



Motor Protection Analyzer

FEATURES

MEASUREMENT OF:

- Current
- Voltage
- Frequency
- Power Factor (PF)
- Reactive Power (KVA)
- Real Power (KW)
- Energy Consumption (KWH)

REPORTS:

- Voltage & Current report
- PF, KVA, KWH, KW report
- Adjusted Values report
- Total Motor Running Time report
- Start Mode report
- 20 Last Fault report
- Power Frequency report
- Motor Temperature report

COMMUNICATIONS:

- COM-LINK RS485@ 9600 baud output available (MODBUS RTU protocol)

PHYSICAL FEATURES:

- Din-Rail, Flat Surface or Flush mounting
- 16x2 LCD Display with current values, voltage values, and load report information on screen
- Four (4) push buttons for operation and protection parameter adjustments (1 for START, 2 for ADJUST and 1 for SELECT)
- Enclosure material UL94V0

ADJUSTMENTS OF:

- Overload
- Undercurrent
- Overvoltage
- Undervoltage
- Current Unbalance
- Voltage Unbalance
- Frequency
- Trip Delay
- Start Up Delay after Voltage
- Fault Recovery
- Motor Thermal Class
- Clock Adjustment
- Control of Motor High-Inertia Load
- Schedule Timer
- AUTO / MANUAL Restart Mode
- Password

PROTECTION AGAINST:

- Overload / Undercurrent
- Overvoltage / Undervoltage
- Frequency Shift
- Voltage Unbalance
- Current Unbalance
- Single Phasing
- Phase Reversal
- Locked Rotor

OTHERS:

- Thermal memory

OVERVIEW

MPA2 is a micro-controlled based three-phase Motor Protection Analyzer Relay specifically designed to protect electric loads and motors from failure and damage due to common current and voltage faults.

MPA2 constantly supervises current and voltage values. When any harmful condition occurs, the output connection is deactivated until the fault disappears, power line conditions return to an acceptable level and the motor has been totally cooled. Specific timing such as Start Up Delay (TC) and Trip Delay (TD) are incorporated to prevent nuisance tripping due to rapid power fluctuations.

MPA2 provides LCD Display to indicate the output status voltage, current, unbalance, frequency and load status and failure conditions. It also provides four (4) push buttons (1 for START, 2 for ADJUST and 1 for SELECT) for operation and protection parameters adjustment. Besides these mentioned advantages, a Communication Port with MODBUS RTU protocol is included with MPA2.

An innovative mechanical design allows two (2) placement options:

- Symmetrical Din-Rail mounting.
- Flat Surface mounting, using an exclusive attachable mounting ear.

MPA2 has been developed using the most advanced technology and designed in accordance with the IEEE, IEC and NEMA protection standards and developed in compliance with IEC electromagnetic compatibility standards, working safely under the hardest electrical environments.

When you use a MPA2 Motor Protection Analyzer, you are working with the best solution to protect your most important investments.

PRODUCT STANDARDS

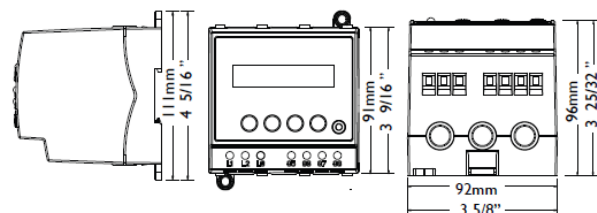
Designed according to Ce Standards (LVD and EMC):

IEC	61010-1
IEC	60255-6
IEC	60255-8
IEC	60947-1

Designed according to:

UL 60947-4-1
IEEE C37.112

DIMENSIONS (INCHES/MILLIMETERS)



FUNCTIONS & RANGE OF APPLICATIONS

The MPA2 provides electrical protection through general functions and setting ranges for intended use listed as follows:

VOLTAGE DETECTION	Overvoltage: 5% up to 20% rated voltage
	Undervoltage: -20% up to -5% rated voltage
	Unbalance: 2% up to 10% rated voltage
	Single Phasing: (IN 33% - OUT 28%)
RECOVERY & DETECTION TIME	Start Up Delay after Voltage fault: 0 to 600 sec
	Voltage Fault detection time: 1 to 30 sec
	Phase Reversal detection time: <1 sec
FREQUENCY DETECTION	Frequency Shift: +/-2% up to +/-10% rated frequency
CURRENT DETECTION	Overcurrent: 5% up to 25%
	Undercurrent: Adjustable by PF or by I nominal
	Unbalance: CUB > 48 %
	Single Phasing: CUB > 60 %
POWER FACTOR DETECTION	Power Factor: 0.0 up to 1.0
THERMAL CLASS IEC 60255-8	Thermal Class: 5 to 30 (in step of one by one)

MODEL NUMBER

MODEL NUMBER	MPA2		
VOLTAGE	208/220/240 V~	240	
	440/480 V~	480	
AMPERAGE	1-4 A		04
	3.5-12.5 A		12
	10-32 A		32
	25-80 A		80
	External Current Transformer		

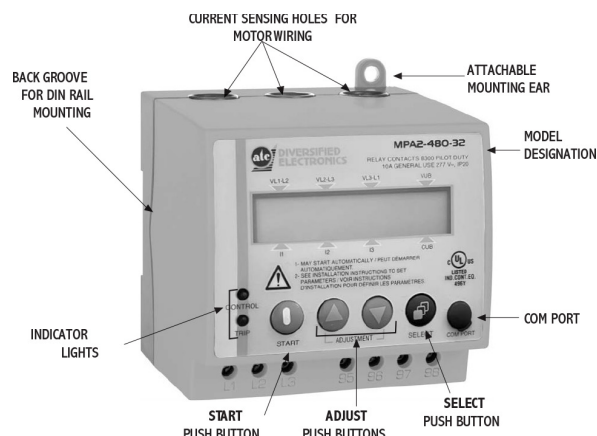
ACCESSORIES

Standard RS485 Communications Cable	MPA2-COM
Current Transformer 30/5 amp	CT30/5
Current Transformer 50/5 amp	CT50/5
Current Transformer 100/5 amp	CT100/5
Current Transformer 200/5 amp	CT200/5
Current Transformer 500/5 amp	CT500/5
Current Transformer 1000/5 amp	CT1000/5

STANDARD STOCK

MPA2-240-CT
MPA2-480-32
MPA2-480-80
MPA2-480-CT
MPA2-COM

PHYSICAL FEATURES



SAFETY INFORMATION

ATTENTION:

Only qualified technicians with knowledge about overload protection relay and associated machinery should do the installation, starting up, and maintenance of the system. Failure to comply may result in equipment damage and/or personal injury.

CONSIDERATION REGARDING EMC

NOTICE:

This product has been designed for industrial environments. Use of this product in residential environments may cause unwanted electromagnetic disturbances in which case the user may be required to take adequate mitigation measures. Failure to comply may result in equipment damage and/or personal injury.