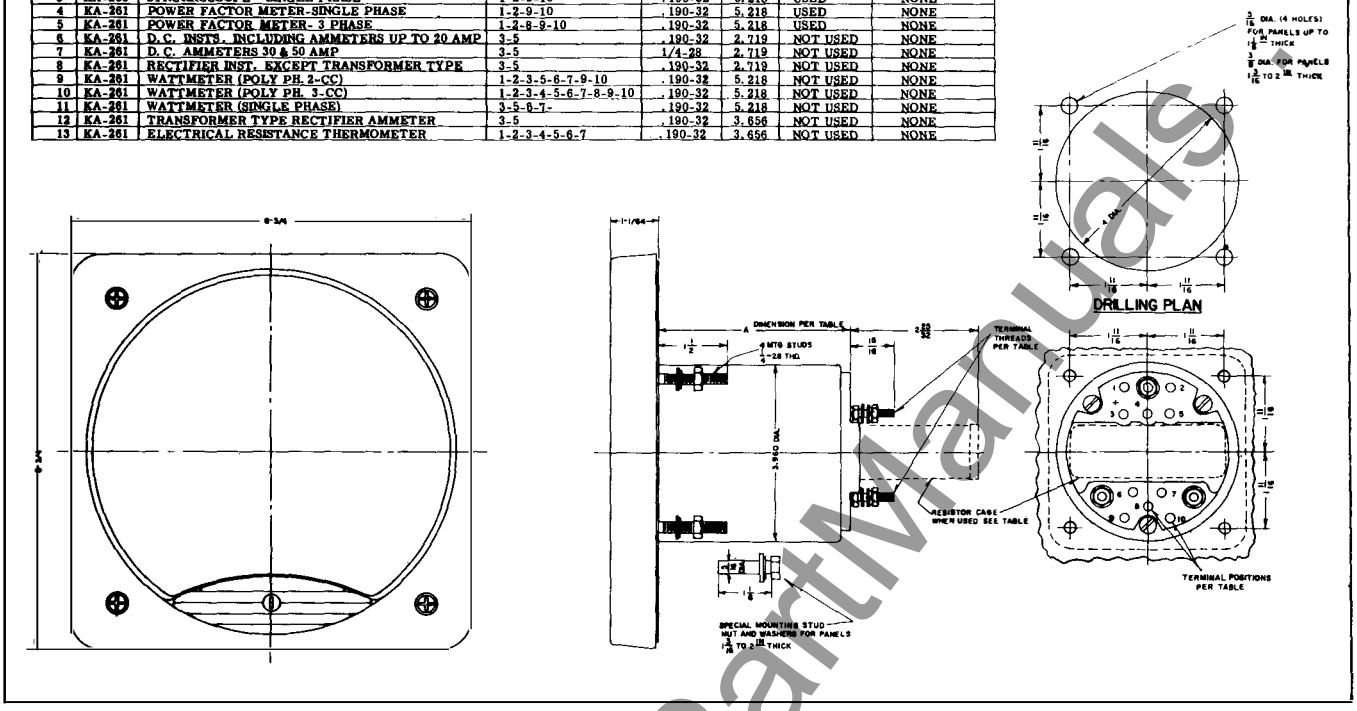
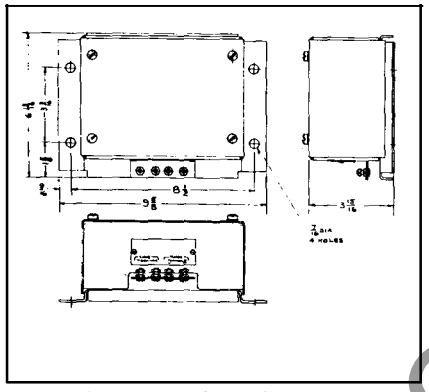
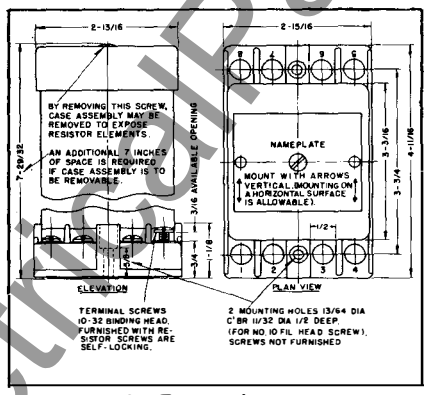


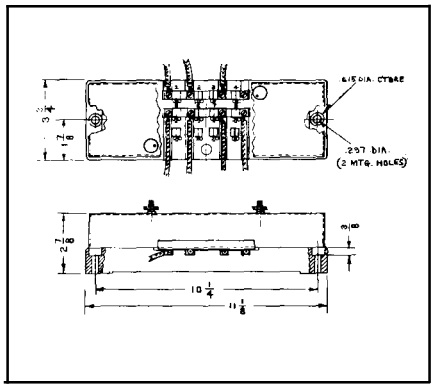
Fig. 1. Outline Dimensions and Drilling Plan for Type K-261 Instruments and Accessories.



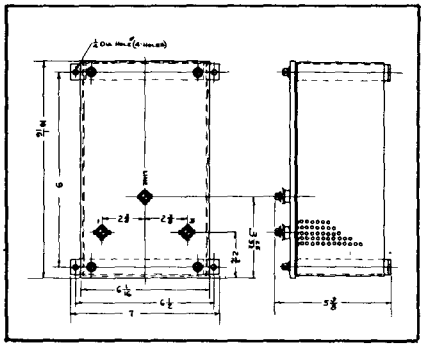
Transducer used with Frequency Meter.



VR-825 External Resistor.



Phase Shifting Transformer used with 3-phase, 3-wire Varmeter and 3-phase 4 wire.



Reactive Compensator used with Single Phase Varmeter.

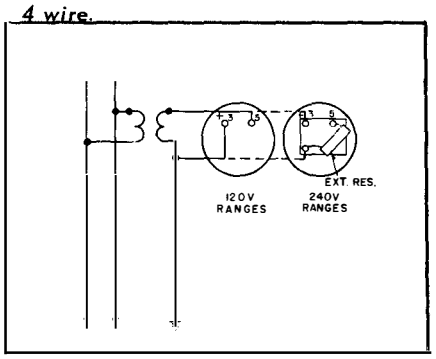


Fig. 2. Type KR2-261 Self Contained Frequency Meter.

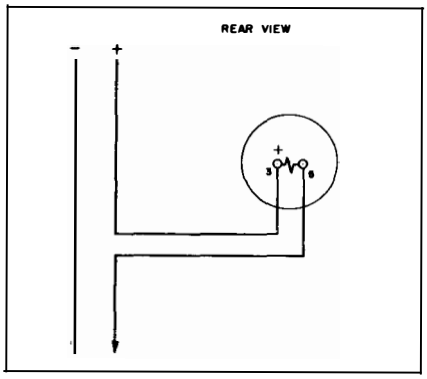


Fig. 3. Type KX-261 Ammeter and Milliameter (self-contained.)

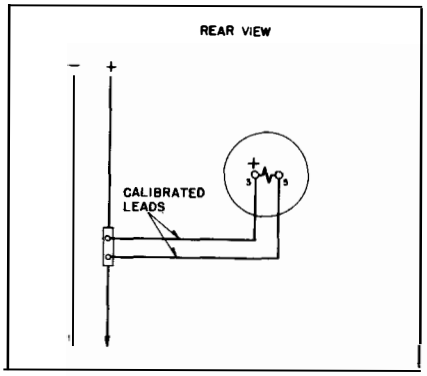


Fig. 4. Type KX-261 Ammeter with External Shunt.

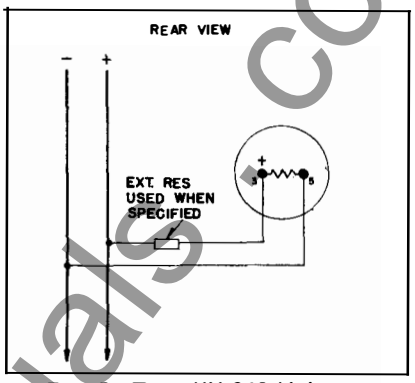


Fig. 5. Type KX-261 Voltmeter

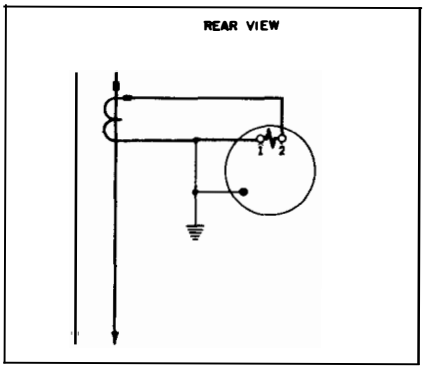


Fig. 6. Type KA-261 and C-261 Ammeter.

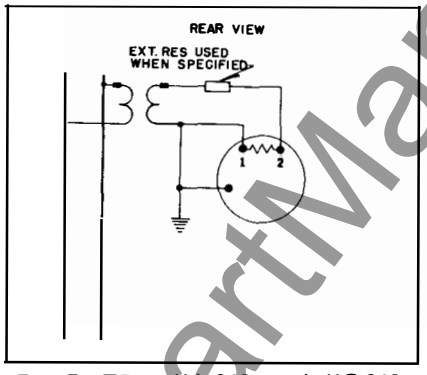


Fig. 7. Type KA-261 and KC-261 Voltmeter.

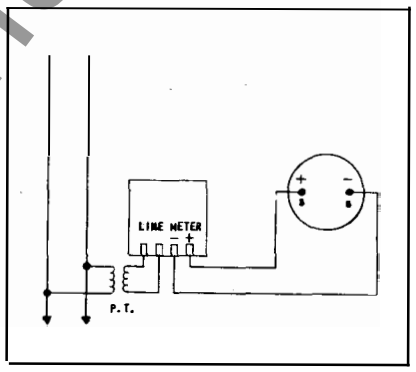


Fig. 8. Type KX-261 Frequency Meter with External Transducer.

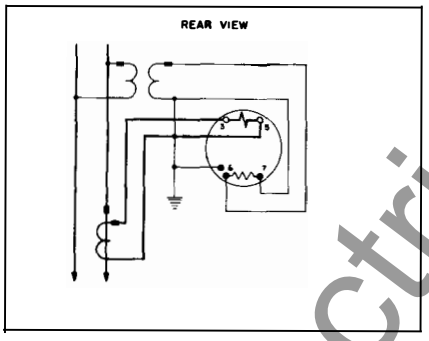


Fig. 9. Type KP-261 Single Phase Wattmeter

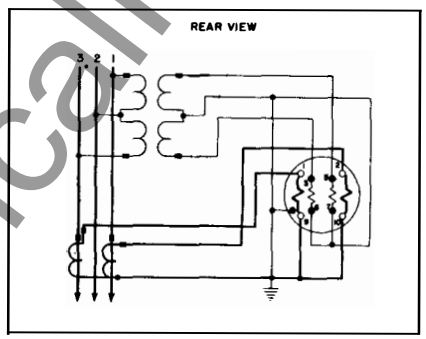


Fig. 10 Type KP-261 polyphase 2 current coil wattmeter.

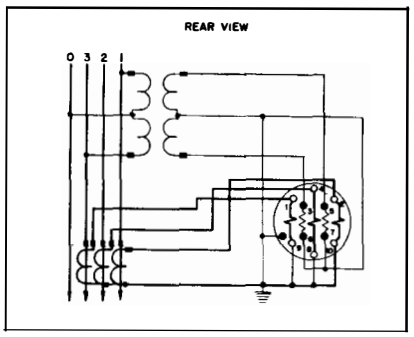


Fig. 11. Type KP-261 Polyphase 3 current coil wattmeter.

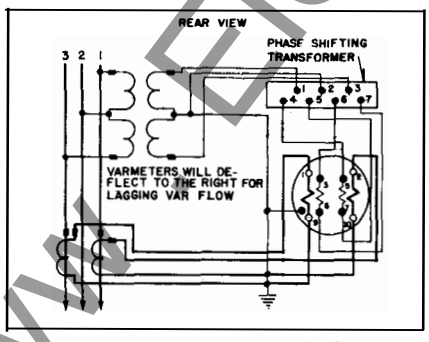


Fig. 12. Type KP-261 Polyphase 2 current Coil Varmeter.

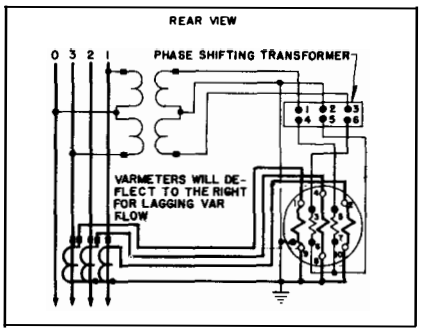


Fig. 13. Type KP-261 Polpyhase 3 Current Coil Varmeter.

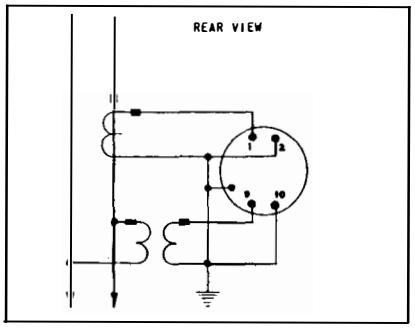


Fig. 14. Type KI-261 Single Phase Power Factor Meter.

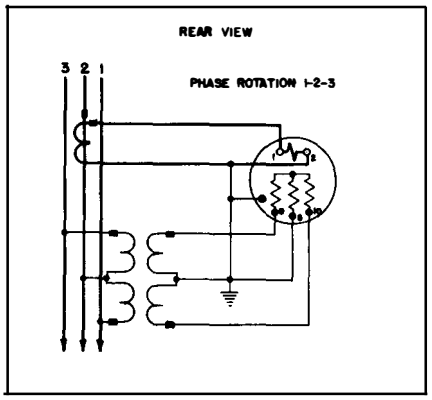


Fig. 15. Type KI-261 Polyphase Power Factor Meter.

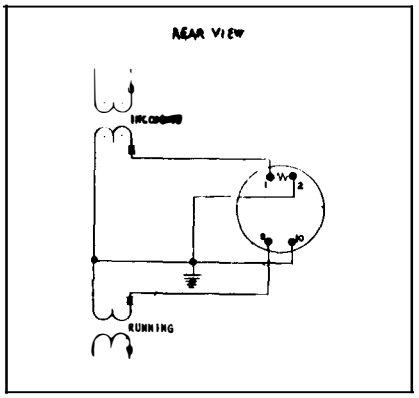


Fig. 16. Type KI-261 Synchroscope.

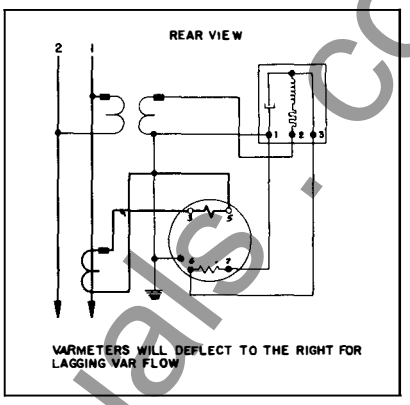


Fig. 17. Type KP-261 Single Phase Varmeter.

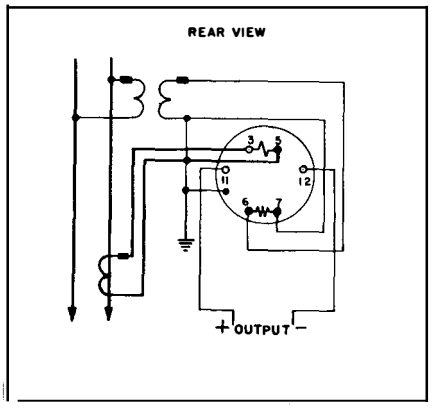


Fig. 18. Type KP2-261 Indicating Watt Transducer Single Phase.

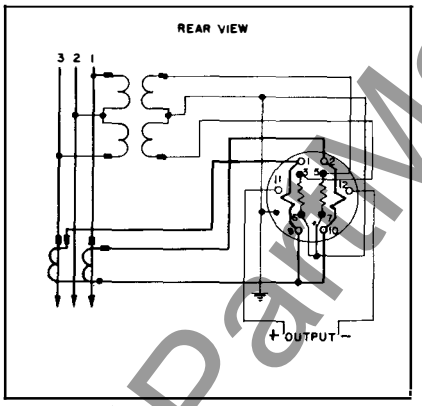


Fig. 19. Type KP2-261 Indicating Watt Transducer 2 Current Coil.

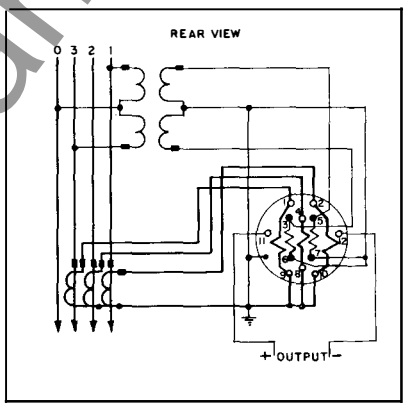


Fig. 20. Type KP2-261 Indicating Watt Transducer 3 Current Coil.

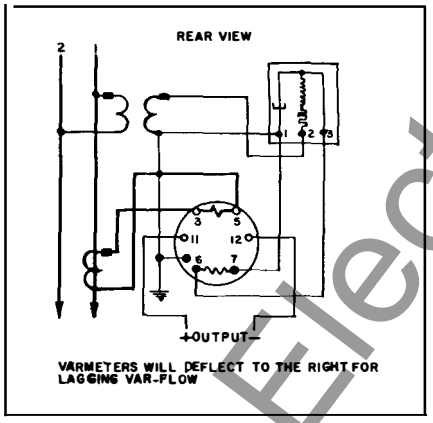


Fig. 21. Type KP2-261 Indicating VAR Transducer Single Phase.

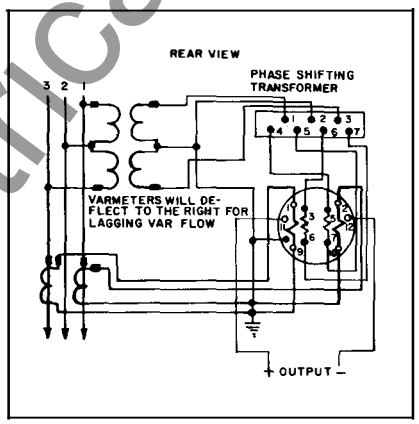


Fig. 22. Type KP2-261 Indicating VAR Transducer 2 Current Coil.

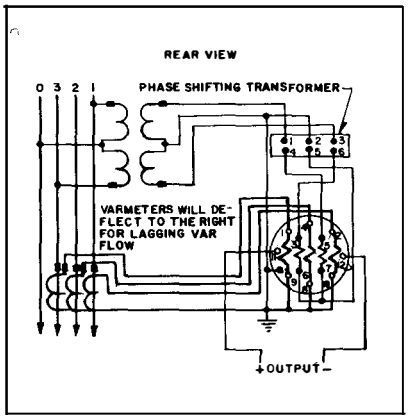


Fig. 23. Type KP2-261 Indicating VAR Transducer 3 Current Coil.