e-MCM Datasheet

Rated Specifications

General Information	
Motor Type	3-phase, AC motors & generator. Motor current (load) variation must be less than 45% during 6 sec data acquisition period. DOL, Star-Delta, Soft Starter, Variable Frequency Driver
Ambient Conditions	
Operating Temperature	-10 - 50 °C
Humidity	%80, Relative Humidity, non-condensing
Pollution Degree	2
Altitude	2000m (6562ft)
IP Rating	IP40
Input Supply Voltage	
Rated Voltage	100-240 Vac
Allowable Input Voltage	90% - 110% (of rated voltage)
Frequency	50/60Hz
Power Consumption	5W
Over Voltage Category	IEC61010 Cat III
Measurement Voltage Inputs	max 690Vac (Line to Line)
Measurement Current Inputs	Up to 2500A with three Cat III Current Transformers: 0.5% accuracy
Frequency Range	15-120Hz
Communication	
Network	RS485 Mosbus-RTU (Only for power monitoring) | TCP/IP Modbus TCP
Display	
4.3" LED	Displays electrical measurement, failure information, and setting values
Status LEDs	Displays power status, module status, comm status, alarm for diagnosis
Dimensions WxHxL	120 mm x 105 mm x 15 mm
Physical	
Weight	450 g (1 lb)
Dimensions WxHxL	96 mm x 64 mm x 110 mm
Mounting	Front Panel Mounting (indoor)
Compliance & Certifications	
EMC	EMC Directive 2004/108/EC, EN61326-1, IEC61326-1
Safety	Electrical Safety Directive 2006/95/EC, EN61010-1,IEC61010-1

Measurement Functions

Voltage	3 phase voltage (line-line), unbalance [%]
Current	3 phase current and leakage current, unbalance [%], THD [%]
Active Power	Measuring active power [kW]
Reactive Power	Measuring reactive power [kVAr]
Frequency	Measuring Frequency [Hz]
Power factor	Measuring Power factor
Energy	Total Whr, Today Whr, Prev day Whr
Data and Time	Year, month, day, hour, minute, second

Auxiliary Functions

Password	Password Secure configuration
Communication	Serial/ethernet communication for monitoring status and event history
Total Running-Hour	Record of total running from installation which cannot be modified or cleared
Alarm	Output alarm signal to 3 output relays
Fault History	30(diagnosis) fault history to the flash memory
Limitation Of Auto Reset Attempt	Block auto-reset if the reset count exceeds the pre-set count within 30 minutes
Date/Time Information Setting	Save date/time to provide exact time of motor failure

Motor Condition Monitor and Diagnostic Functions

Status	
OK	Motor and driven system is working as expected.
Watch Line	Watch Line is usually temporary in nature and generally the user does not need to take any action. However, it is recommended that when this status level occurs, the user should at least assess the extent of the change in the line conditions, as significant changes in the line voltages and currents may be dangerous to the motor. If the line status change is persistent, the user should assess the root cause of this change. For instance, it may be due to a problem in the contactors or for inverter driven motors the settings of the inverter may have been changed. In any case, if the root cause cannot be remedied easily and quickly and the new voltage supply condition presents no danger to the motor, the user has the option to send MCM to the UPDATE mode. This will allow MCM to learn the new voltage supply conditions, after which the status will eventually return to normal.
Watch Load	If the process load has not been altered deliberately, check for leakage, valve & vane adjustment, pressure gauge faults, manometer, dirty filters (fans, compressors). If the process is altered deliberately, device should be updated.
Examine 1	Plan Maintenance (First Level Alarm): There are developing mechanical and/or electrical fault(s).
Examine 2	Do Maintenance (Second Level Alarm): There are developing mechanical and/or electrical fault(s).

Accessory-Split Core Current Transformers

AC25R-10-100mA -E	3x10A	| Splitcore current transformers set, (Ø25mm) 10A:100mA
AC25R-20-100mA -E	3x20A	| Splitcore current transformers set, (Ø25mm) 20A:100mA
AC25R-30-100mA -E	3x30A	| Splitcore current transformers set, (Ø25mm) 30A:100mA
AC25R-30-100mA -E	3x60A	| Splitcore current transformers set, (Ø25mm) 60A:100mA
AC25R-100-100mA -E	3x100A	| Splitcore current transformers set, (Ø25mm) 100A:100mA
AC25R-200-100mA -E	3x200A	| Splitcore current transformers set, (Ø25mm) 200A:100mA

AC35R-300-100mA -E	3x300A	| Splitcore current transformers set, (Ø35mm) 300A:100mA

AC51R-400-100mA -E	3x400A	| Splitcore current transformers set, (Ø51mm) 400A:100mA
AC51R-600-100mA -E	3x600A	| Splitcore current transformers set, (Ø51mm) 600A:100mA
AC51R-800-100mA -E	3x800A	| Splitcore current transformers set, (Ø51mm) 800A:100mA

AC80R-1000-100mA -E	3x1000A	| Splitcore current transformers set, (Ø80mm) 1000A:100mA
AC80R-1500-100mA -E	3x1500A	| Splitcore current transformers set, (Ø80mm) 1500A:100mA

AC105R-1200-100mA -E	3x1200A	| Splitcore current transformers set, (Ø105mm) 1200A:100mA
AC105R-2000-100mA -E	3x2000A	| Splitcore current transformers set, (Ø105mm) 2000A:100mA