

Avtron Model AV850

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



Ultra-Reliable!

- Heavy Mill Duty
- Installation in Minutes!
- Up to 5000 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.

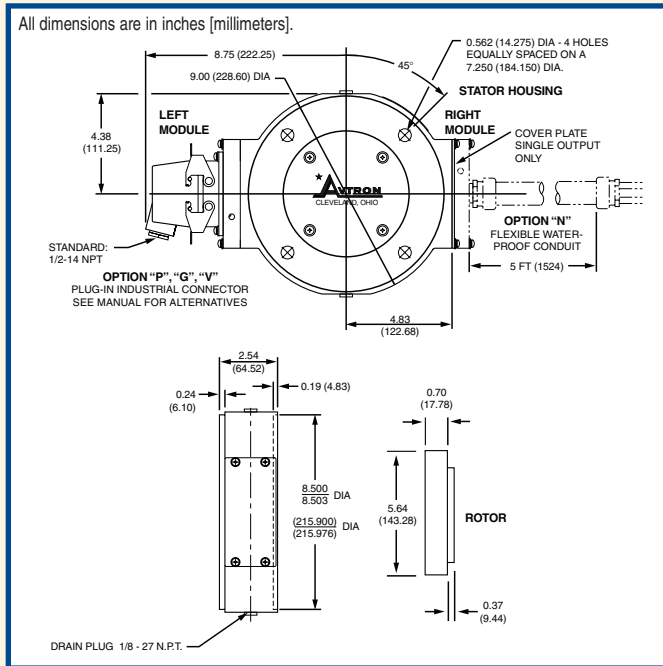
AV850 SMARTach II sensors digitally self-tune the outputs to eliminate drive trips caused by poor encoder signals.

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!

AV850 SMARTach II Magnetic, Modular Encoder, 8.5" C-Face Mount

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 - 5000

Speed: 6000 RPM Max***

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.

***Max RPM may be limited For PPR > 2500 contact factory

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	X- none	X- none	Z- 1200	X- none	X- none	Z- 1200
	US	METRIC	B- inboard, thru	8- 5-24V in/ 5-15V out, hi power	C*-50	A*-1270	8- 5-24V in/ 5-15V out, hi power	C*-50	A*-1270
	CA- 0.625**	MF- 30mm	UF- CD180-32x	F- no inboard, flat outboard	F- 60	4- 2048	H- 120	F- 60	4- 2048
	CB- 0.750*	MJ- 42mm	UN- CD36x	N- inboard, flat outboard	G- 100	5- 2500	A- 128	G- 100	5- 2500
	CC- 0.875*	MP- 60mm	UP- CD4xx	T- no inboard, thru out board	H- 120	D- 4096	B*-150	H- 120	D- 4096
	CE- 1.000*	MY- 80mm**	UQ- CD444/505E*		A- 128	8- 4800	L- 240	A- 128	8- 4800
	CF- 1.125*	MZ- 80mm***	U2- CD5xx		B*-150	9- 5000	0-special	B*-150	9- 5000
	CH- 1.375*	M4- 95mm	UR- CD507, 509		L- 240	0-special		L- 240	0-special
	CJ- 1.625*	M0- special	UV- CD43xx, 44xx, 54xx, 64xx, 65xx*		N- 256			N- 256	
	CK- 1.750*		UW-CD45xx, 75xx, 76xx*		P- 300			P- 300	
	CL- 1.875*		UY- CD46xx, 47xx, 85xx, 86xx*		E- 360			E- 360	
	CM-2.000*		UZ- CD68x*		B- 480			B- 480	
	CN- 2.125*		GZ- "UZ"*		Q- 500			Q- 500	
	CQ- 2.250*		G9- "U9"		R- 512			R- 512	
	CP- 2.375*		U9- CD6xx-62xx, 67xx-69xx		S- 600			S- 600	
	CR- 2.500*		U4- ABB 95mm		V- 900			V- 900	
	CT- 2.625*		UU- Universal: CD180-CD86xx		J- 960			J- 960	
	CS- 2.771*		Q* - Quad Stacking		Y- 1024			Y- 1024	
	C2- 2.875*								
	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								
T1- 4.000									
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	Z- with Plug	S- Mini MS without Plug	W- Leads only	N- Leads only
G- (Northstar™) with Plug	F- "E" with Plug	B- with Plug	R- Mini MS TwistLock with Plug	Q- 18" flex Cable, with Plug on remote base			T- Terminal box
	H- (M727 Pinout) without Plug	C- with Plug & Flex. Conduit Adapter	3- 6 Pin MS (M940)				
	J- "H" with Plug	L- with Right Angle Plug					



INDUSTRIAL AUTOMATION, INC.

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