



- Robust die cast housing
- High shaft load
- Protection up to IP66 (shaft side)
- Clamp flange
- Square flange, US size
- Preferential versions available



I65 • IT65

ENVIRONMENTAL SPECIFICATIONS

Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP65
Operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-25°C +85°C (-13°F +185°F) (98% R.H. without condensation)
Options:	<ul style="list-style-type: none"> • Operating temperature range: -40°C +100°C (-40°F +212°F) • IP66 Protection shaft end (torque 2,5 Ncm and 3000 rpm max.)

MECHANICAL SPECIFICATIONS

Dimensions:	see drawing
Shaft diameter:	Ø 6, 8, 9.52, 10, 12 mm
Shaft loading (axial, radial):	100 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque at 20°C:	0,4 Ncm (typical)
Bearings life:	400 x 10 ⁶ rev. min. (10 ⁹ rev. min. with 20 N shaft loading max.)
Electrical connections:	MIL 7 pin, MIL 10 pin plug or cable output 1 m (3.3 ft)
Weight:	~ 400 g (14,1 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS

Standard resolution with magnetic sensing (PPR): <i>(output circuits N, P, Y, L, H)</i>	2-4-5-6-8-10-12-15-16-20-24-25-30-35-36-40-50-60-64-70 80-90-100-120-125-127-142-150-160-180-200-216-230-236 240-250-254-256-267-270-314-375-400-410-435-471-635-800 1068-1270-1400-2250 (other on request)
Standard resolution with unbreakable disk (PPR): <i>(output circuits N, P, Y, L, H)</i>	300-360-500-512-600-720-750-900-1000-1024 1200-1250-1440-1500-1800-2000-2048-2500-3000 3600-4000-4096-5000
High accuracy glass disk (PPR): <i>(output circuits N, P, Y, L, H)</i>	5K=5000, 9K=9000, 10K=10000 4KB=4096, 8KB=8192
Counting frequency:	300 kHz max.
Output circuits:	NPN, PNP, Push-Pull, Line Driver, Universal circuit
Power supply:	+5V±5%, +10V +30V, +5V +30V
Consumption:	70 mA (typical)
Output current (each channel):	40 mA max.
Protection:	against inversion of polarity and short-circuit (except L circuit)
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4

MATERIALS

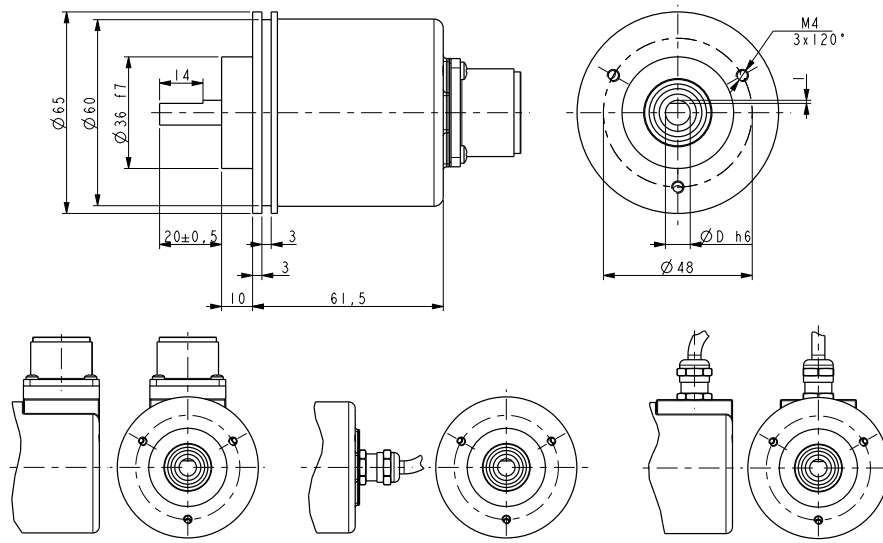
Flange:	anticorrosive, UNI EN AW-6082
Housing:	zamac die cast
Bearings:	ABEC 5
Shaft:	stainless steel, non-magnetic - UNI EN 4305

PREFERENTIAL MODELS

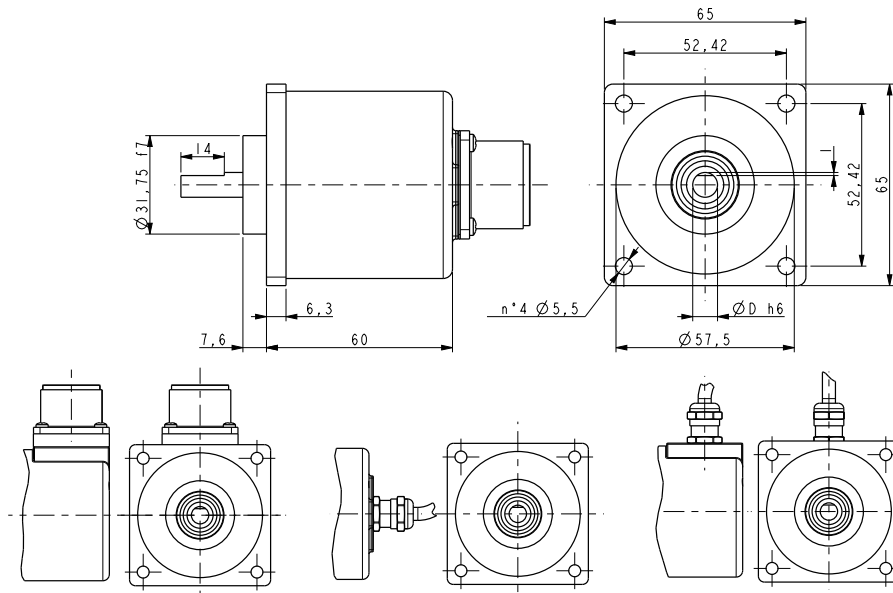
IT65-H4-00100-ZCP-08-PT-R	100 PPR, HTL/TTL output
IT65-H4-00500-ZCP-08-PT-R	500 PPR, HTL/TTL output
IT65-H4-01000-ZCP-08-PT-R	1000 PPR, HTL/TTL output
IT65-H4-01024-ZCP-08-PT-R	1024 PPR, HTL/TTL output
IT65-H4-02500-ZCP-08-PT-R	2500 PPR, HTL/TTL output
IT65-H4-05000-ZCP-08-PT-R	5000 PPR, HTL/TTL output

ACCESSORIES

EC-M7F-LK-I5-L050:	Cordset MIL 7 pin conn. 5 meters cable
EC-M7F-LK-I5-L100:	Cordset MIL 7 pin conn. 10 meters cable
EC-M10F-LK-I8-L050:	Cordset MIL 10 pin conn. 5 meters cable
EC-M10F-LK-I8-L100:	Cordset MIL 10 pin conn. 10 meters cable
E7MLS:	7 pin MIL mating connector
E10MLS:	10 pin MIL mating connector
PAN/PGF:	flexible couplings
LKM-386:	fixing clamps



I65



IT65

Order code

I65	-	XX	-	XXXXX	-	XXX	-	XX	-	X	X	-	X	XXXX	/Sxxx
IT65		(a)		(b)		(c)		(d)		(e)	(f)		(g)	(h)	(i)

(a) OUTPUT CIRCUITS / POWER SUPPLY

- N2 = NPN o.c., +10V ÷ +30V
- P2 = PNP o.c., +10V ÷ +30V
- Y2 = Push Pull, +10V ÷ +30V
- L1 = Line Driver (RS422), +5V ± 5%
- H4 = PP/LD universal circuit, +5V ÷ +30V
- L2 = Line Driver (RS422), +10V ÷ +30V

(b) RESOLUTION (PPR)

See electrical specifications

(c) OUTPUT SIGNALS / CONNECTIONS

- BNF = AB, cable output
- ZNF = ABO, cable output
- BND= AB, MIL 7 pin plug
- ZND= ABO, MIL 7 pin plug
- BCU = AB /AB, cable output
- ZCU = ABO /ABO, cable output
- BCP = AB /AB, MIL 10 pin plug
- ZCP = ABO /ABO, MIL 10 pin plug

(d) SHAFT DIAMETER

- 06 = 6 mm
- 08 = 8 mm
- P9 = 9.52 mm - 3/8"
- 10 = 10 mm
- 12 = 12 mm

(e) PROTECTION

- P = IP65 (standard)
- Q = IP66 protection shaft side

(f) OPERATING TEMPERATURE

- T = -25°C +85°C (-13°F +185°F) stand.
- K = -40°C +100°C (-40°F +212°F)

(g) CONNECTION POSITION

- A = axial
- R = radial

(h) CABLE LENGTH

- L010 = cable output 1 m (standard)
- L020 = cable output 2 m
- Lxx0 = cable output x m (max. length 10 m)

(i) CUSTOM VERSION

Document release	Date	Description
1.5	17.04.2026	Resolution update (100-200-250 PPR with magnetic sensing)
1.4	22.01.2026	Resolution update (deleted 6K)
1.3	24.09.2025	Accessories update (cordset for MIL 7 pin)
1.2	19.05.2025	Resolution update (256-360-400 PPR)
1.1	24.01.2024	Updated codes on preferential model and accessories
1.0	September 2023	New order code