CPM1 Plus – Combined Control & Protection Module

Overview:
M-Tronix is your source for highly innovative electronic control, protection, and monitoring systems for mining and general industry. m-Tronix is also your exclusive distributor of the Bramco product range.

Application:
Introduced in 1984, and continuously developed for almost forty years, this highly advanced package offers Control and Protection for powered outlets, controlling machines or electrical installations. Leaders in Innovative Protection Systems, the Bramco M-Tronix CPM1 is compliant to latest statutory and industry standards CPM1-Plus is the most advanced product in the CPM range. Improved features include distributed processor architecture with dedicated cores for individual protection functions, wider range of protection, faster operation, plug in modular features and leading edge technologies.

Features:
Features suited to 1KV - 4.16KV systems.
Also, 11KV - 13.8KV with reduced features.

- Overload Protection: 1 - 995A with 25 IEC protection curves.
- Short Circuit protection: 4 - 5000A.
- Motor Start Protection: 4 - 5000A.
- Undercurrent control selectable.
- Earth leakage protection with sensitive EL
- toroid - 50 - 500mA / 50 - 500mS.*
- Earth Continuity/pilot or remote control 45ohms.
- Earth Leakage Lockout Protection
- Loss of Vacuum/ Frozen contactor protection.
- Resistive barrier for ELL and FCL.
- Latch functions with individual resets.
- Auto multiple fan interlock control.
- Local or Remote backlit LCD screen.
- Multiple Modules with single LCD screen using token passing.
- Micro Processor control.
- Fault and Event log.
- RS485 Communications Port, RS232 port optional.
- Ethernet interface optional.
- Direct Module Control (DMC) from remote locations.
- Heavy duty switching outputs.
- Power supplies.

Micro Processor Performance

- 120-unit event time date stamped log.
- Highest peak current log per cycle.
- Instantaneous load current continuously displayed.
- Pilot resistance continuously displayed.
- Fault and Trip display.
- Local or remote start operation auto selected.
- Undercurrent for fan or pump control.
- PLC, Mine monitoring system compatibility.
- Remote setting/resetting of module via communications port DMC.
- All Settings visible from the screen continuously.
- Fault diagnostics.
- Security coded program modifications.
- Local and/or remote LCD screen with 5 function buttons.
- Fan interlock selectable feature.
- Module status available at remote locations via the RS485 port.
- All functions plug in and are replaceable.
- Approved for use in hazardous areas of a coal mine.
- Features are AS2081: 2011 compliant.

Ordering Information:

A00531	CPM1-Plus
A00487	Remote Display

Specifications:

Supply: 110V AC(50-60Hz) (40-50hz)

Earth Leakage:
- 50 to 500mAmp adjustable
- 50 to 500mSec adjustable

Earth Continuity: 45 Ohms max

Remote/Pilot Control:
- 0 - 45 Ohm pickup
- 145 Ohm drop out
- Start resistor value 100 Ohm

Earth Fault Lockout:
- 10K Ohms for 1000V
- 1M Ohm Smart Barrier systems

Frozen Contactor/Loss of Vacuum:
- Less than 25VAC

Overload: 1 to 995Amps, adjustable 25-time curves selectable

Short Circuit:
- 4 to 5000Amp adjustable
- 7 to 12mSecs @ 300% setting

Motor Start Current: 4 to 5000Amp adaptive

Enclosure:
Dimensions:
- 240mm x 115mm x 160mm deep
- In base 300mm x 165mm x 160mm deep
- Remote LCD Screen - IP65 with flange gasket.
- Dims: 96mm x 96mm x 100mm deep 70mm behind panel
- Cut out 92mm x 92mm for fascia mount

Material: Powder coated steel construction.

Approvals/Conformances:
AUS Ex 3310X
MDA EXib 1842
MDA EXib R11242
QMD 87 6586XU
Compliances:
AS 2081:2011

Output Current Rating (Standard):
- DR1 1xN/O 5Amp @240Volt AC
- DR2 1xC/O 5Amp @240Volt AC
- DR3 1xC/O 5Amp @240Volt AC
- SSR 1xN/O 5Amp @240Volt AC
- Max contact loading 100VA

Fault Rating CTs:
- 60KA - 1 second
- 20KA - 3 seconds
- 11KA - 11 seconds

Accessories:
- Module Test Unit to test each function and permit programming changes.
- Pilot Protection Unit guarding against spikes on the pilot wire
- Remote screen

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Compliance:
AS/NZS 2081:2011
The CPM1 Plus comes
with a 2-year warranty