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REOVIB ATS-100 Analog Thyristor System

Overview



Enclosed IP 54

P/N: 604452
Input voltage: 110/240V
Current: 15A
Input frequency: 50/60Hz
Output frequency: 60/120Hz or 50/100Hz
Full Wave 3600 / Half Wave 7200
Soft Start: 0.5 seconds
Protection rating: IP 54 (NEMA 12)
Operating temperature: 0 - 45 degrees C
Setpoint: 10k potentiometer, 0-10V dc, 0(4)-20mA
Enable with: Dry set of contact, or 24V dc.
CE Mark and UL listed
Standards: EN 50081 - Teil1
EN 50082 - Teil2
Output power: connect to magnetic coil(s)
Input power: connect to 110/240VAC
Fuse: Very Fast Acting Semiconductor 16A

Notes

* Before you plug the unit in you must set the controller to the correct input voltage. (Please refer to PCB layout to locate this switch)

Contacts

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Safety Instructions

This description contains the necessary information for the correct application of the product described below. It is intended for use by technically qualified personal.

Qualified personnel are persons who, because of their training, experience and position as well as their knowledge of appropriate standards, regulations, health and safety requirements and working conditions, are authorised to be responsible for the safety of the equipment, at all times, whilst carrying out their normal duties and are therefore aware of, and can report, possible hazards (Definition of qualified employees according to IEC 364)



Warning!

Hazardous Voltage

Failure to observe can kill, cause serious injury or damage

Isolate from mains before installation or dismantling work, as well as for fuse changes or post installation modifications.

Observe the prescribed accident prevention and safety rules for the specific application.

Before putting into operation check if the rated voltage for the unit conforms with the local supply voltage.

Emergency stop devices must be provided for all applications. Operation of the emergency stop must inhibit any further uncontrolled operation.

Electrical connections must be covered.

The earth connection must be checked, for correct function, after installation.

Installation

Check !	<p>Are the supply, feeder coil and controller input voltages correct ?</p> <p>Is the controller adequately rated for the rated power of the feeder ?</p> <p>What is the vibrating frequency of the feeder ?</p>
<p>Connect the unit in accordance with the wiring instructions and ensure that Earth ground is correct !</p>	
! Tip	<p>New units are factory set (see table for settings).</p>
External Setpoint.	<p>When an external set point source is used make sure to reference the terminal layouts on the Electrical page.</p>

Operational Data

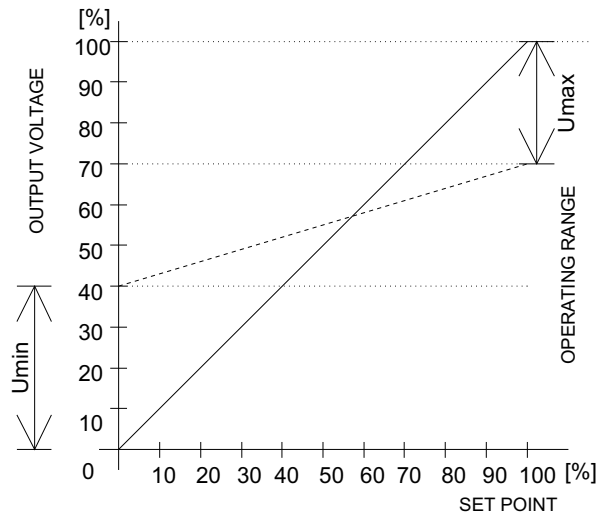
The REOVIB ATS control unit is used to adjust the throughput of vibratory feeders. It can be used with feeder systems which have a mechanical vibrating frequency the same as, or double that of mains frequency. This corresponds to 50 Hz or 100 Hz and 3000 / 6000 cycles per minute for a 50 Hz mains frequency or 60 Hz / 120 Hz and 3600 / 7200 vibrations per minute for a 60 Hz mains frequency. The selection of the operating frequency is achieved by the use of an internal switch.

The IP 54 unit is fitted with a 2 pole, illuminated, mains switch and also a quick blow fuse to protect the semiconductor from short circuit. A built-in potentiometer is used for adjusting the feeder throughput.

The controller works with a triac, using the phase angle control principle and the feeder throughput is regulated by adjusting the coil voltage. The operating range of the set point potentiometer can be adapted for different feed systems by the use of trimmer pots Umin and Umax. This means that when the set point is at zero, the trimmer Umin can be set to give minimum output. Likewise, when the set point is at maximum, the output can be limited by using trimmer Umax. To prevent surges (hammering), when the unit is switched on, there is a gradual increase (soft-start) up to the adjusted output voltage on the feeder.

Adjustment of the control range

Effect of the trimmers Umin und Umax



The effective control range can be adjusted by using the trimmers “Umin” and “Umax”, so that the complete rotation of the set point potentiometer is available for controlling the feeder throughput.

The trimmers are accessed on the IP 54 unit by removing the four corner screws and lifting the sealed faceplate away from the body of the controller. The IP 20 unit has the two trimmers exposed for access.

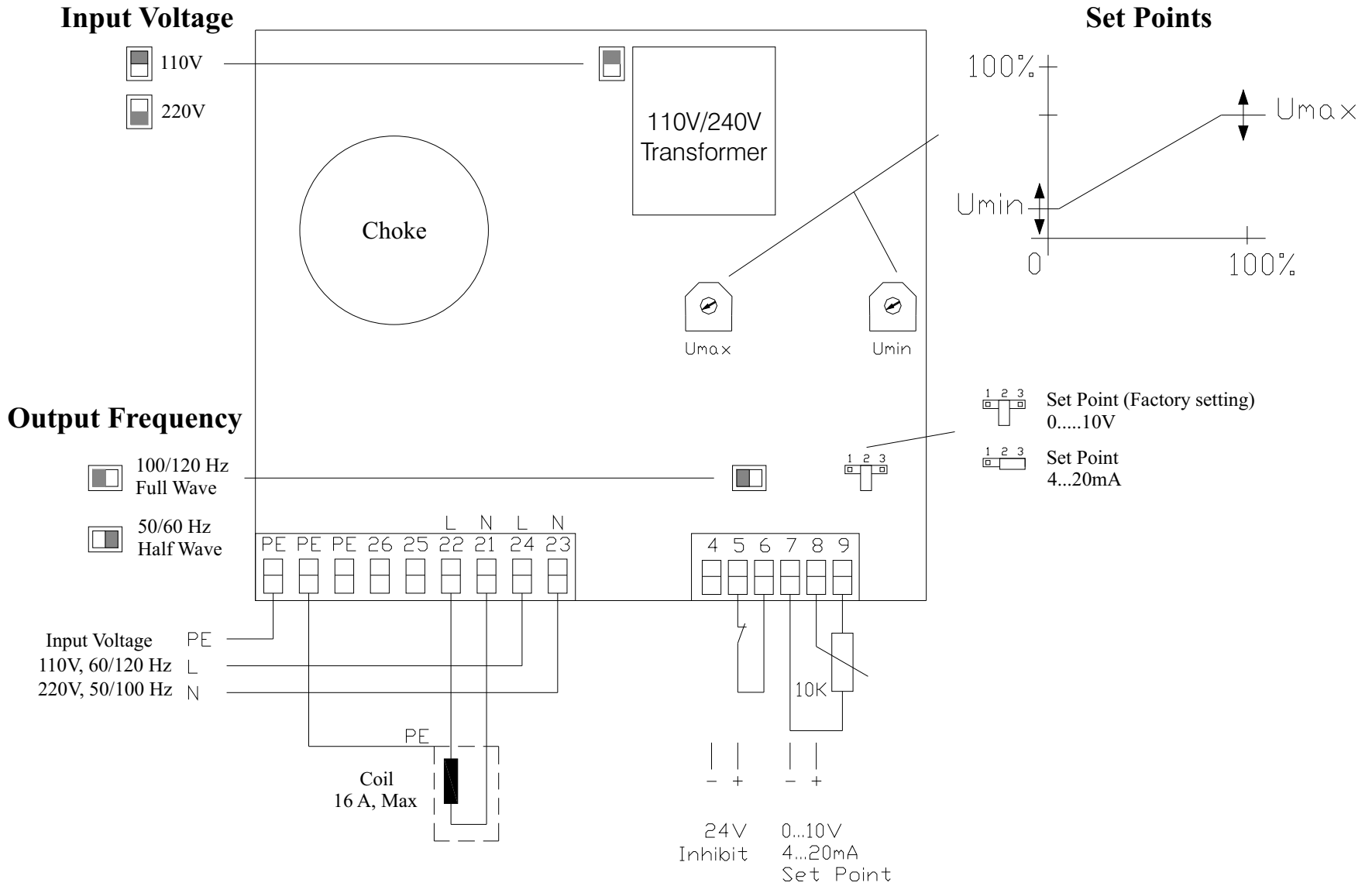
Adjustment of the maximum value: ⚡

Turn the feeder throughput potentiometer to maximum and then turn the trimmer “Umax” counter-clockwise, from its fully clockwise position, until the feeder throughput just begins to decrease.

Adjustment of the minimum value: ⚡

Turn the feeder throughput potentiometer to minimum and then turn the trimmer “Umin” clockwise, from its fully counter-clockwise position, until the feeder just starts to vibrate. The trimmers must cover a wide range, to give sensible setting points, because the characteristics of feeders can vary widely, especially between 50Hz and 100Hz vibrating frequencies.

ATS 100 Electrical



ATS 100 Mechanical

