



Lika Electronic Srl
Via S. Lorenzo, 25
36010 Carrè (VI) • Italy

Smart encoders & actuators

To
all Business partners

k. attn. Purchasing Manager
Technical Manager
Obsolescence Manager

Carrè, 26.02.2025
Our ref.: NPC25004 I28 50-100-200PPR

Subject: Notification of Change to:

I28 series encoder

Dear Customer,

In the process of continuous improvement to the quality, reliability and competitiveness of our products it is necessary to make occasional updates or changes to one of our products.
Details thereof are given in this letter and/or attachment. We would be happy to answer any queries you might have.

Change Category

<input checked="" type="checkbox"/> Minor Change	<input type="checkbox"/> Major Change
<input checked="" type="checkbox"/> End of Life Notification / Product obsolete	<input type="checkbox"/> Datasheet specification Change
<input type="checkbox"/> Design Change	<input checked="" type="checkbox"/> Ordering code Change
<input type="checkbox"/> Material / Component Change	<input type="checkbox"/> Process / Manufacturing Facility Change

Description of Change

Some resolutions of the I28 series can't be delivered anymore because of the allocation of the sensing chip.
Due to an unexpected high demand of these I28 versions we ran out of stock and can no longer manufacture the part numbers listed in the Change explanation.
A 100% replacement is offered by the IM28 series (see attached datasheet).

Change description

Description	Before	Now
Resolution 50, 100, 200 PPR	I28 with optical sensing	IM28 with magnetic sensing
Mechanical interface		no difference
Electrical interface		no difference
General performance		no difference

Customer Impact

<input checked="" type="checkbox"/> Customer should verify this document.	<input type="checkbox"/> Customer should verify impacts on mechanical or electrical interface
<input type="checkbox"/> Sampling, testing & approval is recommended.	<input type="checkbox"/> No direct alternative available. Please contact your sales representative

The change will be effective from the date of this document.

Orders of I28 versions with 50, 100 and 200 PPR will be automatically converted to the equivalent IM28 version.

You are welcome to address your sales engineer for technical issues, and certainly our sales assistants for any ordering issue.

Best Regards
LIKA ELECTRONIC Srl
Sales & Marketing team

- Miniature encoder with magnetic sensing, Ø 28mm
- Robust metal housing
- Resolution up to 20000 PPR (factory programmable)
- For office equipment, electromedical and light industrial applications



IM28

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:	IP54
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)

MECHANICAL SPECIFICATIONS

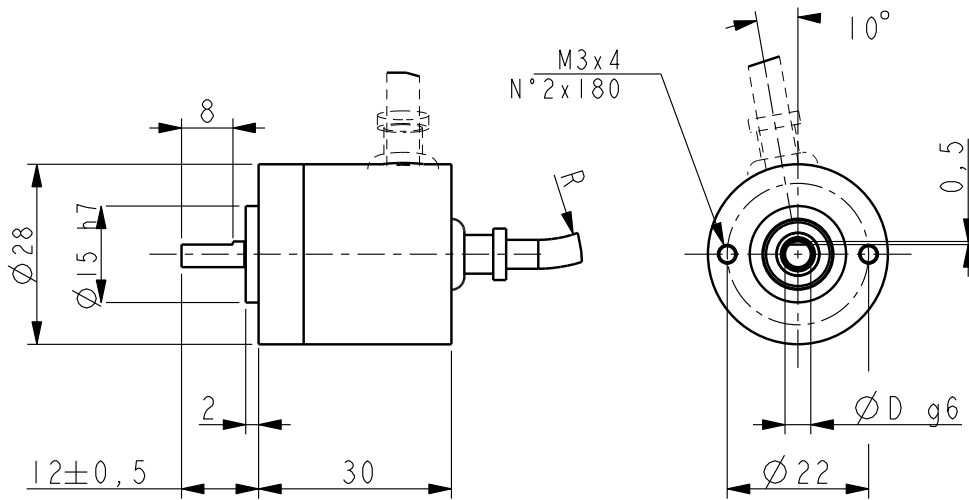
Dimensions:	see drawing
Shaft diameter:	Ø 4,5 mm
Shaft loading (axial, radial):	20 N max.
Shaft rotational speed:	3000 rpm max.
Starting torque (at 20°C):	0,1 Ncm (typical)
Bearings life:	10 ⁹ rev. min.
Electrical connections:	M12 8 pin inline plug or cable output 1 m (3.3 ft)
Weight:	~ 50 g (1,7 oz)
Option:	• additional cable

ELECTRICAL SPECIFICATIONS

Resolution (PPR):	50-100-200-250-256-360-500-512-720-1000-1024-1440 2000-2048-2500-4096-5000-10000
Counting frequency:	800 kHz max.
Output circuits:	Push-Pull, Line Driver, Universal circuit
Power supply:	+5V±5%, +10V +30V, +5V +30V
Consumption:	50 mA max.
Output current (each channel):	40 mA max.
Protection:	against inversion of polarity and short-circuit
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4

MATERIALS

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



IM28

IM28	-	XX Ⓐ	-	XXXXX Ⓑ	-	XXX Ⓒ	-	XX Ⓓ	-	X Ⓔ	X Ⓕ	-	X Ⓖ	XXXX Ⓖ	/Sxxx Ⓙ
------	---	---------	---	------------	---	----------	---	---------	---	--------	--------	---	--------	-----------	------------

Ⓐ OUTPUT CIRCUITS / POWER SUPPLY

Y2 = Push Pull, +10V ÷ +30V
 L1 = Line Driver (RS422), +5V ± 5%
 H4 = PP/LD Universal circuit, +5V ÷ +30V

Ⓑ RESOLUTION (PPR)

See electrical specifications

Ⓒ OUTPUT SIGNALS

BNF = AB
 BCU = AB, /AB
 ZNF = ABO
 ZCU = ABO, /ABO

Ⓓ SHAFT DIAMETER

O4 = 4 mm
 O5 = 5 mm

Ⓔ PROTECTION

V = IP54

Ⓕ OPERATING TEMPERATURE

T = -25°C + 85°C (-13°F + 185°F)

Ⓖ CONNECTION POSITION

A = axial
 R = radial

Ⓖ CABLE TYPE & LENGTH

L010 = cable output 1 m (standard)
 L020 = cable output 2 m
 Lxx0 = cable output x m (max. length 10 m)
 M005 = 0,5 m cable + M12 8 pin inline plug
 M020 = 2 m cable + M12 8 pin inline plug

Ⓙ CUSTOM VERSION

Document release	Date	Description
1.0	27.02.2025	First issue

- Miniature incremental encoder, Ø 28mm
- Robust metal housing
- Resolution up to 2048 pulses/rev.
- For office equipment, electromedical and light industrial applications



I28

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:	IP54
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)

MECHANICAL SPECIFICATIONS

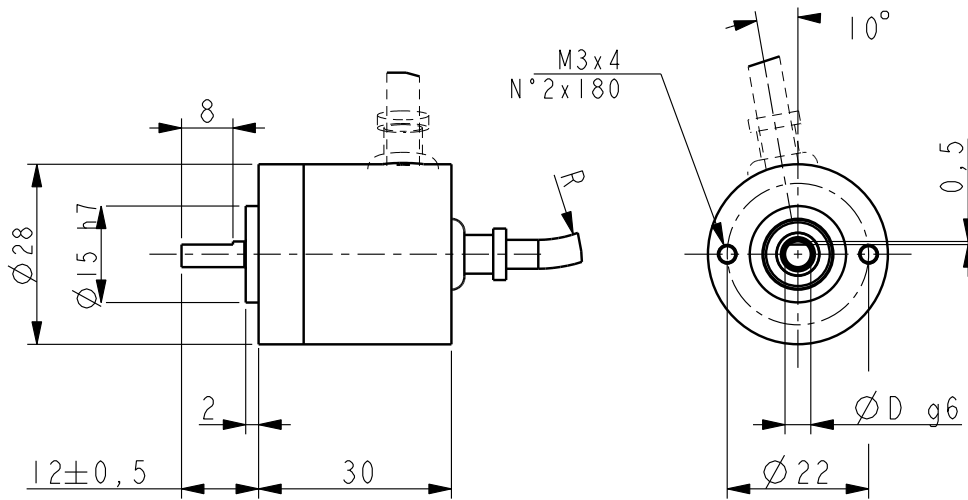
Dimensions:	see drawing
Shaft diameter:	Ø 4, 5 mm
Shaft loading (axial, radial):	20 N max.
Shaft rotational speed:	3000 rpm max.
Starting torque (at 20°C):	0,1 Ncm (typical)
Bearings life:	10 ⁹ rev. min.
Electrical connections:	cable output 1 m (3.3 ft)
Weight:	~ 50 g (1,7 oz)
Option:	<ul style="list-style-type: none"> • additional cable • M12 plug

ELECTRICAL SPECIFICATIONS

Resolution (PPR):	250-256-360-500-512-720-1000-1024-1440-2000-2048
Counting frequency:	100 kHz max.
Output circuits:	Push-Pull, Line Driver, Universal circuit
Power supply:	+5V±5%, +10V +30V,+5V +30V
Consumption:	50 mA max.
Output current (each channel):	40 mA max.
Protection:	against inversion of polarity and short-circuit
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4
Optoelectronic life:	100.000 hrs min.

MATERIALS

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



128

128	-	XX ⓐ	-	XXXXX ⓑ	-	XXX ⓒ	-	XX ⓓ	-	X ⓔ	X ⓕ	-	X ⓖ	XXXX ⓗ	/Sxxx Ⓢ
-----	---	---------	---	------------	---	----------	---	---------	---	--------	--------	---	--------	-----------	------------

ⓐ OUTPUT CIRCUITS / POWER SUPPLY

Y2 = Push Pull, +10V ÷ +30V
 L1 = Line Driver (RS422), +5V ± 5%
 H4 = PP/LD Universal circuit, +5V ÷ +30V

ⓑ RESOLUTION (PPR)

See electrical specifications

ⓒ OUTPUT SIGNALS

BNF = AB
 BCU = AB, /AB
 ZNF = ABO
 ZCU = ABO, /ABO

ⓓ SHAFT DIAMETER

O4 = 4 mm
 O5 = 5 mm

ⓔ PROTECTION

V = IP54

ⓕ OPERATING TEMPERATURE

T = -25°C +85°C (-13°F +185°F)

ⓖ CONNECTION POSITION

A = axial (standard)
 R = radial

ⓗ CABLE TYPE & LENGTH

L010 = cable output 1 m (standard)
 L020 = cable output 2 m
 Lxx0 = cable output x m (max. length 10 m)
 M005 = 0,5 m cable + M12 8 pin inline plug
 M020 = 2 m cable + M12 8 pin inline plug

Ⓢ CUSTOM VERSION

Document release	Date	Description
1.1	June 2024	Output circuits/power supply (deleted L2 output)
1.0	October 2023	New order code