

Objective

512C Quick Set-Up

Note: Text in bold are default switch settings.

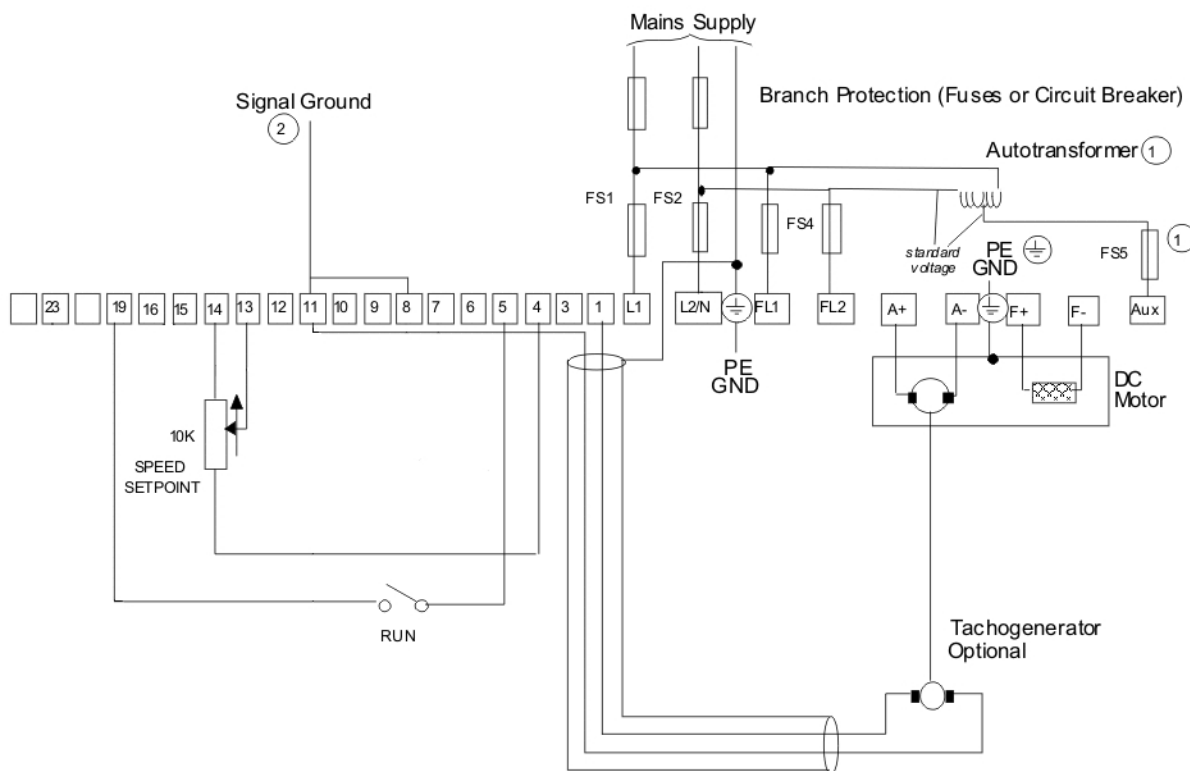
Power connections:

Single phase supply to L1 and L2/N

Motor armature to A+ and A-

Motor field to F+ and F-

Basic Wiring Diagram: Below are the minimum connections required to run the drive in speed control mode with a tachometer. If you are not using a tachometer, ignore the tachometer connections and set switch SW3 to the "ON" position.



- ① When the mains voltage is non-standard, i.e. not selectable via the transformer tapping link (380/415V, 220/240V or 110/120V), connect a low power Autotransformer to generate a standard voltage. Connect the output of the Autotransformer to the AUX terminal. Move the Supply Selector from "MAINS" to "AUX". Select the appropriate voltage via the transformer tapping link. The Autotransformer **must** be connected to the same phase as the incoming power to provide correct coding to the controller.

If you have questions, please call the Product Support Group at (704) 588-3246.

- ② It is recommended that the “0V/common” be connected to protective earth/ground for safety reasons. In a system comprising of more than one controller, the “0V/common” signals should be connected together and joined to protective earth/ground at one point only.

Switch and potentiometer settings

SPEED FEEDBACK

SW1/1	SW1/2	FEEDBACK VOLTAGE	
OFF	ON	10 - 25V	USE P7 TO TRIM
ON	ON	25 - 75V	MAXIMUM SPEED
OFF	OFF	75 - 125V	TO REQUIRED
ON	OFF	125 - 325V	VALUE

Example:

- (a) Customer wishes to run motor at 1500rpm with a 60V/1000rpm tachogenerator.
Feedback voltage = 90V.
From Table 4.1 set SW1 OFF SW2 OFF adjust P10 to give desired speed.
- (b) Customer wishes to run motor at 2000rpm with 320V armature.
Feedback voltage = 320V
From Table 4.1 set SW1 ON SW2 OFF adjust P10 to give desired speed.

Note: It is necessary to set these switches for both tachogenerator and armature voltage feedback.

Speed Feedback Source

SW3 (OFF) Tachogenerator Controller uses Tachogenerator Feedback for Speed Control.

SW3 (ON) Armature Voltage Controller uses Armature Voltage Feedback for Speed Control.

Zero Output Source

SW4 (OFF) Zero Output Zero Setpoint Output

SW4 (ON) Zero Output Zero Speed Output

Current Scaling

SW5	SW6	SW7	FULL LOAD CURRENT CONTROLLER OPTION			
			04	08	16	32

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OFF	OFF	OFF	1/2A	1A *	2A *	4A *
ON	OFF	OFF	1A	2A *	4A *	8A *
OFF	ON	OFF	1 1/2A	3A *	6A *	12A *
ON	ON	OFF	2A	4A *	8A *	16A *
OFF	OFF	ON	2 1/2A	5A	10A	20A
ON	OFF	ON	3A	6A	12A	24A
OFF	ON	ON	3 1/2A	7A	14A	28A
ON	ON	ON	4A	8A	16A	32A

Example Customer wishes to run 14 Amp Motor.

Option 1 Using 512/16 - From table 4.2 set SW7 ON, SW6 ON, SW5 OFF Ia = 14 Amp

Option 2 Using 512/32 From table 4.2 set SW7 OFF, SW6 ON, SW5 ON - Ical = 16 Amp

Turn down I Limit (P4) to give 14 Amps

Note: * 8 Amp, 16 Amp and 32 Amp controllers can be scaled to currents of 4 Amp, 8 Amp or 16 Amp or less but it is recommended that lower current controllers be used in these circumstances.

Current Motor Scaling

SW8 (OFF) Current Meter Buffered Current Meter Output

5V Equivalent to 100% of Controller Current Rating.

i.e. 4 Amp on 512C/04

8 Amp on 512C/08

16 Amp on 512C/16

32 Amp on 512C/32

SW8 (ON) Current Meter Buffered Current Meter Output

5V Equivalent to 100% of Calibrated Current Rating.

For Example 512C/16 SW5-ON,SW6-ON,SW7-OFF

Calibrated Current = 8 Amp therefore 5V = 8amp.

POTENTIOMETERS

P1	Ramp Up Rate	Rotate Clockwise for Faster Acceleration to Set Speed. (Linear :- 1 to 40 seconds)	Same as 512
P2	Ramp Down Rate	Rotate Clockwise for Faster Deceleration to Set Speed. (Linear :- 1 to 40 seconds)	Same as 512

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P3	Speed Loop Stability	Optimises Speed Loop Stability. (Excessive adjustment may lead to instability)	Same as 512
P4	I Limit	Rotate Clockwise to increase Maximum Output Current. With no additional connection to Torque / Current Limit Terminal T7, the Upper Limit is 110%. To achieve the 150% maximum connect T7 to +7.5V.	Same as 512
P5	IR Compensation	Optimises speed regulation against load change when using Armature Voltage Feedback. Rotate Clockwise to increase compensation and reduce regulation.(Excess adjustment may lead to instability) Turn Anti-clockwise when Tachogenerator Feedback used.	Same as 512
P6	Minimum Speed	Controls Minimum Motor Speed /Setpoint when Speed Setpoint Potentiometer connected to Terminal 4. Rotate Clockwise to increase Minimum Speed / Setpoint. (Approximately 30% adjustment when using 10K ohm Speed Setpoint Potentiometer.)	Same as 512
P7	Maximum Speed	Controls Maximum Motor Speed. Rotate clockwise to increase maximum speed.	Same as 512
P8	Zero Speed Offset	Adjusts Zero or Minimum Speed for Zero Speed Setpoint.	New Feature

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