



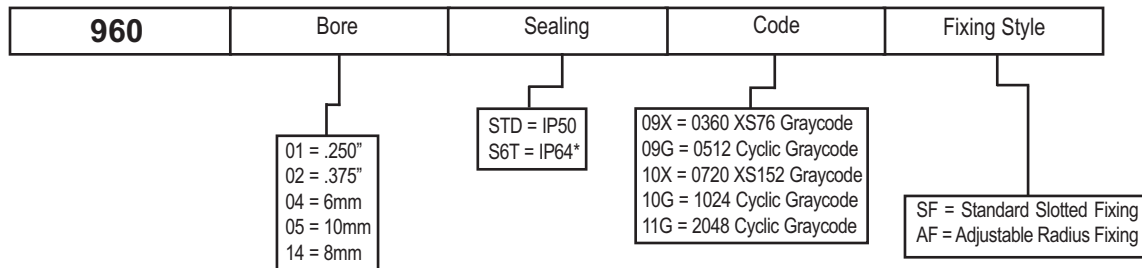
Design Features

The 960 Series miniature 9-11 bit absolute encoder has been designed with very compact dimensions and a simple fixing arrangement. Available in Cyclic or excess graycode, the 960 is a full thru-bore hollow shaft device, fitted with 2m of cable. The encoder operates from 4.75 - 26V in Push-Pull mode and features a user selectable "direction of control!"

Specifications

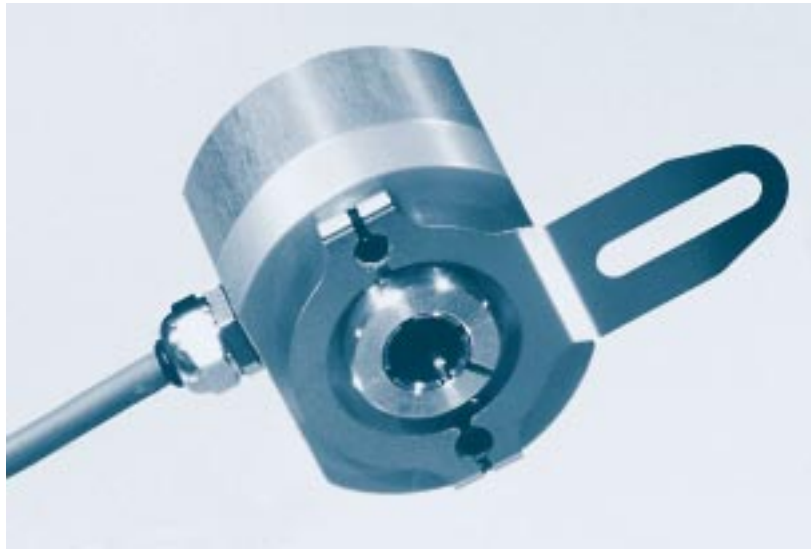
Input Voltage range	4.75/26V	Starting torque	0.002 Nm
Regulation, for 5V operation	5%, with 2% maximum ripple	User radial shaft runout	0.15 max TIR
Current consumption	100mA. No external load	User axial shaft end play	±0.7mm
Output circuits, per channel	20mA (max) Push-Pull	Radial loading	Being the mass of the encoder
Frequency response (LSB)	50 KHz	Axial loading	Being the mass of the encoder
Output codes	Cyclic graycode, XS graycode	Moment of inertia	100 g/cm
Repeatability	within 0.01°	Acceleration	10⁵ radians/sec²
Error limit/accuracy	0.04°	Weight	0.2 Kg
Rise time	Less than 1 microsecond	Housing	Aluminum
Resolution	9 to 11 bits	Operating temperature	0°C to +70°C
LED life	100,000 hrs typical	Storage temperature	-20°C to +85°C
Pulses per revolution	See ordering information	Humidity	98% RHNC
Max shaft speed	6,000 rpm continuous	Vibration	10 G's @ 58 to 500 Hz
Bore sizes	See ordering information	Shock	50 G's for 11 mSec
Bore tolerance	H7 sliding fit for g6	Protection	IP50 standard
Bearings	ABEC 3		*IP64 due late 2003

Ordering Information

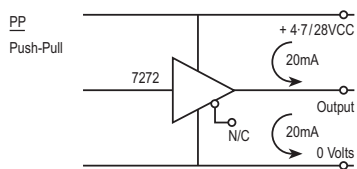


*IP64 available late 2003 in bore sizes .250"; 6mm and 8mm only.





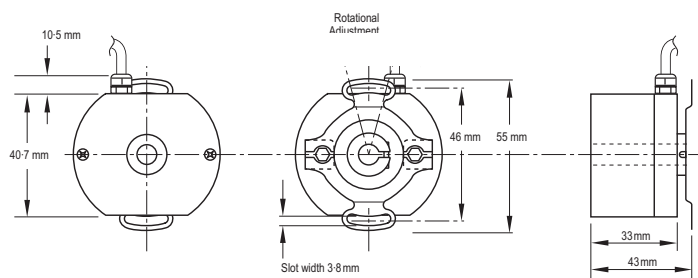
Output Circuits



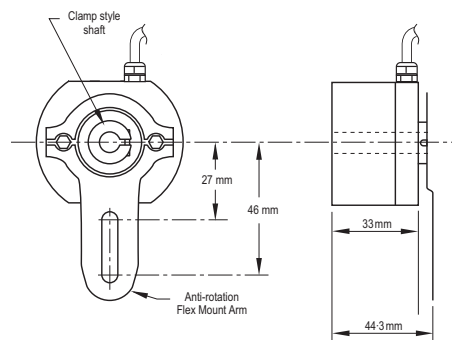
Termination

Function	Cable colour
OV Common	Black
+VCC (5-24V)	Red
S1 (cw MSB)	Brown
S2	White
S3	Green
S4	Orange
S5	Blue
S6	Violet
S7	Grey
S8	Pink
S9 LSB 9 bit	Red & Green
S10 LSB 10 bit	Red & Yellow
S11 LSB 11 bit	Turquoise
Case Ground	Screen Wire
CW/CCW	Red & Blue

Dimensions



Standard Slotted Fixing



Adjustable Radius Fixing

