

Avtron Model AV850

SMARTach II Magnetic, Modular Encoder, 8.5" C-Face Mount



Ultra-Reliable!

- Heavy Mill Duty
- Installation in Minutes!
- Up to 4096 PPR
- Removable Sensors
- Wide-Gap Technology, No Air Gap Adjustment Required
- Mounts Securely to Motor
- Outputs Fully Short Circuit Protected
- Self-Diagnostic LED & Alarm Output
- Sealed Electronics
- -40°C to +100°C Operation
- 3 Year No-Hassle Warranty
- Excellent for Gear Motors and Brake Applications

AV850 SMARTach II heavy mill duty modular magnetic encoders fit standard 8.5" FC-Face motors. Other models, from 115mm to 12.5", are available to fit other motor sizes.

Quite simply, the AV850 is designed to eliminate encoder failures.

All AV850 electronics are fully encapsulated.

There are no moving wearing parts. AV850 sensors locate over 4X farther

from the rotor than the competition; no more sensor/rotor grinding!

The AV850's high-power outputs have over 50X more capacity.

Miswiring an encoder is common—and it shouldn't cost you time or money. The AV850 has full output short circuit and reverse voltage protection, plus surge protection.

AV850 SMARTach II sensors digitally self-tune the outputs to eliminate drive trips caused by poor encoder signals.

AV850 sensors feature unsurpassed diagnostics. If the encoder signal is not ideal, the alarm output and LED inform the machine operator that the encoder should be checked, before a failure occurs! The AV850 even checks the rotor position before you start running!

If you think you need to replace your drives to end your encoder failures, try a better encoder instead. Specify AV850!

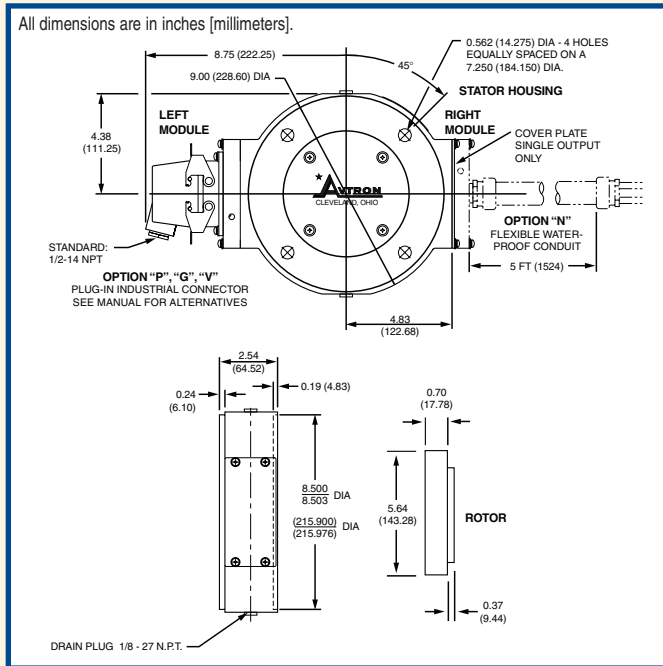


QUALITY SYSTEM CERTIFIED TO ISO 9001

www.avtronencoders.com

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OUTLINE DRAWING



Check out our web site for more detailed specifications, drawings, and installation instructions. www.avtronencoders.com

MORE AV850 ADVANTAGES

- SMARTach II sensors find problems before they cause failure
- Replaces Northstar/LakeShore RIM8500™; Avtron M193B, M285; GE AN-DG models
- Resists motor and brake interference noise
- Reverse voltage protection
- Mix and match any PPRs with any rotor
- Permits axial movement up to +/-0.100" [+/-2.54mm]
- Universal rotor for all GE CD style and many Reliance motors.
- Optional overspeed switch
- Optional shaft grounding

AV850 SPECIFICATIONS

Operating Power (Each Sensor): 5-24V, 100mA
Output Format: A Quad B with marker (A, \bar{A} , B, \bar{B} , Z, \bar{Z})
Frequency Range: 0 to 165 KHz
Maximum Instantaneous Current Output: 3000mA*
PPR: 8 - 4096
Speed: 4400 RPM Max. (contact factory for higher speeds)
Rotor Positioning: Up to +/-0.100" movement/misalignment
Sensor-Rotor Gap: 0.050", +0.015/-0.040" [1.27mm+0.38/-1.0]
Temperature: -40° to 100°C (rotor -40° to 150°C peak)
Electronics: Fully Encapsulated, IP67**
Vibration: 18 g's
Shock: 1 meter drop test
Weight: 9lbs. [4kg]; 11lbs. [5kg] dual

*Output option 8; see manual for details.
 **Connector options may reduce IP rating.

SELECTION GUIDE

AV850 PART NUMBERS AND AVAILABLE OPTIONS											
Model	Rotor Bore Size/Mounting				Inboard & Outboard Cover Plates	Left Module		Right Module		Connector Options	Modifications
	Thru Shaft		End of Shaft (GE Motors)			Line Driver	PPR	Line Driver	PPR		
AV850	XX- no rotor	XX- no rotor	UF- CD180-32x	GF- "UF"	X- none B- inboard, thru outboard ⁺⁺⁺ F- no inboard, flat outboard N- inboard, flat outboard ⁺⁺⁺ T- no inboard, thru out board ⁺⁺⁺ + Large motor stator adapter required if not previously installed ++ N/A with T6 rotor ^ CB rotor is also "Universal" rotor used in all UF-UU and GF-G9 kits. > N/A for End of Shaft rotor styles	X- none	X- none	X- none	X- none	000- none 700- large motor sta- rtor adapt.*	
	US- METRIC	w/o Ground	w/ Ground	GN- "UN"		8- 5-24V in/ 5-15V out, hi power	F- 60	8- 5-24V in/ 5-15V out hi power	F- 60		
	CA- 0.750"	MJ- 42mm	UN- CD36x	GN- "UN"		9- 5-24V in, 5V fixed out	H- 120	H- 120	H- 120		
	CC- 0.875"	MP- 60mm	UP- CD4xx	GP- "UP"			L- 240	L- 240	L- 240		
	CE- 1.000"	MY- 80mm**	UQ- CD444/505E ⁺	GQ- "UQ"			N- 256	N- 256	N- 256		
	CF- 1.125"	MZ- 80mm***	U2- CD5xx	G2- "U2"			P- 300	P- 300	P- 300		
	CH- 1.375"	M0- special	UV- CD43xx, 44xx, 54xx, 64xx, 65xx ⁺	GV- "UV"			B- 480	B- 480	B- 480		
	CJ- 1.625"		UW- CD45xx, 75xx, 76xx ⁺	GW- "UW"			R- 512	R- 512	R- 512		
	CK- 1.750"		UY- CD46xx, 47xx, 85xx, 86xx ⁺	GY- "UY"			S- 600	S- 600	S- 600		
	CL- 1.875"		UZ- CD68x ⁺	GZ- "UZ"			J- 960	J- 960	J- 960		
	CM- 2.000"		U9- CD6xx-62xx, 67xx-69xx	G9- "U9"			Y- 1024	Y- 1024	Y- 1024		
	CN- 2.125"		UU- Universal: CD180-CD86xx	G0- special			Z- 1200	Z- 1200	Z- 1200		
	CQ- 2.250"		Q* - Quad Stacking				4- 2048	4- 2048	4- 2048		
	CP- 2.375"						5- 2500	5- 2500	5- 2500		
	CR- 2.500"						D- 4096	D- 4096	D- 4096		
	C2- 2.875"						0- special	0- special	0- special		
	CW- 3.250"										
	CY- 3.375"										
	CZ- 3.421"										
	C3- 3.500"										
TD- 3.625	*Set Screw										
TG- 3.750	Rotor Optional										
T4- 3.875	**ABB Vaasa										
T6- 4.500	***ABB Helsinki										
C0- special											

Connector Options							
Mounted on Encoder Body				3' Cable			5' Flexible Conduit
Industrial Connector	5 pin MS	10 pin MS	Other	Industrial Connector	TwistLock	Other	
P- with Plug	E- (M737 Pinout) without Plug	A- without Plug	K- Condulet with Leads	X- without Plug	S- Mini MS without Plug	W- Leads only	N- Leads only Terminal box
G- (Northstar™) with Plug	F- "E" with Plug	B- with Plug	R- Mini MS TwistLock without Plug	Z- with Plug			
	H- (M727 Pinout) without Plug	C- with Plug & Flex. Conduit Adapter					
	J- "H" with Plug	L- with Right Angle Plug					

CE Pending



Gordy's Sensors

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All dimensions are in inches [millimeters].
 Specifications and features are subject to change without notice