EAC58P-EU

ARTICLE PROPERTIES

TYPE	Standard hollow shaft absolute singleturn encoder
SIZE	Ø 58

TECHNICAL DATA

SHAFT DIAMETER	Ø 8H7 mm / Ø 10 H7 mm / Ø 12H7 mm	**STARTING TORQUE**	< 0.01 N·m
SPEED	6000 rpm	**BODY MATERIAL**	Aluminum
BEARING LIFE	10^9 revolution	**HOUSING MATERIAL**	Aluminum
MOMENT OF INERTIA	1.8 x 10^{-6} kgm^2	**WEIGHT**	360 g

ENVIRONMENTAL CONDITIONS

PROTECTION CLASS	IP65	**OPERATING TEMPERATURE**	-20 ... +80 °C
MAX LOAD CAPACITY OF THE SHAFT	60 N axial, 120 N radial	**STORAGE TEMPERATURE**	-25 ... +85 °C
SHOCK RESISTANCE (EN 60068-2-27)	50 g, 11 ms	**RELATIVE HUMIDITY / CONDENSATION**	90%, condensation not permitted
VIBRATION RESISTANCE (EN 60068-2-6)	10 g, 10 ... 2000 Hz		

Resolution:
SSI: 1024, 2048, 4096, 8192
Parallel: 2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096, 8192

ELECTRICAL PARAMETERS

OUTPUT CIRCUIT	SSI	SSI	PARALLEL	PARALLEL
OUTPUT DRIVER	RS422	RS422	Push-pull / NPN OC	Push-pull / NPN OC
RESOLUTION	13 Bits	13 Bits	13 Bits	13 Bits
SUPPLY VOLTAGE	10 ... 30 VDC	5 V DC	10 ... 30 V DC	5 V DC
POWER CONSUMPTION (NO LOAD)	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
PERMISSIBLE LOAD (CHANNEL)	± 20 mA	± 20 mA	± 20 mA	± 20 mA
PULSE FREQUENCY	Max. 1 MHz	Max. 1 MHz	Max. 40 kHz	Max. 40 kHz
SIGNAL LEVEL HIGH	Typ. 3.8 V	Typ. 3.8 V	Typ.Ub-2.8 V	Typ. 3.4 V
SIGNAL LEVEL LOW	Max. 0.5 V	Max. 0.5 V	Max. 2.0 V	Max. 0.5 V
RISE TIME TR	Max. 100 ns	Max. 100 ns	Max. 0.2 µs	Max. 0.2 µs
FALL TIME TF	Max. 100 ns	Max. 100ns	Max. 0.2 µs	Max. 0.2 µs

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STANDARDS AND DIRECTIVES

LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR
EN IEC 61000-6-2
EN IEC 61000-6-4

APPROVALS

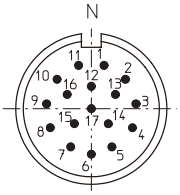
CE

TERMINAL ASSIGNMENT

Terminal	Wire color	Signal	Resolution					
			8 bit (256)	9 bit (512)	10 bit (1024)	11 bit (2048)	12 bit (4096)	13 bit (8192)
1	WH	0 V	0 V	0 V	0 V	0 V	0 V	0 V
2	BN	+Ub	+Ub	+Ub	+Ub	+Ub	+Ub	+Ub
3	GN	bit 1 MSB	B^7 / G^7	B^8 / G^8	B^9 / G^9	B^{10} / G^{10}	B^{11} / G^{11}	B^{12} / G^{12}
4	YE	bit 2	B^6 / G^6	B^7 / G^7	B^8 / G^8	B^9 / G^9	B^{10} / G^{10}	B^{11} / G^{11}
5	GY	bit 3	B^5 / G^5	B^6 / G^6	B^7 / G^7	B^8 / G^8	B^9 / G^9	B^{10} / G^{10}
6	PK	bit 4	B^4 / G^4	B^5 / G^5	B^6 / G^6	B^7 / G^7	B^8 / G^8	B^9 / G^9
7	BU	bit 5	B^3 / G^3	B^4 / G^4	B^5 / G^5	B^6 / G^6	B^7 / G^7	B^8 / G^8
8	RD	bit 6	B^2 / G^2	B^3 / G^3	B^4 / G^4	B^5 / G^5	B^6 / G^6	B^7 / G^7
9	BK	bit 7	B^1 / G^1	B^2 / G^2	B^3 / G^3	B^4 / G^4	B^5 / G^5	B^6 / G^6
10	VT	bit 8	B^0 / G^0	B^1 / G^1	B^2 / G^2	B^3 / G^3	B^4 / G^4	B^5 / G^5
11	GY / PK	bit 9	NC	B^0 / G^0	B^1 / G^1	B^2 / G^2	B^3 / G^3	B^4 / G^4
12	RD / BU	bit 10	NC	NC	B^0 / G^0	B^1 / G^1	B^2 / G^2	B^3 / G^3
13	WH / GN	bit 11	NC	NC	NC	B^0 / G^0	B^1 / G^1	B^2 / G^2
14	BN / GN	bit 12	NC	NC	NC	NC	B^0 / G^0	B^1 / G^1
15	WH / YE	bit 13 LSB	NC	NC	NC	NC	NC	B^0 / G^0
16	YE / BN	V/R	V/R	V/R	V/R	V/R	V/R	V/R
17	WH / GY	ST	ST	ST	ST	ST	ST	ST

Attention: Bite definition of parallel interface for an absolute encoder is: bit 1 = MSB, bit 2 = MSB-1, bit 3 = MSB-2, ...
ST: SET input, the high level will last 2 s and this position will be stored as new zero position.
V/R: Up / down input, in the normally open state, the encoder's counting function can be switched.
Observe the shaft end, in the normally closed state, the encoder's counting will increase when the shaft turning clockwise, in the normally open state, the encoder's counting will decrease when the shaft turning clockwise.

M23 17-pin



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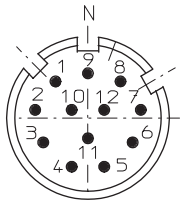
TERMINAL ASSIGNMENT (SSI)

Signal	0 V	+U_B	+C	-C	+D	-D	ST *	V/R*	LH	Shield
Color	WH	BN	GN	YE	GY	PK	BU	RD	BK	⏚
M23 12-pin	1	2	3	4	5	6	7	8	9	PH

C: Colck Signal
D: Data Signal
ST: SET input, the high level will last 2 s and this position will be stored as new zero position.
V/R: Up/down input, in the normally open state, the encoder's counting function can be switched.
Observe the shaft end, in the normally closed state, the encoder's counting will increase when the shaft turning clockwise, in the normally open state, the encoder's counting will decrease when the shaft turning clockwise.
LH: LATCH input, freeze current value.

M23 12-pin

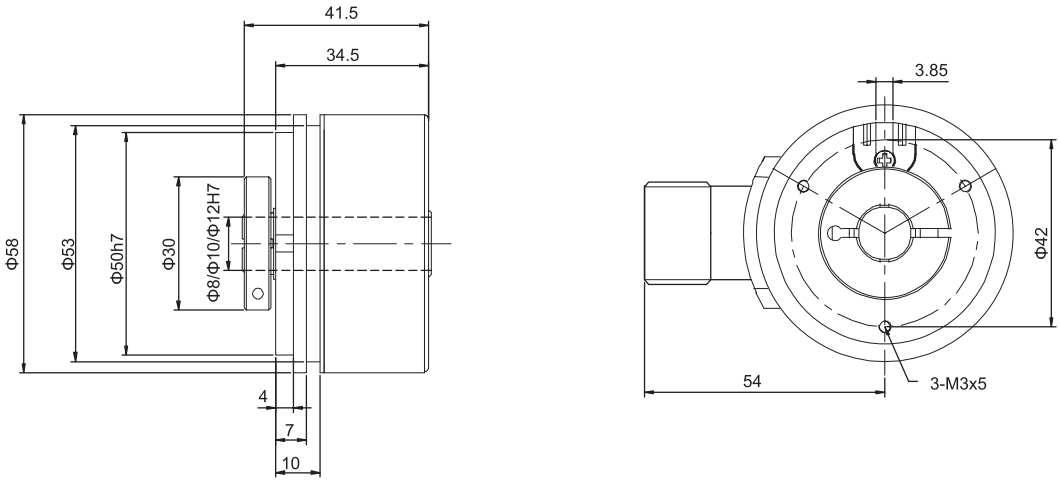


EAC58P-EU

DIMENSIONS (mm)

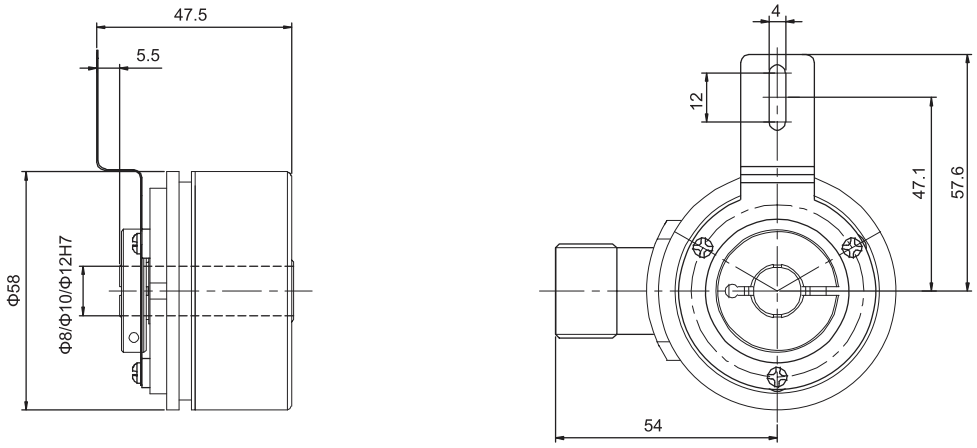
EAC58P(Q)

P: without installation accessories
Q: short torque support slot
Accessories: E23230010A/0



EAC58H

Accessories: E41350050A/0

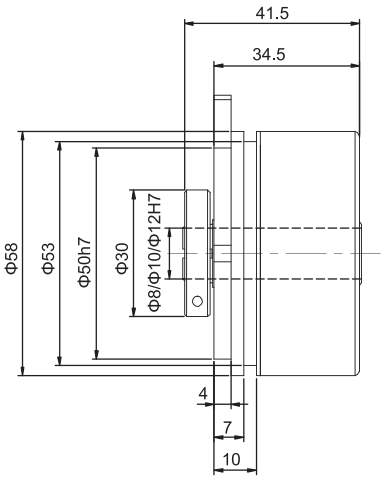


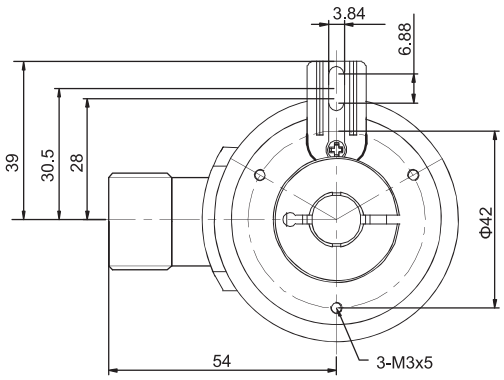
EAC58P-EU

DIMENSIONS (mm)

EAC58K

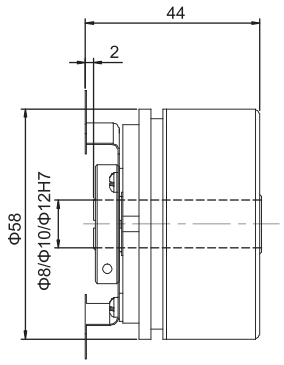
Accessories:
E41220001A/0
E4700 0000

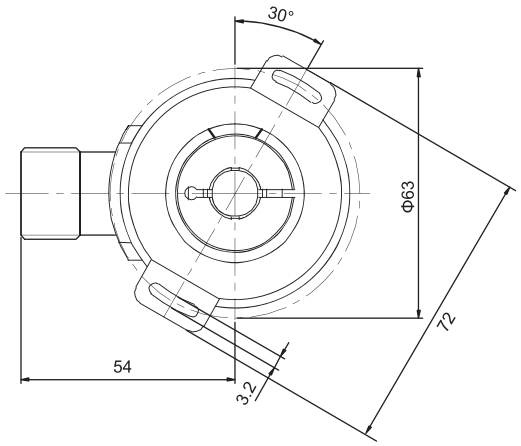




EAC58W

Accessories: E41350042A/1





EAC58P-EU

ORDER CODE

EAC 58 W 10 - G S6 X PC R - 8192 EU . XXXX

Shaft diameter
8 = Ø 8 mm
9 = Ø 9.52 mm
10 = Ø 10 mm
12 = Ø 12 mm

Flange type
P = Without installation accessories
H = Tether arm
Q = Short torque support slot
K =Long torque support slot
W = Double-winged stator coupling

Housing diameter
58 = Housing diameter

Series
EAC = Standard absolute singleturn

Outlets direction
R = Radial
A = Axial

Type of connection
PC = 12-core cable (SSI) standard length 1.5 m
T = M23, 12-pin connector (SSI)
PD = 18-core cable (parallel) standard length 1.5 m
TA = M23, 17-pin connector (parallel)

Output logic
P = Positive logic (parallel)
N = Negative logic (parallel)
X = No definition (SSI)

Supply voltage

P6 = Push-Pull (standard positive logic)	10 ... 30 V DC
P5 = Push-Pull (standard positive logic)	5 V DC
S6 = SSI (synchronous serial interface)	10 ... 30 V DC
S5 = SSI (synchronous serial interface)	5 V DC
C6 = NPN open collector (standard negative logic)	10 ... 30 V DC

Output Code
G = Gray
B = Binary

Resolution
Singleturn resolution
(see previous pages for reference)
Max 8192 (13 bits) - parallel
standard 8192 (13 bits) - SSI

Standard absolute singleturn encoder

XXXX = Special code
Customized cable length
CN00XX = Cable length
e.g. CN0010 = 1 m
CN0020 = 2 m

Connector accessories
Connectors matching with “T” wiring. Ordering code: TMSP1612F
Connectors matching with “TA” wiring. Ordering code: TMSP1617F

SALES AND SERVICE

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