

Avtron AV6A Absolute Encoder



AV6A Optical Rotary Absolute Encoders, 58mm flange, solid shaft

Tough and Compact! AV6A

- | Industry Standard 58mm Size
 - | Up to 30 Bit Resolution
- | Unbreakable Optical Disk
 - | Singleturn or Multiturn
 - | IP66 Rating
- | Superior Bearings and Seals
 - | No Batteries
- | -40°C to +85°C Operation
- | 2 Year No-Hassle Warranty

AV6A absolute rotary encoders fit industry standard 58mm flanges, yet are superior to ordinary absolute encoders. Also available: HS6A hollow shaft models, AV6M magnetic absolute encoders, AV30 severe-duty absolute magnetic encoders with 58mm, 2.5", and 85mm flange mounting.

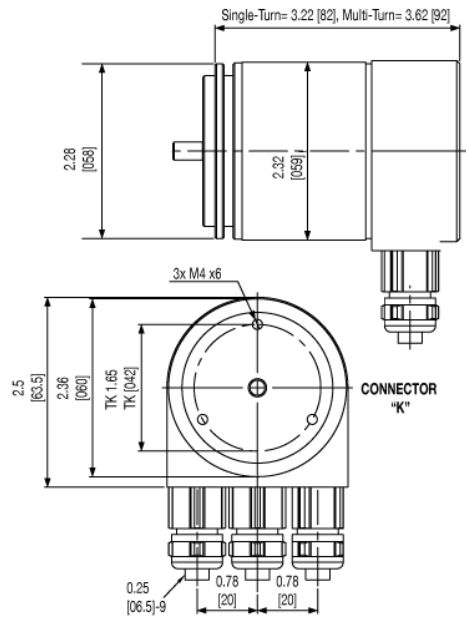
AV6A encoders have superior shaft seals and bearings that stay sealed to keep contaminants out, despite temperature cycles or liquid sprays. Our encoder seals are protected by mechanical barriers to prevent flexing or failure. Avtron's superior bearings permit much larger side and axial loads.

Many competitive optical encoder designs risk sensor damage from any vibration or shock. Some designs even use thin glass disks in "industrial" products! Avtron uses only unbreakable disks.

The AV6A offers a broad range of communication options, from parallel output and SSI to the latest Profibus and Ethernet standards.

Our optical AV6A encoders use superior sensor, disk, bearing, and seal technology to give top performance in industrial conditions. Select an Avtron AV6A today!

OUTLINE DRAWING



MORE AV6A ADVANTAGES

- Stainless steel shaft standard
- Optional all-stainless construction
- More than 2X the axial and side load capability of the competition
- Ultra-long-life internal gearbox
- Software-settable zero point for SSI and parallel output
- Optional factory-programmable cam limits
- Optional 5V operation
- Protected against reverse power wiring
- Profibus DP & ProfiNet Support for Class 1 & 2 & DPV2 Isochronous (ProfiDrive)

AV6A SPECIFICATIONS

Operating Power: Volts: 10 - 30 VDC

Current: 230mA at 10V, 100mA at 24V maximum*

Output Formats: Ethernet/IP*, Modbus TCP*, Profinet*, Powerlink, Profibus, CANOpen, CANSafe, DeviceNet, SSI, Parallel

Accuracy: +/-0.02° (+/-1 arc-min)

Shaft Loading: axial 9lbs [40N], radial 25lbs [110N]

Temperature: -40° to 85°C*

Environment: IP66**

Vibration: 10G, 10-1000Hz

Shock: 30G, 11mS duration*

Weight: 1.21lb [550g]; stainless option 2.7lb [1200g]

*(Ethernet versions require 400mA @ 10V or 160mA @ 24V)

Check out our website for more detailed specifications, drawings, and**with standard recommended seals installation instructions. www.avtronencoders.com

SELECTION GUIDE

AV6A PART NUMBERS AND AVAILABLE OPTIONS																																																										
Model	Bus	Flange	Shaft Size	Turns/ bits	PPR/bits per turn	Connector	Connector Exit	Output	IP Rating	Special Option																																																
AV6A	C- CANOpen D- DeviceNet F- CANSafe K- POWERLINK L- Parallel M- ModbusTCP Ethernet N- Profinet IO P- Profibus DP R- Ethernet/IP S- SSI	1- 58mm "servo/ clamp" flange, 36mm male pilot, 3X M3, 3X M4 at 48mm 2- 58mm "synchro" flange, 50mm male pilot, 3X M4 at 42mm 4- 2.5" square flange w/1.25" male pilot	B- 3/8" dia. x 5/8" w/flat C- 10mm dia. x 20mm w/flat T- 6mm dia., x 10mm, no flat	X- 0/0- single turn A- 16/4** D- 128/7** E- 256/8** 2- 4096/12 4- 16384/14	E- 256/8** F- 512/9** 0- 1024/10** 2- 4096/12 3- 8192/13 4- 16384/14 6- 65536/16	A- 1xM12/5 pin B- 2xM12/5 pin C- 3xM12 4/4/5 or 4/4/4 pins D- 2xM12/4/5 pin E- M12/8 pin F- M23/12 pin G- M27/26pin J- 2x cable entry K- 3x cable entry M- M23/8pin Hengstler N- M23/8pin Stegmann Q- M23/8pin Kubler W- Cable, 1m	A- side/radial E- end/axial	1- Binary 2- Gray	X- None, IP54* A- IP66 shaft seals S- IP66 seals, stainless housing	000- none 9xx- special cable length xx=length *0.3m																																																
<table border="1"> <thead> <tr> <th colspan="4">FLANGE COMPATIBILITY</th> </tr> <tr> <th>Flange</th> <th>Shaft</th> <th colspan="2">IP/Sealing</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>C</td> <td colspan="2">X*, A, S</td> </tr> <tr> <td>2</td> <td>C, T</td> <td colspan="2">X*, A, S</td> </tr> <tr> <td>4</td> <td>B</td> <td colspan="2">X*, A</td> </tr> </tbody> </table>											FLANGE COMPATIBILITY				Flange	Shaft	IP/Sealing		1	C	X*, A, S		2	C, T	X*, A, S		4	B	X*, A																													
FLANGE COMPATIBILITY																																																										
Flange	Shaft	IP/Sealing																																																								
1	C	X*, A, S																																																								
2	C, T	X*, A, S																																																								
4	B	X*, A																																																								
<table border="1"> <thead> <tr> <th colspan="4">STANDARD CONNECTORS & OUTPUT FORMATS</th> </tr> <tr> <th>Bus</th> <th>Code</th> <th>Connectors</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>CANOpen</td> <td>C</td> <td>A, B, C, J, K, W</td> <td>1</td> </tr> <tr> <td>DeviceNet</td> <td>D</td> <td>A, W</td> <td>1</td> </tr> <tr> <td>CANSafe</td> <td>F</td> <td>K</td> <td>1</td> </tr> <tr> <td>POWERLINK</td> <td>K</td> <td>C</td> <td>1</td> </tr> <tr> <td>Parallel</td> <td>L</td> <td>G, W</td> <td>1, 2</td> </tr> <tr> <td>ModbusTCP</td> <td>M</td> <td>D</td> <td>1</td> </tr> <tr> <td>Profinet</td> <td>N</td> <td>C</td> <td>1</td> </tr> <tr> <td>Profibus DP</td> <td>P</td> <td>C, J, K</td> <td>1</td> </tr> <tr> <td>EtherNet/IP</td> <td>R</td> <td>C</td> <td>1</td> </tr> <tr> <td>SSI</td> <td>S</td> <td>E, F, W</td> <td>1, 2</td> </tr> </tbody> </table>											STANDARD CONNECTORS & OUTPUT FORMATS				Bus	Code	Connectors	Output	CANOpen	C	A, B, C, J, K, W	1	DeviceNet	D	A, W	1	CANSafe	F	K	1	POWERLINK	K	C	1	Parallel	L	G, W	1, 2	ModbusTCP	M	D	1	Profinet	N	C	1	Profibus DP	P	C, J, K	1	EtherNet/IP	R	C	1	SSI	S	E, F, W	1, 2
STANDARD CONNECTORS & OUTPUT FORMATS																																																										
Bus	Code	Connectors	Output																																																							
CANOpen	C	A, B, C, J, K, W	1																																																							
DeviceNet	D	A, W	1																																																							
CANSafe	F	K	1																																																							
POWERLINK	K	C	1																																																							
Parallel	L	G, W	1, 2																																																							
ModbusTCP	M	D	1																																																							
Profinet	N	C	1																																																							
Profibus DP	P	C, J, K	1																																																							
EtherNet/IP	R	C	1																																																							
SSI	S	E, F, W	1, 2																																																							

Nidec

**AVTRON
ENCODERS**

CE

Nidec-Avtron Makes the Most Reliable Encoders in the World
8901 E. PLEASANT VALLEY ROAD • INDEPENDENCE, OHIO 44131-5508
TELEPHONE: (1) 216-642-1230 • FAX: (1) 216-642-6037
E-MAIL: tachs@nidec-avtron.com • WEB: www.avtronencoders.com

All dimensions are in inches [millimeters]. Specifications and features are subject to change without notice. EU-SMART™, SMARTSafe™, SMARTach II™, THIN-LINE™, THIN-LINE II™, WIDE-GAP™, and BULLSEYE32™ are trademarks of Nidec Avtron Automation. All other trademarks and registered trademarks are the property of their respective owners.