

# CPM 311

## DIGITAL MULTIFUNCTION MODULAR TYPE CURRENT PROTECTION RELAY

CPM 311 is the digital Overcurrent relay that is designed with 50 years of experience in the relay sector and strong cooperation with our clients. It is widely implemented in Smart Grid and Substation Automation System, therefore it provides us easy-to-use advanced solutions of high protection, control and measurement application for the HV and MV system.



FUNCTION	ANSI CODE	CPM 311
Phase Overcurrent	50/51 P	3 thresholds
Earth Overcurrent	50/51N	3 thresholds
Negative Sequence Overcurrent Protection	46	2 thresholds
Undercurrent Protection	37	1 thresholds
Thermal Overload Protection	49	2 thresholds
Automatic reclosing	79	4 shot
Broken Conductor Detection	46BC	
Breaker Failure Settings	50BF	
Cold Load Pickup	CLPU-50/50N	
Latching	86	
Trip Circuit Supervision	74TCS	
Blocking Relay	68	
Inrush Current Detection	68	



### MEASUREMENTS/RECORDS

RMS Current Measurement  
 Max Rms Current Meas.  
 Fundamental Current Meas.  
 P/N Sequences Current Meas.  
 Thermal ( $\theta$ ) Measurements  
 Circuit Breaker Monitoring  
 Automatic reclosing Meas.  
 Event Records  
 Fault Records  
 Alarm Records  
 Comtrade Waveform Records



### INPUT/OUTPUT

5 Input  
 4 Output



### COMMUNICATION

RS485  
 - MODBUS RTU  
 - IEC60870-5-103  
 USB (front port)

### APPLICATION AREAS



### SPECIFICATIONS

- Wide range IEC, ANSI and Special curves
- 8 Programmable Virtual Led
- 9 INFO LED
- Visualisation of activated functions on main screen (2 Group)
- Function Test without using Relay Test Set
- Visibility of R-S-T-N currents from 1,5 - 2 m distance thanks to the large LCD Screen (128 x 64 px)
- 1-5 A Current transformer flexibility in usage
- Blocking Selectivity by delaying previous breaker
- Electro-magnetic compatibility tested for IEC directives,
- Temperature/Buchholz/Pressure Protection
- Remote or local Alarm-Reset
- SCADA ready
- Displaying Alarm and Fault Records with one click
- Circuit Breaker trip/close
- IP52 and IP20 protection for front and rear panel respectively

### CERTIFICATES

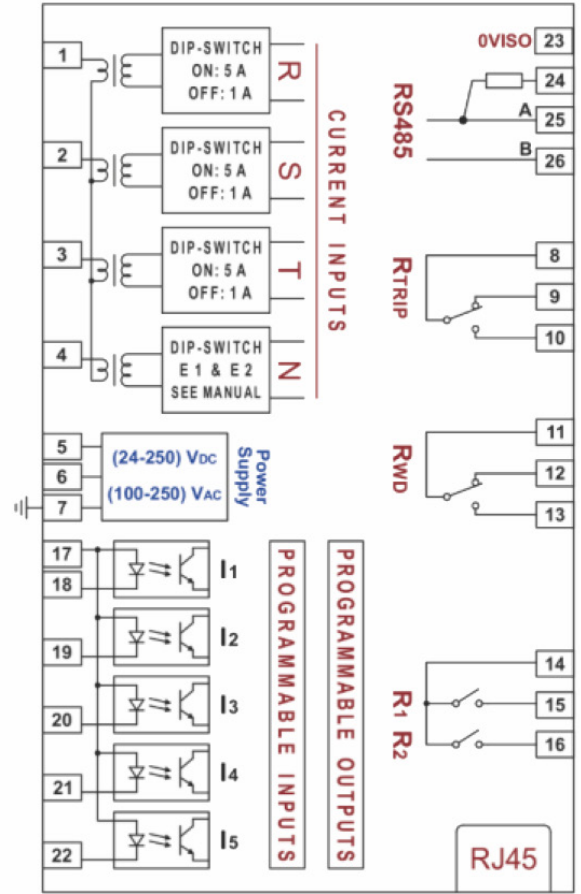


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With its separated structure, CPM 311 eliminates the necessity of keeping current, supply, command and control cables on the panel cover. CPM 311, provides great ease of installation by connecting with a single cable between the main unit and the control unit.

## CPM 311 CIRCUIT DIAGRAM

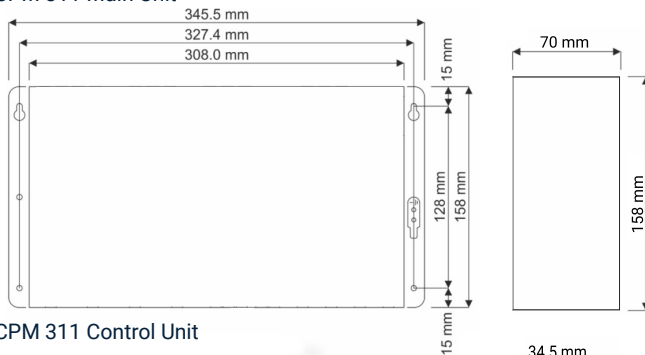


## TECHNICAL SPECIFICATIONS

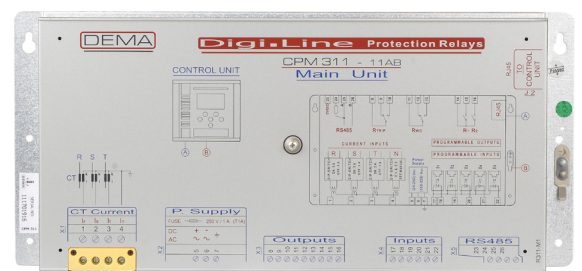
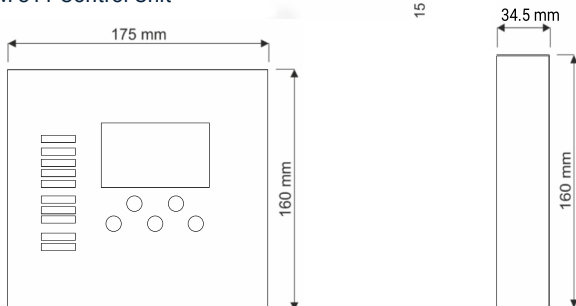
Nominal Auxiliary Voltage	(24-240) V <sub>DC</sub> / (48-240) V <sub>AC</sub>
Auxiliary Voltage Variation	(21-275) V <sub>DC</sub> / (80-275) V <sub>AC</sub>
Burden of Auxiliary	Max. 8 W / 15 VA
Secondary Current Inputs	(1/5)A, 3 Phase / 1 Earth
Secondary Burden	I <sub>n</sub> : 1A if 0.01VA, I <sub>n</sub> : 5A if 0.2 VA
Phase / Earth Measurement Tech.	Fundamental harmonics
Thermal Measurement Technique	RMS Current
Programmable Inputs Quantity	5 inputs, opto isolation
Programmable Outputs Quantity	4 outputs
Language Options	English / Turkish
Communications Baudrate	Max 38,400 baud
Drop-out Time	40 ms
Storage & Operation Ambient Temp.	-25°C / +70 °C
Weight	3.5 kg net

## CPM 311 DIMENSIONS

CPM 311 Main Unit



CPM 311 Control Unit



## PANEL CUTTING DIMENSIONS

