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ISOLATED DRIVE PACKAGE

IDP100 SERIES

The Isolated Drive Package IDP100 Series of D.C. motor controls provides a full range of speed and torque control for 1/4 - 5 HP shunt wound and permanent magnet D.C. motors. Designed for quality and performance, these drives are targeted for the OEM and Panel Builder to meet their system requirements. Two units cover the full horsepower range.

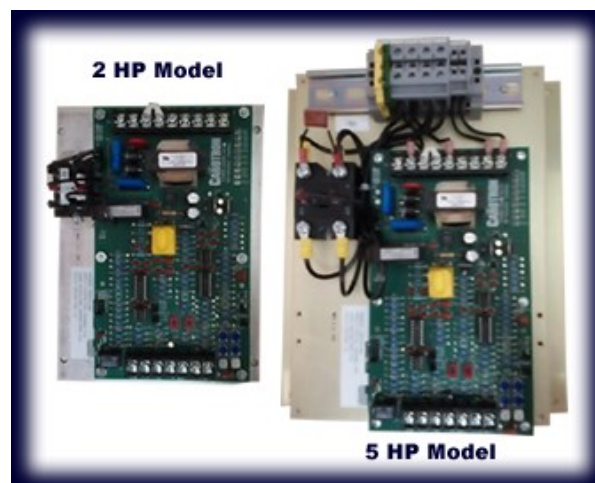
The NEMA type K single phase power bridge is precisely controlled to give the best in speed and torque regulation. Quality components, conservative heat sinking, inner current loop design, unique high frequency gating, and modular construction all combine to produce dependability, simplified installation, and competitive pricing.

The Isolated Drive Package IDP100 Series of D.C. motor controls are also offered in models for Run-Brake and Contactor Reversing operation. Six models in two physical sizes cover a horsepower range from 1/4 to 5 HP.

Each model is supplied chassis-only complete with an IDP102 or IDP105 motor control installed on the option chassis. In each horse-power range, the Run-Brake models are physically interchangeable with the Contactor Reversing models.

Standard Features

- Low profile chassis design
- Independently adjustable linear ACCEL and DECEL
- A single ENABLE input for start and stop
- Inner current loop for fast stable response to changing load conditions
- Metal film resistors and cermet pots. for temperature stability
- Transformer power supply with IC regulators
- High frequency multi-pulse gating for reliable control at high speeds
- Wide range of resistance for speed potentiometer



- Independent MIN and MAX speed adjustments
- Adjustable current limit
- Adjustable IR compensation
- 110 quick connect terminals for test points and circuit access
- Snubber and line MOV for transient protection
- 50 or 60 Hz operation
- Electrically isolated SCR power bridge allows chassis to serve as heat sink
- Easy conversion from speed to torque regulator for versatility of application
- +10 VDC reference input for full speed

Specifications

A.C. INPUT

115 VAC \pm 10%, 50/60 HZ \pm 2 HZ (IDP102 only)
 230 VAC \pm 10%, 50/60 HZ \pm 2 HZ

HORSEPOWER RANGE

Model IDP102: 1/4 - 1 HP @ 90 VDC 1/2 - 2 HP @ 180 VDC

Model IDP105: 3 - 5 HP @ 180 VDC

ARMATURE OUTPUT

Model IDP102: 0- 90 VDC @ 11 amps continuous
 0- 180 VDC @ 11 amps continuous
 Model IDP105: 0- 180 VDC @ 25 amps continuous

FIELD OUTPUT

100 VDC @ 1 amp max. for 115 VAC input
 200 VDC @ 1 amp max. for 230 VAC input

SPEED REGULATION

Armature feedback: $\pm 2.0\%$ of base speed
 Tachometer feedback: $\pm 0.5\%$ of base speed

TORQUE REGULATION

$\pm 2\%$ of range selected

TACHOMETER FEEDBACK

7 VDC/1000 RPM tach with 1750 base speed motor

AMBIENT TEMPERATURE

Chassis model: 0 to 55 degrees C
 Enclosed model: 0 to 40 degrees C

ADJUSTMENTS**Minimum:**

0 to 25% of speed (speed mode)
 0 to 10% of rated current (torque mode)

Maximum:

-20 to +10% of base speed (speed mode)
 -20 to +10% of rated current (torque mode) IR

Compensation:

Range set by current range jumper

Current limit:

0 to 150% of current range

ACCEL AND DECEL:

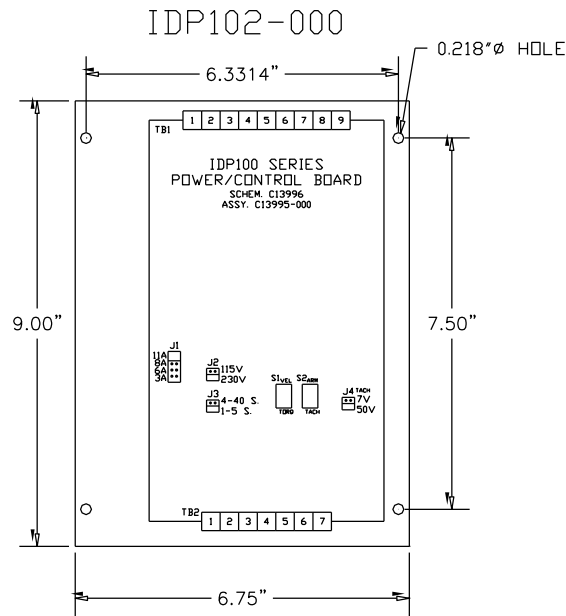
Linear, independently adjustable 2 ranges,
 1 - 5 sec. or 4 - 40 sec

Standard Models and Descriptions

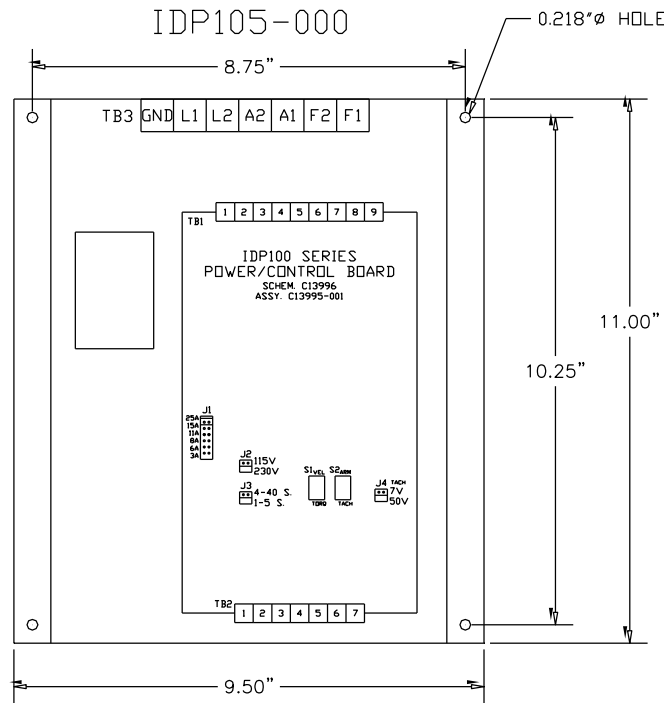
115 VAC Input	230 VAC Input	Model Number	Description	Approx. Shipping Weight	Dimensions	Connections
¼ - 1 HP	½ - 2 HP	IDP102-000	Chassis Only, Basic model	3 lbs.	Fig. D.1	Fig.D.4
-	3 - 5 HP	IDP105-000	Chassis Only, Basic model	8 lbs.	Fig. D.2	Fig. D.5
¼ - 1 HP	-	IDP102-BC1	Run-Brake Model Chassis Only	10 lbs.	Fig. D.3	Fig. D.6
-	½ - 2 HP	IDP102-BC2	Run-Brake Model Chassis Only	11 lbs.	Fig. D.3	Fig. D.7
-	3 - 5 HP	IDP105-BC2	Run-Brake Model Chassis Only	17 lbs.	Fig. D.3	Fig. D.10
¼ - 1 HP	-	IDP102RC1	Contacting Reversing with D.B. Model, Chassis Only	11 lbs.	Fig. D.3	Fig. D.8
-	½ - 2 HP	IDP102-RC2	Contacting Reversing with D.B. Model, Chassis Only	12 lbs.	Fig. D.3	Fig. D.9
-	3 - 5 HP	IDP105-RC2	Contacting Reversing with D.B. Model, Chassis Only	17 lbs.	Fig. D.3	Fig. D.11

Dimensions

Figure D.1



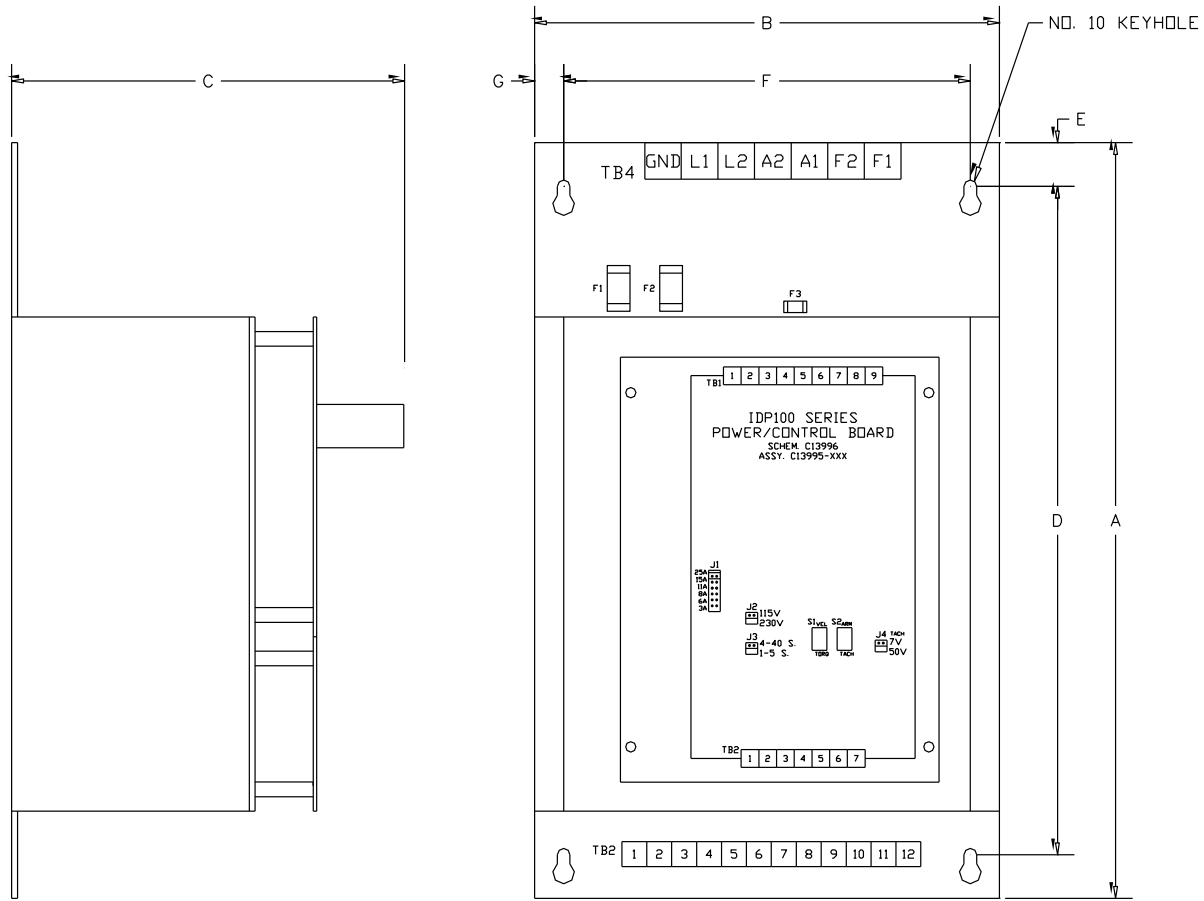
1. DIMENSIONS IN INCHES
2. MAX. DEPTH OF BASIC MODEL IS 2.75". MAX. DEPTH WITH ADP100-001 TORQUE/TAPER OPTION IS 3.00".



1. DIMENSIONS IN INCHES
2. MAX. DEPTH OF BASIC MODEL IS 3.25". MAX. DEPTH WITH ADP100-001 TORQUE/TAPER OPTION IS 3.50".

Figure D.2

IDP CONTACTOR MODELS



DIMENSIONS							
MODEL NO.	A	B	C	D	E	F	G
IDP102-BC1	13	8	6.75	11.5	0.75	7	0.50
IDP102-BC2							
IDP102-RC1							
IDP102-RC2							
IDP105-BC2	16	10	7.25	14.5	0.75	9	0.50
IDP105-RC2							

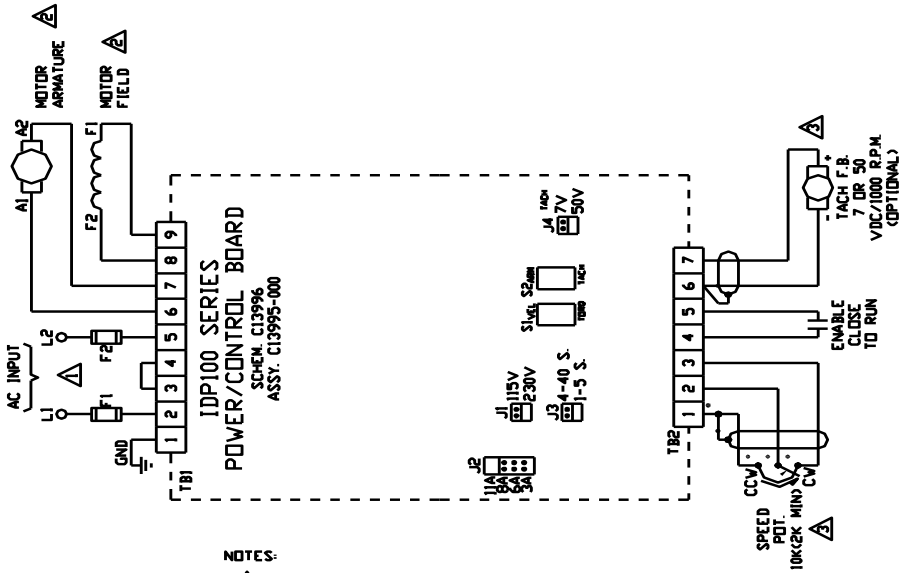
1. DIMENSIONS IN INCHES
2. ADDITION OF ADP100-001 TORQUE/TAPER OPTION WILL ADD 0.25" TO DEPTH (C DIMENSION).

Figure D.3

Connections

Figure D.4

IDP102-000



NOTES:

⚠ CONNECTIONS SHOWN FOR 230VAC. FOR 115VAC, REMOVE JUMPER 3 TO 4 & JUMPER 3 TO 2 & 4 TO 5. ALSO MOVE J2 FROM 230 TO 115. FUSE PER MANUAL.

⚠ USE PROPER MOTOR RATING PER CHART:

INPUT	RANGE	ARMATURE	FIELD
115VAC	1/4-1 HP	0-90VDC	100VDC
230VAC	1/2-2 HP	0-180VDC	200VDC

IDP105-000

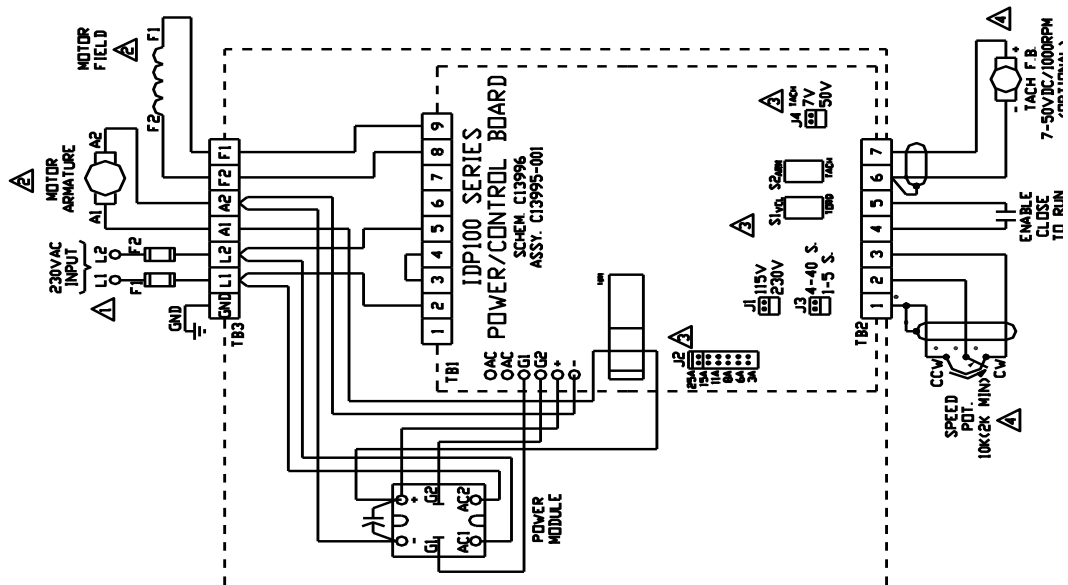
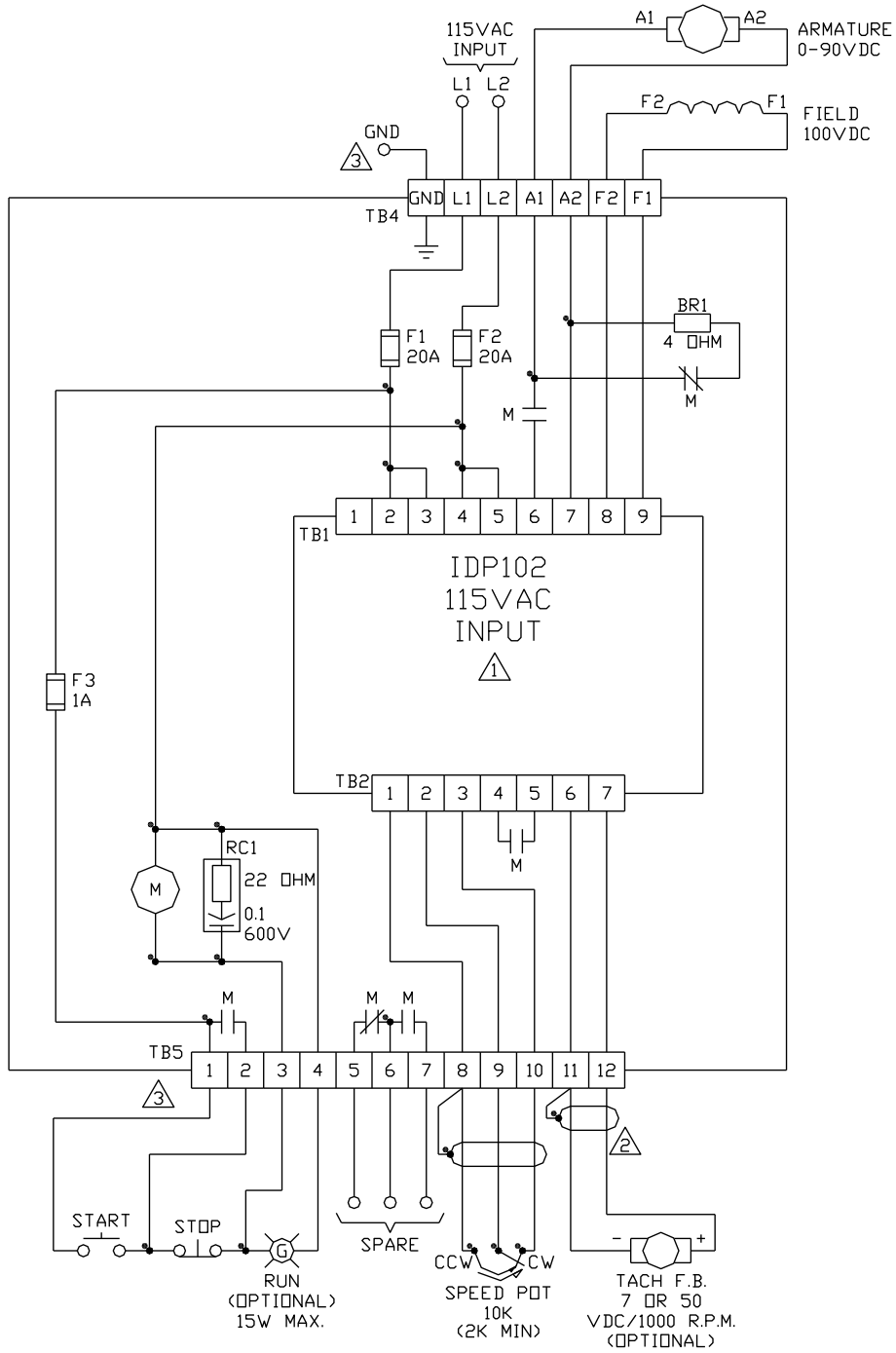


Figure D.5

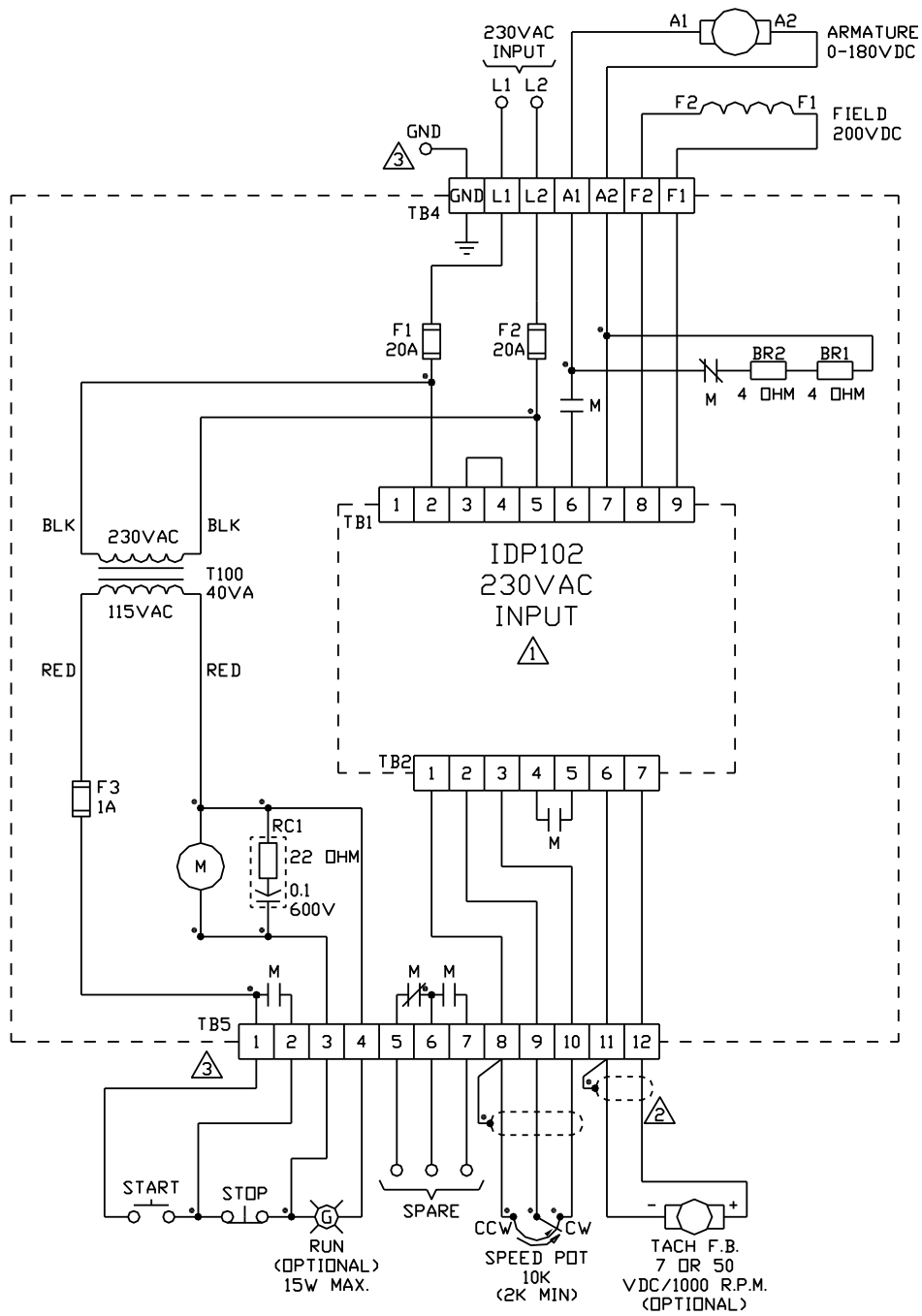
IDP102-BC1 RUN/BRAKE CONTROL 115VAC



WIRING AND CONNECTION
DIAGRAM MODEL
IDP102-BC1

Figure D.6

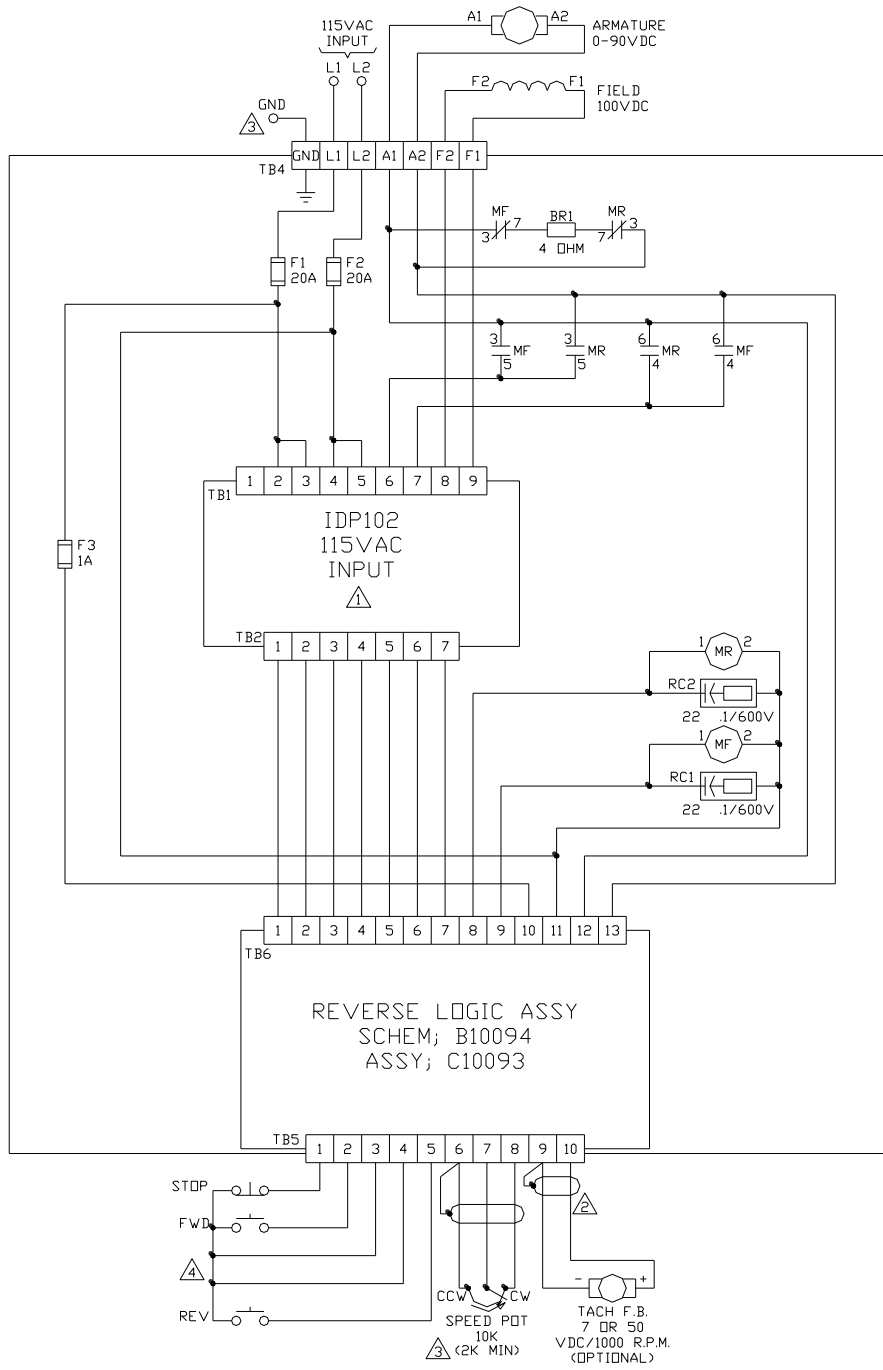
IDP102-BC2 RUN/BRAKE CONTROL 230VAC



WIRING AND CONNECTION
DIAGRAM MODEL
IDP102-BC2

Figure D.7

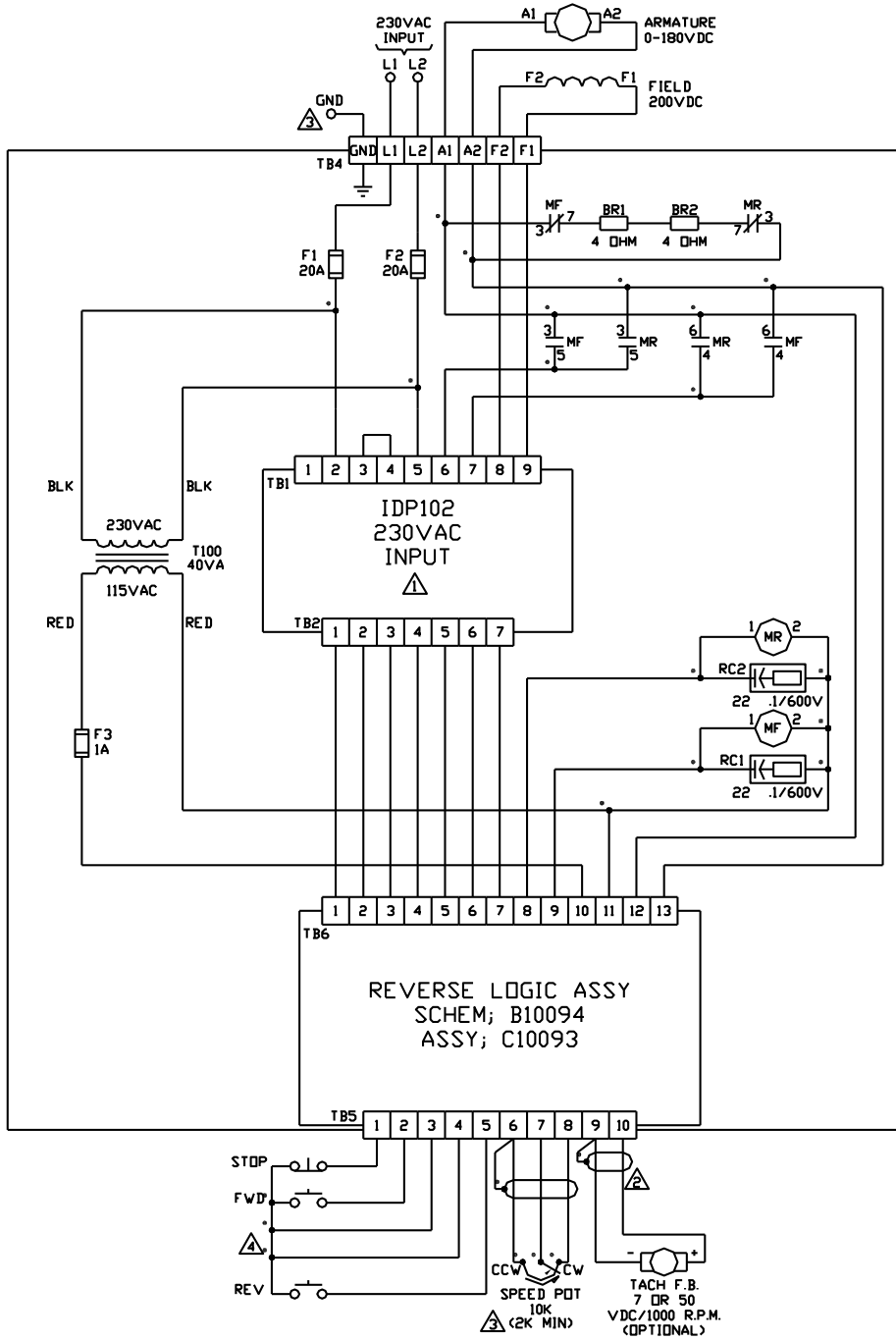
IDP102-RC1 REVERSING CONTROL 115VAC



WIRING & CONNECTION
DIAGRAM MODEL
IDP102-RC1

Figure D.8

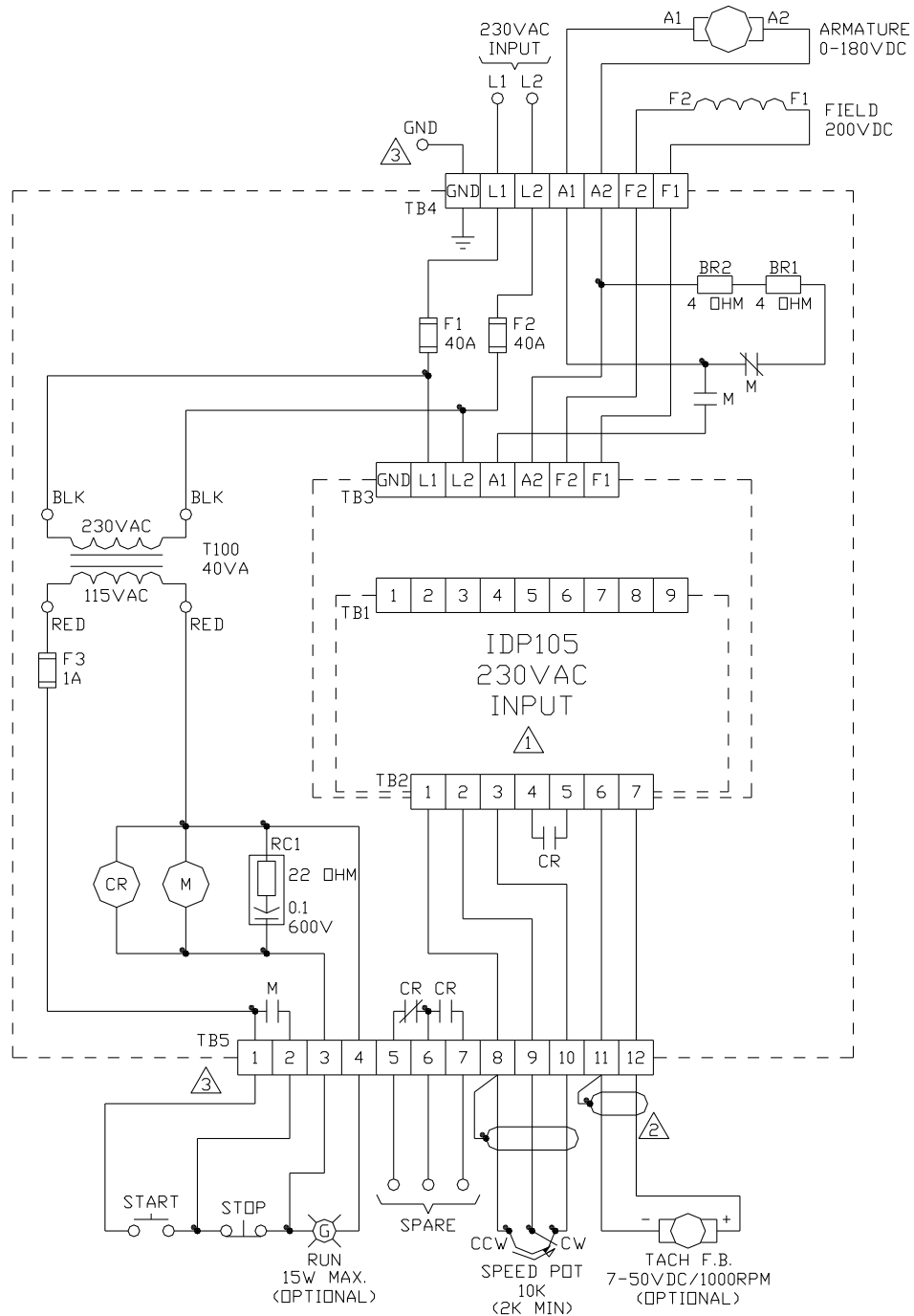
IDP102-RC2 REVERSING CONTROL 230VAC



WIRING & CONNECTION
DIAGRAM MODELS
IDP102-RC2

Figure D.9

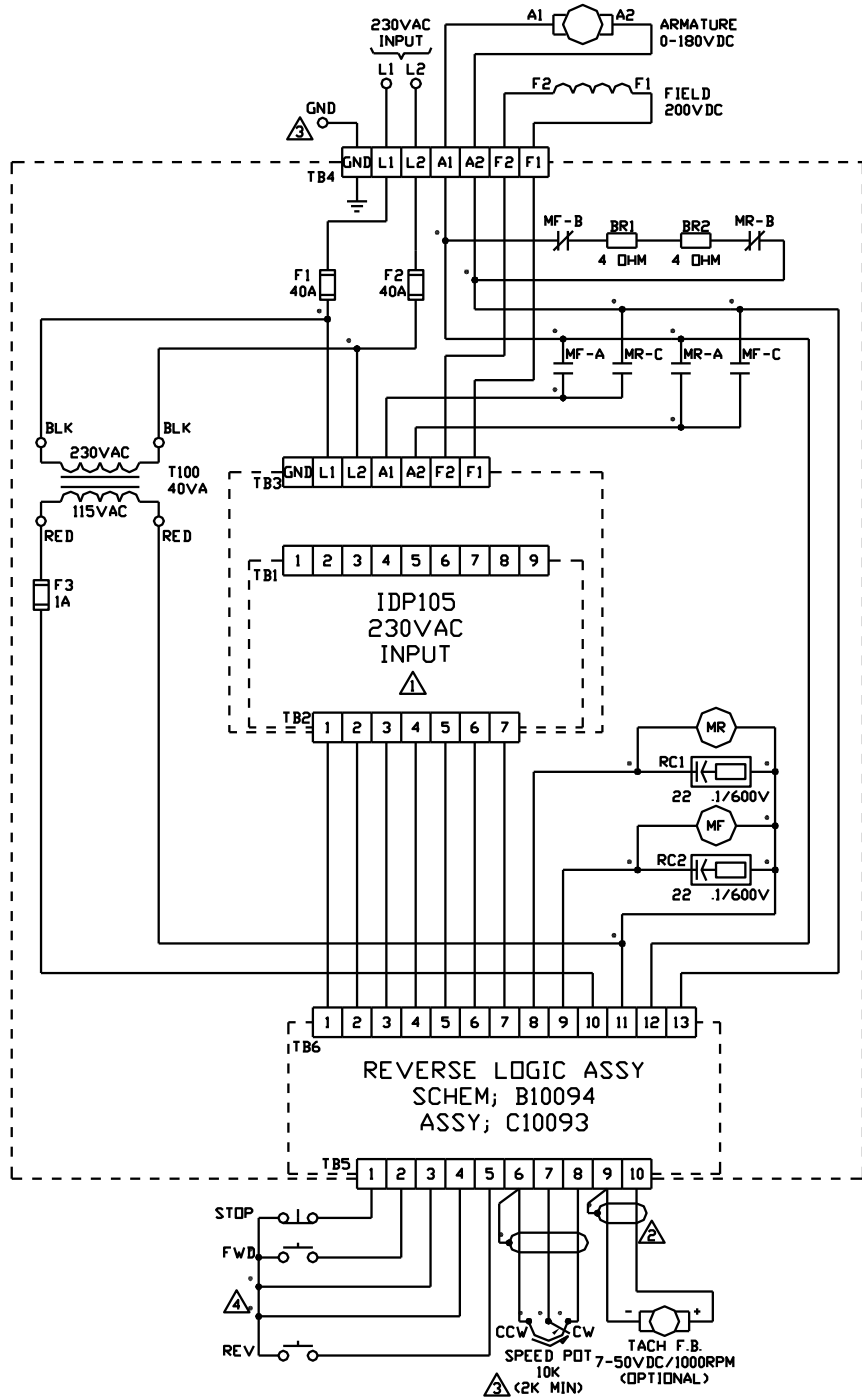
IDP105-BC2 RUN/BRAKE CONTROL 230VAC



WIRING AND CONNECTION
DIAGRAM MODEL
IDP105-BC2

Figure D.10

IDP105-RC2 REVERSING CONTACTOR 230VAC



WIRING & CONNECTION
DIAGRAM MODEL
IDP105-RC2

Figure D.11

Isolated Drive Package IDP100 Series

View or download the complete IDP100 Series Instruction Manual (MAN2005-00) from
www.carotron.com .



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