



FAST-BACK®

POWERED BRUSHLESS MOTOR



FAST-BACK® (FBK)

All-in-one fully digital DRIVE+MOTOR. The decentralized structure gives you much more freedom in designing your machine's layout. Installation, commissioning and service are much simpler. Many advantages such as cables and control cabinet space reduction. Motion controller and EMC line filter suppression are integrated.



STANDARD FEATURES

- ✓ Power supply 230 VAC three phase
- ✓ EMC line filter and in-rush circuit integrated
- ✓ Power supply for control circuits obtained from DC Bus
- ✓ Integrated regenerative circuit and power resistor
- ✓ Optical insulation between power stage and signals
- ✓ Integrated positioning control
- ✓ Feedback from encoder 2048 P/rev
- ✓ CAN BUS - CAN V2.0B standard (⚡ Optocoupled)
- ✓ CAN OPEN protocol implementations:
 - part of the DS301-V4.02
 - part of the DSP402-V2.0
- ✓ Fully programmable via RS232 (opto-isolated), Mod Bus-RTU based
- ✓ **Speeder-One®** software interface (Windows 98/2000/XP based)
- ✓ Multidrop interface RS232 to CAN BUS

OPTIONS

- ✓ Power supply 230 VAC single phase²
- ✓ Holding brake (internally controlled)
- ✓ Protection class: IP65, IP65S (with shaft sealing)
- ✓ Special flange and shafts available upon request
- ✓ Special windings
- ✓ 2 digital inputs (opto-isolated) 24 Vdc - 7 mA (PLC compatible)
- ✓ 1 digital output (opto-isolated) 24 Vdc - 50 mA (PLC compatible)
- ✓ 1 analog programmable output ±10 Vdc - 10 mA
- ✓ RS485 interface, Mod Bus - RTU based (⚡ Optocoupled) 230 Kbps max
- ✓ Safety Enable Function

SPECIFICATIONS

- ✓ Operating frequency 10 KHz
- ✓ Ambient temperature
 - operating at rated data: 0 ÷ 45°C (no derating)
 - rated and peak current derating: 45 ÷ 55°C (2.5%/°C)
 - maximum operating: 55°C max
 - storage: -20 ÷ 55°C
- ✓ Altitude A.M.S.L.
 - operating at rated data: 1000 m
 - rated and peak current derating: 1000 ÷ 2500 m (1.5 %/100m)
- ✓ Storage duration 1 year max*
- ✓ Protection class IP54

*: After 1 year storage duration the internal electrolytic power capacitors must be re-formed. Contact Axor's technical department for details.

TYPICAL APPLICATIONS

- food processing
- labelling equipment
- adjustment of formats
- medical equipment
- laser/water jet cutters
- pick-and-place equipment
- industrial printing
- limit stop adj. for wood, metal working machines
- size adj. for packing machines

SERIES		FBK 75				FBK 100			
SIZE		XS	S	M	L	S	M	L	
Mo stall Torque ($\Delta t=100^\circ\text{C}$)	(Nm)	1.1	1.6	2.7	3.8	3.2	5.2	7.5	
Mpk Peak Stall Torque (x 2 sec.)	(Nm)	3.3	4.8	8.1	10	10.3	10.5	15	
Nn Rated speed ¹⁾	(Rpm)	3000	3000	3000	3000	3000	3000	2200	
Mn Rated torque at Nn ($\Delta t=100^\circ\text{C}$)	(Nm)	0.95	1.35	2.35	3.3	2.8	4.5	6.4	
Power Supply (grounded systems only)		230 VAC $\pm 10\%$ three phase (single-ph as optional feature) ²⁾							
Logic Supply (for back-up only)		24 Vdc ($\pm 10\%$) - 200mA							
Logic Supply (for back-up+brake)		24 Vdc ($\pm 5\%$) - 800 mA MAX							
J Rotor Inertia	(Kg m ²) · 10 ⁻⁴	0.4	0.6	1	1.4	1.8	2.8	3.8	
Jb Brake Inertia	(Kg m ²) · 10 ⁻⁴	0.122					0.37		
BRAKE stall torque ($\Delta t=100^\circ\text{C}$)		4 Nm (0.5 Adc)				8 Nm (0.8 Adc)			
MODULE		2	3	5	7	3	5	7	

NOTE ¹⁾: Rated speed refers at 230 VAC power supply three phase

²⁾: Single phase does not allow you to obtain the rated performance (torque and speed). Contact Axor's technical department for details.

