EMKO

"Smart I/O Module" System
RS-232/485 Modbus RTU
Serial Communication Process Controllers

Process Controllers

ESM-4450	ESM-4950	
ESM-7750	ESM-9450	ESM-9950

CE c**RU**us EAC

- ▶ 8 steps profile control (Ramp & Soak) function and start-hold-stop by using logic input module

- ▶ For process value and process control Retransmission feature

- ▶ Detection of heater failure by using 0...5Adc CT input module
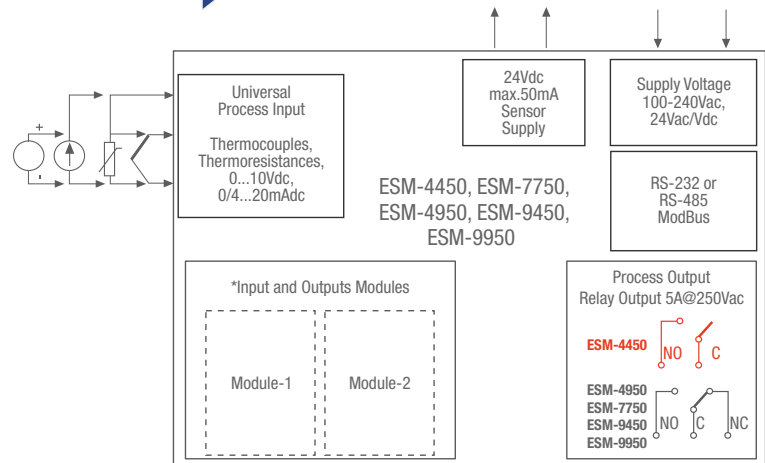
- ▶ Universal process input (TC, RTD, mVdc, Vdc, mAdc)

- ▶ Bumpless transfer

- ▶ Motorized valve control function

Specifications

4 Digits process (PV) and 4 Digits set (SV) display
Programmable heating, cooling and alarm functions for control outputs
Auto-tune and Self-tune PID
Dual or multi point calibration for dc Voltage/Current input
Configurable ON/OFF, P, PI, PD, and PID control forms

Technical Specification

Accuracy: ±0.25%of full scale for thermocouple, thermoresistance, mV, V ±0.70% of full scale for mA input
Cold Junction Compensation: Automatically ± 0.1°C/1°C
Line Compensation: Maximum 10 Ohm
Sensor Break Protection: Upscale
Sampling Cycle: 3 samples per second
Input Filter: 0.0 to 900.0 seconds

Universal Process Input

Thermocouples, Thermoresistances, 0...10Vdc, 0/4...20mAdc

24Vdc max.50mA Sensor Supply

Supply Voltage 100-240Vac, 24Vac/Vdc

ESM-4450, ESM-7750, ESM-4950, ESM-9450, ESM-9950

RS-232 or RS-485 ModBus

*Input and Outputs Modules

Module-1   Module-2

Process Output
Relay Output 5A@250Vac

ESM-4450 NO   C

ESM-4950
ESM-7750 NO   C   NC
ESM-9450
ESM-9950

* Input and output modules can be mounted aech modules sockets.
* One analog input module can be connected to the device at the same time.

ModBus RS-232 RS-485 | OUT PUT X1 | PID CONTROL | SMART OUTPUT MODULE | SMART INPUT MODULE | Process

INPUT X1 | 96x96 | 48x96 | 72x72 | 96x48 | 48x48

A . 20 . D . 1 / FG . HI / 0 . 0 . 0 . 0

ESM-4450 (48x48x116 mm)
ESM-7750 (72x72x87,5 mm)
ESM-4950 (96x48x86,5 mm)
ESM-9450 (48x96x86,5 mm)
ESM-9950 (96x96x87,5 mm)

A Supply Voltage

1	100-240Vac (-%15; +%10) 50/60 Hz
2	24Vac (-%15;+%10) 50/60 Hz
	24Vdc (-%15; +%10)

BC Input

20 Universal Input: TC, RTD, dc Voltage/Current
Thermocouple (TC): L(DIN 43710), J, K, B, E and N(IEC584.1) (ITS90), C(ITS90)
Thermoresistance (RTD): PT-100, (IEC 751) (ITS90)

D Serial Communication

| 1 | RS-232 ModBus RTU |
| 2 | RS-485 ModBus RTU |

Input/Output Modules **FG** / **HI**

Relay Output Module	01
SSR Driver Output Module	02
Digital(Transistor) Output Module	03
Current Output Module (04...20mAdc veya 0...10Vdc)	04
Digital Input Module	07
0/4...20 mAdc Current Input Module	08
0...5Aac CT Input Module	09
TC or (0...50mVdc) Input Module	10
PT-100 Input Module	11
0...10Vdc Input Module	12

Process Output **E**

| Standard Relay Output: (5A @ 250Vac) | 1 |