

### MAIN FEATURES

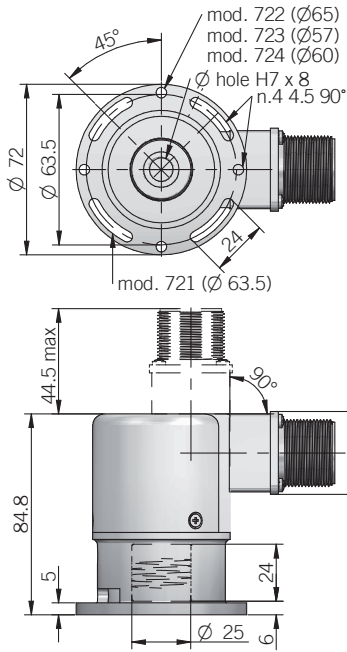
Standard encoder series for industrial environments with high mechanical resistance requirements. Specifically designed for direct mounting on motors or tachometric dynamos thanks to integrated elastic coupling which allows radial and / or axial motor shaft play.

- 3 channel encoder (A / B / Z) up to 24000 ppr
- Power supply up to +28 V DC with several electrical interfaces available
- Up to 500 kHz output frequency
- Cable or connector output
- Available with metal cover for heavy duty applications
- Integrated elastic couplig up to 10 mm bore diameter

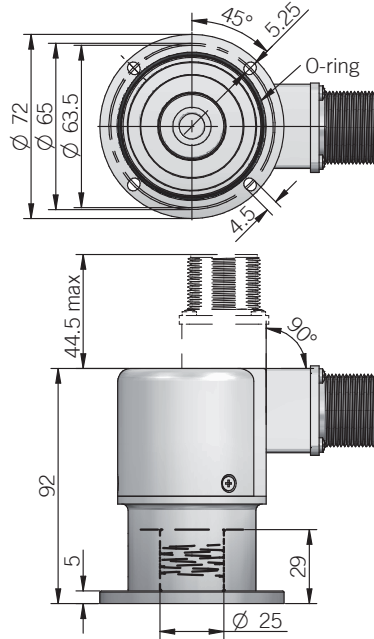


ORDERING CODE	ER	721	A	M*	500	S	5/28	P	8	X	6	P	R	.XXX
<b>SERIES</b> incremental encoder series <b>EL</b> incremental encoder series <b>ER</b>														
<b>MODEL</b> fixing holes $\varnothing$ 63,5 mm <b>721</b> fixing holes $\varnothing$ 65 mm <b>722</b> fixing holes $\varnothing$ 57 mm <b>723</b> fixing holes $\varnothing$ 60 mm <b>724</b>														
<b>FLANGE TYPE</b> flange type <b>A</b> flange type <b>B</b>														
<b>METAL COVER</b> * add for metal cover <b>M</b>														
<b>RESOLUTION</b> ppr from <b>1</b> to <b>24000</b> see table for pulses availability														
<b>ZERO PULSE</b> without zero pulse <b>S</b> with zero pulse <b>Z</b>														
<b>POWER SUPPLY</b> (with L electrical interface) 5 V DC <b>5</b> 5 ... 28 V DC <b>5/28</b>														
<b>ELECTRICAL INTERFACE</b> NPN open collector <b>C</b> push-pull <b>P</b> line driver <b>L</b> power supply 5/28V - output RS-422 <b>RS</b>														
<b>BORE DIAMETER</b> mm <b>6</b> mm <b>8</b> mm <b>10</b>														
<b>ENCLOSURE RATING</b> IP 54 <b>X</b> (mod. EL721 / EL722) IP 66 <b>S</b>														
<b>MAX ROTATION SPEED</b> (IP 66) 3000 rpm <b>3</b> (IP 54) 6000 rpm <b>6</b>														
<b>OUTPUT TYPE</b> cable (standard length 1,5 m) <b>P</b> preferred cable lengths 2 / 3 / 5 / 10 m, to be added after DIRECTION TYPE (eg. PR5) MIL connector <b>M</b> JIS-C-5432 connector <b>J</b> M12 connector <b>M12</b> M23 connector <b>H</b> IP40 IEC 60130-9 connector <b>C</b> female connector included, without female please add 162 as variant code														
<b>DIRECTION TYPE</b> axial <b>A</b> radial <b>R</b>														
<b>VARIANT</b> custom version <b>XXX</b>														

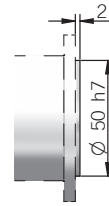
**721 A**



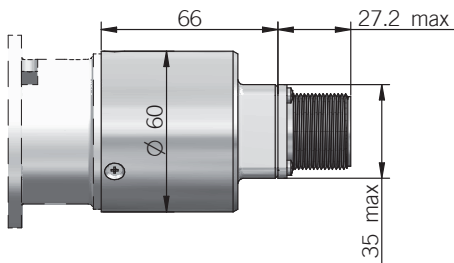
**721 A IP 66**



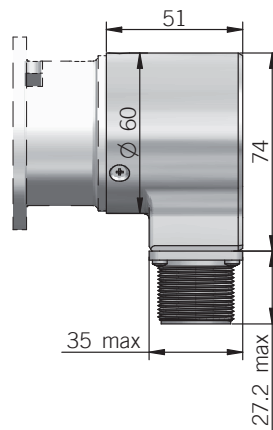
**72 B flange version**



**Dimensions with metal cover axial output**



**Dimensions with metal cover radial output**



dimensions in mm

**ELECTRICAL SPECIFICATIONS**

<b>Resolution</b>	from 1 to 24000 ppr
<b>Power supply</b>	5 = 4,5 ... 5,5 V DC 5/28 = 4,5 ... 30 V DC (reverse polarity protection)
<b>Power draw without load</b>	800 mW max
<b>Max load current</b>	C / P = 50 mA / channel L / RS = 20 mA / channel
<b>Output type*</b>	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or equivalent)
<b>Max output frequency</b>	250 kHz up to 6000 ppr 500 kHz from 7200 ppr
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Electromagnetic compatibility</b>	according to 2014/30/EU directive
<b>RoHS</b>	according to 2011/65/EU directive
<b>UL / CSA</b>	certificate n. E212495

\* for further details please see OUTPUT LEVELS under TECHNICAL BASICS section

**EL SERIES RESOLUTIONS**

1 - 2 - 4 - 5 - 10 - 15 - 16 - 20 - 25 - 30 - 32 - 40 - 50 - 60 - 70 - 80 - 90 - 100\* - 160 - 180 - 240\* - 250\* - 350 - 450 - 500\* - 660 - 700 - 750 - 900\* - 1000\* - 1024\* - 1250\* - 1300\* - 1500 - 1800\* - 2000\* - 2048\* - 2500\*

\* only with model EL721 / EL722 with "S" enclosure rating

**ER SERIES RESOLUTIONS**

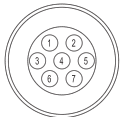
100 - 120 - 128 - 150 - 200 - 240 - 250 - 256 - 300 - **360** - 400 - 480 - **500** - **512** - **600** - 625 - **720** - 800 - 900 - **1000** - **1024** - 1200 - 1250 - 1440 - 1600 - 1800 - **2000** - **2048** - **2500** - 3000 - **3600** - 4000 - 4096 - **5000** - 6000 - **7200** - 8000 - 8192 - 9000 - **10000** - 10240 - 12000 - **14400** - 16000 - 16384 - 18000 - **20000** - 20480 - 24000

please directly contact our offices for other pulses, preferred resolutions in bold

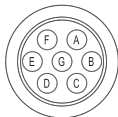
**CONNECTIONS**

Function	Cable C / P	Cable L / RS	7 pin J C / P	7 pin J L / RS no Zero	7 pin M C / P	7 pin M L / RS no Zero	10 pin J L / RS with Zero	10 pin M L / RS with Zero	5 pin M12 C / P	8 pin M12 L / RS	12 pin H	5 pin C C / P	8 pin C L / RS
+V DC	red	red	6	4	F	D	4 - 5	D - E	2	7	12	5	7
0 V	black	black	1	6	A	F	6	F	4	1	10	1	8
Ch. A	green	green	3	1	C	A	1	A	3	6	5	2	1
Ch. A-	/	brown	/	3	/	C	7	G	/	5	6	/	2
Ch. B	yellow	yellow	5	2	E	B	2	B	1	4	8	4	3
Ch. B-	/	orange	/	5	/	E	8	H	/	3	1	/	4
Ch. Z	blue	blue	4	/	D	/	3	C	5	2	3	3	5
Ch. Z-	/	white	/	/	/	/	9	I	/	8	4	/	6
⊥	shield	shield	7	7	G	G	10	J	housing	housing	9	/	/

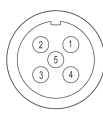
J connector (7 pin)  
JIS-C-5432 Size 16  
solder side view FV



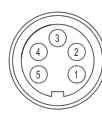
M connector (7 pin)  
Amphenol MS3102-E-16-S  
solder side view FV



M12 connector (5 pin)  
M12 A coded  
solder side view FV



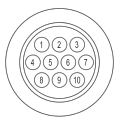
C connector (5 pin)  
IEC 60130-9  
solder side view FV



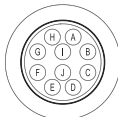
H connector (12 pin) - M23 CCW  
Hummel 7.410.000000 -  
7.002.912.603  
solder side view FV



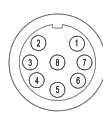
J connector (10 pin)  
JIS-C-5432 Size 16  
solder side view FV



M connector (10 pin)  
Amphenol MS3102-E-18-1  
solder side view FV



M12 connector (8 pin)  
M12 A coded  
solder side view FV



C connector (8 pin)  
IEC 60130-9  
solder side view FV

