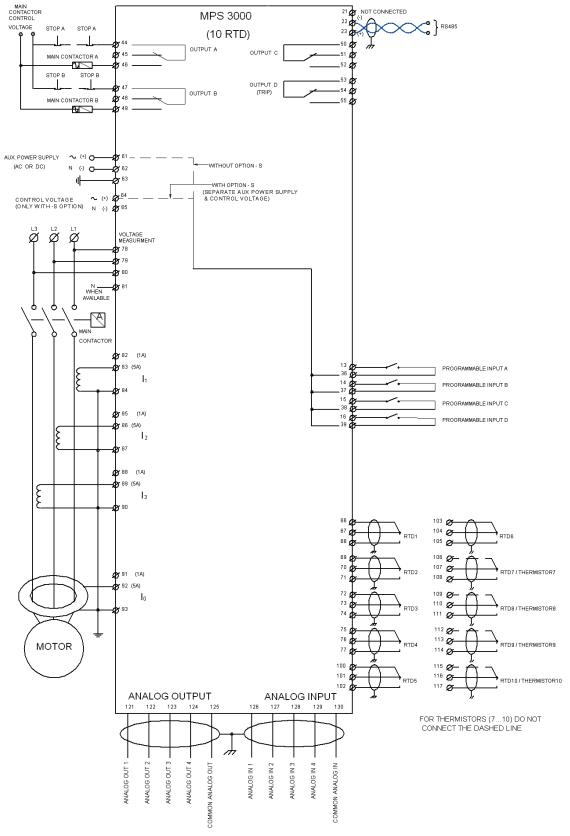
MPS3000

Motor Protection Relay

Specifications

- Standard voltage version: 85 - 250 V
- Low voltage version: 19 - 60 V
- Frequency: DC, 45 to 65 Hz.
- Power consumption: Less than 20 VA
- Input method : True RMS, sample time 0.5 ms.
- Ambient temperature : 0°C to +50°C

Input/Output Indication Scheme



*For illustration purposes only

Solcon-IGELS's Motor Protection System is a microprocessor-based relay/controller designed for three-phase induction motors.

It measures true RMS voltages and currents at a 0.5ms sampling rate, making it compatible with electronic motor drives like soft starters.

The MPS3000 offers motor protection, supervision, and communication features, while the MPS3000-C adds motor control capabilities. This system provides comprehensive protection by accurately modeling motor thermal conditions to ensure safe operation within specified limits, protecting against voltage abnormalities, motor and cabling faults, and operator errors.

Features

- Monitoring 3 temperature inputs, 3-phase current, voltage and energy
- Power measurement (3-phase voltage measurement)
- Statistical data last 10 trips -time / date stamp
- RTD bias for thermal overload
- Multiple Thermal Overload curves
- Too Many Starts pre-alarm, configurable to energize dedicated output relay
- Capture and display of min and max RMS, average of 3-phase current, one voltage, min and max frequency
- Ground Fault setting during start eliminates nuisance trips
- MODBUS communication, remote parameter programming, control and supervision.
- Programmable discrete inputs/output
- 4 programmable analog outputs

Protection Package

ANSI/IEEE C37.2	PROTECTIONS	
3	Communication failure / Internal failure	√
27	Under-voltage	√
32L	Under Power Level 1/2	√
37	Under current Level 1/2	√
46	Current Imbalance Level 1/2	√
47	Phase sequence/loss	√
48	Max. Start Time	√
49R	High Temp. Level 1/2, sensors 1-10	√
49/51	Thermal Capacity Level 1/2	√
50	Over Current Level 2 - Short	√
50G	Ground Fault Level during starting	√
50G/N	Ground Fault Level 1/2	√
51L	Load Increase - Alarm	√
51R	Over Current Level 1 - Jam	√
55	Lead / Lag PF / Low Power Factor	√
59	Over-voltage Level 1/2	√
66	Too Many Starts Level 1	√
74	Welded contactor (MPS 3000c)	-

Applications

- Pumps
- Thrusters
- Mixers
- Crushers
- Conveyors
- Chillers
- Fans
- Compressors
- Power Packs
- Debarkers
- Ball Mills

Dimensions

- Vertical : 310 / 134 / 140
- Horizontal : 140 / 310 / 134
- Weight : 3.1kg

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Ordering Information

MPS3000	P	V	1P	2	0	M	S
	Relay Type	Direction	Thermal sensor	Supply / Control Voltage	Options	Comm.	Front Panel

Relay Type	
Specify	Description
P	Motor Protection Relay
C	Motor Protection Controller

Direction	
Specify	Description
H	Horizontal
V	Vertical

Thermal sensor	
Specify	Description
1P	Ten RTD Platinum 100 ohm/Nickel 120 ohm
1C	Ten RTD Copper 10 ohm
TP	Four Thermistors + six RTD (Pt100)
TC	Four Thermistors + six RTD (Copper)

Supply / Control Voltage	
Specify	Description
2	110-230V 50/60Hz or DC (+10% / -15%)
2S	110 - 230 Vac/dc with separate AUX. Power Supply and Control Voltage
3	19 - 60 Vdc

Options	
Specify	Description
0	No Option
2	Trip on disconnected RTD
Z	Bazan
4	Motor Insulation Tester [4]

Communication	
Specify	Description
M	RS485 with MODBUS protocol
P	Rear Profibus connection and front RS232 with MODBUS protocol at fixed baud rate of 9600bps [1]
Notes:	[1] Only available in vertical model For P in horizontel model consult with factory

Front Panel - Standard

Disclaimer

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