



PROTECTION RELAYS

MC3V-CEI⁰²¹

Multifunction three phase overvoltage / undervoltage relay According to CEI 0-21 Standards

Three-phase voltage relay, suitable for protection of MV power transmission and distribution systems.

The relay MC3V-CEI measures the true R.M.S. value of the 3 phases through three transformers isolated high-impedance inputs.

Applicable for CEI-021 Italian Standards.

Protective Functions

- F27 : 2 Undervoltage elements
- F59 : 2 Overvoltage elements
- F81> : 1 Overfrequency element
- F81< : 1 Underfrequency element
- F51BF : Breaker Failure protection
- 2 Setting Banks

Measurements

- Real Time Measurements (Hz - EA - EB - EC - Vo - V1 - V2)
- Trip Recording (last 20 trips with date & time)

Control

- 4 Output Relays (programmable)
- 3 Digital Inputs (programmable)
- Time tagged multiple event recording
- Oscillographic wave form capture
- Remote Trip

Technical Characteristics

- Complete autodiagnostic program
- Display LCD 16 (2x8) characters
- 4 Leds for signalization



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Communications

- 1 RS485 Serial communication port on rear side
- 1 RS232 Serial communication port on front panel
- Modbus RTU Communication Protocols

Power Supply Ratings

- Type 1 : 24V(-20%) / 110V(+15%) a.c. - 24V(-20%) / 125V(+20%) d.c.
- Type 2 : 80V(-20%) / 220V(+15%) a.c. - 90V(-20%) / 250V(+20%) d.c.

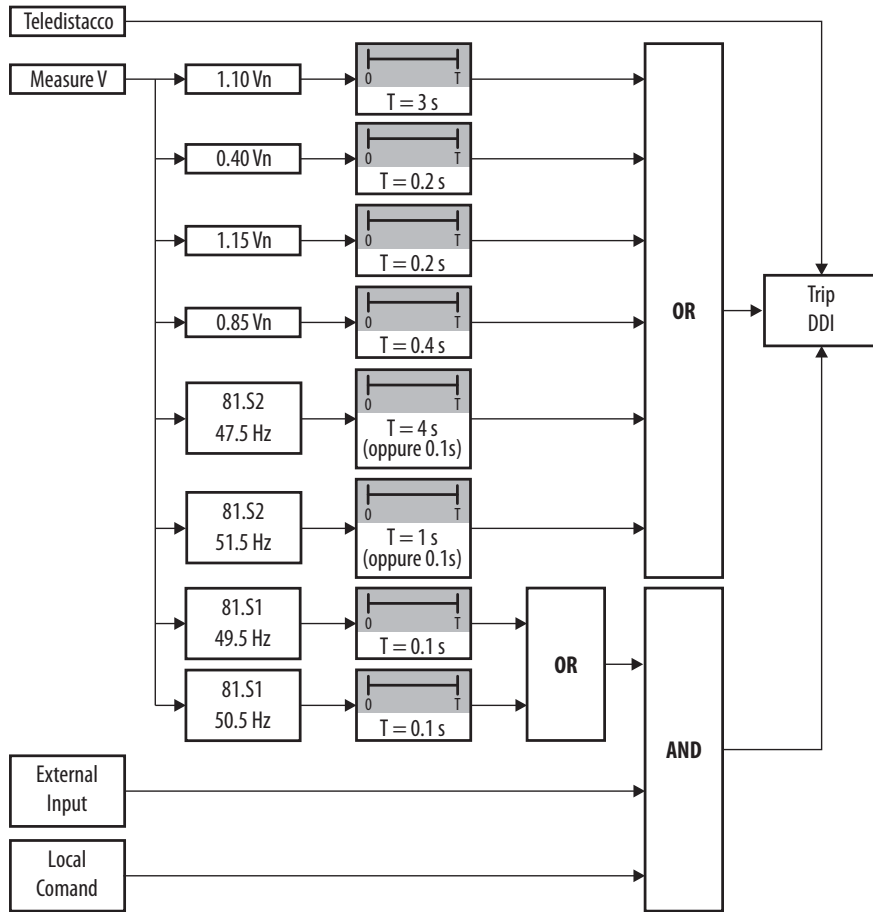
Mounting

- 1 Module box , totally draw-out execution
- IP44 protection case (on request IP54)

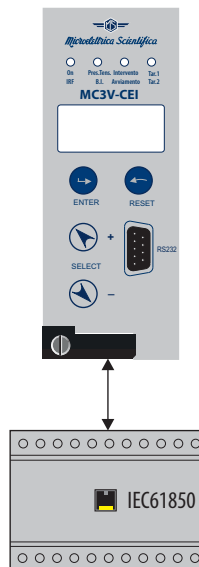
Software

- MCom2 Program interface for device management

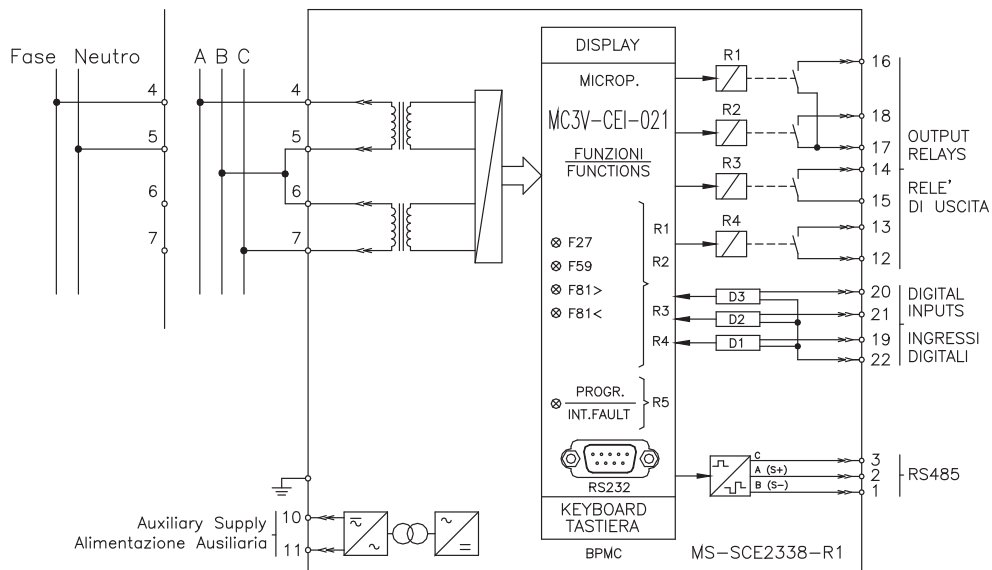
Programmable Input Quantities		
Fn : System frequency	(50 ÷ 60)Hz	
V1 : Rated primary phase to phase voltage of system's Pts	(0,05 ÷ 500)kV	step 0,01kV
V2 : Rated secondary phase to phase voltage of system's Pts	(100 ÷ 440)V	step 0,01V.
1 - F27 (S1) : First Undervoltage Element		
Function enabling	Enable/Disable	
Setting range	S1 = (0,2 ÷ 1,20)Vn	step 0,01Vn
Instantaneous output	≤ 0,03s	
Independent trip time delay	27tS1 = (0,05 ÷ 60)s	step 0,01s
2 - F27 (S2) : Second Undervoltage Element		
Function enabling	Enable/Disable	
Setting range	S2 = (0,2 ÷ 1,20)Vn	step 0,01Vn
Instantaneous output	≤ 0,03s	
Independent trip time delay	27tS2 = (0,05 ÷ 60)s	step 0,01s
1 - F59 (S1) : First Overvoltage Element		
Function enabling	Enable/Disable	
Setting range	S1 = (0,5 ÷ 1,50)Vn	step 0,01Vn
Instantaneous output	≤ 0,03s	
Independent trip time delay	59tS1 = (0,05 ÷ 60)s	step 0,01s
2 - F59 (S2) : Second Overvoltage Element		
Function enabling	Enable/Disable	
Setting range	S2 = (0,5 ÷ 1,50)Vn	step 0,01Vn
Instantaneous output	≤ 0,03s	
Independent trip time delay	59tS2 = (0,05 ÷ 60)s	step 0,01s
81< : Underfrequency Element		
Function enabling	Enable/Disable	
Setting range	81< = (45 ÷ 65)Hz	step 0,01Hz
Instantaneous output	≤ 0,03s	
Independent trip time delay	t81< = (0,05 ÷ 60)s	step 0,01s
81> : Overfrequency Element		
Function enabling	Enable/Disable	
Setting range	81> = (45 ÷ 65)Hz	step 0,01Hz
Instantaneous output	≤ 0,03s	
Independent trip time delay	t81> = (0,05 ÷ 60)s	step 0,01s



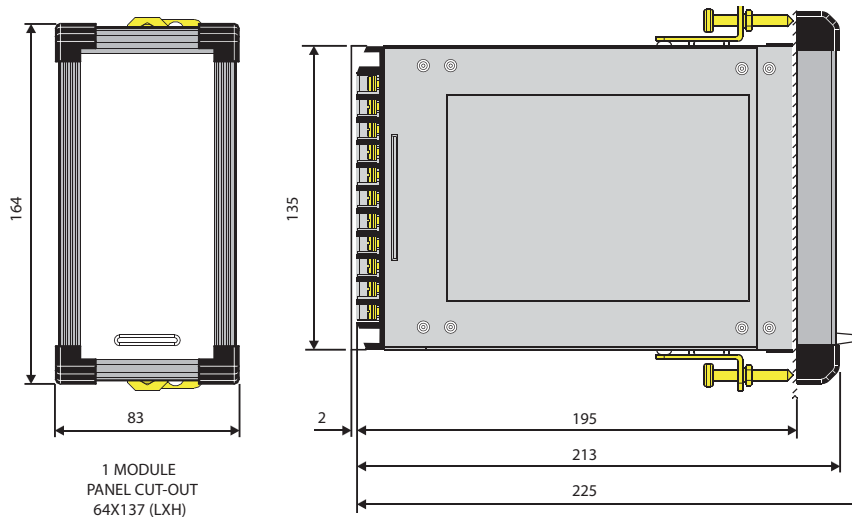
Available Configurations - IEC61850



Wiring Diagram



Overall Dimensions (mm)



Order code - Example

MC3V-CEI-021	1	1
	Power Supply	Insertion
	1 = Type 1	1 = $U_n = (230 \div 400)V_{ca}$ Direct insertion in LV
	2 = Type 2	

The technical specifications reported are not binding and they should be agreed in the contract.

For further technical information on our products visit www.microelettrica.com

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