



# B17

## AC BRUSHLESS SERVODRIVE



**B17®**

Digital eurocard brushless servodrive for AC sinusoidal servomotors up to 20Nm (2860 oz.-in.)

Typical applications are: **Conveyors, Medical, Textile Equipment, Packaging Machinery, Positioners, Converting Machinery, Feeders.**

### STANDARD FEATURES

- ✓ Single DC Power Supply
- ✓ Three phase sinusoidal - four quadrant operation
- ✓ 32 Bit RISC Micro-controller
- ✓ Two feedback modes:
  - 1) from incremental encoder (max 200 KHz) emulation resolution divided by 1 - 2- 4 - 8 16 - 32 - 64 - 128 (IAW original)
  - 2) from resolver (2 - 4 - 6 - 8 poles) encoder emulation (standard setting) 4096 - 2048 - 1024 - 512 - 256 - 128 P/r (2 poles resolver - 14 bit - 4000 Rpm Max Motor Speed)
- ✓ Positive / Negative Limit Switches
- ✓ Two programmable digital inputs (alternative with limit switches)
- ✓ Parameter setting by keys on the front panel or RS232/485
- ✓ Available software interface (windows 95/98 based)
- ✓ Enable inputs available with both positive/negative logical levels
- ✓ Completely protected from: Over/Under supply voltage Over temperature/External short circuit motor polarity Absence or improper connection of speed feedback

### SPECIFICATIONS

- ✓ Operating frequency 16 (KHz)
- ✓ Operating temperature 0 ÷ 40 °C (32÷104°F)
- ✓ Motor current monitor (Iq component) ±10VDC (at peak current)
- ✓ Motor speed monitor:
  - encoder feedback ±10Vdc (at 200 KHz)
  - resolver feedback (2 poles) ±10VDC (at 6000 Rpm motor)
- ✓ Auxiliary external input supply voltage 24VDC (for logic only)
- ✓ Enable signals +10÷30VDC
- ✓ Analog input reference (differential) ±10VDC (16 bit resolution)
- ✓ Output voltage supply +10/-10VDC @ 2.5mA
- ✓ Humidity (%) (without condensation) 10 ÷ 95%



### DESCRIPTION

The **B17® Digital** amplifiers are eurocard formatted servodrives for sinusoidal brushless servomotors. They have a very flexible design and can be supplied to accommodate rack mount (up to 6 axis slots). The power stage is made by power Mos-fet or IGBT.

### ACCESSORIES

(see specific data sheets for details)

- ✓ SERVOMOTORS
  - Ssax 1000/2000:0.35÷17Nm
- ✓ GEARBOXES
  - Rex 100: 5 flange sizes, R ratios 1/3÷1/216
- ✓ RACK MULTIAXIS (with internal power supply)
  - RKB: 2÷6 axis + dumping slot
- ✓ DUMPING CARDS (for all rack systems)
  - SHR : braking power 50÷800 W
- ✓ TRANSFORMERS
  - TM/TT: single/3ph, 100÷8000 VA
- ✓ NET FILTERS (for CE compliance)
  - FRM/FRT: single/3ph, 2÷16 Arms

MODEL	B17 A60						B17 B140						B17 C200						B17 D300 <sup>φ</sup>						
	SIZE		4/8	8/16	10/20	14/28	20/40	25/50	4/8	8/16	10/20	14/28	20/40	25/50	4/8	8/16	10/20	14/28	20/40	25/50	4/8	8/16	10/20	14/28	20/40
WIDTH (TE)	STANDARD	13	13	13	13 <sup>⊗</sup>	13 <sup>⊗</sup>	13 <sup>⊗</sup>	13	13	13	13 <sup>⊗</sup>	13 <sup>⊗</sup>	13 <sup>⊗</sup>	13	13	13 <sup>⊗</sup>	13 <sup>⊗</sup>	17 <sup>⊗</sup>	17 <sup>⊗</sup>	13	13	13 <sup>⊗</sup>	13 <sup>⊗</sup>	17 <sup>⊗</sup>	NA
	OPTION	-	-	-	17	-	-	-	-	-	17	-	-	-	-	17	-	-	-	-	-	17	-	-	NA
Rated Current (Arms)		4	8	10	14	20	25	4	8	10	14	20	25	4	8	10	14	20	25	4	8	10	14	20	NA
Peak Current (Arms) x 2 sec.		8	16	20	28	40*	50*	8	16	20	28	40*	50*	8	16	20	28	40*	50*	8	16	20	28	40*	NA
FDC: Supply Line Fuse (type F, M or T)*		15 A / 250 V (5x20 mm) (F, M, T-TYPE)			25 A / 500 V (6.3x32 mm) (T-TYPE)			15 A / 250 V (5x20 mm) (F, M, T-TYPE)			25 A / 500 V (6.3x32 mm) (T-TYPE)			15 A / 250 V (5x20 mm) (F, M, T-TYPE)			25 A / 500 V (6.3x32 mm) (T-TYPE)			25 A / 500 V (6.3x32 mm=0.25x1.25) (T-TYPE)					
Supply (Vdc)		63 Vdc <sup>▲</sup>						140 Vdc <sup>▲</sup>						200 Vdc <sup>▲</sup>						300 Vdc <sup>▲</sup>					

\*: FDC Fuse Type: **F**=Quick-acting  
**M**= Medium time-lag  
**T**=Time-lag

⊗: Forced cooling required

▲: Recommended DC power supply

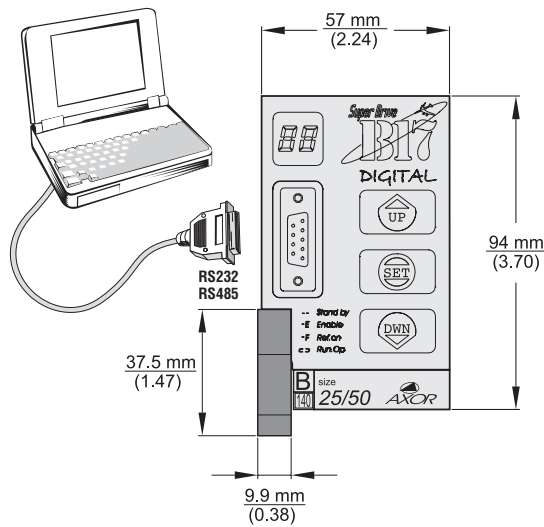
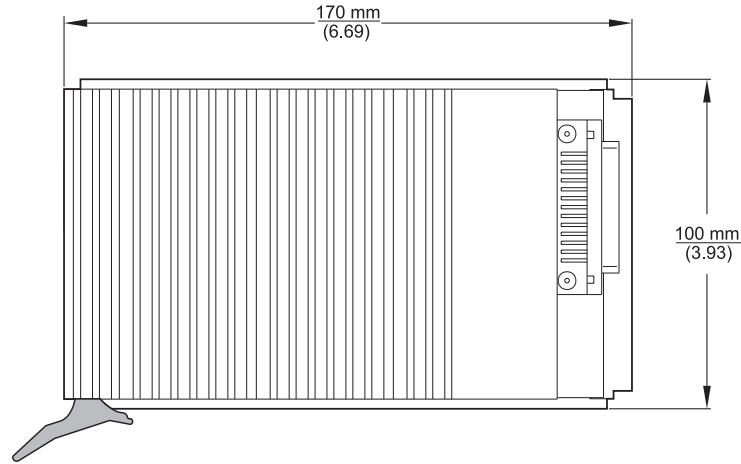
\*: Peak current= x 1 second

φ: Optocoupled

## MECHANICAL DIMENSIONS

Drawings are not to scale (see quotations)

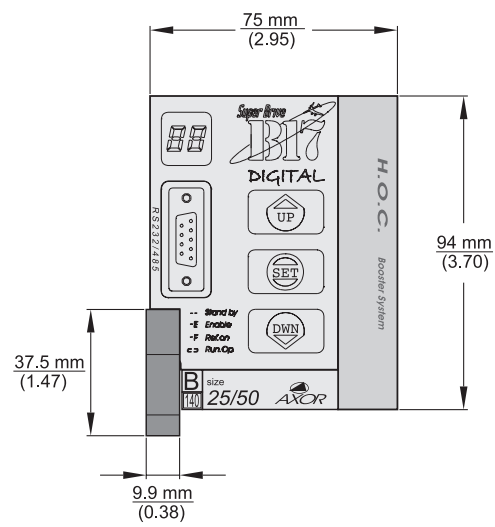
mm  
(INCHES)



Standard version

**13 TE**

Weight: 0.8 Kg



Booster version  
(Heatsink powered)

**17 TE**

Weight: 1.35 Kg



For the connection diagram, please see RKB (multiaxis power supply) system Data Sheet

### ORDERING CODE

**B17 - B140 - 20 / 40 - B - S - D - 1000 - EC - RD**

Example:

**NAME:** Line of Brushless Servodrives

**AMPLIFIER TYPE:** A60 - B140 - C200 - D300

**SIZE:** 04/08 - 08/16 - 10/20 - 14/28 - 20/40 - 25/50\*  
(\* = not available for B17 D 300 type)

### HEATSINK VERSIONS:

**N** = Without Booster 13TE  
**B** = Booster 17TE (optional)

### PROTECTION:

**S** = Standard  
**T** = Tropicalized

### TYPE:

**D** = Digital  
**A** = Analog

### CONTROL MODE:

**RD** = Differential reference  
**IO** = Demand current (torque mode)

### FEEDBACK:

**EC** = Commutation encoder  
**RO** = Resolver  
**EH** = Encoder+external hall

**AXOR:** adjustment identification number

