

# Avtron AV30 Absolute Encoders



**Severe Mill Duty Shafted  
Absolute Encoder, Singleturn  
or Multiturn**

## Absolutely Severe Duty AV30

- | Fits Industry Standard 2.5", 58mm and 85mm Flanges
- | Shaft Sizes 1/4"-3/8" [10mm-18mm]
- | Directly Replaces Standard Models
  - | Up to 27 Bit Resolution
  - | Moisture-Proof, Shock Resistant Magnetic Sensor
  - | Singleturn or Multiturn
  - | IP65 Rating
- | Bearings 20X Larger Than Standard Encoder!
  - | No Batteries or Gears!
  - | -40° to 85°C Operation
- | 3 Year No-Hassle Warranty

AV30 shafted magnetic absolute rotary encoders offer a completely new level of durability, never seen before in absolute encoders. Yet the AV30 encoder will fit existing flanges and mounts, enabling easy upgrades from low durability encoders. Also available: hollow shaft model (HS40), absolute+incremental combo units (HS45, AV45) as well as optical models (AV6A, HS6A) for ultra-precision applications.

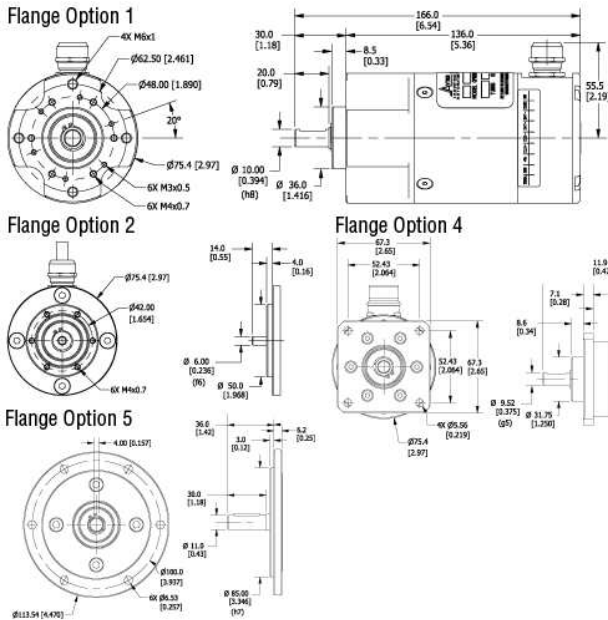
The AV30 features massive bearings with over 10X the load rating of the competition. Industry-leading seal systems stay sealed to keep contaminants out, through temperature cycling and liquid sprays. Moreover, the magnetic sensor can see through oil, dust and dirt that disable ordinary optical absolute encoders.

By utilizing Wiegand wire energy harvesting technology combined with magnetic sensors, Avtron has created an absolute encoder design which requires no batteries, long-term capacitors, glass disks, or gears!

The AV30 features a broad range of industry standard communication protocols: from analog outputs to CANbus, DeviceNet, J1939 and SSI, you will find the communication protocol you need.

Stop suffering costly downtime due to absolute encoder failures--upgrade to AV30 today!

## OUTLINE DRAWING



## MORE AV30 ADVANTAGES

- More than 6X the axial and side load capability of the competition
- No internal gearbox to wear out
- Software settable zero point for SSI output
- Optional factory-programmable cam limits

## AV30 SPECIFICATIONS

### Operating Power:

SSI: 5-30VDC; 30mA @ 24VDC, 125mA @ 5VDC

Analog V Out: 12-30VDC; 15mA @ 24V

Analog I Out: 15-30VDC; 40mA @ 24V

**Output Format:** Analog, SSI (future CANOpen, DeviceNet, J1939, Profibus)

**Accuracy:**  $\pm 0.35^\circ$  ( $\pm 21$  arc-min)

**Temperature:**  $-30^\circ\text{C}$  to  $+85^\circ\text{C}$

**Environmental:** IP65

**Shaft Load:** 180N axial, 180N radial\*

**Vibration:** 5-2000Hz, 30G\*

**Shock:** 300G, 6mSec\*

**Weight:** 3lb [1350g]

**Certifications:** CE

Check out our website for more detailed specifications, drawings, and installation instructions. [www.avtronencoders.com](http://www.avtronencoders.com)

## SELECTION GUIDE

Model	Bus	Flange	Shaft	Turns	CPR	Conn	Conn exit	Coding	Add'l drill pattern	Mods
AV30	<b>A-</b> Analog <b>C-</b> CANOpen <b>D-</b> DeviceNet <b>P-</b> Profibus DP <b>S-</b> SSI	<b>1-</b> 58mm flange, 36mm male pilot, 3X M3, 3X M4 @ 48mm BC <b>2-</b> 58mm flange, 50mm male pilot, 3X M3, 3X M4 @ 42mm BC <b>4-</b> 2.65" Square flange, 1.25 male pilot <b>5-</b> 85mm (B10) flange 6X M6 @ 100mm	<b>B-</b> 3/8" solid shaft w/flat <b>C-</b> 10mm solid shaft w/flat <b>H-</b> 11mm dia. Shaft <b>T-</b> 6mm solid shaft, no flat	<b>X-</b> 0/0-single turn <b>A-</b> 16/4 (analog) <b>2-</b> 4096/12 <b>3-</b> 8192/13 <b>4-</b> 16384/14 <b>5-</b> 32768/15	<b>2-</b> 4096/12 <b>3-</b> 8192/13	<b>C-</b> 3xM12 4/5/5 pin <b>E-</b> M12/8 pin <b>F-</b> M23/12 pin <b>K-</b> 3x cable entry <b>W-</b> Cable, 1m <b>S-</b> Single cable entry	<b>A-</b> side/radial	<b>Digital</b> <b>1-</b> Binary <b>2-</b> Gray  <b>Analog</b> <b>3-</b> 0-5V <b>4-</b> 0-10V <b>5-</b> 4-20mA <b>6-</b> 0-20mA	<b>X-</b> No Additional Face Drill Holes	<b>000-</b> none <b>9xx-</b> special cable length (xx=feet [0.3m])

**Nidec**

**AVTRON**  
ENCODERS

Nidec-Avtron Makes the Most Reliable Encoders in the World

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**CE**

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