

### CHARACTERISTICS

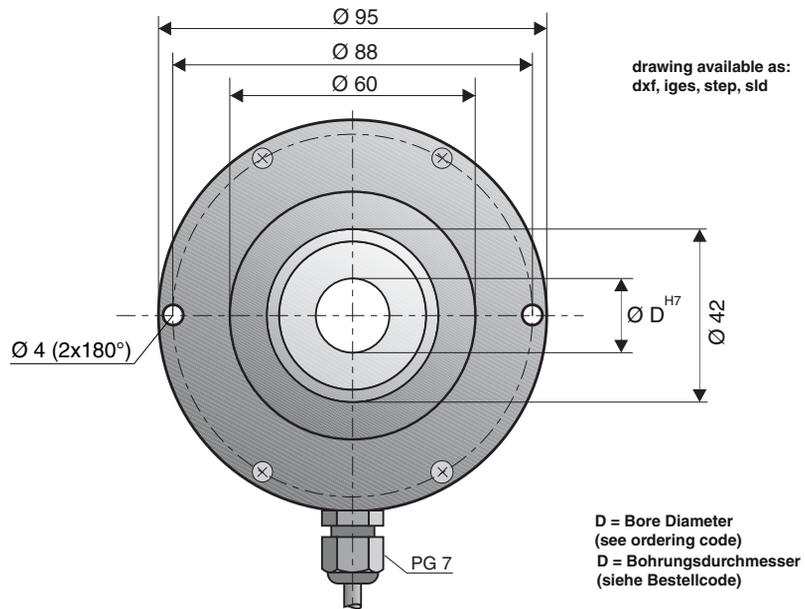
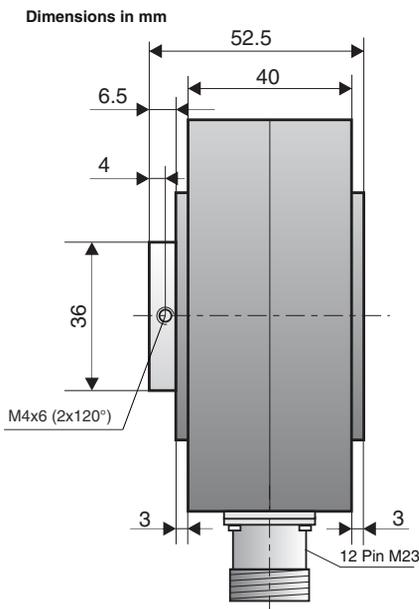
- Housing 95 mm
- Floating Bearing Assembly and Heavy Duty Design
- Shaft Bore Diameter from 15 to 30 mm
- Resolution 1024 ppr or 2048 ppr
- Supply Voltage 5 VDC

### MECHANICAL SPECIFICATIONS

Cover & Body	Aluminum
Shaft	Stainless Steel
max. Speed	6000 RPM
Mass moment of inertia	$100 \cdot 10^{-6} \text{ kgm}^2$ (Bore Size $D = 20\text{mm}$ ) $96 \cdot 10^{-6} \text{ kgm}^2$ (Bore Size $D = 25\text{mm}$ )
Starting Torque (at 25°C)	> 0.04 Nm
max. Loading on Shaft	Axial 50 N, Radial 50 N
Shock resistance (6 ms)	$\leq 1000 \text{ m/s}^2$
Vibration resistance (55 - 2000 Hz)	$\leq 200 \text{ m/s}^2$ (Cable) $\leq 100 \text{ m/s}^2$ (Plug)
Protection Rate (DIN EN 60529)	IP 65
Operating Temperature	-20° C to +70° C
Weight	ca. 0.7 kg



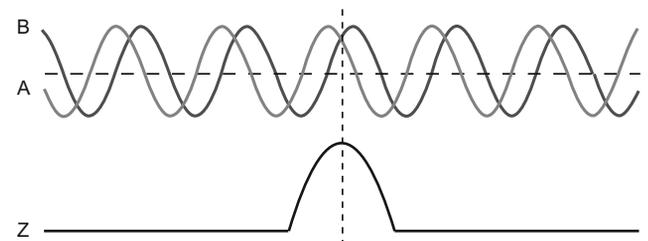
### DIMENSIONS



### ELECTRICAL SPECIFICATIONS

Supply Voltage	5 VDC
Current Consumption (no load)	max. 40 mA
Output Circuit	Op-Amp
Pulse frequency	max. 100 kHz
Signal Level (high)	$V_{cc} - 0.7 \text{ Volt}$
Signal Level (low)	max. 0.25 Volt
Short Circuit Protection	100%
Reverse polarity protection per channel	100%
Output-Signals	Sin/Cos 1Vpp

### SIGNALS



A leads B in the Clockwise Direction (facing shaft)  
Complementary Signals are also available (see ordering code)

### CONNECTIONS

Function	Cable Code	12 Pin M23 Plug	9 Pin Sub-D Plug
GND	white	01	01
Vcc	brown	02	02
A	green	03	03
B	yellow	04	04
Z	grey	05	05
$\bar{A}$	pink	06	06
$\bar{B}$	blue	07	07
$\bar{Z}$	red	08	08

### ORDERING CODE

SH
950
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Sxxx\*

a      b      c      d      e      f      g      h      Resolution 1024 or 2048 ppr available

- a Group Function**  
 SH = Sine-Cosine Hollow Shaft
- b Basic Series Number**  
 950
- c Bore Diameter D**  
 selectable from 15 to 30 mm  
 15 = 15 mm, 18 = 18 mm, 25 = 25 mm
- d Mechanical Option**  
 0 = None, 1 = Stainless Steel

- e Connection Type**  
 0 = 2 m Cable , 7 = 12 Pin M23 Plug  
 6 = 9 Pin Sub-D Plug
- f Connection Location**  
 R = Radial
- g Output Signals**  
 I = A + B + Z (Sin/Cos)  
 C = A + B + Z +  $\bar{A}$  +  $\bar{B}$  +  $\bar{Z}$  (Sin/Cos)
- h Output Circuit Type / Supply Voltage**  
 Q = Op-Amp 5 VDC

**\* Notes:**  
 Any special functions and design will be designated by a 4 digit code (Sxxx) at the end of the part number.  
 Consult our Office for your region for further details. If this encoder does not fit your need please also consult us for help.

### FURTHER INFORMATION

**Accessories:**  
 Corresponding accessories, such as couplings, measuring wheels, display modules, extension cables etc., for this encoder can be found on our homepage [www.globalencoder.com](http://www.globalencoder.com) under „Accessories“.

