



# MINISPEED

## DC SERVODRIVE



### MINISPEED® (MS)

Four quadrant bi-directional eurocard servodrives for controlling DC Servomotors up to 15 Nm (2142 oz.-in.)

Typical applications are: Robotics, X-Y Tables, Medical Equipment, Textile Equipment, Conveyors, Graphic Machinery, Packaging Machinery, Positioners, Converting Machinery, Feeders.

#### STANDARD FEATURES

- ✓ Eurocard format
- ✓ Single DC power supply
- ✓ Extremely high reliability (over 200000 units produced)
- ✓ Tachogenerator feedback
- ✓ Armature feedback
- ✓ Torque mode feedback
- ✓ SMT technology
- ✓ IGBT or POWER MOSFET bridge
- ✓ Protected from: external short circuit motor polarity, over/under supply voltage, over temperature, absence or improper connection of speed feedback

#### OPTIONS

- ✓ Encoder feedback
- ✓ PWM + Dir. feedback

#### SPECIFICATIONS

- ✓ DC supply voltage range:
  - (MS60) 20÷82 Vdc
  - (MS140) 40÷182 Vdc
  - (MS200) 60÷275 Vdc
- ✓ Operating frequency: 20 KHz
- ✓ Operating temperature: 0÷ 40°C (32÷104°F)
- ✓ Analog input reference (differential): ±10 Vdc
- ✓ Humidity (without condensation): 10 ÷ 95%
- ✓ Enable signals: +10÷30 Vdc
- ✓ Out. voltage (for ext. use): +10/-10 Vdc@2.5 mA
- ✓ Motor current monitor: ±7.5 Vdc (at peak current)
- ✓ Input/out. demand current: ±10 Vdc (at peak current)



#### DESCRIPTION

The MINISPEED® is a very complete line of eurocard formatted servodrives for DC servomotors. Ideal for incremental motion control, velocity loops and positioning systems, which require fast response, precision and smooth control. Powering them requires only a single Vdc power supply which could even be provided with unbeatable multi-axis executions, when combined with the "RKM" rack system up to 11 axis, with internal power supply.

#### ACCESSORIES

(see specific data sheets for details)

- ✓ SERVO MOTORS
  - Sax 100: 0.045÷2.7Nm (6.4÷386 oz.-in.)
  - Sax 350: 0.7÷1.8Nm (100÷257 oz.-in.)
  - Sax 500: 2.8÷8Nm (400÷1143 oz.-in.)
  - Sax 700: 0.1÷8Nm (14÷1143 oz.-in.)
- ✓ GEARBOXES
  - Rex 100: 5 flange sizes, R ratios 1/3÷1/216
- ✓ RACK MULTIAXIS (WITH INTERNAL POWER SUPPLY)
  - RKM: 2-10 axis + dumping slot
- ✓ DUMPING CARDS (FOR ALL RACK SYSTEMS)
  - SHR 60/140/200 - 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	MS 60							MS 140							MS 200						
	2/4	4/8	8/16	10/20	14/28	20/40	25/50	2/4	4/8	8/16	10/20	14/28	20/40	25/50	2/4	4/8	8/16	10/20	14/28	20/40	25/50
Rated Current (A <sub>dc</sub> )	2	4	8	10	14	20	25	2	4	8	10	14	20	25	2	4	8	10	14	20	25
Peak Current (A <sub>dc</sub> ) x 2 sec.	4	8	16	20	28	40*	50*	4	8	16	20	28	40*	50*	4	8	16	20	28	40*	50*
Width STANDARD	8	8	8	8	8 <sup>⊗</sup>	8 <sup>⊗</sup>	12 <sup>⊗</sup>	8	8	8	8	8 <sup>⊗</sup>	8 <sup>⊗</sup>	12 <sup>⊗</sup>	8	8	8	8 <sup>⊗</sup>	8 <sup>⊗</sup>	12 <sup>⊗</sup>	12 <sup>⊗</sup>
Width OPTION (TE)					12	12						12	12					12			
FDC: Supply Line Fuse (type F, M or T)*	15 A / 250 V (5x20 mm)			25 A / 500 V (6.3x32 mm) (0.25x1.25')				15 A / 250 V (5x20 mm)			25 A / 500 V (6.3x32 mm) (0.25x1.25')				15 A / 250 V (5x20 mm)			25 A / 500 V (6.3x32 mm) (0.25x1.25')			
Supply (V <sub>dc</sub> )	63 Vdc ▲							140 Vdc ▲							200 Vdc ▲						

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

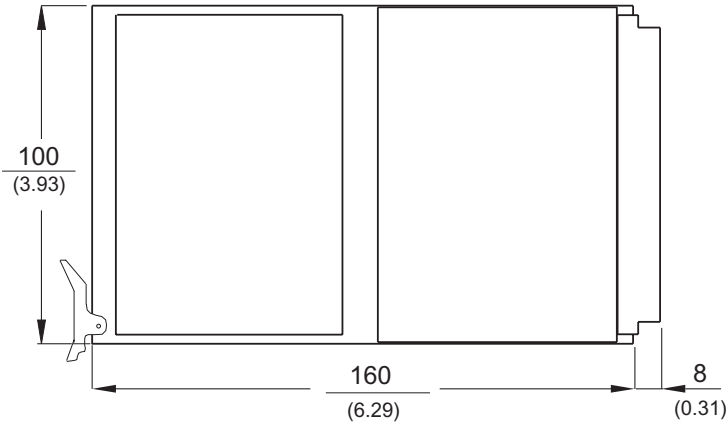
⊗: Forced cooling required  
\*: Peak current= x 1 second

▲: Recommended voltage supply

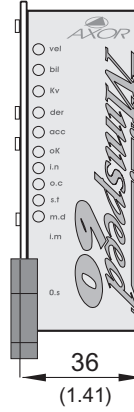
Drawings are not to scale (see quotations)

## MECHANICAL DIMENSIONS

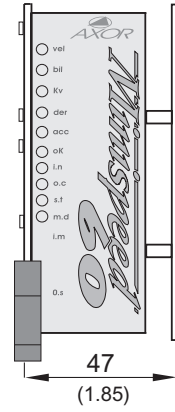
mm  
(INCHES)



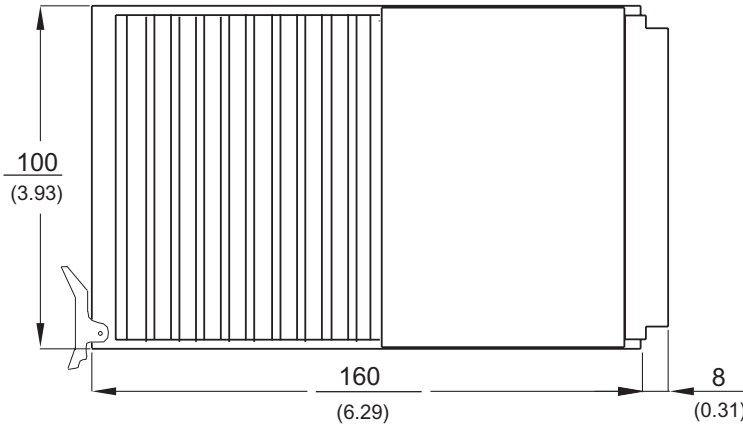
Weight:  $\frac{0,52}{1.1}$   $\frac{\text{Kg}}{\text{Lbs}}$



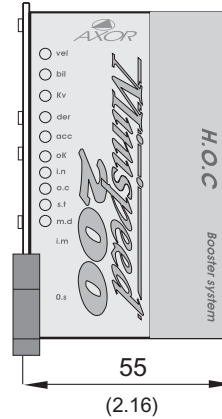
**8 TE**  
Standard version



**11 TE**  
Encoder Feedback version  
(Optional)



Weight:  $\frac{0.7}{1.5}$   $\frac{\text{Kg}}{\text{Lbs}}$



**12 TE**  
Booster version  
(Heatsink powered)



### ORDERING CODE

Example:

**MS - 200 - 10/20 - B - S - 1000 / TO RD**

**NAME:** Line of DC Servodrives

**AMPLIFIER TYPE:** 060 - 140 - 200

**SIZE:** 02/04 - 04/08 - 08/16 - 10/20 - 14/28 - 20/40 - 25/50

#### HEATSINK VERSIONS:

**N** = Normal  
**B** = Booster

**AXOR**  
adjustment  
identification  
number

**PROTECTION:**  
**S** = Standard  
**T** = Tropicalized

**CONTROL MODE:**  
**RD** = Differential reference  
**IO** = Demand Current  
(torque mode)  
**PD** = PWM+DIR (optional)

#### FEEDBACK:

**TO** = Tachogenerator (DC)  
**AO** = Armature  
**EO** = Encoder (option)

Specifications subject to change without notice. This document has been carefully checked. However, Axor does not assume any liability for errors or inaccuracies.

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