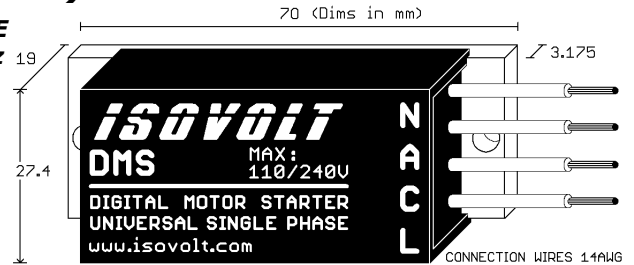


DIGITAL MOTOR STARTER UP TO 5HP(4KW) – UNIVERSAL

NEW ELECTRONIC CENTRIFUGAL SWITCH FOR ANY SINGLE PHASE MOTOR UP TO 3HP(2.5KW) AND 5HP(4KW) 110/240VAC 50/60Hz

The smart replacement for any centrifugal switch used on any motor type, voltage, power, RPM and frequency.

No more problems due to the lack of the specific centrifugal switch that fits into your single phase motor.



- ☑ The DMS05U module works on any single phase motor up to 5HP(4KW).
- ☑ The DMS03U module works on any single phase motor up to 3HP(2.5KW).
- ☑ Every startup time is mathematically calculated as a function of the motor type, voltage and loading condition.
- ☑ On high cycling condition (ON/OFF/ON) the motor's coasting speed is measured avoiding any unnecessary startup or reduce it.
- ☑ Problems associated with RPM tolerance, mechanic and electrical fatigue, vibration, humidity, dust, etc. Are eliminated avoiding erratic motor startups.
- ☑ If there is a motor-locked condition during startup for more than 0.5s. The start circuit opens avoiding motor overheats or burn out.
- ☑ If there is a motor-locked condition during normal operation. It will not be restarted unless the operator turns off the motor, find and fix the problem and turn it on again. Avoiding motor overheats or burn out that will otherwise occur due to a mechanical centrifugal switch trying to restart the motor.

Connection and disconnection of the start capacitor (CS) are made at zero crossing of its voltage and current. After motor's startup, the start capacitor residual voltage is discharged increasing its life.

Gaining maximum performance on continuous heavy duty work on: Pumps, compressors, motor-tools, hoists, motorized doors and gate lifts that uses single phase motors with centrifugal switches. No arcing contacts allowing safe operation on hazardous and explosion proof environments.

Motor's Power(HP) vs Start-Capacitor(uf) - Suggested values:

1/6	20 - 25	See app-note-002 On www.isovolt.com
1/5	30 - 40	
1/4	40 - 60	
1/3	60 - 80	
1/2	80 - 100	
3/4	100 - 120	
1	120 - 160	
1.5	140 - 180	
2	160 - 220	
3	200 - 280	
4	240 - 360	
5	330 - 470	

SINPAC

Compatible

Connection:

- L - 2
- C - 3
- A - 4
- N - 1

TERMINALS

L - N: Are the power terminals connected to the main power cables that feeds the motor from 110 to 240V.

They differ on the following:

Terminal L – The line upon which the start capacitor (CS) close/open circuit is made.

Terminal N – The line upon which the start winding (LS) is referenced.

A: Connected to the start capacitor (CS) and start winding (LS) junction wire.

VANmax=800VAC - DMS05U

VANmax=700VAC - DMS03U

C: Where the free end of the start capacitor (CS) is wired.

The DMS close/open the terminals C-L during startup.

VCLmax= 700VAC - DMS05U

VCLmax= 570VAC - DMS03U

ICLmax value depends on motor's startup time. Example 0.40s:

DMS05U ICLmax@25°C= 350Amp

Pmax= 5HP Approved (Tested on 7HP)

DMS03U ICLmax@25°C= 150Amp

Pmax= 3HP Approved (Tested on 5HP)

✓The module DMS must be installed using the included diagrams only by qualified technicians.

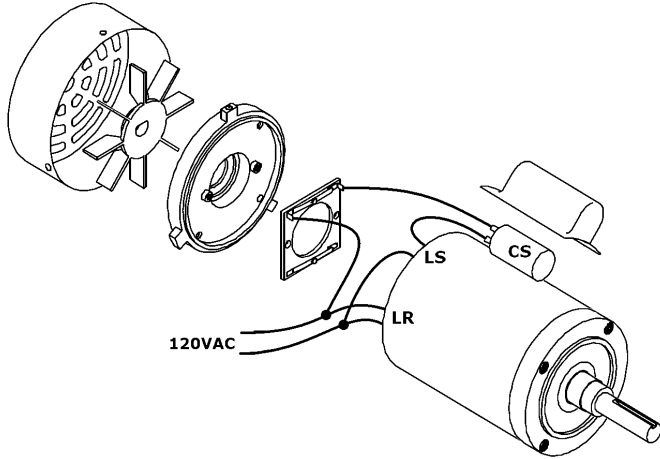
ISOVOLT

SINGLE PHASE MOTOR GENERAL CONNECTIONS

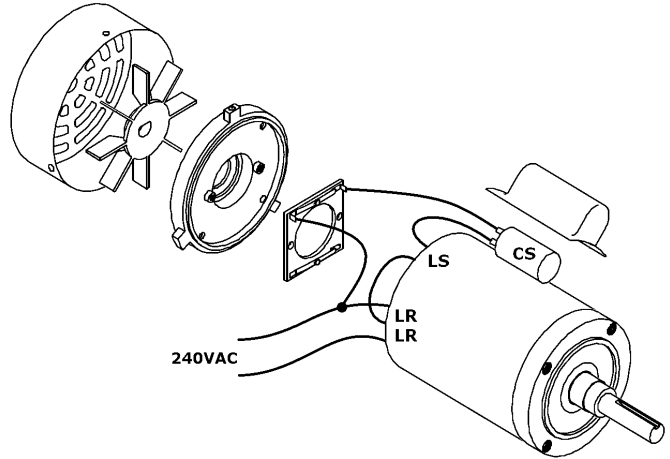
LR: RUN WINDING
 LS: START WINDING CS: START CAPACITOR

NOTE: ON MOTORS WITH RUN CAPACITOR
 CONNECT IT BETWEEN TERMINALS (L) AND (A)

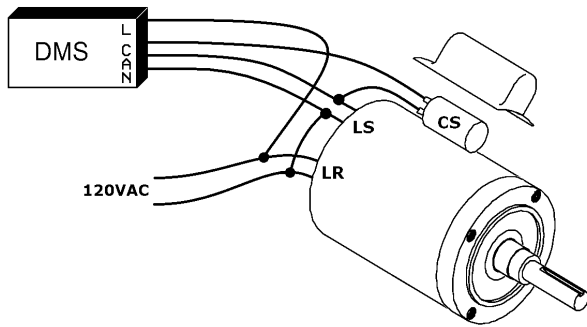
TYPICAL CONNECTION USING CENTRIFUGAL SWITCH
 ON 120V MOTOR (MAIN WINDING -LR IN PARALLEL)



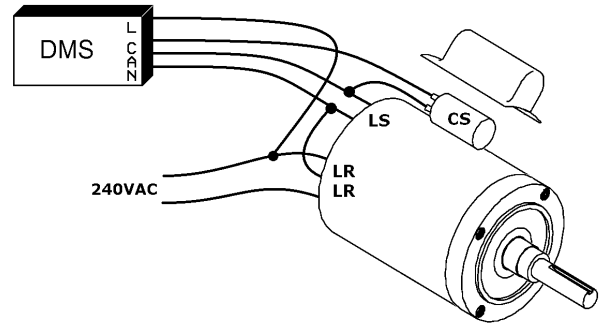
TYPICAL CONNECTION USING CENTRIFUGAL SWITCH
 ON 240V MOTOR (MAIN WINDING LR-LR IN SERIES)



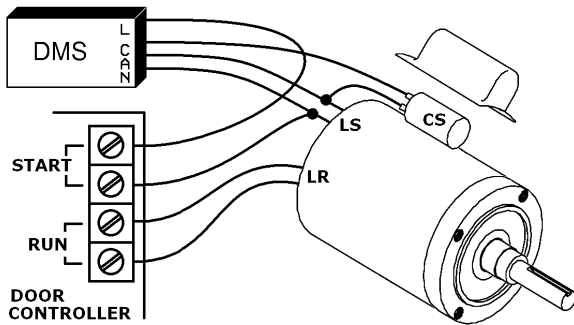
-DMS- CONNECTED TO 120V MOTOR
 (MAIN WINDING -LR IN PARALLEL)



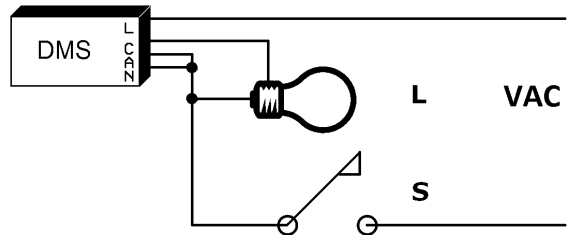
-DMS- CONNECTED TO 240V MOTOR
 (MAIN WINDING LR-LR IN SERIES)



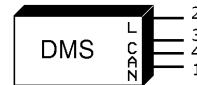
-DMS- CONNECTED TO 120V MOTOR WIRED TO
 DOOR CONTROLLER (MAIN WINDING -LR IN PARALLEL)



-DMS- TEST SETUP: CONNECTING SWITCH (S)
 LAMP (L) WILL TURN ON 0.5s

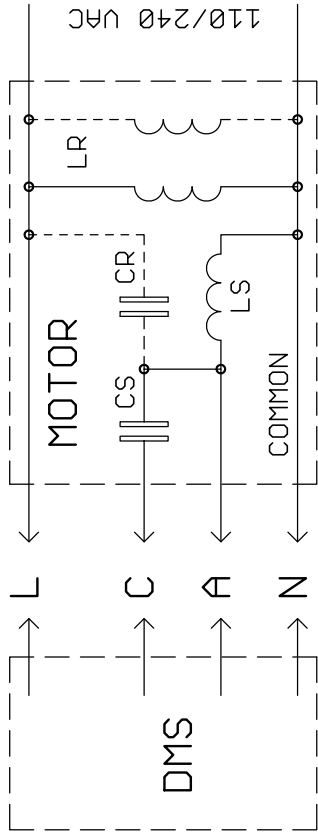


-SINPAC - WIRING

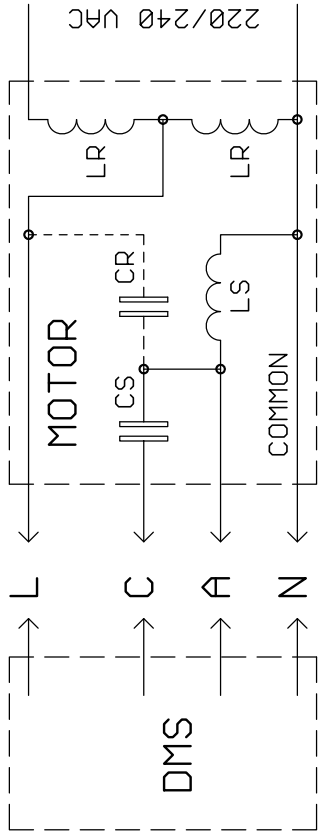


NOTE: ON SPLIT PHASE OR SHADOW POLE
 MOTORS, JOIN TERMINALS (C)-(A) AND
 CONNECT THEM TO THE START WINDING LS.

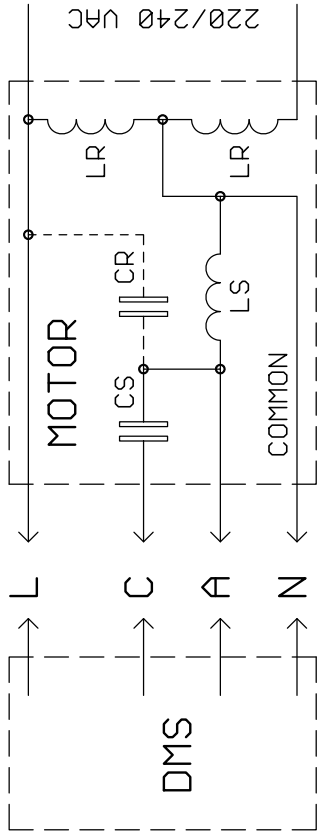
MOTORS WITH START CAPACITOR CS AND (OPTIONAL) RUN CAPACITOR CR



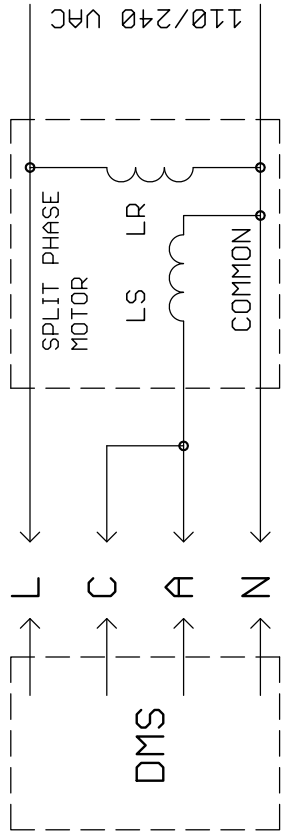
DMS



DMS

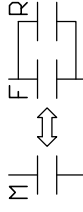


DMS

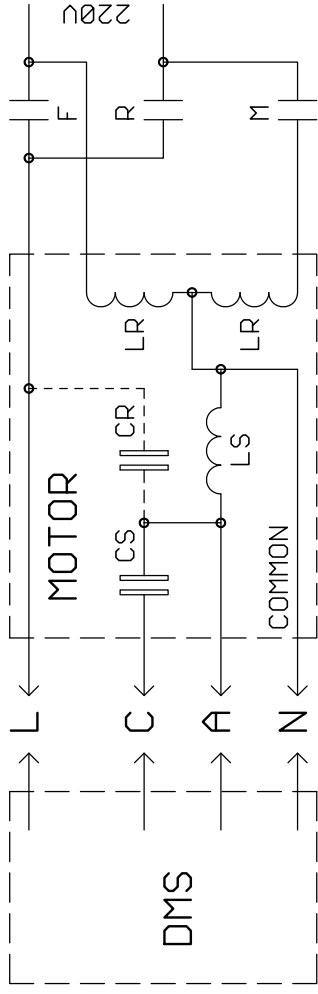


DMS

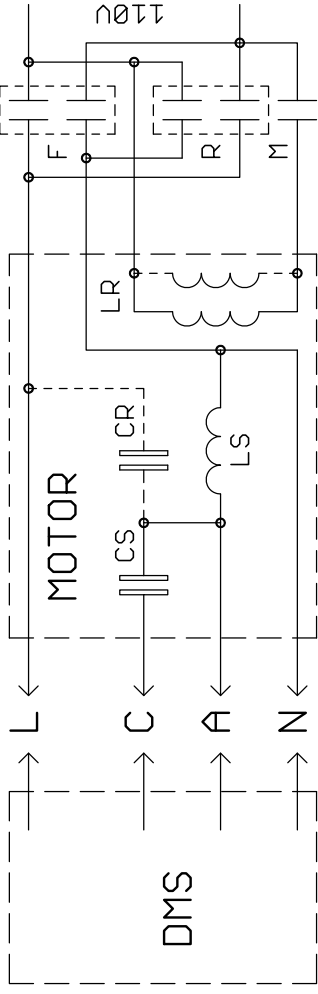
MOTORS USING A ROTATION CHANGING CONTACTOR



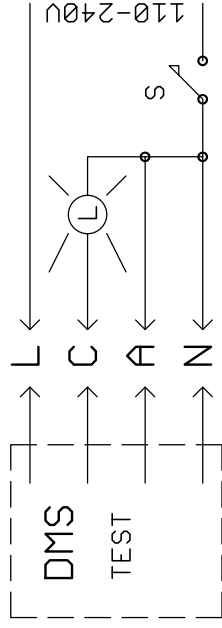
F: FORWARD
R: REVERSE
M: MAIN



DMS



DMS



TEST:

CLOSING S
THE LAMP L
WILL TURN ON 0.5s

SINPAC
WIRING

- L - 2
- C - 3
- A - 4
- N - 1



DMS

DIGITAL MOTOR STARTER UNIVERSAL CONNECTION DIAGRAMS