

MXS-42-series

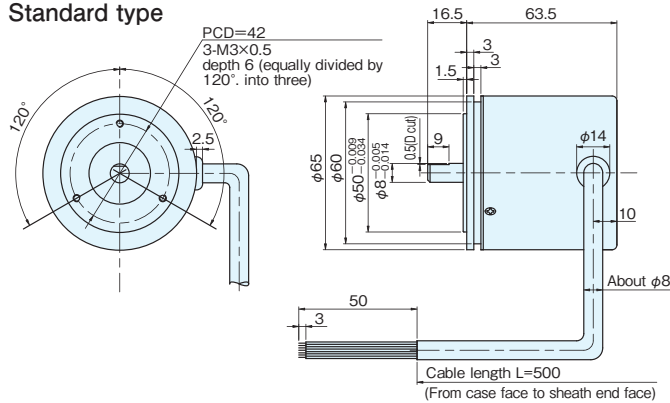
[High-resolution Multiple-rotation (64 rotations max) Absolute Type Encoder]

- High-reliability operation without internal battery is possible. (Batteryless)
- Permitting a total count of 2^{18} max. high-resolution
- O.D. $\phi 65 \times 63.5$
- Multiple-rotation (64 rotations max.) absolute output
- Selection of gray code output without reading error or pure binary code
- Selection of side-cable, rear-cable, or connector type
- IP64 drip-proof option possible (rear-cable type)

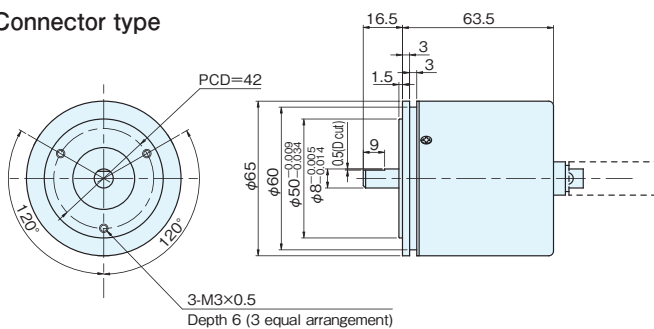


Outside dimensions

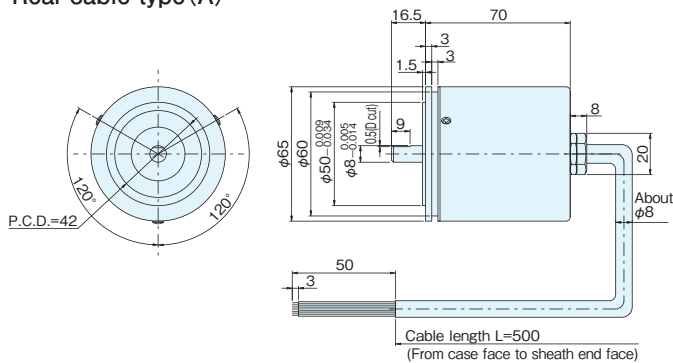
Standard type



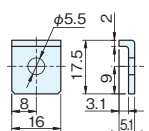
Connector type



Rear-cable type (A)



Detailed servo mount clamp



Specifications

Type name	MXS-42-○○○-□□□□△◇◇◇◇
Protective structure:	W: Waterproof
Number of multi-turn revolutions	□□□□
Single turn resolution	△
Output signal coding: G, N	◇◇◇◇
Output format: Unmarked, C	□□□□
Power supply voltage: 3, 6	○ ○ ○
Option V: Increment on reverse rotation (V indicates values increases in CCW direction) Option N: Negative logic (N indicates values increases in CCW direction) Option C: Negative logic (C indicates values increases in CW direction)	
Cable placement: B: side attached (standard), A: rear attached (waterproof type W only), unmarked: Connector attached	
Item	
Supply voltage	Voltage output: 3 DC5V-5%~12V+10% Open collector output: 6 DC5V-5%~24V+15%
Current consumption	Voltage output: 3 450mA or less Open collector output: 6 240mA or less
Output code	G: gray code N: pure binary code
Output logic	No mark: positive logic; N: negative logic
Output pulse number (Standard)	128 1,024 256 2,048
[Pulse number/rotation]	512 4,096
Rotation number	2·4·8·16·32·64·100 (DC5V, N code only)
Maximum response frequency	40kbit/s (10kbit/s during guaranteed precision)
Shaft allowable load (electrical)	Radial: 49N (5kgf) Thrust: 29.4N (3kgf)
Working temperature/humidity	-10°C~70°C/RH95% or less (no dewing)
Storage temperature	-20°C~80°C
Vibration resistance	Durability 0-500Hz, double amplitude 1.52mm 2 hours each in X, Y, and Z directions
Impact resistance	Durability 11msec (about 50G) 3 times each in X, Y, and Z directions
Mass	600g or less (excluding cable)

Connection

a) Cable				b) Connector			
Cable color	Output signal	Cable color	Output signal	Pin No.	Output signal	Pin No.	Output signal
Brown	2 ⁰	Brown / White	2 ¹⁰	1	2 ⁰	13	2 ¹²
Red	2 ¹	Red / White	2 ¹¹	2	2 ¹	14	2 ¹³
Orange	2 ²	Orange / White	2 ¹²	3	2 ²	15	2 ¹⁴
Yellow	2 ³	Yellow / White	2 ¹³	4	2 ³	16	2 ¹⁵
Green	2 ⁴	Green / White	2 ¹⁴	5	2 ⁴	17	2 ¹⁶
Blue	2 ⁵	Blue / White	2 ¹⁵	6	2 ⁵	18	2 ¹⁷
Purple	2 ⁶	Purple / White	2 ¹⁶	7	2 ⁶	19	Vcc
Gray	2 ⁷	Gray / White	2 ¹⁷	8	2 ⁷	20	Vcc
White	2 ⁸	Yellow / Black	Vcc	9	2 ⁸	21	COMMON
Black	2 ⁹	White / Black	COMMON	10	2 ⁹	22	COMMON
		Shield	Cable shield	11	2 ¹⁰	23	NC
				12	2 ¹¹	24	Frame ground
						25	NC

- Note:
- shielding cable is non-connected in encoder.
 - Those cable which are unnecessary for signals are to be cut.
 - The form bellow indicate 64 multi-turn and 4096P/R. When resolution is not enough, it becomes NC.