

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!

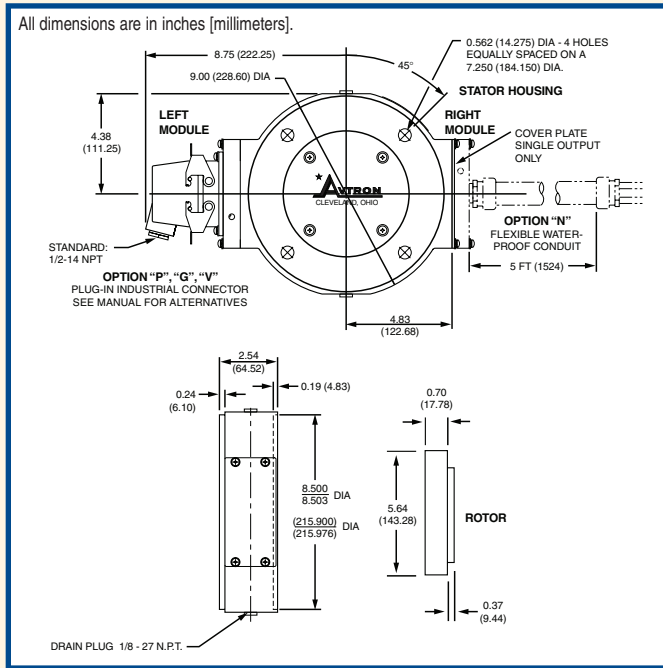


QUALITY SYSTEM CERTIFIED TO ISO 9001

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	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- tor adapt.*	
	US METRIC	w/o Ground w/ Ground		8- 5-24V in/ 5-15V out, hi power	F- 60	8- 5-24V in/ 5-15V out	F- 60		
	CA- 0.750"	MJ- 30mm		UF- CD180-32x	H- 120	H- 120	H- 120		
	CC- 0.875"	MF- 42mm		UN- CD36x	L- 240	L- 240	L- 240		
	CE- 1.000"	MP- 60mm		UP- CD4xx	N- 256	N- 256	N- 256		
	CF- 1.125"	MY- 80mm**		UQ- CD444/505E ⁺	P- 300	P- 300	P- 300		
	CH- 1.375"	MZ- 80mm***		U2- CD5xx	B- 480	B- 480	B- 480		
	CJ- 1.625"	M0- special		UV- CD43xx, 44xx, 54xx, 64xx, 65xx ⁺	R- 512	R- 512	R- 512		
	CK- 1.750"			UW- CD45xx, 75xx, 76xx ⁺	S- 600	S- 600	S- 600		
	CL- 1.875"			UY- CD46xx, 47xx, 85xx, 86xx ⁺	J- 960	J- 960	J- 960		
	CM- 2.000"			UZ- CD68x ⁺	Y- 1024	Y- 1024	Y- 1024		
	CN- 2.125"			U9- CD6xx-62xx, 67xx-69xx	Z- 1200	Z- 1200	Z- 1200		
	CQ- 2.250"			UU- Universal: CD180-CD86xx	4- 2048	4- 2048	4- 2048		
	CP- 2.375"			Q* - Quad Stacking	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		
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
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



INDUSTRIAL AUTOMATION, INC.

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