



1986I Resolver Data Sheet

Absolute Rotary Sensing

The Gemco Series 1986 Resolver has been the preferred source for rugged and accurate rotary positioning in a variety of industrial applications.

The brushless resolver works on the same principle as a rotary transformer to couple power in the rotor. The internal brushless resolver has three separate windings: a reference winding, a SIN winding and a COS winding.

The reference winding is excited by an AC voltage. The SIN and COS winding are set 90° apart and provide two different output voltages whose ratio represent absolute position of the shaft.

The advantage of resolver transducers over other rotary position products is that resolvers hold up better in harsh environments and they are always absolute, so if power is lost and restored, the exact position data will be communicated.

In long cable runs a resolver signal can typically go much further than other technologies. Resolvers have long been the standard rotary position method in packaging, primary metals manufacturing, stamping, automotive, tire and rubber, paper mills and mining.

Gemco has always been a pioneer in the design and manufacturing of

“built to order” resolver packages. We can mechanically and electrically match any competitor’s package while improving on the overall design to enhance the performance, accuracy or durability.

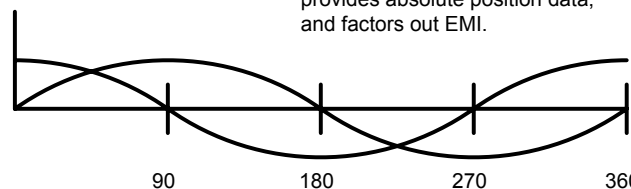
Through our wide range of materials for construction and precision gear reducers we can extend your sensor’s life many times over.

We offer packages with multiple sensors and gear reducers in a variety of materials. We have engineered special resolver packages with stainless steel housings, oil filled packages, high RPM, high resolution, resolver/encoder combinations and tach generators.



Resolver Specifications	
Shaft Loading Axial	50 lbs. Max.
Shaft Loading Radial	100 lbs. Max.
Enclosure	NEMA 4
Temperature	-40° to 125°C
Shock	50G's for 11 mSec
Vibration	5 to 2000Hz @ 20G's
RPM	5,000 Max.

Stator 1 Voltage
Stator 2 Voltage



Ratiometric conversion of the two secondary coil voltages provides absolute position data, and factors out EMI.

1986I Resolver

Part Numbering

1986I		1	X	S	X																						
Mounting Configuration and Shaft Size <table border="1"> <tr> <td>I</td> <td>4.00" round face mount 5/8" input shaft</td> </tr> </table>		I	4.00" round face mount 5/8" input shaft	Resolver Electrical Output Characteristics <table border="1"> <tr> <td>1</td> <td>Standard output compatible with all Gemco electronic modules & Autotech. Resolver No. 04535001</td> </tr> <tr> <td>2</td> <td>Special output compatible with AMCI resolver input devices. Resolver No. 04535076</td> </tr> <tr> <td>3</td> <td>Special output compatible with GE axis positioning modules. Resolver No. 04535044</td> </tr> <tr> <td>4</td> <td>Special output compatible with Modicon motion cards. Resolver No. 04535076</td> </tr> <tr> <td>5</td> <td>Special output compatible with Reliance resolver input card. Resolver No. 04535023</td> </tr> <tr> <td>6</td> <td>Special output compatible with Namco resolver input card. Resolver No. 04535053</td> </tr> </table>	1	Standard output compatible with all Gemco electronic modules & Autotech. Resolver No. 04535001	2	Special output compatible with AMCI resolver input devices. Resolver No. 04535076	3	Special output compatible with GE axis positioning modules. Resolver No. 04535044	4	Special output compatible with Modicon motion cards. Resolver No. 04535076	5	Special output compatible with Reliance resolver input card. Resolver No. 04535023	6	Special output compatible with Namco resolver input card. Resolver No. 04535053	Single/Multi-Turn <table border="1"> <tr> <td>X</td> <td>Single turn resolver. No gear reducer.</td> </tr> <tr> <td>GR</td> <td>Single turn resolver with internal gear reducer 1.5:1 to 520:1.</td> </tr> </table> <p>Lengths may vary with gear reducer.</p>	X	Single turn resolver. No gear reducer.	GR	Single turn resolver with internal gear reducer 1.5:1 to 520:1.	Options <table border="1"> <tr> <td>X</td> <td>None</td> </tr> </table>	X	None	Connection <table border="1"> <tr> <td>S</td> <td>Side conduit entrance w/ terminal blocks</td> </tr> </table> <p>Consult factory for other connector options.</p>	S	Side conduit entrance w/ terminal blocks
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1.5:1	7.5:1	15:1	24:1*	48:1	75:1	160:1	360:1
2:1	7.625:1	16:1	25:1	50:1	80:1	180:1	400:1
3:1	8:1	17:1	30:1	54:1	90:1	200:1	500:1
4:1	9:1	18:1	31.25:1	58:1	91:1	210:1	520:1
4.75:1	9.2:1	19:1	35:1	60:1	100:1	225:1	
5:1	9.5:1	19.5:1	36:1*	64:1	115:1	250:1	
6:1	10:1	20:1	38:1	65:1	120:1	270:1	
6.15:1	12:1	21.66:1	40:1	70:1	128:1	310:1	
7:1	14:1	23:1	42:1	73:1	150:1	350:1	

Dimension Drawing

[] = DIMENSIONS IN MILLIMETERS

