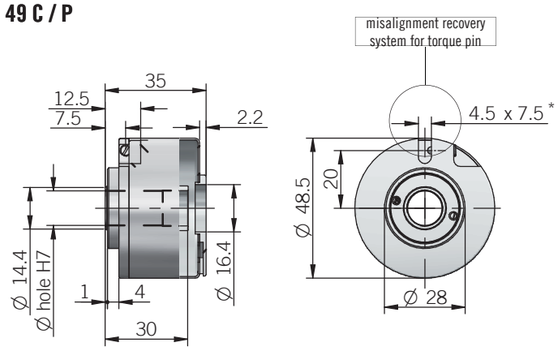
49 C / P



* ø 4 mm torque pin min 0.5 mm from bottom end
for size 19 (version 01 or 14) resolver flange please refer to Accessories

recommended mating shaft tolerance g6
dimensions in mm

ELECTRICAL SPECIFICATIONS

Incremental resolution	from 100 to 2048 ppr
Power supply[1]	4,5 ... 5,5 V DC
Current consumption without load	150 mA max
Max load current	20 mA / channel
Electrical interface for incremental signals[2]	line driver RS-422 (AELT-5000 or equivalent)
Electrical interface for Hall phases[2]	NPN open collector (pull-up max +30V DC) line driver RS-422 (AELT-5000 or equivalent)
Max output frequency	150 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	according to 2014/30/EU directive
RoHs	according to 2011/65/EU (01/09/2020) directive
UL / CSA	certificate n. E212495

CONNECTIONS

Function	Cable
+V DC	red
0 V	black
A+	green
B+	yellow
Z+	blue
A-	brown
B-	orange or pink
Z-	white
U+	grey
V+	violet
W+	grey-pink
U-	red-blue
V-	white-green
W-	brown-green
⏚	shield

MECHANICAL SPECIFICATIONS

Bore diameter	ø 6 / 8 / 9,52 (3/8") / 10 / 12 / 12,7 (1/2") mm
Enclosure rating	IP 40 (IEC 60529)
Max rotation speed	6000 rpm
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	5 G, 10 ... 500 Hz (IEC 60068-2-6)
Moment of inertia	2 x 10^{-6} kgm^2 (47 x 10^{-6} lbft^2)
Starting torque (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin)
Bearing stage material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	nickel plated brass
Bearings	n.2 ball bearings
Bearings life	10^9 revolutions
Operating temperature[3, 4]	-20° ... +85 °C (-4° ... +185°F) -10° ... +100°C (+14° ... +212°F) on demand
Storage temperature[4]	-25° ... +85°C (-13° ... +185°F)
Weight	150 g (5,29 oz)

[1] as measured at the transducer without cable influences
[2] for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section
[3] measured on the transducer flange
[4] condensation not allowed

RESOLUTIONS

100 4 / 6 poles
200 4 / 6 poles
500 4 / 6 / 8 poles
512 4 / 6 / 8 poles
1000 4 / 6 / 8 poles
1024 4 / 6 / 8 poles
2000 4 / 6 / 8 poles
2048 4 / 6 / 8 poles

please directly contact our offices for other pulses

EH 50 FA / FP

THROUGH HOLLOW SHAFT INCREMENTAL ENCODER

MAIN FEATURES

ø 50 mm encoder recommended for motor feedback. Suitable for small size motors due to its compact dimensions.

- 3 channel encoder (A / B / Z) up to 1024 ppr
- Higly integrated optical ASIC
- Wide power supply up to +30 V DC
- Through hollow shaft up to 10 mm diameter
- Mounting by coupling flange or stator coupling (front or rear fixing)
- IP 65 as protection grade
- Wide temperature range -40 ... + 100°C

ORDERING CODE

EH 50FP 1024 S 5/30 P 6 X 6 PR .XXX

SERIES
incremental encoder series EH

MODEL
through hollow shaft with front fixing 50FA
through hollow shaft with rear fixing 50FP

RESOLUTION
ppr from 100 to 1024
refer to the available pulses list

ZERO PULSE
without zero pulse S
with zero pulse Z

POWER SUPPLY
5 ... 30 V DC 5/30

ELECTRICAL INTERFACE
push-pull P
line driver L
power supply 5/30V - output RS-422 RS

BORE DIAMETER
mm 6
mm 8
(3/8") mm 9,52
10 mm 10

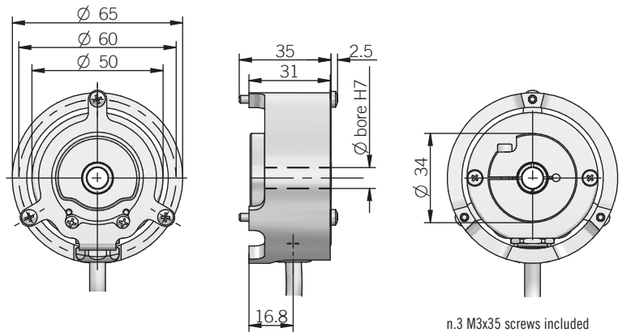
ENCLOSURE RATING
IP 65 X

MAX ROTATION SPEED
6000 rpm 6

OUTPUT TYPE
radial cable (standard length 0,5 m) PR
preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)

VARIANT
custom version XXX

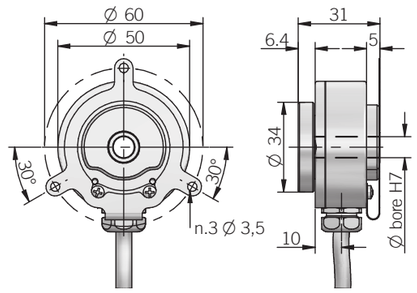
50 FA



n.3 M3x35 screws included

recommended mating shaft tolerance g6
dimensions in mm

50 FP



ELECTRICAL SPECIFICATIONS

Resolution	from 100 to 1024 ppr
Power supply[1]	4,5 ... 30 V DC (with reverse polarity protection)
Power draw without load	800 mW max
Max load current	20 mA / channel
Electrical interface[2]	push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or equivalent)
Max output frequency	105 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU (01/09/2020) directive
UL / CSA	certificate n. E212495

RESOLUTIONS

100 - 200 - 256 - **360** - 400 - 500 - **1000** - **1024** ppr

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

CONNECTIONS

Function	Cable P	Cable L / RS
+V DC	red	red
0 V	black	black
A+	green	green
A-	/	brown or grey
B+	yellow	yellow
B-	/	orange
Z+	blue	blue
Z-	/	white
⏚	shield	shield

MECHANICAL SPECIFICATIONS

Bore diameter	ø 6 / 8 / 9,52 (3/8") / 10 mm
Enclosure rating	IP 65 (IEC 60529)
Max rotation speed	6000 rpm
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	0,5 x 10^{-6} kgm² (12 x 10^{-6} lbft²)
Starting torque (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin)
Bearing stage material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	EN-AW 2011 aluminum
Bearings	n.2 ball bearings
Bearings life	10^9 revolutions
Operating temperature[3, 4]	-40° ... +100 °C (-40° ... +212°F)
Storage temperature[4]	-40° ... +100 °C (-40° ... +212°F)
Weight	150 g (5,29 oz) mod.FP 200 g (7,05 oz) mod.FA

[1] as measured at the transducer without cable influences
[2] for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section
[3] measured on the transducer flange
[4] condensation not allowed

EH 53 A / B

BLIND HOLLOW SHAFT INCREMENTAL ENCODER

MAIN FEATURES

Encoder series for direct mounting on motors; integrated elastic coupling allows radial and axial shaft play.

- 3 channel encoder (A / B / Z) up to 1024 ppr
- Power supply up to +24 V DC with several electrical interfaces available
- Up to 150 kHz output frequency
- Cable outuput, connectors available on cable end
- Up to 10 mm bore diameter
- Integrated elastic couplig

ORDERING CODE

EH	53A	500	S	8/24	P	8	X	6	PR.N	XXX

SERIES
incremental encoder series EH

MODEL
adjustable flange model 53A
adjustable flange model 53B

RESOLUTION
ppr from 50 to 1024
refer to the available pulses list

ZERO PULSE
without zero pulse S
with zero pulse Z

POWER SUPPLY
(with L electrical interface) 5 V DC 5
8 ... 24 V DC 8/24

ELECTRICAL INTERFACE
NPN open collector C
push-pull P
line driver L

BORE DIAMETER
mm 6
mm 8
mm 10

ENCLOSURE RATING
IP 54 X

MAX ROTATION SPEED
6000 rpm 6

OUTPUT TYPE
radial cable (standard length 0,5 m) PR.N
preferred cable lengths 1,5 / 2 / 3 / 5 / 10 m, to be added after OUTPUT TYPE (eg. PR5)

VARIANT
custom version XXX