

MAIN FEATURES

Industry standard singleturn absolute encoder for factory automation applications.

- Optical sensor technology (OptoASIC)
- Resolution up to 13 bit (8192 ppr)
- Power supply up to +28 VDC with Bit Parallel or SSI as electronic interface
- Code reset for easy setup
- Cable or connector output
- Blind hollow shaft diameter up to 15 mm
- Mounting by stator coupling, spring or anti-rotation pin

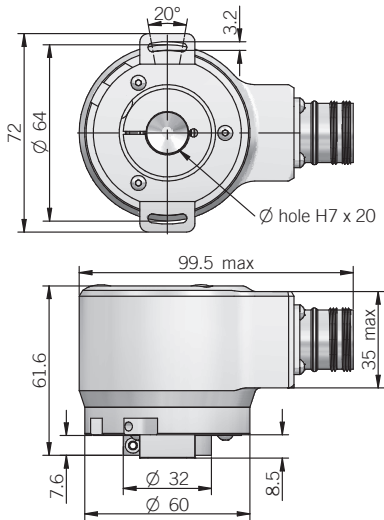


ORDERING CODE	EA	63G	256	G	8/28	P	P	X	8	X	3	PD	R	.XXX
BIT PARALLEL														

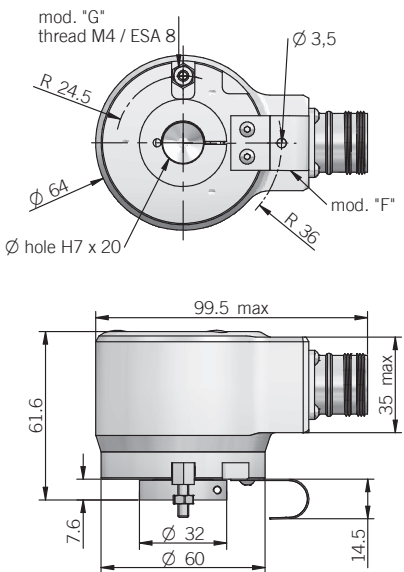
SERIES singleturn absolute encoder EA														
MODEL blind hollow shaft with stator coupling 58F blind hollow shaft with spring 63F blind hollow shaft with anti-rotation pin 63G														
RESOLUTION (powers of 2) ppr from 2 to 8192 (multiples and submultiples of 360) ppr from 90 to 3600 (multiples and submultiples of 1000) ppr from 250 to 4000														
CODE TYPE binary B gray G (no powers of 2) binary offset code (0-XXX) BC (no powers of 2) gray offset code (0-XXX) GC														
POWER SUPPLY 8 ... 28 V DC 8/28														
ELECTRONIC INTERFACE push pull P														
LOGIC negative N positive P														
OPTIONS latch L (binary code) strobe S to be reported if not used X														
BORE DIAMETER mm 8 (9,52mm 3/8") mm 9 mm 10 mm 12 mm 14 mm 15														
ENCLOSURE RATING IP 54 X														
MAX ROTATION SPEED 3000 rpm 3														
OUTPUT TYPE cable (standard length 1,5 m) PD (with option "latch") cable (standard length 1,5 m) PE 19 pin MIL connector MA female connector included, without female please add 162 as variant code														
DIRECTION TYPE axial A radial R														
VARIANT custom version XXX														

ORDERING CODE	EA	63G	256	G	8/28	S	X	X	8	X	3	PC	R	.XXX
SSI														
SERIES singleturn absolute encoder	EA													
MODEL blind hollow shaft with stator coupling blind hollow shaft with spring blind hollow shaft with anti-rotation pin		58F 63F 63G												
RESOLUTION (powers of 2) ppr from (multiples and submultiples of 360) ppr from (multiples and submultiples of 1000) ppr from			2 to 8192 90 to 3600 250 to 4000											
CODE TYPE binary gray (no powers of 2) binary offset code (no powers of 2) gray offset code				B G BC GC										
POWER SUPPLY 8 ... 28 V DC					8/28									
ELECTRONIC INTERFACE Serial Synchronous Interface - SSI						S								
LOGIC to be reported							X							
OPTIONS to be reported if not used reset								X ZE						
BORE DIAMETER mm (9,52mm 3/8") mm mm mm mm mm									8 9 10 12 14 15					
ENCLOSURE RATING IP 54										X				
MAX ROTATION SPEED 3000 rpm											3			
OUTPUT TYPE cable (standard length 1,5 m) 7 pin MIL connector (with option "reset") 10 pin MIL connector 12 pin M23 connector 8 pin M12 connector												PC MC MD HA M12		
<i>female connector included, without female please add 162 as variant code</i>														
DIRECTION TYPE axial radial													A R	
VARIANT custom version														XXX

EA 58 F

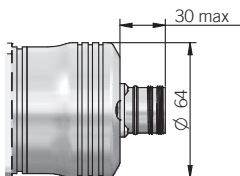


EA 63 F - G



anti-rotation pin is included in model G, for mounting instruction please refer to product installation notes

Dimensions with axial output



dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 2 to 8192 ppr
Power supply	8/28 = 7,6 ... 29,4 V DC
Current consumption without load	100 mA
Max load current	20 mA / channel
Output type	P = push-pull (active short circuit protection)* S = RS-422
Auxiliary inputs (U/D - Latch - Reset)	active high (+Vdc) connect to 0V if not used / Reset tmin 150 ms
Max frequency	output: 25 kHz LSB bit parallel clock input: 100 kHz ... 1 MHz SSI
SSI monostable time (Tm)	18 µs
SSI pause time (Tp)	> 35 µs
SSI frame	(MSB ... LSB) 13 bit data length
Accuracy	± 1/2 LSB
Counting direction	decreasing clockwise (shaft view)
Start-up time	150 ms
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

*output levels according to power supply, for further details please see under Technical basics section

MECHANICAL SPECIFICATIONS

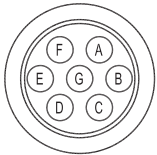
Bore diameter	ø 8* / 9* / 10* / 12* / 14 / 15 mm
Enclosure rating	IP 54 (IEC 60529)
Max rotation speed	3000 rpm
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	5 x 10 ⁻⁶ kgm ²
Starting torque (at +20°C / +68°F)	< 0,02 Nm
Body material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	painted aluminum
Bearings	2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature	0° ... +60°C (+32° ... +140°F)
Storage temperature	-15° ... +70°C (+5° ... +158°F)
Fixing torque for collar clamping	1,5 Nm recommended
Weight	450 g (15,87 oz)

* with supplied adapter shaft

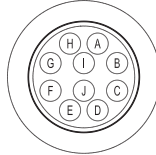
BIT PARALLEL CONNECTIONS				
Function	Binay / Gray	Cable output PD	Cable output PE	MA 19 pin
bit 1 (LSB)	B ⁰ / G ⁰	green	green	A
bit 2	B ¹ / G ¹	yellow	yellow	B
bit 3	B ² / G ²	blue	blue	C
bit 4	B ³ / G ³	brown	brown	D
bit 5	B ⁴ / G ⁴	orange or pink	orange or pink	E
bit 6	B ⁵ / G ⁵	white	white	F
bit 7	B ⁶ / G ⁶	grey	grey	G
bit 8	B ⁷ / G ⁷	purple	purple	H
bit 9	B ⁸ / G ⁸	gray / pink	gray / pink	J
bit 10	B ⁹ / G ⁹	white / green	white / green	K
bit 11	B ¹⁰ / G ¹⁰	brown / green	brown / green	L
bit 12	B ¹¹ / G ¹¹	white / yellow	white / yellow	M
bit 13	B ¹² / G ¹²	yellow / brown	yellow / brown	N
STROBE	/	/	green / blue	P
LATCH	/	/	yellow / grey	R
0 Volt	/	black	black	T
U / D	/	red / blue	red / blue	U
+ Vdc	/	red	red	V
≡	/	shield	shield	S

SSI CONNECTIONS					
Function	Cable output PC	7 pin MC	10 pin MD	12 pin HA	8 pin M12
+ Vdc	red	G	G	8	8
0 Volt	black	F	F	1	5
data +	green	C	C	2	3
data -	brown	D	D	10	2
clock +	yellow	A	A	3	4
clock -	orange or pink	B	B	11	6
RESET	white	/	H	4	1
U / D	red / blue	E	E	5	7
≡	shield	housing	J	9	housing

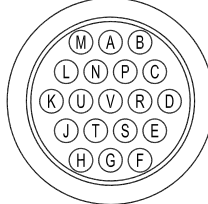
MC connector (7 pin)
Amphenol MS3102-E-16-S
solder side view FV



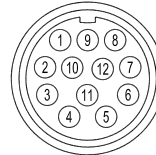
MD connector (10 pin)
Amphenol MS3102-E-18-1
solder side view FV



MA connector (19 pin)
Amphenol 62IN 12E 14-19 P
solder side view FV



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



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

