

Absolute angle encoder  
Enclosed type

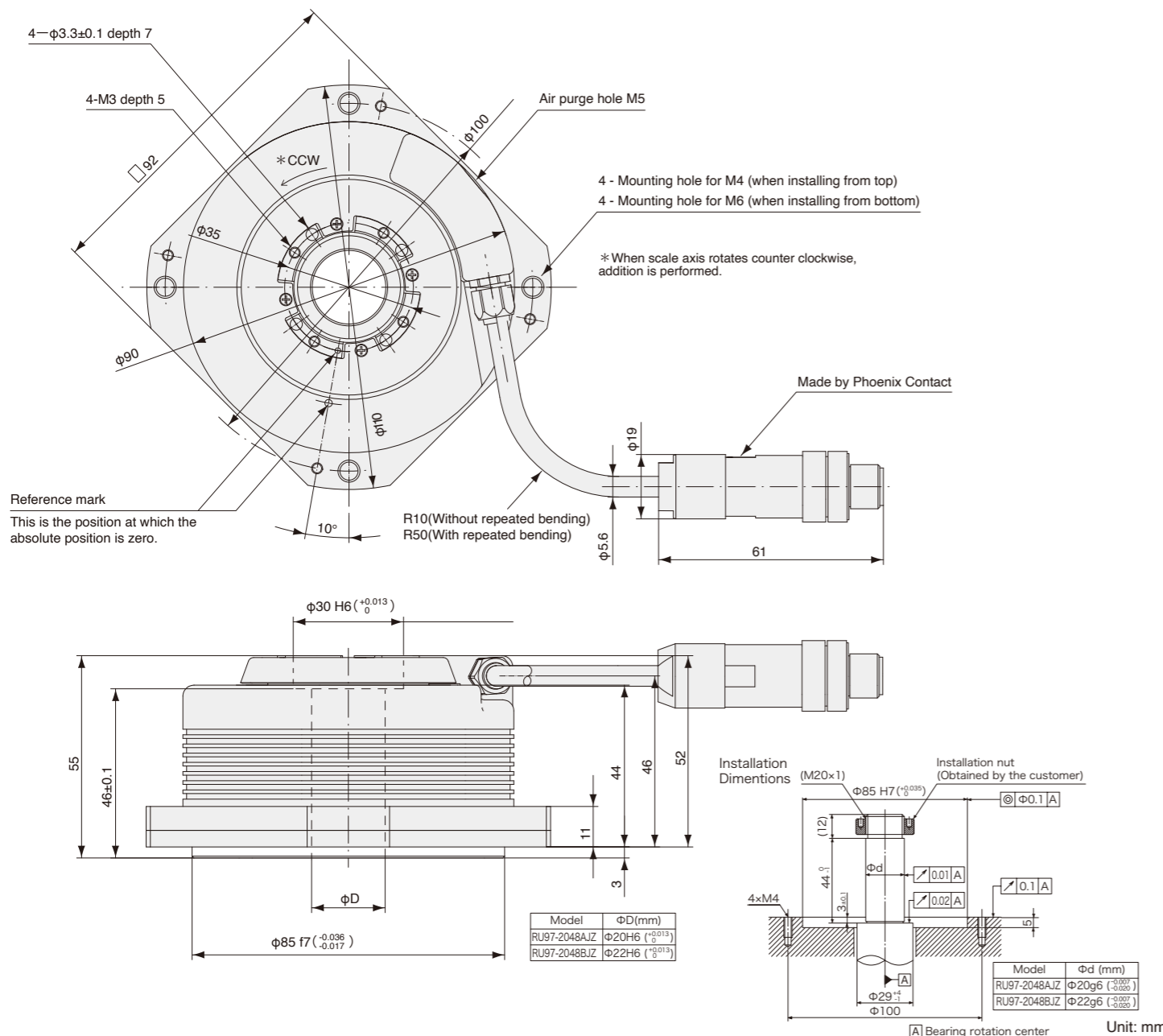
# RU97-2048

- Enables direct communication using the SIEMENS DRIVE-CLiQ protocol without the requirement of an amplifier
- Magnetic system enables use even in environments with condensation, oil, and other adverse conditions
- Internal coupling allows for design and mounting flexibility



SIEMENS

## Dimensions



## Specifications

Model name	RU97-2048AJZ RU97-2048BJZ
Output wave number	2,048 waves/revolution
Through hole diameter	A: φ20 mm, B: φ22 mm
Accuracy(at 20°C)	±2.5"
Output signal	Compliant with DRIVE-CLiQ, single turn absolute type
Compatible controllers	SIEMENS AG
Resolution	25 bit (33,554,432 pulses/revolution)
Maximum response revolutions	2,000 min <sup>-1</sup>
Maximum mechanical revolutions	3,000 min <sup>-1</sup>
Functional safety	IEC 61508, EN/BS 62061 SIL 2 EN/BS/ISO 13849-1 Cat. 3 / PL d EN/BS 61800-5-2
Product Safety	FCC Part15 Subpart B Class A ICES-003 Class A Digital Device EN/BS 61000-6-2, EN/BS 61000-6-4
Product Environment	EN/BS 63000
Operating temperature range	0 to +60°C
Storage temperature range	-10 to +60°C
Vibration resistance	150 m/s <sup>2</sup> (50 Hz to 2,000 Hz)
Impact resistance	1,000 m/s <sup>2</sup> (11 ms)
Protective design grade	IP65
Power supply voltage range	DC+17 to +30.8 V
Maximum consumption current	1.6 W or less (17 V or 30.8 V)
Consumption current	65 mA (24 V) (when the controller is connected)
Moment of inertia	9.4×10 <sup>-5</sup> kgm <sup>2</sup> or less
Starting torque (at 20°C)	0.08 Nm or less
Mass	Approx. 1.2kg or less
Compatible cables (types without relay connectors) Maximum cable length	CH22-***NSFY 30 m
Compatible cables (types with relay connectors) Maximum cable length	CH22-***NSFF + CH22-***NSFY 30 m

\*Magnescale reserves the right to change product specifications without prior notice.

## Details of model designation

Scale

RU97-2048 ☆ JZ ■ ■

☆ Drum inner diameter

Type	Drum inner diameter
A	φ20 mm
B	φ22 mm

[J] Resolution 25 bit

[Z] SIEMENS AG DRIVE-CLiQ

■ Head cable length

Type	Head cable length
01	1 m
02	2 m
03	3 m

Cables

CH22 - □ □ □ □ □ ▽ ※ #

□ □ □ Cable length

Written by flush right, indication in "m" units, up to 30 m, 0.5 m pitch (Example)

Type	Cable length
015	1.5m
070	7m
260	26m

○ Conduit specification

Type	Conduit specification
C	With conduit
N	Without conduit (standard)

▽ Cable sheath (covering)

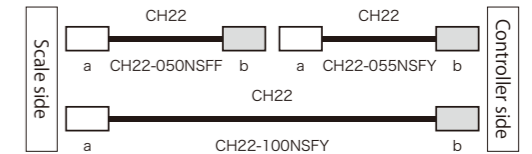
Type	Cable specification
S	PU (Polyurethane, Siemens Motion connect 800+)

※ Scale side connector

Type	Specification	Remarks
M	Scale head connector	Standard
F	M12 connector (Female) made by Phoenix Contact	Relay/ Waterproofing
E	M12 connector (Female) made by Phoenix Contact	Relay/ Waterproofing/ Attached connector

■ Controller side connector

Type	Specification	Remarks
None	Open-end	
Y	RJ45 connector made by YAMAICHI ELECTRONICS	Adopts NC machine tool
Z	RJ45 connector (water proof) made by YAMAICHI ELECTRONICS	Relay
F	M12 connector (Male) made by Phoenix Contact	Relay/ Waterproofing



CH22-050NSFF (example)	CH22-100NSFY (example)	CH22-055NSFY (example)
Cable length 5m Without conduit PU sheath	Cable length 10m Without conduit PU sheath	Cable length 5m Without conduit PU sheath
Scale side connector M12 (Female) made by Phoenix Contact	Scale side connector M12 (Female) made by Phoenix Contact	Scale side connector M12 (Female) made by Phoenix Contact
Controller side connector RJ45 made by YAMAICHI ELECTRONICS	Controller side connector RJ45 made by YAMAICHI ELECTRONICS	Controller side connector RJ45 made by YAMAICHI ELECTRONICS

SR67A SR7A SR74 SR84 RS97-100AE RS97-100AN RU97-2048 RU77-4098