

# Controls

## Power Supply Overview

Inertia Dynamics offers a comprehensive line of power supplies to interface electrical control systems with electric clutches and brakes.

CONTROL TYPE	MODEL	PART #	INPUT	OUTPUT	DESCRIPTION
On/Off Plug-In	N/A	65-22-3	N/A	N/A	Octal Socket For Plug-In Power Supplies
On/Off Plug-In	D2101	D6001-448-004	120 VAC	90 VDC	Dual Channel Rectifier, Fused, Arc Suppression
On/Off Plug-In	D2110	224215	230 VAC	90 VDC	Dual Channel Rectifier, Fused, Arc Suppression
On/Off Din Rail Mount	D2550	214247-040-2201 214247-040-2202 214247-040-2203	120 VAC	90 VDC	Dual Channel Rectifier, Arc Suppression, PLC Compatible
Accel/Decel Din Rail Mount	D2750	214257-040-2230 214257-040-2231 214257-040-2232	120 VAC	90 VDC	Dual Channel Variable Voltage Power Supply, Arc Suppression, PLC Compatible
Overexcitation Din Rail Mount	D2950	214277-040-2211 214277-040-2212 214277-040-2213	120 VAC	90 VDC	Dual Channel Overexcitation Control, Arc Suppression, PLC Compatible
Adjustable Torque Din Rail Mount	D2650	214237-040-2233	120 VAC	0-90 VDC	Dual Channel Variable Voltage Power Supply, Arc Suppression, PLC Compatible

### Control Functions

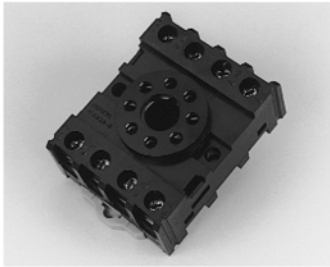
**On/Off Controls:** Electric clutches and brakes are turned on and off by a controlled DC voltage. This DC voltage is typically obtained by rectifying AC voltage. The On/Off controls rectify 120 or 230 VAC and provide a 90 VDC output for a clutch and/or brake. Actual switching is provided by a customer-supplied switch, such as a relay, PLC, photo eye, or proximity sensor.

**Adjustable Torque:** Varying the current to a power-on clutch and/or brake provides variable torque output. Fine-tuning of the torque allows smooth and repeatable starts and stops.

**Overexcitation Control:** To obtain high cycle rates and/or accurate positioning with electric clutches and brakes, overexcitation controls can be used. Inertia Dynamics offers OEX controls for individual, combination, or wrap spring clutches and brakes.

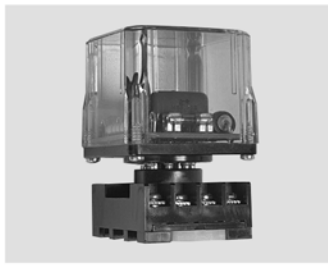
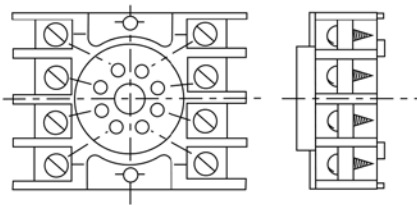
**Mounting Options:** Two different mounting options are available with Inertia Dynamics power supplies:

1. Octal socket mount for individual or combination clutches and brakes
2. Din rail mount for individual, combination, or wrap spring clutches and brakes.



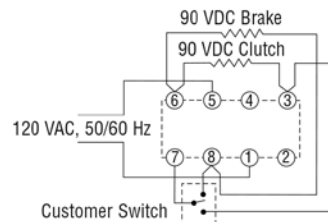
### Octal Socket

- Socket used with octal bases
- Prewired
- UL approved
- Standard design
- Dimensions: 3/4" H, 2 1/2" W, 2" D
- Part Number: 65-22-3



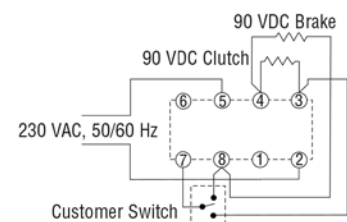
### D2101 — On/Off Control

- Formerly Model PS200
- Octal socket mount
- Controls one brake and clutch
- Input: 120 VAC; 50/60 Hz, fused
- Output: 90 VDC
- Rating: 2.0 amps
- Full wave rectifier
- Dimensions: 2 7/8" H, 2" W, 1 5/8" D
- Fused for overload protection
- Part Number: D6001-448-004



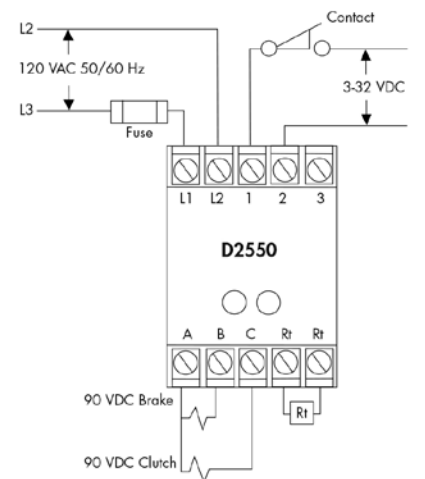
### D2100 — On/Off Control

- Formerly Model PS200A
- Octal socket mount
- Controls one brake and clutch
- Input: 230 VAC; 50/60 Hz, fused
- Output: 90 VDC
- Rating: 2.0 amps
- Half wave rectifier
- Dimensions: 2 1/2" H, 2" W, 2" D
- Fused for overload protection
- Part Number: 214215



### D2550 — On/Off Control

- Formerly Model PS300
- All solid state
- PLC compatible
- Fast response time
- Epoxied for high resistance to shock and vibration
- Adjustable switching time delay
- Status indicator
- Controls one clutch and brake
- Full wave rectifier
- Standard din rail mount
- Line Input: 120 VAC, 50/60 Hz
- Output: 90 VDC
- Rating: 1.0 amp
- Dimensions: 2.76" H, 1.97" W, 4.30" D
- Part Number: 21247-040-2201, 2202, 2203



Wiring example for logic input 3-32 VDC

LOGIC INPUT	PART #
120 VAC, 50/60Hz	214247-040-2201
3-32 VDC	214247-040-2202
Contact Closure	214247-040-2203

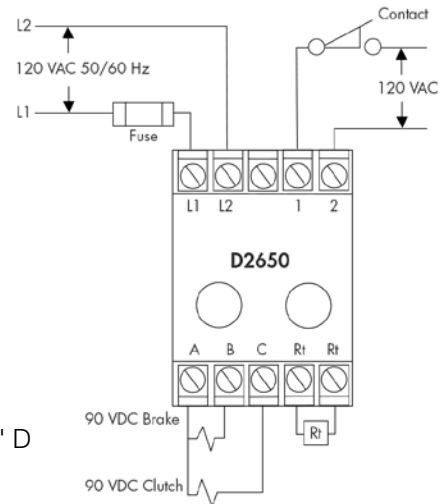
## Controls



LOGIC INPUT	PART #
120 VAC, 50/60Hz	214237-040-2233

### D2650 — DUAL CHANNEL ANTI-OVERLAP TORQUE ADJUST CLUTCH/BRAKE CONTROL

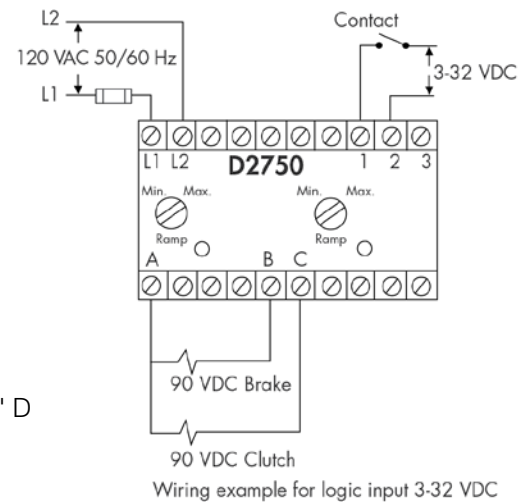
- All solid state
- Operates one or two coils, incorporating adjustable output voltage (torque) for each channel and an anti-overlap circuit
- Soft-start and soft-stop
- Meets **UL** and **CE** certification
- Standard din rail mount
- Line Input: 120 VAC, 50/60 Hz
- Output: 90 VDC
- Rating: 1.0 amp
- Dimensions: 2.76" H, 1.97" W, 4.30" D
- Part Number: 214237-040-2233



LOGIC INPUT	PART #
120 VAC, 50/60Hz	214257-040-2230
3-32 VDC	214257-040-2231
Contact Closure	214257-040-2232

### D2750 — ACCEL/DECEL DUAL CHANNEL CLUTCH/BRAKECONTROL

- All solid state
- Operates one or two coils, incorporating an anti-overlap circuit
- Soft-start and soft-stop
- Meets **UL** and **CE** certification
- Standard din rail mount
- Line Input: 120 VAC, 50/60 Hz
- Output: 90 VDC (adjustable 0-2 second time ramps)
- Rating: 1.0 amp
- Dimensions: 2.76" H, 3.94" W, 5.28" D
- Part Number: 214257-040-2230, 2231, 2232





### D2950 — ACCEL/DECEL DUAL CHANNEL CLUTCH/BRAKE CONTROL

- Formerly Model No. PS500
- All solid state
- Operates one or two coils, with an adjustable anti-overlap circuit and OE
- Meets **UL** and **cUL** certification
- Standard din rail mount
- Line Input: 120 VAC, 50/60 Hz
- Output: 90 VDC (105 V actual)
- Rating: 1.0 amp
- Dimensions: 2.76" H, 3.94" W, 5.28" D
- Part Number: 214277-040-2211, 2212, 2213

LOGIC INPUT	PART #
120 VAC, 50/60Hz	214277-040-2211
3-32 VDC	214277-040-2212
Contact Closure	214277-040-2213

