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REOVIB ATS 200/300, IP54

Phase-angle control units for Vibratory Feeders

CE

Operating manual

Revised on: 06/12/2006

Features:
Inexpensive triac unit for controlling the throughput of vibratory feeders.
Each module includes power output terminals and and the setting-up components for a feeder. The basic module includes an EMC input filter, for interference suppression, and the supply voltage for the electronic control circuits.
All the functions required for building a complete feeding station; comprising linear feeder, bowl feeder and hopper are included in the modules. Each module includes a sensor input for a 24 VDC PNP sensor, track control (linear storage),and an enable input and a status relay. The setpoint can be adjusted from either a voltage signal 0 - 10 V, DC, a current signal 0(4) - 20 mA or a potentiometer 10 Kohm.

Bowl/Hopper module
Supply connection with EMC filter and electronic supply.
Single output for a feeder.
Umin and Umax trimmers for throughput, control range adjustment.
Trimmers, t-on and t-off, for feeder on/off switching delay.
Vibrating frequency 50 / 100 Hz or 60 / 120 Hz
Mains voltage 110 V / 240 V
Setpoint source 0 - 10 V or 0(4) - 20 mA
Invert sensor switch.

Linear feeder
Single output for a feeder.
Umin and Umax trimmers for throughput, control range adjustment.
Vibrating frequency 50 / 100 Hz or 60 / 120 Hz
Setpoint source 0 - 10 V or 0(4) -20 mA
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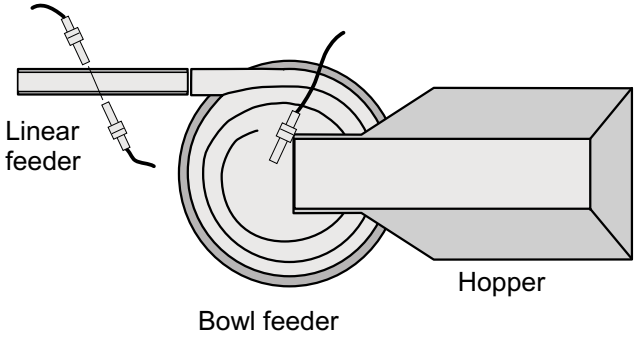


Technical data:

Supply voltage:	Switch selected, 110/ 240 V, +/- 10% 50/60 Hz
Output voltage:	20 - 100 V or 40 - 210 V
Output current:	max. 8 A, per module - total current 12 A
Vibrating frequency:	Switch selected, 60 / 120 Hz (50 / 100 with 50 Hz system)
Sensor supply:	24 V, DC (50 mA)
Enable input:	Contact or 24 V, DC
Status relay:	Changeover contact (max. 250 V, 1 A)
Type of protection:	IP 00
Operating temperature:	0 - 45 °C
Storage temperature:	-10 to + 85 °C

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 personnel. 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.
Earth connections must be checked for correct function, after installation.

Specified Use

The units described herein are electrical controllers for installation in industrial plants.

They are designed for power adjustment on vibratory feed equipment.

Declaration of conformity

CE

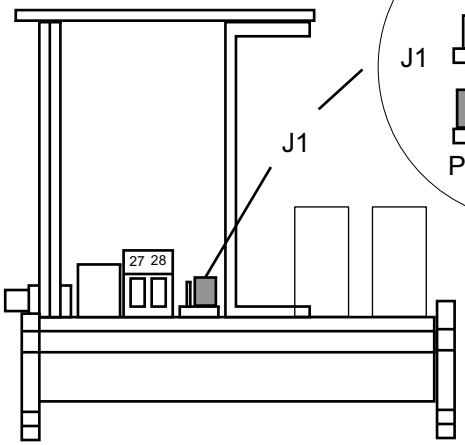
We declare that these products conform with the following standards and directives:
EN 50081-2 and EN 50082-2 in accordance with Directive 89/336/EEC.
REO ELEKTRONIK AG, D-42657 Solingen

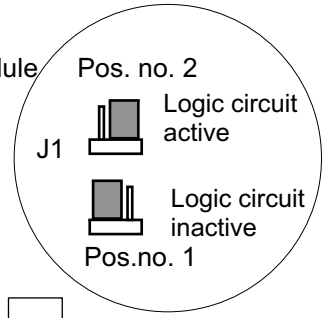
Installation

! Check!	Do supply voltage, operating voltage of the conveyor and controller input voltage match ? Is the controller adequately rated for the rated power of the feeder ? What is the vibrating frequency of the feeder ?
Connect the unit in accordance with the wiring instructions and ensure that earthing is correct !	
Attention!	A wrongly selected vibrating frequency may result in destruction to the connected coils! Make sure that suitable coils are used foe half-wave operation; when this is selected (50 Hz / 3000 vibs./min. / 3600 vibs./min.).
! Tip	When using the internal logic circuit the jumper J1; on the lower printed-circuit board of the extension modules; it must be put into position 2. The sequence of units (linear feeder, bowl feeder, hopper) is then fixed as follows: Linear feeder will call bowl feeder, bowl feeder will call hopper.

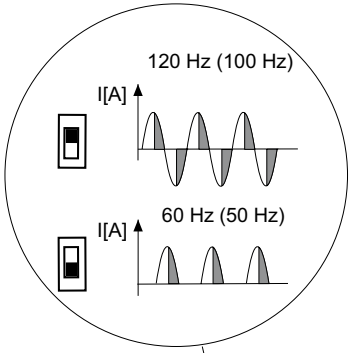
ATS Basic Module Control

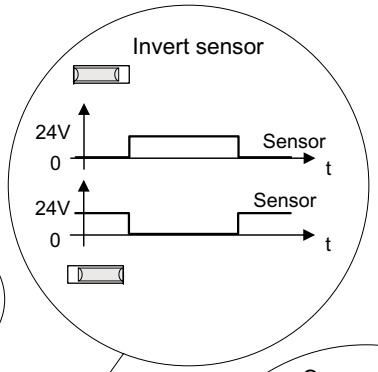
Settings
Umin Minimum output voltage (Potentiometer value 0)
Umax Maximum output voltage (Potentiometer value 100%)
t-on Sensor control switch-on time delay
t-off Sensor control switch-off time delay
S1 Vibrating frequency 60/120 Hz (50/100)
S2 Invert sensor
S3 Setpoint source 0(4) - 20mA or 0 - 10 V, DC or potentiometer 10Kohm
S4 Supply voltage 110 V/240 V

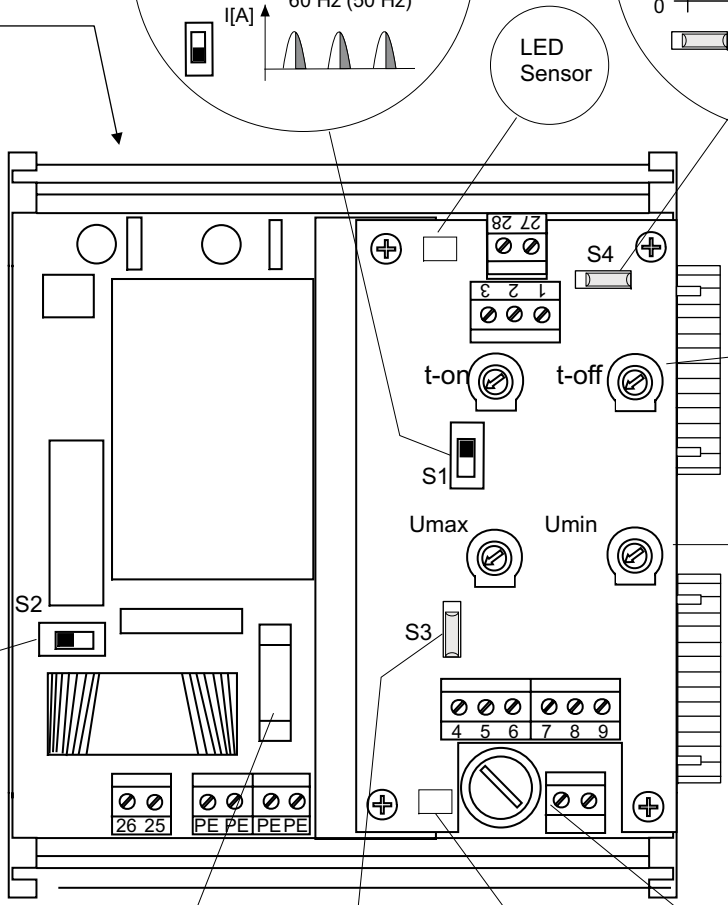


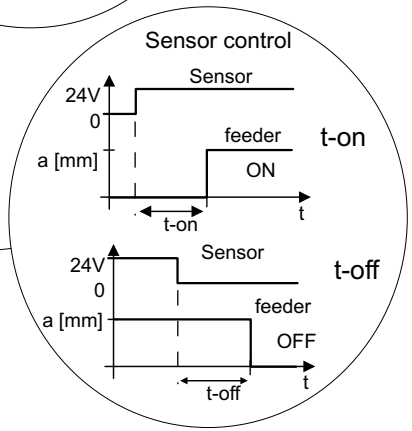


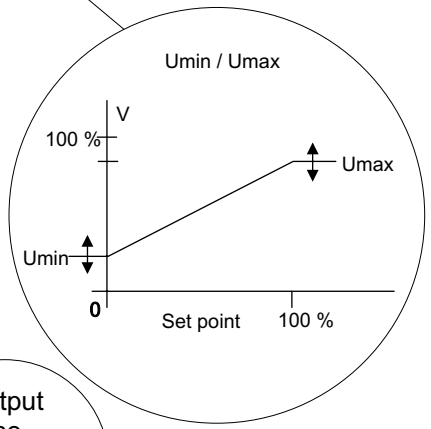
When several modules are combined, the status relay contacts (terminals 27 & 28) of one module can be wired to the enable contacts (terminals 5 & 6) of another module. This same connection can be made electronically through the green connection terminals that join the modules together. This is achieved by positioning the J1 jumper, seen above, in the number two position.

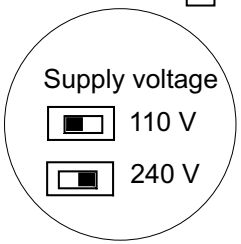


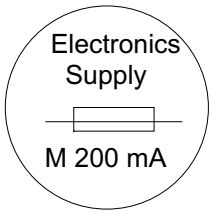


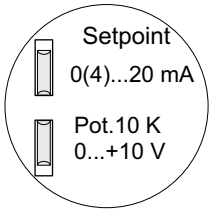


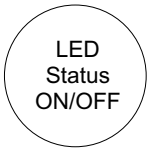


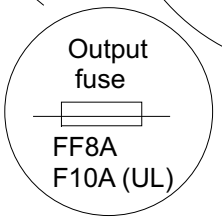




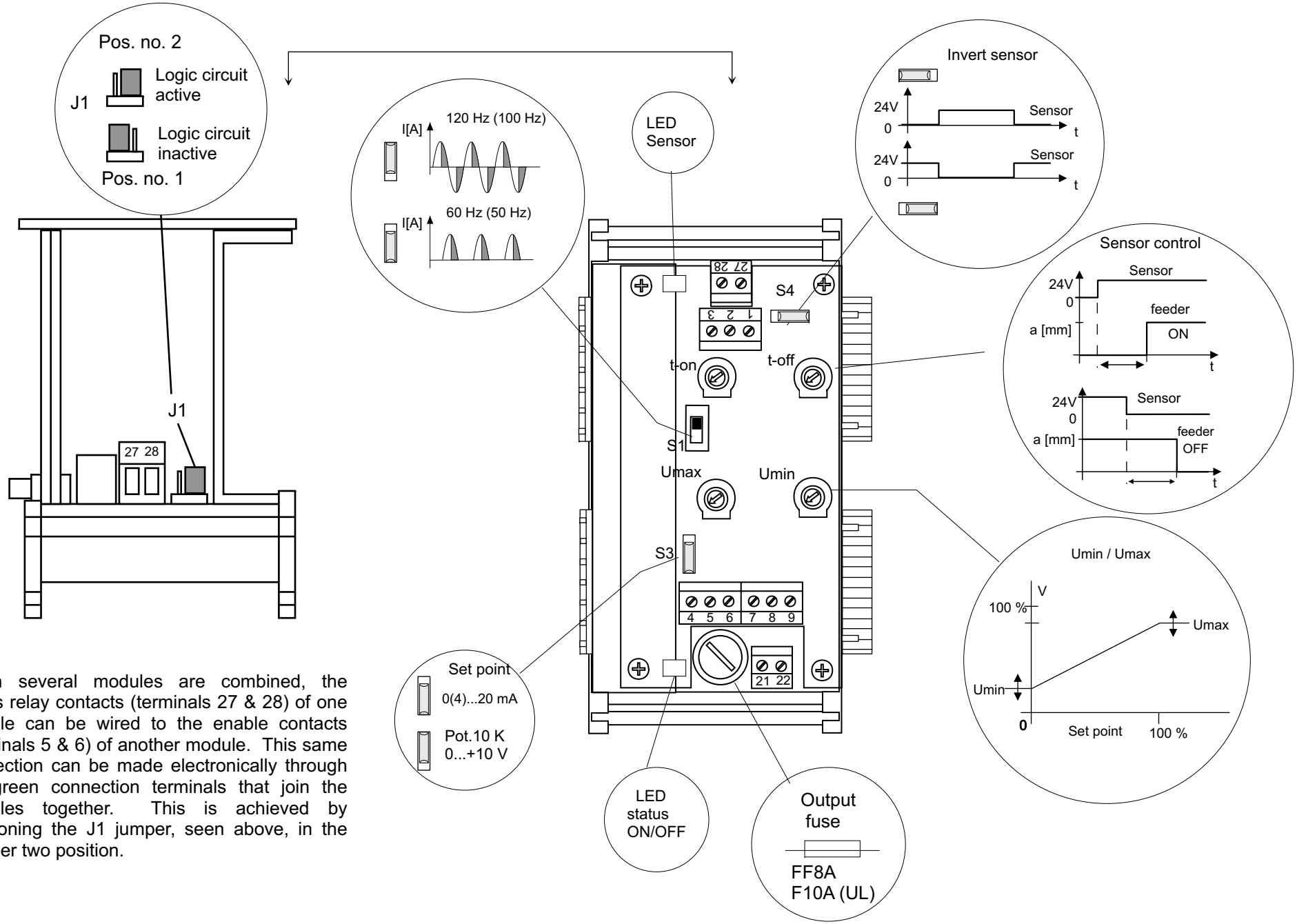








ATS Expansion Module Control



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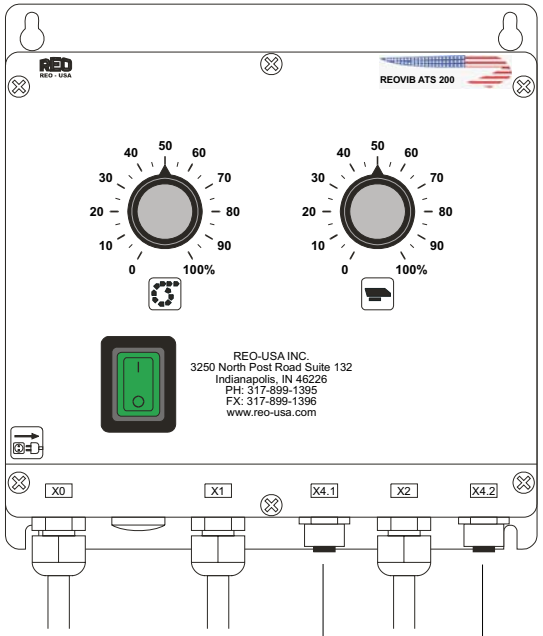
ATS 200 and 300 External Electrical

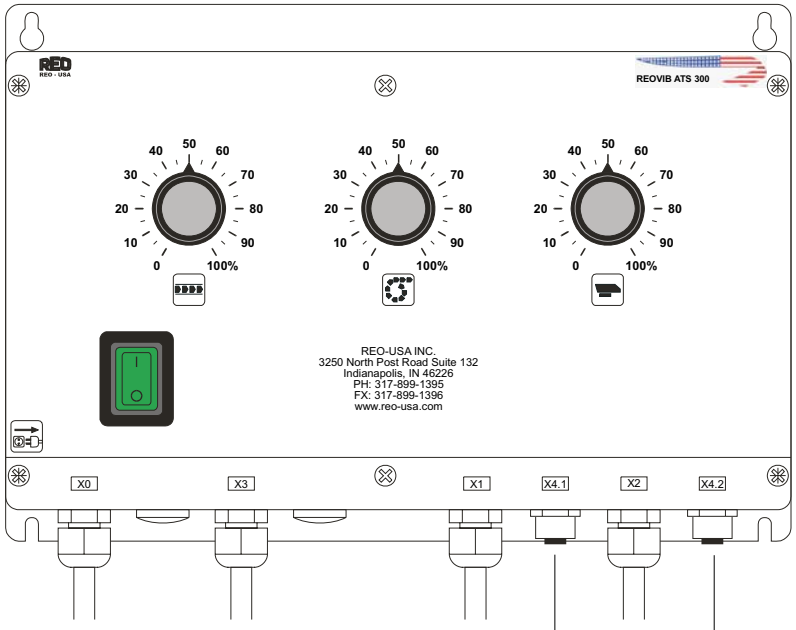


Track controll Bowl

1 = 24 V
3= GND
4 = Input

Track controll Hopper

1 = 24 V
3= GND
4 = Input



Track controll Bowl

1 = 24 V
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Track controll Hopper

1 = 24 V
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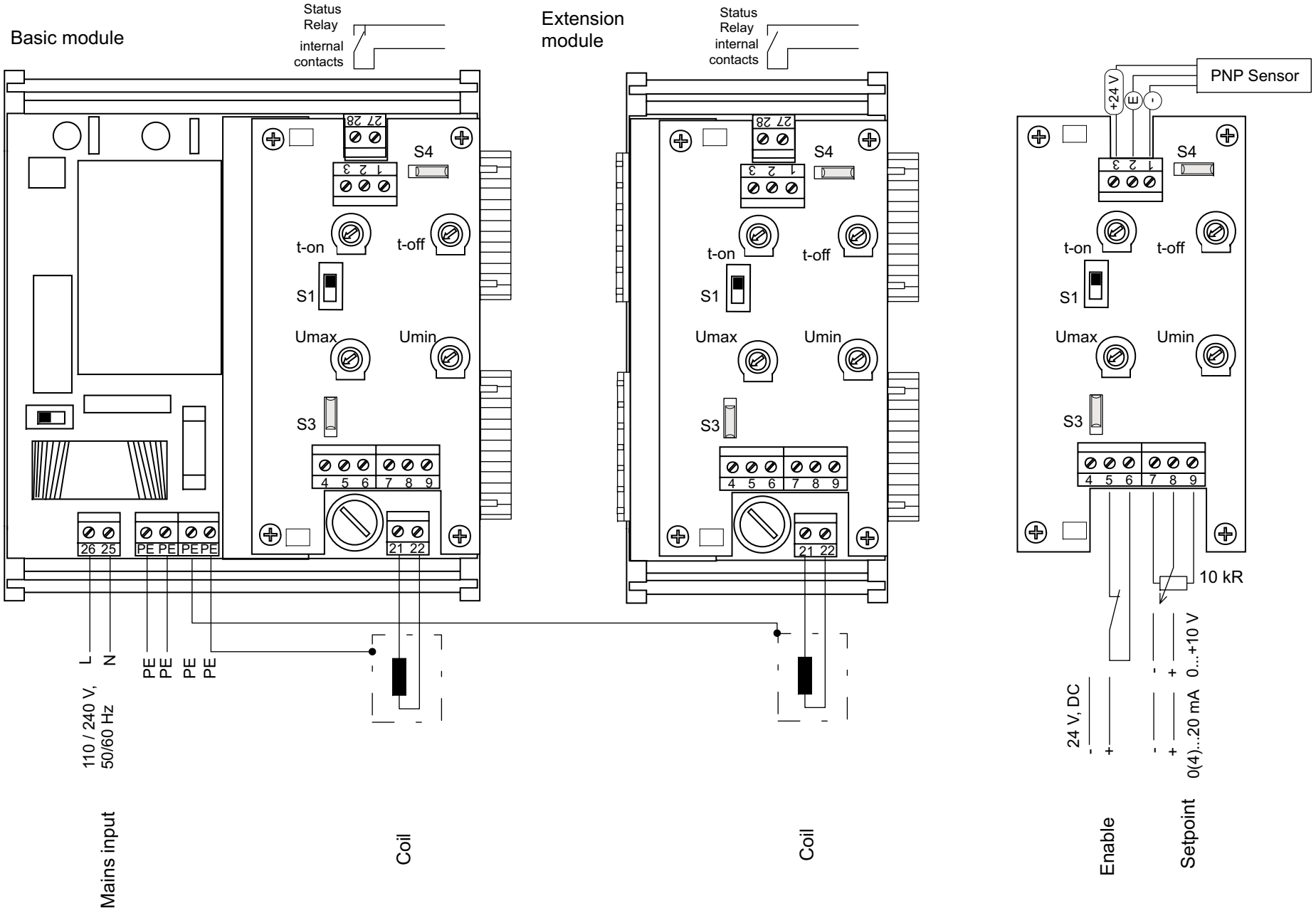
4 = Input

ATS 200 and 300 Internal Electrical



ATS 200 and 300 Mechanical