

SECTION 11 - MECHANICAL BRAKES

The Delta S driver is equipped with special circuitry and software to sequence an electrically released mechanical brake. The full line of Delta motors are available with mechanical brakes to provide mechanical fail safe braking in the case of power loss and driver disable.

It is very important for proper operation to sequence the driver servo lock and mechanical brake to avoid loss of holding torque during the transition. The driver in conjunction with an external relay and brake power supply provide for the optimum sequencing to prevent loss of holding torque or driver damage.

11.1 NO MECHANICAL BRAKING

If a mechanical brake is not used, the BRAKE CONFIRM input must be satisfied. This can be handled by 1 of 2 methods. Method 1 is to tie the BRAKE CONFIRM input ON for the DS-1.5 through DS-17.5 driver sizes. For the DS-35 and larger drivers, a jumper must be provided between B11 and B12. The factory installs a B11 to B12 jumper. Method 2 is to invert the BRAKE CONFIRM input in the Parameter HP-44 "Input Inversion. Refer to [Section 4.1.5](#) for details.

Set UP-16 to the default value of 0.

If configuring the Brake Mode over SERCOS, parameter 34316 must be set to a value of 0 for no mechanical braking. Also, by setting the brake mode to a value of 0 over SERCOS, the drive will also properly handle the BRAKE CONFIRM input by inverting the input in HP-44.

11.2 MECHANICAL BRAKING

The driver sequencing can be set to apply the mechanical brake immediately upon driver disable. Since the mechanical brake is applied immediately upon driver disable the deceleration of the motor will be abrupt and limited only by the brake torque and mechanical system.

Connect the braking relay and power supplies as shown in [Figures 11.1 or 11.2](#) and set UP-16 to a value of 02. Over SERCOS, parameter 34316 must be set to a value of 2.

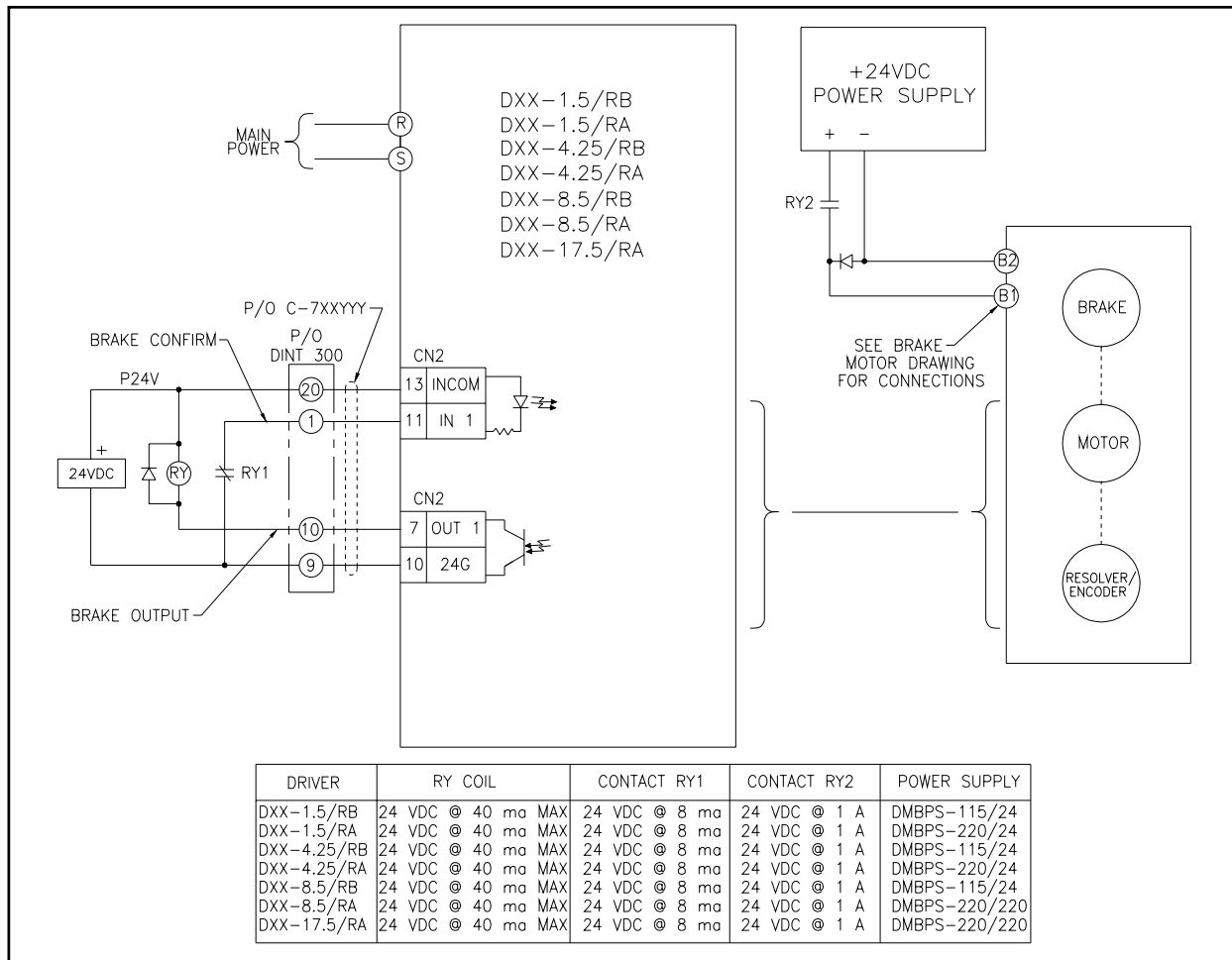


Figure 11.1 - Mechanical Brake Connection for the DS-1.5 Through DS-17.5 Drivers

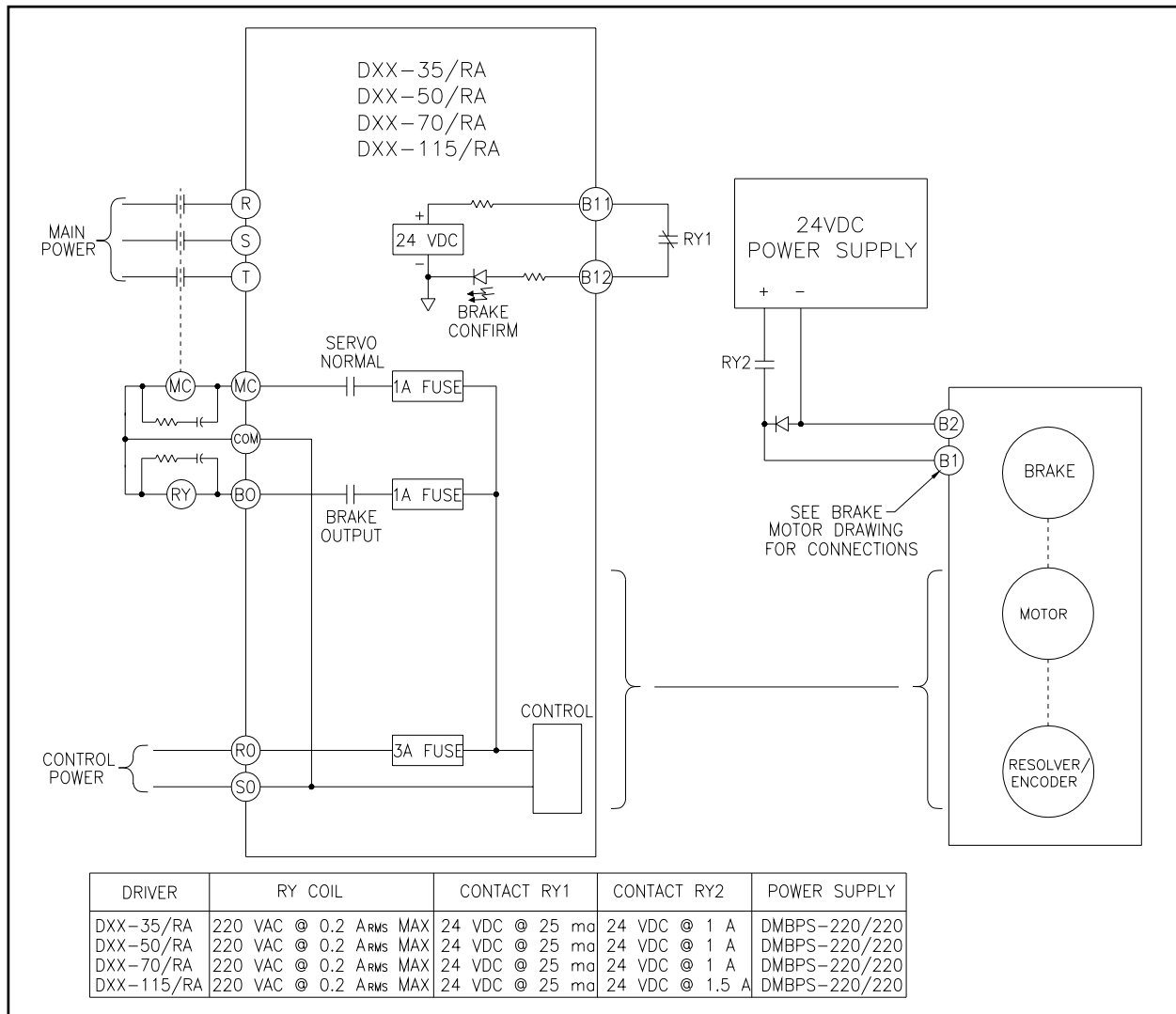


Figure 11.2 - Mechanical Brake Connection for the DS-35 Through DS-115 Drivers

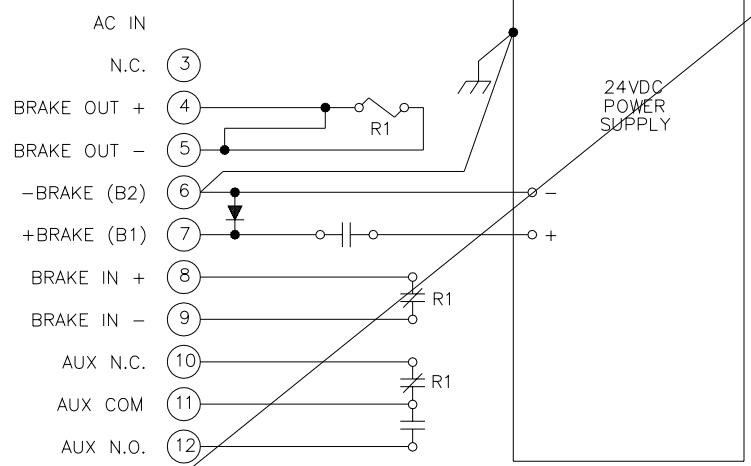
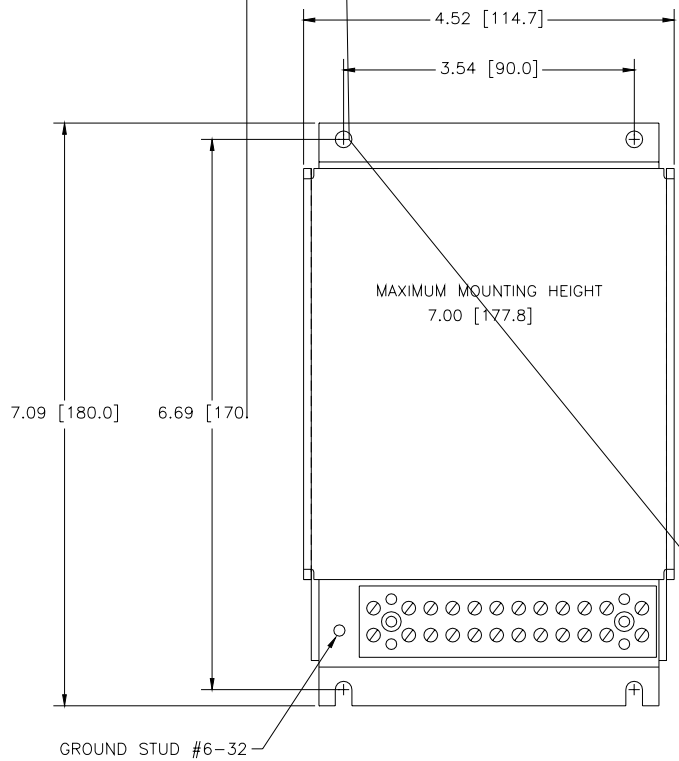
11.3 MECHANICAL BRAKE POWER SUPPLY

DRAWING NUMBER

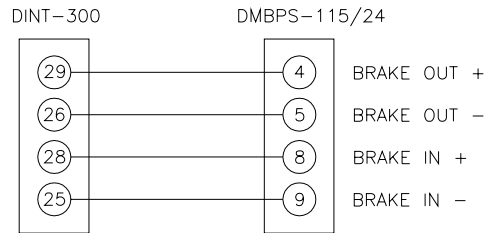
DESCRIPTION

DMBPS-115/24
DMBPS-220/24
DMBPS-220/220

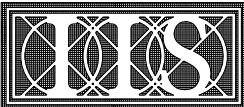
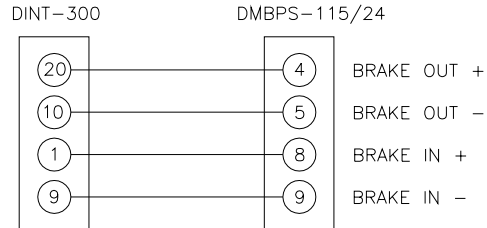
Mechanical Brake Power Supply
Mechanical Brake Power Supply
Mechanical Brake Power Supply



FOR DELTAMAX AND DELTAPRO SOURCING I/O CONTROLLERS WITH
DSD-8.5 AND DSD-17.5 DRIVES:



FOR DELTA DSD-8.5 AND DSD-17.5 DRIVES:

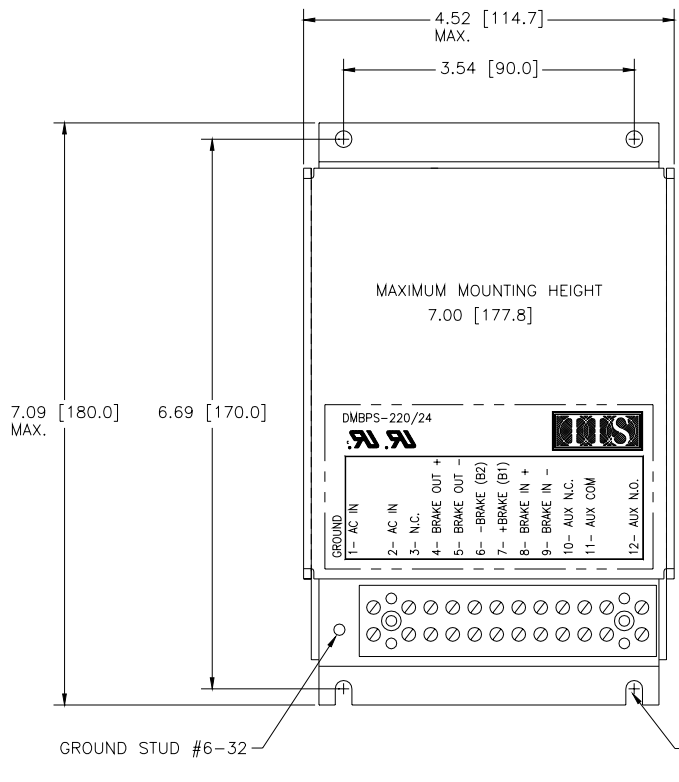


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TITLE
MECHANICAL BRAKE POWER SUPPLY

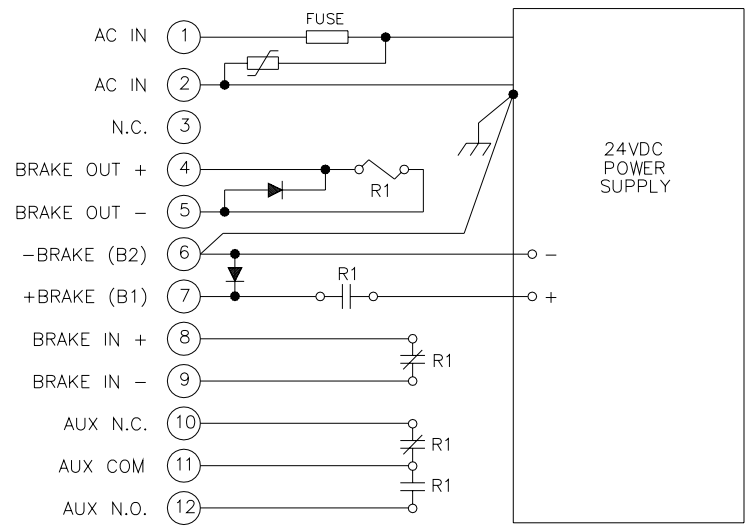
DRAWING NUMBER
DMBPS-115/24



SPECIFICATIONS:	
INPUT POWER: AC IN	200-240VAC 50/60Hz 200ma max
BRAKE OUTPUT:	26 VDC at 1.0 A max.
R1 AUX CONTACT:	24 VDC at 1 A max./ 120 VAC at 1 A max.
R1 IN0 & 24G:	24 VDC at 1 A max.
R1 COIL:	24 VDC at 0.9 watts
FUSE:	GDC-0.200A

GROUND STUD #6-32

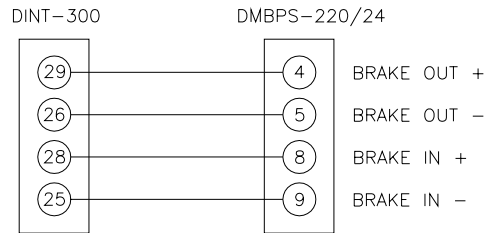
#10-32 [M5] MOUNTING HARDWARE (4 PLACES)



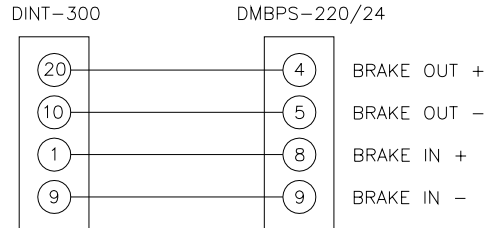
INDUSTRIAL INDEXING SYSTEMS, Inc.
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TITLE	MECHANICAL BRAKE POWER SUPPLY
DRAWING NUMBER	DMBPS-220/24

FOR DELTAMAX AND DELTAPRO SOURCING I/O CONTROLLERS WITH
DSD-8.5 AND DSD-17.5 DRIVES:



FOR DELTA DSD-8.5 AND DSD-17.5 DRIVES:

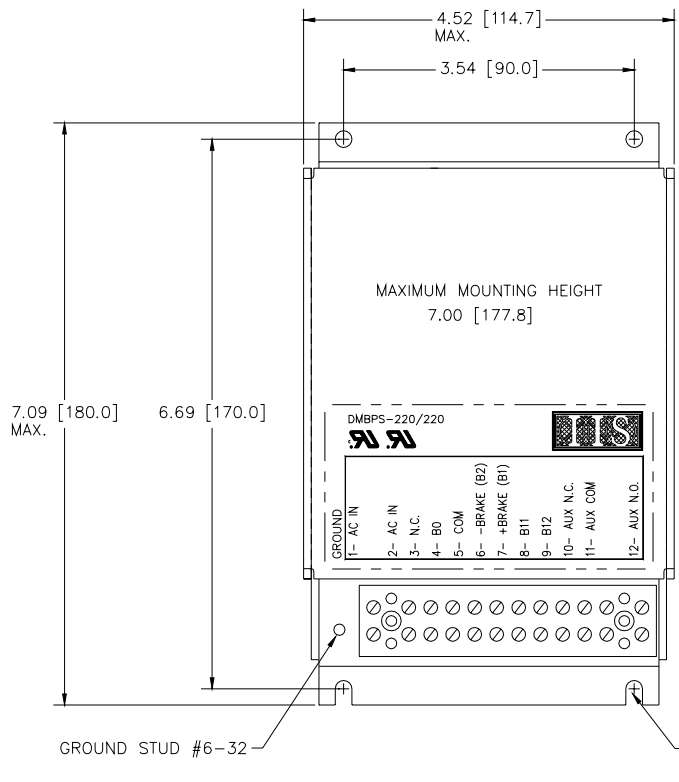


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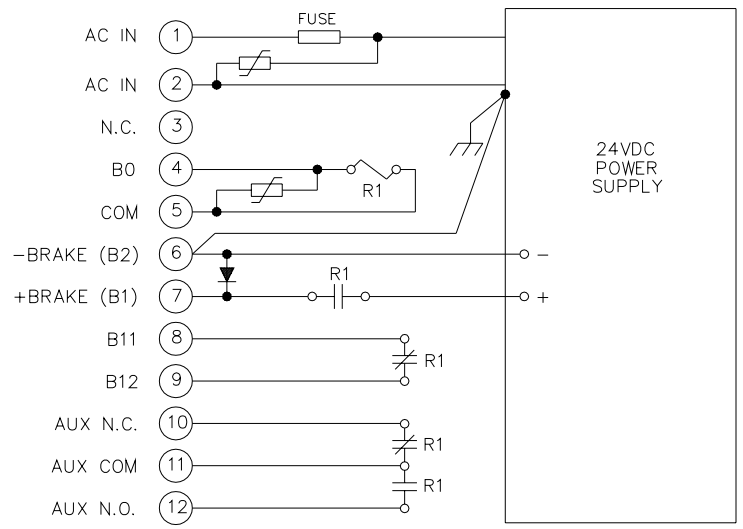
TITLE
MECHANICAL BRAKE POWER SUPPLY

DRAWING NUMBER
DMBPS-220/24



SPECIFICATIONS:	
INPUT POWER: AC-IN	200-240VAC 50/60Hz 200ma max
BRAKE:	26 VDC at 1.5 A max.
R1 AUX CONTACT:	24 VDC at 1 A max./ 120 VAC at 1 A max.
R1 B11 & B12:	24 VDC at 1 A max.
R1 COIL: B0 & COM	220 VAC at 3.5 VA Inrush 1.2 VA Sealed
FUSE:	GDC-0.200A

GROUND STUD #6-32 #10-32 [M5] MOUNTING HARDWARE (4 PLACES)



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TITLE
MECHANICAL BRAKE POWER SUPPLY

DRAWING NUMBER
DMBPS-220/220

