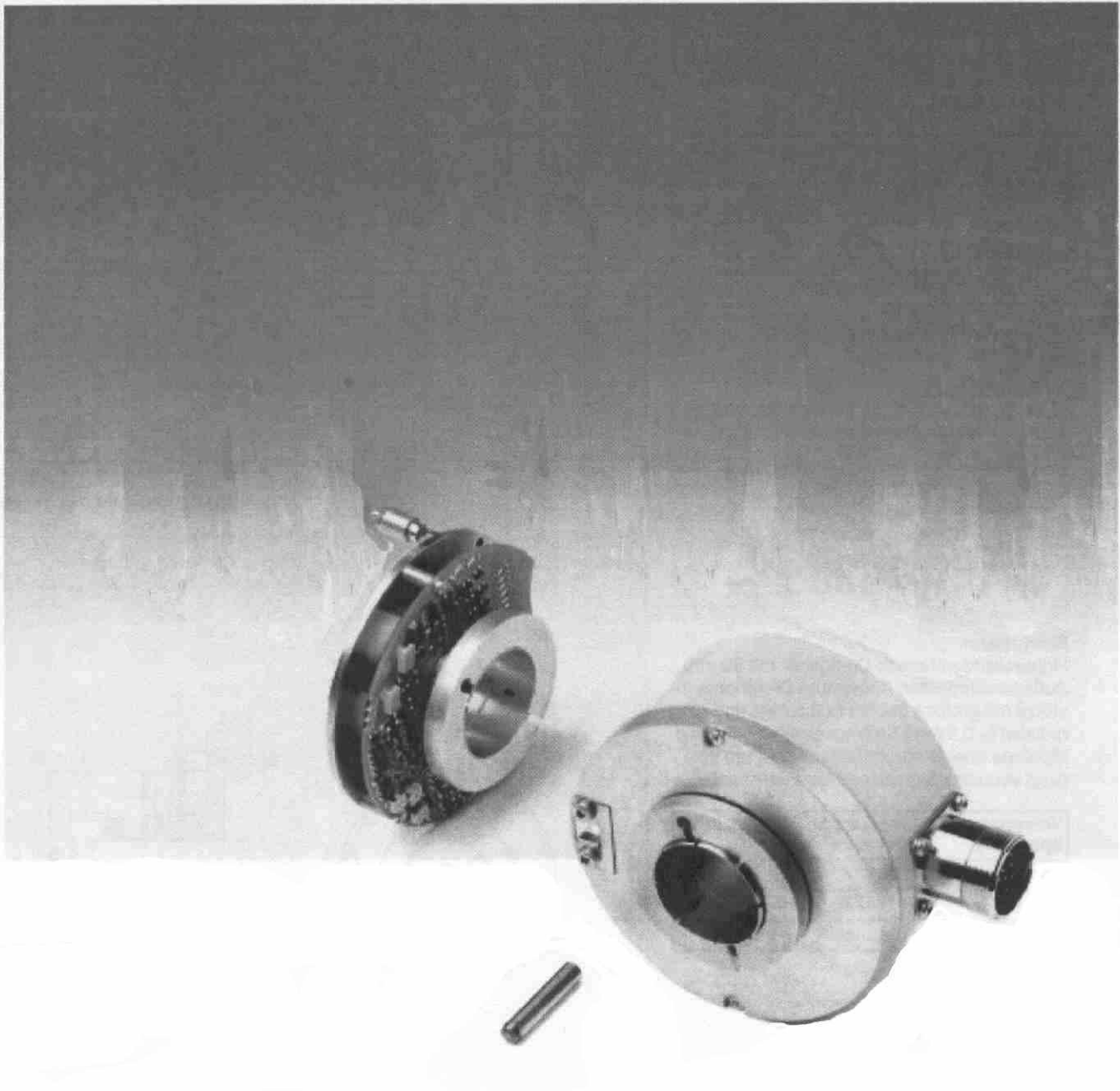
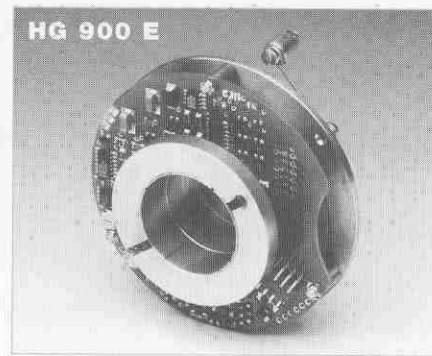


**Hollow shaft incremental encoder HG 900**



**HG 900 D****HG 900 E****HG 900 D.R****Features:**

Hollow-through shaft encoder having a 90 mm external diameter. External torque support using a cylindrical pin with large axial ( $\pm 0.5$  mm) and radial ( $\pm 0.5$  mm) play compensation. Quadrature output signals and reference mark.

Supply voltage	Output driver	Identification character
4 ... 6 V	RS 422	F
10 ... 30 V	RS 422	G
10 ... 30 V	push-pull	6

**Shaft diameter:**

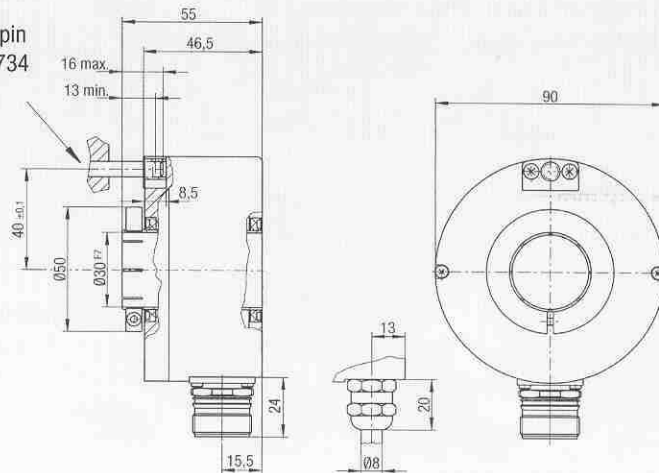
30 mm, other through shaft diameters upon request.

**Pulse numbers (Z):**

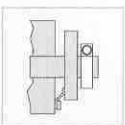
1024, 2048, 2500, 4096, 5000, 8192, 10000\*, 16384\* – \*Not possible with Driver 6.

Order example: **HG 900 DKR 5000, 6**

Torque support for the encoder via cylindrical pin  $\varnothing 6$  DIN EN 28734

**HG 900 DSR****HG 900 DKR**

Standard cable length: 1.5 m, 11 core

**HG 900 E****Features:**

Hollow-through shaft encoder having a 80 mm external diameter. External coupling with large axial ( $\pm 0.5$  mm) and radial ( $\pm 0.5$  mm) play compensation. Simple mounting using external torque support. Quadrature output signals and reference mark.

Supply voltage	Output driver	Identification character
4 ... 6 V	RS 422	F
10 ... 30 V	RS 422	G
10 ... 30 V	push-pull	6

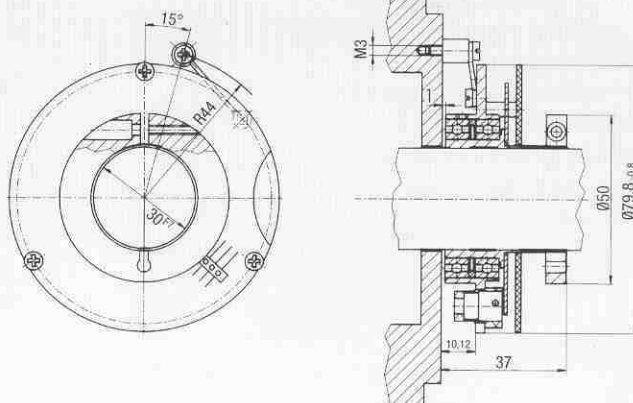
**Shaft diameter:**

30 mm, other through shaft diameters upon request.

**Pulse numbers (Z):**

1024, 2048, 2500, 4096, 5000, 8192, 10000\*, 16384\* – \*Not possible with Driver 6.

Order example: **HG 900 E 2500, 6**



Standard cable length: 1.5 m, 11 core

## Technical data and characteristics in accordance with DIN 32878

Encoder type		HG 900 E	HG 900 D	Units
Interfaces		RS 422 Push-pull outputs proof against internal voltages		
Dimensions		see drawings		mm
Mass		0.3	1.1	kg
Moment of inertia of the rotor		600	490	gcm <sup>2</sup>
Measurement step	RS 422/push-pull	90/pulse number		degree
Reference signal	Number Position	1 90° electrical, logically linked to K1 and K2*		
Error limits	100 ≤ Z < 1.250 1.250 < Z ≤ 5.000	45/Z + 0.054 45/Z + 0.015		degree
Measurement step deviation	RS 422/push-pull	45/Z		degree
Max. output frequency	RS 422/Sinusoidal Push-pull output	300 200		kHz
Max. operating speed		3000		min <sup>-1</sup>
Max. angular acceleration		10 <sup>5</sup>		rad/s <sup>2</sup>
Operating torque		0.6	7	Ncm
Starting torque		1.5	9	Ncm
Permissible shaft movement of the drive element				
Radial movement	static dynamic	±0.5 ±0.1		mm
Axial movement	static dynamic	±0.5 ±0.5		
Angular movement at right angles to the axis	static dynamic	34 × 10 <sup>-3</sup> 17 × 10 <sup>-3</sup>		mm/mm
Bearing life		3.6 × 10 <sup>9</sup>		revolutions
Working temperature range		-20 ... +70		°C
Operating temperature range		-20 ... +85		°C
Storage temperature range		-30 ... +85		°C
Permissible relative air humidity		70	90	%
EMV acc. EN 50081-2 and EN 50082-2				
Resistance to shock in the assembled state in accordance with (DIN IEC 68 part 2-27)		30/11		g/ms
Resistance to vibration in the assembled state in accordance with (DIN IEC 68 part 2-6)		20/10 ... 150		g/Hz
Degree of protection in acc. with IEC 60529 in the assembled state				
	with plug outlet with cable outlet	IP 00	IP 65 IP 65	
Operated voltage range	RS 422 Push-pull	4 ... 6 / 10 ... 30 10 ... 30		V
Operating current at 24 V on no load at 5 V		100 120		mA
Signal line (supply voltage is floating with respect to the housing, screen is at housing potential)				
Diameter min. bending radius		8 40		mm

\* not valid for driver S.

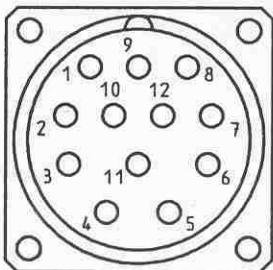
## Pin and wire allocation

PIN	Colour	Signal 24 volts push-pull Designation 6	Signal 5 volts RS 422 Designations F, G, S	Explanation	
1	black	N.C.	K2	S2	Signal line
2	grey	N.C.	* Sense+		Internal, connected to Us
3	violet	K 0	K 0	S0	Signal line
4	yellow	N.C.	K 0	S0	Signal line
5	white	K 1	K 1	S1	Signal line
6	brown	N.C.	K 1	S1	Signal line
7	orange	N.C.	N.C.		not connected
8	pink	K 2	K 2	S2	Signal line
9		screen	screen		
10	blue	GND	GND		Earth connect. of the encoder
11	green	GND	* Sense-		Internally connected to GND
12	red	US	US		Encoder supply voltage

N.C. = not connected

Pins/wires with this designation may not be connected

\* HG 660 without Sense lines.



View connector side

The C 12 FUR mating plug  
(item number 026 020 200 700)  
is not included in the items delivered.  
Please order separately.

Not all variants are available!

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1800 33 48 02 – toll free  
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Fax +43 (0)22 36 62 28 85

**Belgium/Luxembourg**

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Fax +32 (0)24 63 31 04

**Brazil**

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Fax +55 11 55 35 41 53

**China**

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Fax +8 52 27 63 63 11

**Czech Republic**

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**Netherlands**

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