

# CONTROL EQUIPMENT

M521 DIGITAL CONTROL  
BOX SINGLE PHASE



# NITRO PUMPS

2023 V1

PERFORMANCE PERFECTED

## M521 DIGITAL CONTROL BOX SINGLE PHASE

### Product functions

- Liquid level control for supply (borehole) and delivery (storage). Enabled for operation, utilising floating level switch / liquid level probe / pressure switch.
- Over / under voltage protection with adjustable parameters.
- Auto / Manual operation.
- Dynamic and interactive LCD display.
- Push Button Calibration
- Pump Accumulative Running Time Display
- Pump Last Five Fault condition Recording
- Controller enabled for operation with single phase motor fitted with internal or external capacitor from 0.18 to 2.2kw. Capacitor to be retro fitted for borehole motor use. Refer to capacitor size requirement as per table below.



### Application range

Type of motor:	Single phase motor
Motor power:	0.37-2.2kW
Voltage:	220V
Frequency:	50Hz

### Installation environment index

Grade protection:	IP22
Environment temperature:	-25°C to 55°C
Environment humidity:	(20-90)%RH










SINGLE PHASE 3" / 4" OIL FILLED BOREHOLE MOTOR CAPACITOR RATINGS	
kW	Capacitor (mF)
0.37	20
0.55	25
0.75	35
1.1	45
1.5	55
2.2	75

TECHNICAL DATA	
RATED OUTPUT POWER	0.37kW - 2.2kW
RATED INPUT VOLTAGE	AC220V/50Hz Single Phase
TRIP RESPONSE TIME OF OVER LOAD	5sec - 5min
TRIP RESPONSE TIME OF SHORT CIRCUIT	0.1sec
TRIP RESPONSE TIME OF UNDER / OVER VOLTAGE	5sec
TRIP RESPONSE TIME OF DRY RUN	6sec
RECOVERY TIME OF OVER LOAD	30min
RECOVERY TIME OF UNDER / OVER VOLTAGE	5min
RECOVERY TIME OF DRY RUN	30min
TRIP VOLTAGE OF OVER VOLTAGE	110% of rated input voltage
TRIP VOLTAGE OF UNDER VOLTAGE	80 of rated input voltage

## PROTECTION FUNCTIONS

Dry run                      Over load  
 Transient surge          Under voltage  
 Over voltage              Pump stalled  
 Short circuit

## MEANING OF THE ICONS SHOWN ON THE LCD

Icon	Meaning/Description
	pump parameter configuration icon, when this icon appears, pump control box is in parameter adjusting manual;
	time displaying icon, when this icon appears, it means pump control box is displaying some parameter of time, eg: pump accumulative running time (unit: hour); counting down etc
	pump fault icon, when this icon appears, it means pump control box is displaying some fault information;
 ON LINE	network connection error icon, when this icon appears, it means there is no network connections or network connection error between pump control box and SC(slave controller) or computer;
 ON LINE	network normal connection icon, when this icon appears, it means the network connection between pump control box and SC (slave controller) or computer is normal;
V	voltage
M	minute
S	second
H	hour
%	percent
A	ampere
	pump running
	pump stops running
	low pressure or lack of pressure in the pipeline or pressure tank
	high pressure or full of pressure in the pipeline or pressure tank

## Installation

ELECTRICAL CONNECTION TO THE POWER SUPPLY:

