

# STEPPER MOTOR DRIVE

## PULSE AND DIRECTION, FULL AND HALF STEP 2.0 A, 35 VDC



TRODEKS®

2035



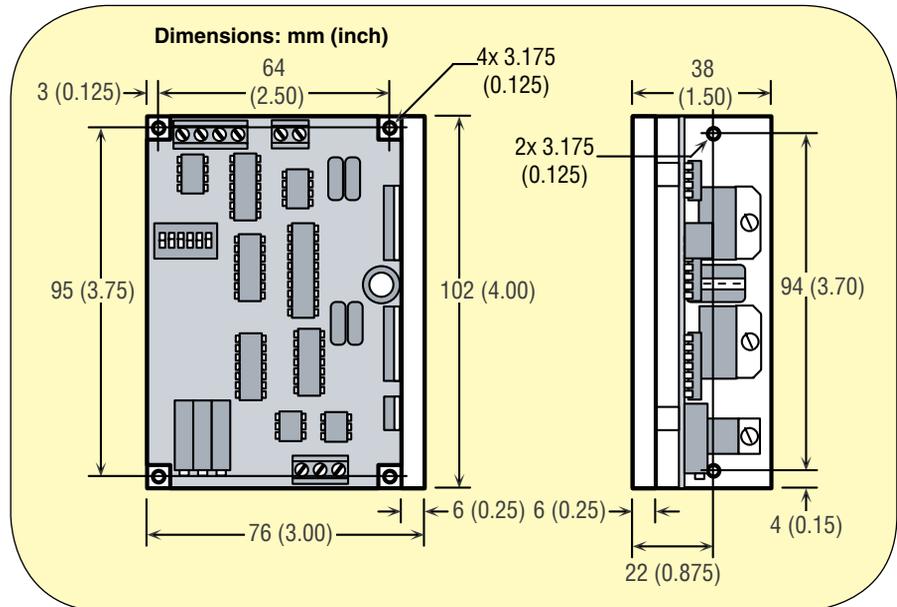
2035 close to actual size.

- Wide Range of Motor Sizes
- 70 W of Usable Power
- Pulse Width Modulation Switching Amplifiers
- DC Bus Voltage 12 to 35 Vdc Motor Supply (Including Ripple)
- Phase Current from 0.125 to 2.0 A (Switch Selected, 16 Settings)
- Step, Direction and Enable Inputs, Optically Isolated, 5 to 24V
- Inputs Can be Sourcing (PNP) or Sinking (NPN) Type
- Full and Half Step (Switch Selected)
- Automatic 50% Idle Current Reduction (Switch Selected)
- Compact Size: 38.1 x 76.2 x 101.6 mm (1.5 x 3.0 x 4.0")
- CE Compliant

The 2035 step motor driver is a full or half step phase sequencer with three state switching amplifiers and optoisolated circuits. The drive also includes an automatic feature to lower motor current by 50% anytime the motor is left at rest for more than one second. This feature can be disabled. The amplifier regulates motor current by chopping at a constant, inaudible frequency. Phase current is selected from 16 levels by a DIP switch. Full or half step resolution is switch selectable.

### SPECIFICATIONS

**Amplifiers:** Dual, bipolar H-bridge, pulse width modulated switching at 20 KHz; 12 to 35 Vdc input; 0.125 to 2.0 A/phase output current, switch selectable in 0.125 A increments; 70 W maximum output power; automatic idle current reduction, reduces current to 50% of setting after one second



**Inputs:** Step, direction and enable, optically isolated, 5 to 24V logic; 2200Ω input impedance; motor steps when STEP input turns off; 10 μsec minimum low pulse; 50 μsec minimum set up time for direction signal

**Physical:** Mounted on ¼ inch thick black anodized aluminum heat transfer chassis; 38.1 x 76.2 x 101.6 mm (1.5 x 3.0 x 4.0") overall; power on red LED

**Maximum Chassis Temperature:** 70°C (158°F)

**Weight:** 250 g (9 oz)

**Ambient Temp Range (Operating):** 0 to 70°C (32 to 158°F)

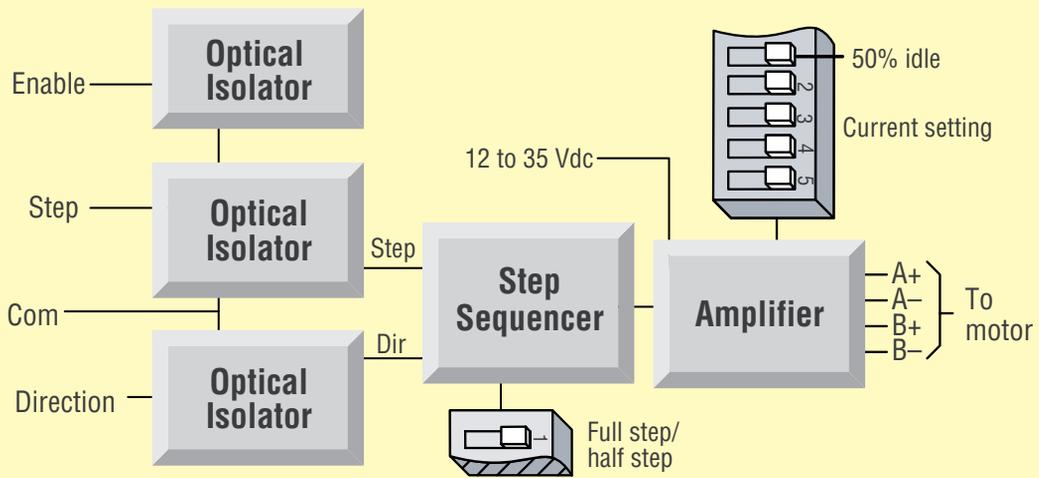
**Connectors:** European style screw terminal blocks

**Power Supply:** 2 position

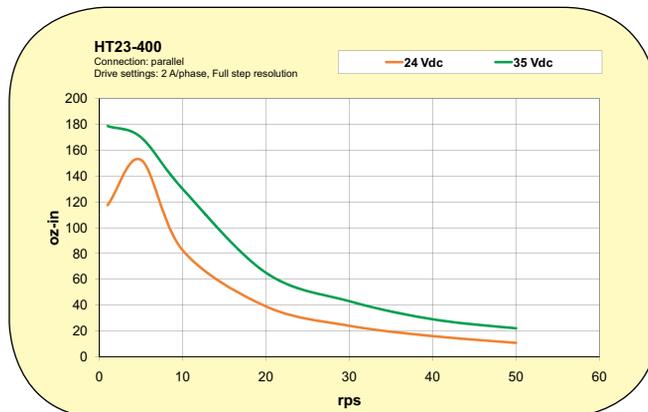
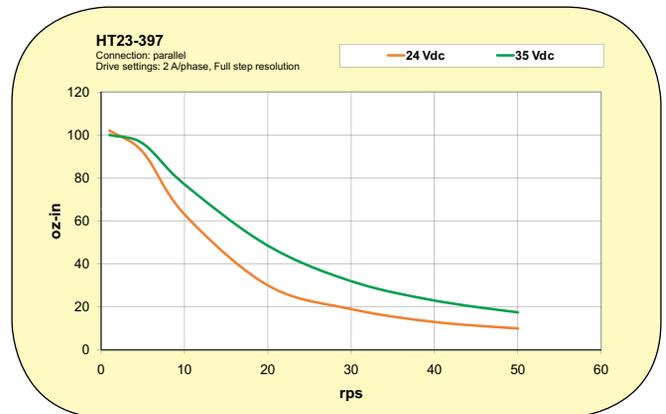
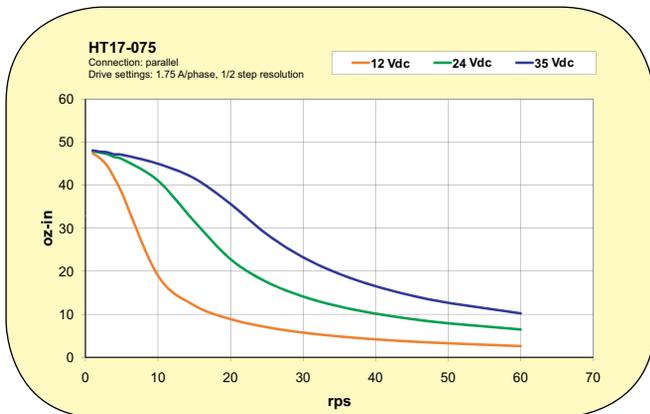
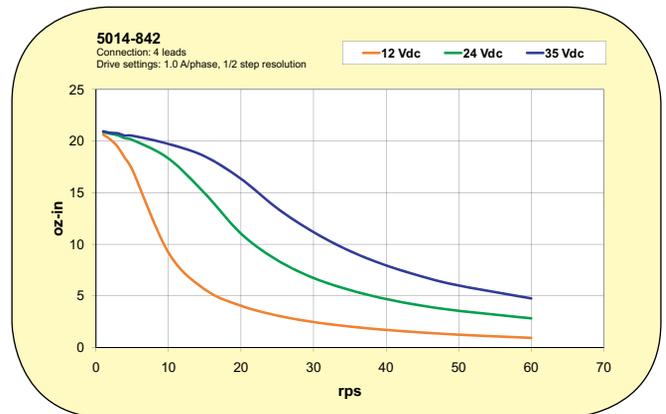
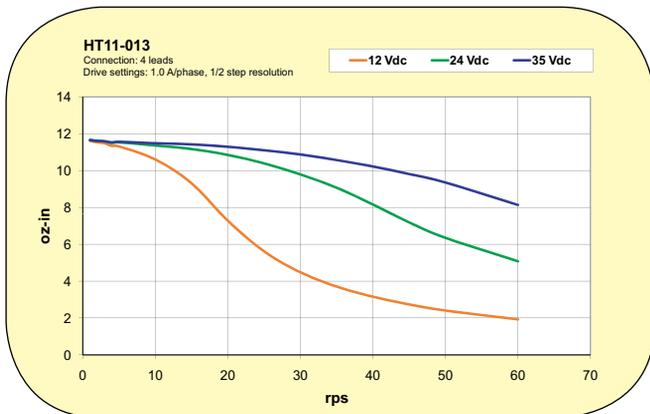
**Motor:** 4 position

**Signal Input:** 4 position

**Max Wire Size:** 16 AWG



## TORQUE-SPEED CURVES FOR RECOMMENDED MOTORS





**OPTIONAL ACCESSORIES**

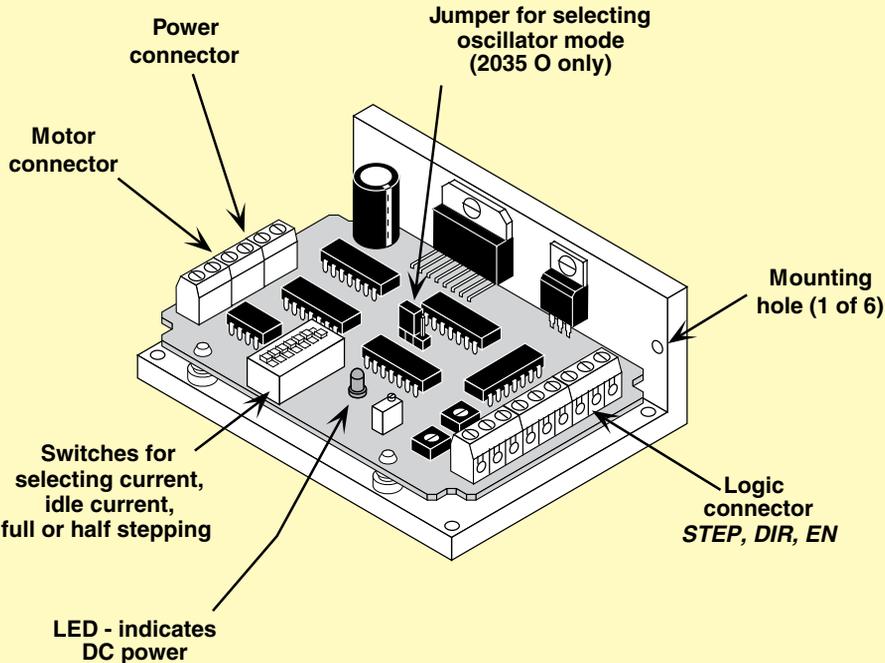
**Power Supply (Required for Drive Operation):**

Recommended  
OMPS150A24,  
24 Vdc, 6.3 A



OMPS150A24 shown smaller than actual size.

Order  
**OMPS150A24**  
  
ps\_series



Order motors separately, see below for details

**To Order** Visit [omegamation.com/2035](http://omegamation.com/2035) for Pricing and Details

MODEL NO.	DESCRIPTION
2035	Stepper motor drive

Ordering Example: 2035, stepper motor drive.

**RECOMMENDED MOTORS FOR 2035**

MODEL NO.	HOLDING TORQUE g-cm (oz-in)	RATED VOLTAGE (V)	RATED CURRENT (A)	RESISTANCE OHMS	INDUCTANCE MH	ROTOR INERTIA g-cm <sup>2</sup> (oz-in <sup>2</sup> )
<b>NEMA 11 STEP MOTOR SPECIFICATIONS (RATINGS ARE WITH MOTOR CONNECTED IN PARALLEL)</b>						
OMHT11-013	1080 (15)	2.0	1.0	2.0	2.6	18 (0.098)
<b>NEMA 14 STEP MOTOR SPECIFICATIONS (RATINGS ARE WITH MOTOR CONNECTED IN PARALLEL)</b>						
OM5014-842	1872 (26)	4.8	1.0	4.3	5.5	208 (0.109)
<b>NEMA 17 STEP MOTOR SPECIFICATIONS (RATINGS ARE WITH MOTOR CONNECTED IN PARALLEL)</b>						
OMHT17-075	4522 (62.8)	2.8	1.7	1.7	3.0	68 (0.37)
<b>NEMA 23 STEP MOTOR SPECIFICATIONS (RATINGS ARE WITH MOTOR CONNECTED IN PARALLEL)</b>						
OMHT23-397	12746 (177)	2.5	2.83	0.9	2.5	300 (1.64)
OMHT23-400	19011 (264)	3.2	2.83	1.1	3.6	480 (2.62)

**ACCESSORY**

MODEL NO.	DESCRIPTION
OMPS150A24	Stepper drive power supply, 24 Vdc, 6.3 A