

Absolute angle encoder  
Enclosed type

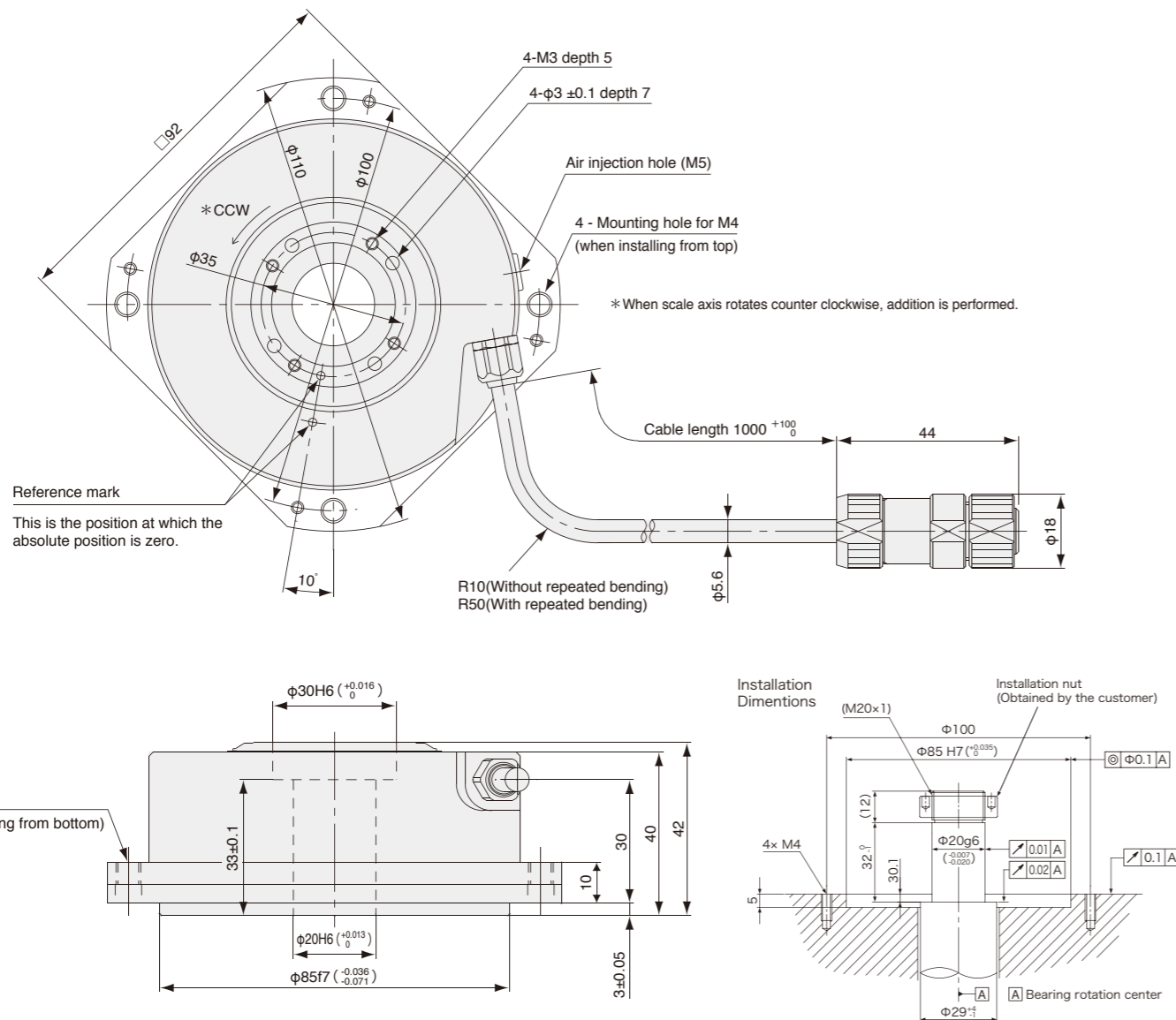
# RU77-4096

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



FANUC Mitsubishi Electric Yaskawa Electric

## Dimensions



Unit: mm

## Specifications

Model name	RU77 - 4096A□△
Output wave number	4,096 waves/revolution
Through hole diameter	φ20 mm
Accuracy(at 20°C)	±2.5"
Output signal	Absolute serial bidirectional signal, compliant with EIA-485
Compatible controllers	FANUC Mitsubishi Electric Yaskawa Electric
Maximum resolution	25bit (33,554,432 pulse/revolution)
Maximum response revolutions	2,000 min <sup>-1</sup>
Maximum mechanical revolutions	3,000 min <sup>-1</sup>
Functional safety	—
Legal compliance	FCC Part15 Subpart B Class A and ICES-003 Class A Digital Device and EN55011 Gp 1 Class A, EN 61000-6-2 Safety standards not applicable (60 V DC or less)
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 2000 Hz)
Impact resistance	1,000 m/s <sup>2</sup> (11 ms)
Protective design grade	IP65
Power supply voltage range	DC4.75-5.25 V (with connecting terminal)
Consumption current	200mA (at 120Ω termination)
Moment of inertia	9.4×10 <sup>-6</sup> kgm <sup>2</sup> or less
Starting torque (at 20°C)	0.1 Nm or less
Mass	Approx. 1.2kg or less
Standard compatible cable	CE28-***
Maximum cable length	15 m

## Details of model designation

Scale  
RU77 - 4096A□□△

Type	Resolution	Number of pulses/revolution	Number of partitions
A	Approx. 2.5°/1,000	131,072	1/32
B	Approx. 1°/1,000	262,144	1/64
C	Approx. 7°/10,000	524,288	1/128
D	Approx. 3.5°/10,000	1,048,576	1/256
E	Approx. 2°/10,000	2,097,152	1/512
F	Approx. 1°/10,000	4,194,304	1/1,024
G	Approx. 4.5°/100,000	8,388,608	1/2,048
H	Approx. 2°/100,000	16,777,216	1/4,096
J	Approx. 1°/100,000	33,554,432	1/8,192

Type	Number of wires	NC manufacturer
A	4-wire	FANUC
B	2-wire	Mitsubishi Electric
D	4-wire	Mitsubishi Electric
F	2-wire	Yaskawa Electric

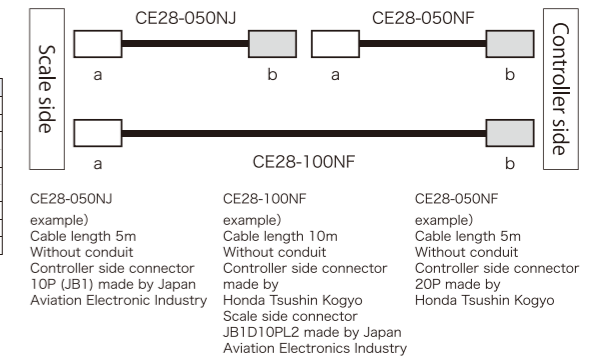
Cable  
CE28 - □□□□○※

□□□□ Cable length  
Written by flush right, indication in "10cm" units, up to 14m, 1m pitch

Type	Cable length
070	7m
090	9m
130	13m

Type	Conduit
C	With conduit (standard)
N	Without conduit

Type	Specification	Remarks
Without/With	Earth wire	
Without	Open-end	Standard
L	10P made by Sumitomo 3M	Mitsubishi NC, J3 (A/B/Reference)
M	10P made by Sumitomo 3M	Mitsubishi NC, J3 (INC serial, ABS)
E	20P made by Honda Tsushin Kogyo	FANUC (A/B/Reference)
F	20P made by Honda Tsushin Kogyo	FANUC (INC serial, ABS)
G	6P made by molex®	YASKAWA Electric (INC serial, ABS)
J	10P (JB1) made by Japan Aviation Electronics Industry	RU77 cable extension (standard)
K	10P (NI1) made by Japan Aviation Electronics Industry	RU77 cable extension (standard)



SR67A  
SR74  
SR84  
RS97-1004E  
RS97-1004N  
RU97-2048  
RU77-4096