

Control and Monitoring	P220	PM20
Emergency Restart	-	■
Programmable Scheme Logic (8 basic equations)	■	■
CB Control & Monitoring	■	■
Trip Circuit Supervision	-	■
Setting Groups	2	4
Measurements and Records	P220	PM20
Measurements	■	■
Power and Energy Measurements	-	-
Hours Run	■	-
CB Operations	■	■
Disturbance Records up to number x 2.5 sec (backed-up)	5	25-200*
Fault Records (backed-up)	25	300
Event Logging (backed-up)	250	2000
Communication	P220	PM20
Front port	RS232	USB Type B
Rear port (RS485)	■(option)	■
2nd rear port (RS485) (grouped option)	■	-
Rear port (2*RJ45) (option)	-	■(IEC61850)
Rear Port Communication Protocol	P220	PM20
Modbus RTU	■	■
IEC 60870-5-103	■	-
Kbus-Courier	■	-
Modbus TCP/IP	-	■(Optional)
IEC60870-5-103 Eth	-	-
IEC61850	-	■(Optional)
Hardware	P220	PM20
Logic inputs (option)	6	8
Additional 5 digital inputs (grouped option)	■	■
Outputs relays	6	6 up to 12
1/5 dual rated AC Current inputs (settable)	4	4
57....130 or 220...480 V AC Voltage inputs (option)	-	■(AC/DC)
Synchronization (grouped option)	■	■
Measurements	P220	PM20
Phase current magnitude in true RMS value: IA, IB, IC	■	■
Neutral current magnitude in true RMS value: IN	■	■
Positive sequence current I1	■	■
Negative sequence current I2	■	■
Zero sequence current I0	■	■
Unbalance ratio I1/I2	■	■
Frequency	■	■
Peak current value	■	■
Motor's Status and Availability	P220	PM20
Thermal status of the motor	■	■
Load value as a % of full load current	■	■
Time to thermal trip	■	■
Temperature of each RTD (optional)	■	■
Hottest RTD (optional)	■	■
Authorized start number	■	■
Time before another start-up authorization	■	■
Last start current magnitude	■	■
Last start time value	■	■
Number of starts and emergency starts	■	■
Total motor running hours	■	■
Fault Records	P220	PM20
Fault number	■	■
Date and time	■	■
Active setting group	■	■

*Number of the faults can vary depending on considered time length for disturbances.

Faulty phase or phases	■	■
Function that gave the trip	■	■
Magnitude of the value that gave rise to the trip command	■	■

Protection Functions		P220	PM20	Min	Max	Step
50/51	Three-Phase Overcurrent	■	■	0.1	10	0.01
50N/51N	Earth fault	■	■	0.04	10	0.01
50BF	Breaker Failure	-	■	0.1	10	0.01
66	Number of Starts Limitation	■	■	1	10	1
37	Loss of load/Underpower	■	■	0.1	20	0.01
46	Negative Sequence Overcurrent	■	■	0.02	10	0.01
49	Thermal Overload	■	■	0.05	10	0.01
27/27LV/59	Undervoltage / Overvoltage	-	-			
86	Latching of Output Relay	■	■			
48/ 51LR	Start / Stalled Protection / Motor Re-Acceleration	■	■	0.1	10	0.1
	Undervoltage Auto-Restart / Load Restoration Sequence	■	-			
51S	Locked Rotor during Start-up	■	■	0.1	10	0.01
14	Speed Switch Input	■	■			
26	Optional RTD / Thermistor Inputs	6/2	8/16			

Additional Functions		PM20	Min	Max	Step
	CT Supervision	■	0.01	1	0.01
	Cold Load Pickup	■	0.1	5	0.1
	Inrush Blocking	■	5	50	0.1
	Breaker Wearing	■			

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