



ESM-4450 48 x 48 1/16 DIN Universal Input PID Process Controller with Smart I/O Module System

- 4 digits process (PV) and 4 digits process set (SV) display
- Universal process input (TC, RTD, mV $_{\text{---}}$, V $_{\text{---}}$, mA $_{\text{---}}$)
- Optional secondary sensor input
- Dual or multi point calibration for $_{\text{---}}$ Voltage / Current input
- Configurable ON/OFF, P, PI, PD and PID control forms
- Adaptation of PID coefficients to the system with Auto-tune and Self-tune
- Manual/Automatic mode selection for control outputs
- Bumpless transfer
- Smart I/O module system
- Programmable heating, cooling and alarm functions for control outputs
- Motorized valve control function
- 8 steps profile control (Ramp & Soak) function and start-hold-stop by using logic input module
- Remote set point function by using analogue input modules
- Retransmission of process value or process control by using 0/4...20 mA $_{\text{---}}$ Current Output Module
- Detection of heater failure by using 0...5A \sim CT input module
- Hardware configuration by using input/output modules
- RS-232 (standard) or RS-485 (optional) serial communication with Modbus RTU protocol