

## RM-AC500 – Advanced Control Device

### Description

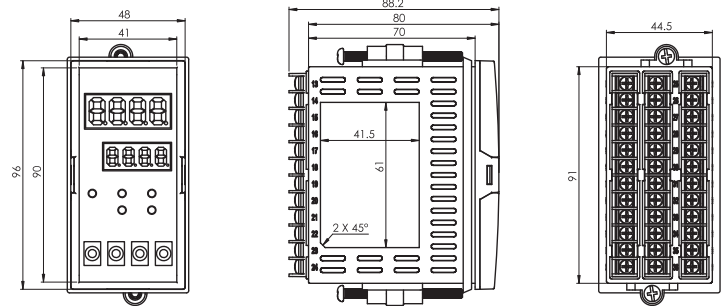
AC500 model devices are designed in 48 x 96 mm dimensions for measuring many industrial process variables (temperature, pressure, speed, level, humidity, current, voltage, resistance, etc.) and for ON/OFF and PID control. They are fully modular devices, and each module can be configured independently.



### General Features

- 3 x 4-digit numeric displays on LCD
  - LED indicators for relays
  - 4 capacitive touch keys
  - 1 transmitter supply output (24VDC)
  - 1 universal sensor input (TC, RT, mA, mV, V)
  - 1 auxiliary analog input (0/4-20mA)
  - 1 potentiometer input (100-1500Ω)
  - 3 digital inputs (15V)
  - 2 analog outputs (0/4-20mA, 0/2-10V)
  - 1 RS485 communication unit
  - 4 relay or logic outputs (24V)
  - 100-240V AC/DC universal or 24V AC/DC supply
  - Isolation between input/output modules
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- Control according to the difference between two inputs
  - Position feedback proportional valve control
  - Feedback-free proportional valve control (floating control)
  - PID heating/cooling
  - Auto-Tuning (automatic adjustment of PID parameters)
  - Self-Tune feature
  - Automatic/manual operating modes
  - Bumpless transfer feature
  - Sensor failure detection
  - Remote set point (remote set value determination)
  - 8 selectable set points
  - Ramp function
  - Retransmission (for process and set value)
  - 15 different relay functions
  - ON/OFF, P, PI, PD, PID control
  - Linear and time-proportional control output
  - 100 ms sampling and control cycle
  - Standard MODBUS RTU communication protocol
  - Master-Slave and Cascade control applications
  - Configuration via computer

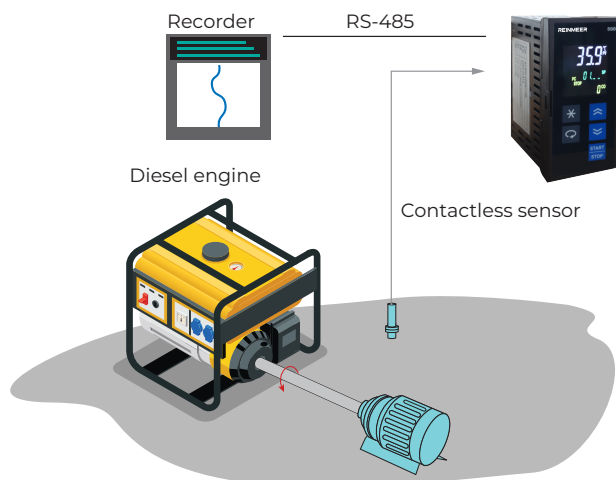
### Device Dimensions



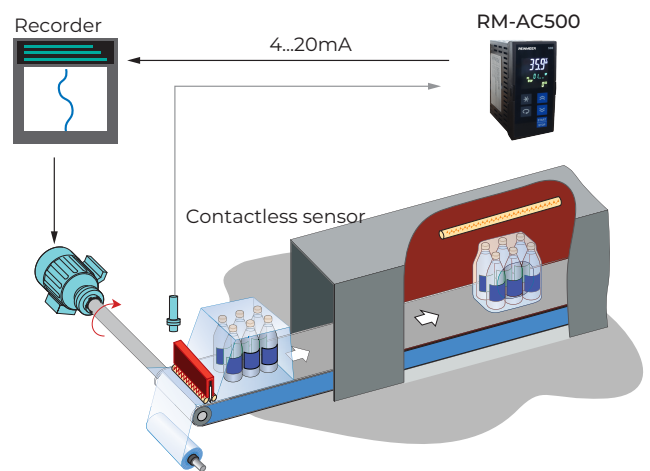
Panel Cutting Dimensions: 46 +/- 0.5 mm x 91 +/- 0.5 mm

### Applications

Food, Plastic, Iron & Steel, Chemical, Metallurgy, Cement, Ceramic, Petrochemical, Refineries, Glass, and other industrial sectors.



Diesel engine speed control



Controlling the speed of container movement on a conveyor during the packaging process

## Technical Specifications

Supply Voltage (PS)	100-240 Vac/dc +10% -15% 24 Vac/dc +10% -20%
Power Consumption	6W, 10VA
Universal Sensor Input (S1)	Thermocouple: B, E, J, K, L, N, R, S, T, U Two-wire transmitter: 4-20mA Resistance thermometer: Pt-100 Current: 0/4-20mA Voltage: 0-50mV, 0/2-10V
Auxiliary Analog Input (S2)	0/4-20mA
Potentiometer Input (S3)	100-1500Ω
Transmitter Supply (TX)	24Vdc (Isc = 30mA)
Analog Input Impedances	Thermocouple, mV: 10MΩ Current: 10Ω Voltage: 1MΩ
Analog Outputs (O1, O2)	Current: 0/4-20mA (RL ≥ 500Ω) Voltage: 0/2-10V (RL ≥ 1MΩ)
Relay Outputs (R1, R2, R3, R4)	250VAC 10A contact Logic output: 24Vdc 20mA
Contact Life	No load: 10,000,000 operations 250V 10A resistive load: 1,000,000 operations
Other	Memory: 100 years / 100,000 rewrites Accuracy: ± 0.2% Sampling time: 100 ms Operating temperature: -10...+55°C Storage temperature: -20...+65°C
Protection class:	Front panel IP54 / Rear panel IP20
Mechanical Specifications	Width: 48 mm Height: 96 mm Depth: 78.2 mm Panel cut-out: 92 ± 0.5 mm x 92 ± 0.5 mm Weight: 430 g

## Electrical Wiring Diagram

