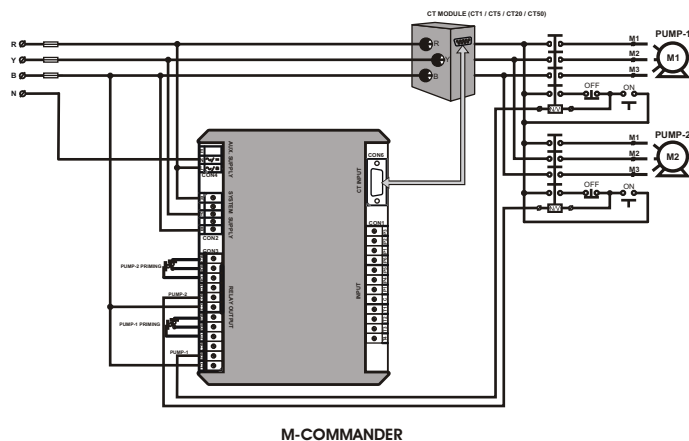


PUMP HOUSE AUTOMATION SYSTEM

PUMP MANAGEMENT & PROTECTION

M - COMMANDER



M-COMMANDER
For Auto operation, Put link across 'ON' push button



M-Commander is a micro-processor based Motor protection and Pump management system, suitable for 2 pumps. Sensing Voltage & Current, Protecting against Phase Failure, Unbalance, Phase sequence, Under/Over Voltage, Overloading, Dry Running, Over Current/Short Circuit. Auto/Manual resetting, Adjustable trip settings for UV/OV,UC/OC,O/L,Start-up delay adjustable, 2x1CO output relays RTC based time settings, Useful for saving energy, Wastage of water & Man Hrs etc.

Motor Protection Includes

- Under /Over voltage protection
- Single/Reverse phasing protection
- Voltage / Current unbalance
- Overload trip
- Over current protection
- Dry running protection

Pump Management System Features

- Auto Change over between two pumps
- Intelligent resetting facility
- On-site programming facility
- Password protection for programming
- Pump On-Off timer programmable for 10 times a day, with advance programming of 7 days
- Run-time compensation
- Ideal for Pump Automation & Unmanned Pumping Stations

Supply Voltage System Auxiliary	415 V AC $\pm 20\%$, 50/60Hz $\pm 3\%$ 90-270 VAC/DC, 50Hz
Output Contact	4 x 1 CO Relays (for 2 pumps)
Current sensor	External CT1 / CT5 / CT20 / CT50
Reset	Auto/ Multi-Attempt / Manual
Unbalance	4-20% for Voltage Unbalance 40-60% ($\pm 10\%$) of I Max.
Overload	As per inverse time characteristics (2/5/10/15/20-Selectable)
Over Current	300% - 800%
Under Voltage	75% - 95% of system supply (adjustable)
Over Voltage	105%-120% of system supply (adjustable)
Dry Running	30-90% of I _{max}
Trip time delay	1-10 Sec. for OV/UV/UB/SP/OC 1-60 Sec. for UC/Dryrun
Start Inhibition Time	1-20 Numbers/hr
Priming Time	0-600 Sec.
Indication	A) Power – Green B) Alarm – Red
Display	16x2 Ch. (Backlit LCD)
Operating Conditions	
A. Temperature	5°C to 60°C
B. Humidity	Upto 95 % Rh.
Weight	800 gms.
Enclosure	ABS
Mounting	Flush Mounting

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