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RPM CONTROLLER FOR SINGLE-PHASE AC MOTORS

SCRM1

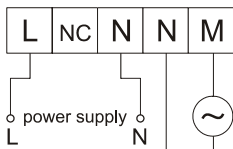
OPERATION MANUAL



Please read this Operation Manual before mounting and operating!
Save the Manual for future references!

The RPM controller SCRM1 is designed to control the speed of single-phase AC motors up to 5A/230VAC. It employs the principle of 'phase angle control' from 25 to 180 degrees, adjustable through a thumbwheel on the front panel and applied to an internal power triac. SCRM1 can switch up to 500 VA AC motor of a fan or other industrial appliance, connected to the device output. A load-current sensing can be used for keeping the motor speed relatively constant and independent of the load.

Mounting and Wiring



Prior to wiring the controller, turn the mains supply off!

Mounting

SCRM1 is designed for DIN-rail mounting.

- ◆ Insert the upper rail edge into the upper plastic groove of the rail-installing mechanism on the back side of the unit.
- ◆ Press the unit towards the lower rail edge until the moving part of the installing mechanism clicks.
- ◆ Ensure the unit is firmly set on the rail.

Wiring

- ◆ Connect the unit to the AC motor.
- ◆ Connect the right power supply voltage for your device (see '**Specifications**').

Waste Disposal

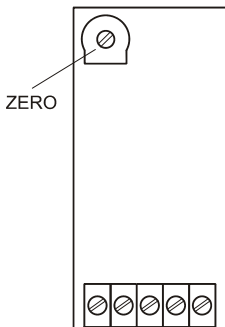


Do not dispose of electronic devices together with household waste material!

If disposed of within European Union, this product should be treated and recycled in accordance with the laws of your jurisdiction implementing Directive 2012/19/EU on waste electrical and electronic equipment (WEEE).



Starting-speed adjustment is imperative with each change of the motor connected to your SCRM1!



Starting-speed adjustment

- ◆ Ensure the power supply is off.
- ◆ Turn the front-panel thumbwheel counterclockwise to its end position (0%).
- ◆ Pull up and remove the black thumbwheel knob from the front panel.
- ◆ Press one of the plastic side locks, sticking up from the box base, and draw out the unit cover.
- ◆ Find the 'ZERO' potentiometer in the upper part of the PCB and, using a screwdriver, turn the potentiometer counterclockwise to its limit.
- ◆ Turn the power on.
- ◆ Slowly turn 'ZERO' clockwise until the motor starts and reaches the desired starting speed.
- ◆ Put the box cover back and mount the knob on its place.

Speed adjustment

Turn the front-panel thumbwheel to set the desired speed (RPM) within the 0% (starting speed) to 100% (maximum speed) range.

Declaration of Conformity



The undersigned hereby declares, on behalf of COMECO Inc., that this RPM controller model SCRM1 has been manufactured in compliance with standards EN 61010-1 and EN 61326-1, and meets the requirements of Directives 2004/108/EC and 2006/95/EC.

Krasimir Darakchiev, CEO
COMECO Inc.

| | |
|---|--|
| Power Supply | □ 230 VAC ± 10%, □ 115 VAC ± 10% |
| Consumption | less than 2.5 VA |
| Motor Power Ratings | 0.5...5 A, max. 500 W |
| Minimum Holding Current | 50 mA |
| Maximum Leakage Current | 2 mA |
| Critical Rate of Current Rise di/dt | 50 A/ μ s |
| Critical Off-state Voltage Rise dV/dt | 1000 V/ μ s |
| I^2t Value for Fusing | 78 A ² s at $t = 10$ ms |
| Motor Speed | 0...100% |
| Speed Control | with triac, phase angle 25...180 ° |
| Load-current Sensing | □ \approx 10% of set-point angle per 1 A |
| Mains Voltage Compensation | \approx 1% of set-point angle per 10 V |
| Temperature Drift | max. 0.05% for 1 °C |
| Ambient Temperature / Humidity | -10...40 °C / 0...85% RH |
| Storage Temperature | -30...80 °C |
| Protection Class | IP40 |

Warranty and Support

Warranty

COMECO warrants this product to be free from defects in materials and workmanship for 2 years. If your unit is found to be defective within that time, we will promptly repair or replace it. This warranty does not cover accidental damage, wear or tear, or consequential or incidental loss. This warranty does not cover any defects caused by wrong transportation, storage, installation, or operating (see '**Specifications**').

Technical support

In the unlikely event that you encounter a problem with your COMECO device, please call your local dealer or contact directly our support team.

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article number

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serial number

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manufacturing date

QC check mark(passed)
(stamp)

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