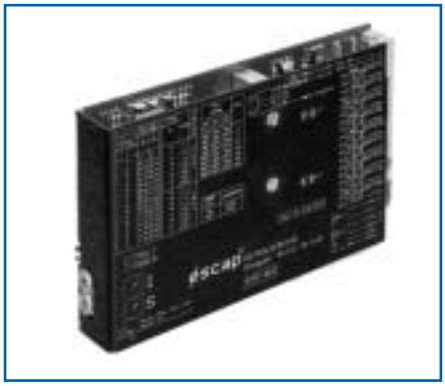
EDM-453

Stepper motor drive circuit

Microstep bipolar chopper driver 3 A, 45 V

- Single DC supply voltage 12 to 45 V
- Two different current ranges 0-3 A / 0-1,5 A user selectable; 16 levels per range, programmable with front panel commutator
- Choice of 8 various resolutions via front panel commutator or by logic inputs, from full-step to 64 microsteps
- All inputs opto-isolated
- Chopper control mode selectable between regenerative and freewheeling
- Recommended for the following TurboDisc motors: P110, P310, P430, P520, PP520, P530, P630, P850.



Specifications

1	Power supply voltage	DC 12 V to 45 V
2	Max phase current	1,5 A / 3 A, fuse max 2 A slow blow
3	Optocoupler inputs:	
	input 0	0 V or GND
	input 1 (int. series resistor 470 Ω)	+3,5 V...+6 V
	input 2 (int. series resistor 2200 Ω)	+10 V...+30 V
	current	15 mA typ, 20 mA max
4	Boost/stand by current values	nominal ± 33 % (3 A max)
5	Chopper frequency	40 kHz
6	Max. clock frequency	150 kHz
7	LED indicator	Power (green) - Fault (red)
8	Protection	short-circuit between phases, phase and +VDC
9	Temperature	0°C to 50°C
10	Size / Connector	160 x 100 x 26 mm / DIN 41612 D64

Connector:

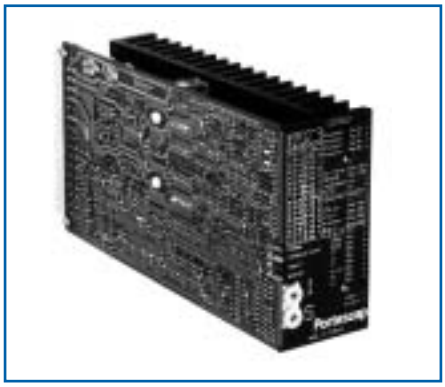
Pin	Row A	Row C
1	NC	Home H
2	NC	Home L
3	NC	Enable 0
4	Enable 1	Enable 2
5	Dir. 1	Dir. 2
6	Dir. 0	Clock 0
7	Clock 1	Clock 2
8	St-by 1	St-By
9	St-By 0	Boost 0
10	Boost 1	Boost 2
11	D2 1	D2 2
12	D2 0	D1 0
13	D1 1	D1 2
14	D0 1	D0 2
15	D0 0	Mode 0
16	Mode 1	Mode 2
18	Phase A+	Phase A+
22	Phase A-	Phase A-
24	Phase B+	Phase B+
28	Phase B-	Phase B-
30	0 VDC	0 VDC
32	+ VDC	+ VDC

EDM-907

Stepper motor drive circuit

Microstep bipolar chopper driver 9 A, 70 V

- Single DC supply voltage 22 to 70 V
- Choice of 8 peak phase current levels from 1,3 A to 9,9 A via front panel commutator or by logic inputs
- Choice of 11 resolutions from full step to 64 microsteps through front panel commutator
- Perfect current regulation especially around zero crossing
- Electronic damping available for motors having velocity sensors
- Opto-isolated inputs for Direction, Clock, Boost and Stand by
- Short-circuit and over temperature protections
- Recommended for the following TurboDisc motors: P530, P630, P850.



Specifications

1	Power supply voltage	DC 22 V to 70 V (protected with fuse 4 A)
2	Supply voltage output	5 V / 20 mA
3	Phase current (peak value)	1.3 A to 9.9 A
4	Optocoupler inputs:	Clock. Direction. Enable. Stand by.
	input voltage (without series resistor)	5 V to 7 V
	input current	4 mA to 10 mA
5	Logic inputs	I_0, I_1, I_2 (current selection)
	input voltage	5 V to 24 V (TTL compatible)
6	TTL inputs	Energise, Damp
	input voltage	5 V
7	Open drain output	Home, Fault, (V_{max} = 50 V, I_{max} = 25 mA)
8	Max. clock frequency	500 kHz
9	Speed sensor input signal:	
	voltage range	-200 V to + 200 V
	damping gain (factory set)	1.25 A/V
10	LED indicator	Power Home (green), Fault (red), Torque loss (orange)
11	Protection	Short-circuit, Overvoltage, Thermal
12	Operating temperature	0 to 40°C
13	Size/Connector	160 x 100 x 54 mm/DIN 41612D32

Connector:

Pin	Row A	Row C
2	Phase B+	Phase B+
4	Phase B-	Phase B-
6	Phase A+	Phase A+
8	Phase A-	Phase A-
10	Vmot	Vmot
12	GND	GND
14	Output +5 V/25 mA	Fault
16	+CW/CCW	-CW/CCW
18	+CLK	-CLK
20	+Stand by	-Stand by
22	+Boost	-Boost
24	Energize	NC
26	Home	Damp
28	I_2	a+ velocity sensor a
30	I_1	a-b- velocity sensor a/b
32	I_0	b+ velocity sensor b