

VOLTAGE AND FREQUENCY MONITOR UNITS

General Description

A comprehensive range of electronic instruments designed for modern industrial applications. A transistorised amplifier is used to operate a relay when the monitored voltage or frequency moves outside the prescribed limits. The relay contacts may be used to provide audible or visual alarms and/or switch contactors.

Applications

Control and monitoring of emergency and standby supplies.
Monitoring and switching of ground power units.
Voltage and frequency alarms for diesel alternators.
Mains supply monitoring for all equipment.

A.C. Under and Over Voltage Trip Units

The under and over voltage trip units are accurate instruments designed to operate from a single phase or three phase four wire A.C. supply. Each phase voltage trip point is independently adjustable and the relay will de-energise if any one or more of the phase voltages move outside the set trip points.

Specification

Relay, two pole change over 8 amp maximum.
Ambient temperature range -10°C to $+55^{\circ}\text{C}$.
Maximum temperature drift 0.02% per $^{\circ}\text{C}$.
Time constant approximately 500 milliseconds.
Trip Point ranges OVT 0 to $+20\%$ UVT 0 to -20% .
Hysteresis range 1% to 20% standard 5%.
Supply frequency range 45Hz to 500 Hz.
Nominal auxiliary supplies 120VAC, 240VAC or 415VAC.

| Monitored AC Input Volts. Nominal | Under Voltage. Unit type No. | Over Voltage. Unit type No. |
|--------------------------------------|---------------------------------|--------------------------------|
| 120V single phase. | UVT12A1. | OVT12A1. |
| 240V single phase. | UVT24A1. | OVT24A1. |
| 208/120V three phase. | UVT12A3. | OVT12A3. |
| 415/240V three phase. | UVT24A3. | OVT24A3. |

ORDERING DATA: Please specify:—

Type No, Input Voltage, Auxiliary Supply (may be derived from any input phase), Trip Point, Voltage. Hysteresis if different from standard 5%.

High and Low Frequency Trip Units.

The frequency trip units are used to monitor the supply frequency. Each unit has a fine and coarse adjustment of the trip point to facilitate accurate setting of the trip level. The low frequency unit's relay de-energises when the frequency goes low and the high frequency unit's relay de-energises when the frequency goes high. Under normal conditions these units will monitor the frequency of it's own mains supply, a signal equivalent to this frequency is fed to the input of the unit via the link shown on the connection diagram.

Specification

Relay, two pole change over 8 amp maximum.
Ambient temperature range -10°C to $+50^{\circ}\text{C}$.
Maximum temperature drift 0.04% per $^{\circ}\text{C}$.
Time constant approximately 500 milliseconds.
Trip point range HFT 0 to $+20\%$, LFT 0 to -20% .
Hysteresis 0.2Hz for 50 Hz units, 1.0 Hz for 400 Hz units.

| Monitored Supply Frequency. | Low Frequency. Unit type No. | High Frequency. Unit Type No. |
|-----------------------------|---------------------------------|----------------------------------|
| Nominal. | | |
| 50 Hz. | LFT50. | HFT50. |
| 60 Hz. | LFT60. | HFT60. |
| 400 Hz. | LFT400. | HFT400. |

ORDERING DATA: Please Specify:—

Type No, Supply Voltage, Trip Point Frequency.

Mains Failure Unit.

The mains failure unit is specifically designed to operate from a 3 phase 3 wire supply. Two phase voltages are monitored, the third phase (B) is used as reference, and the relay will de-energise if any of the monitored voltages fall below the trip level setting. an internal preset control allows the trip point to be adjusted.

Specification

Relay, two pole change over 5 amps maximum
Ambient temperature range -10°C to $+55^{\circ}\text{C}$.
Maximum temperature drift 0.1% per $^{\circ}\text{C}$.
Time constant approximately 500 milliseconds.
Trip point range 0 to -30% .
Hysteresis range 2% to 10%.
Supply frequency range 45Hz to 500 Hz.

| Monitored AC Input Volts (Nominal.) | Unit type No. |
|-------------------------------------|---------------|
| 420 three phase | MFU45. |
| 240 three phase | MFU24. |

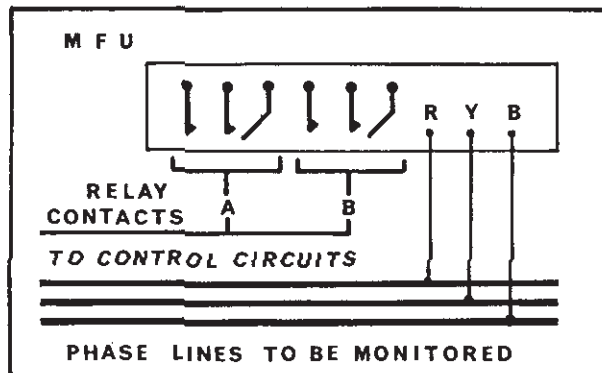
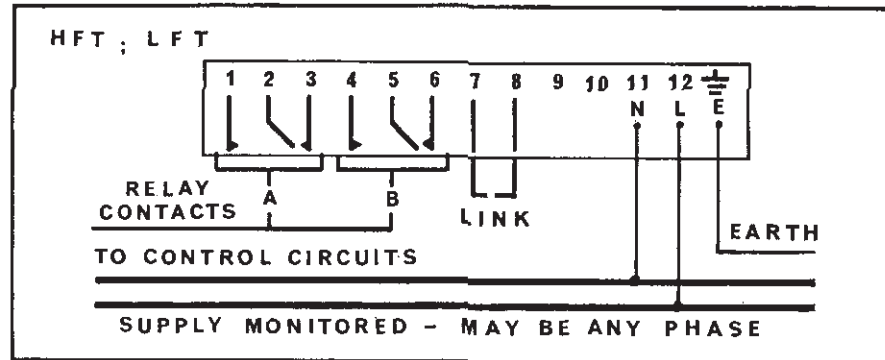
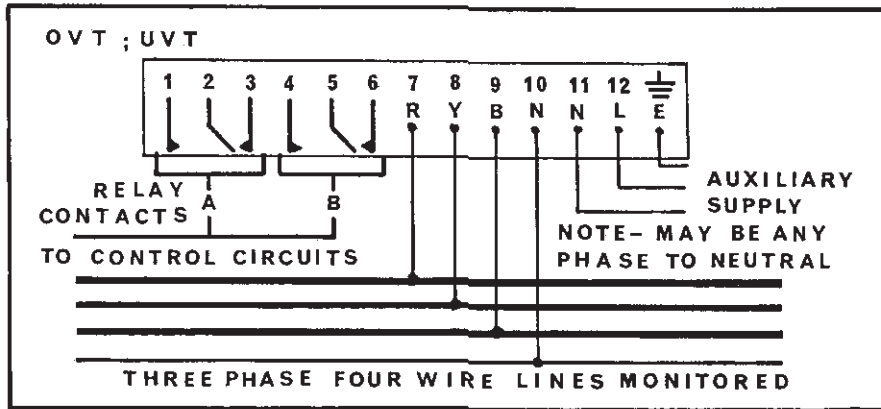
ORDERING DATA: Please specify:— Type No, Input voltage, trip point.



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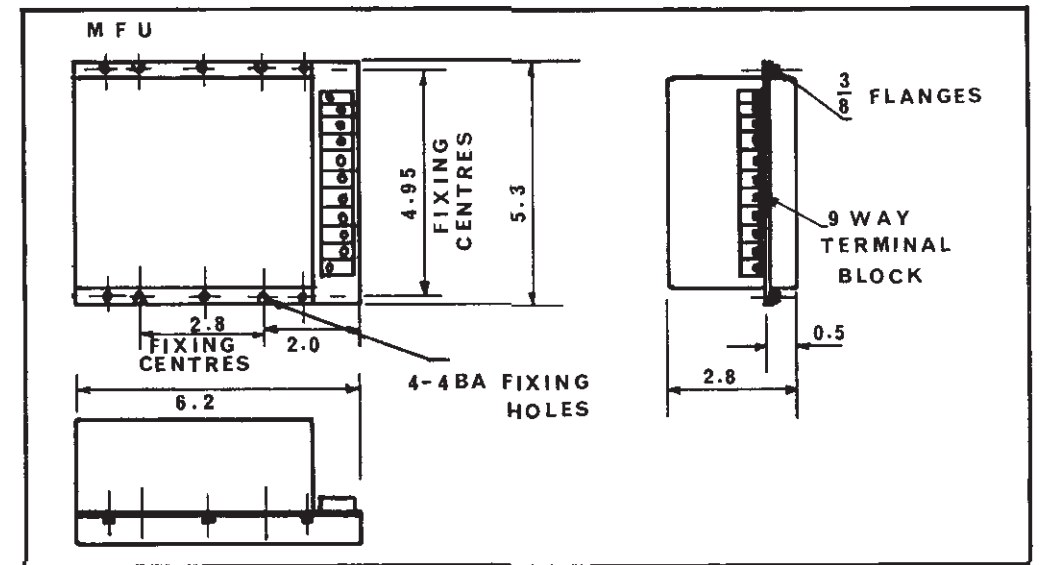
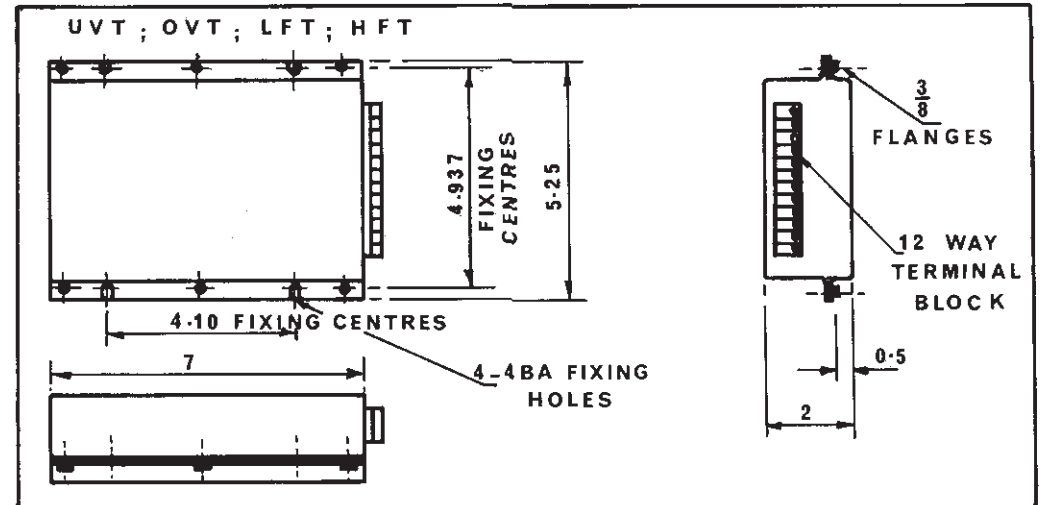
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CONNECTIONS



NOTE:—
ALL RELAY CONTACTS SHOWN IN DE-ENERGISED STATE.

DIMENSIONS



NOTE:— ALL DIMENSIONS SHOWN IN INCHES.