

MXS-42-series

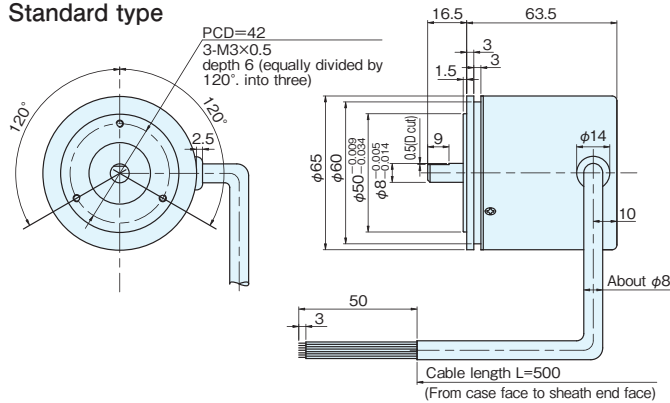
[High-resolution Multiple-rotation (64 rotations max) Absolute Type Encoder]

- 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)

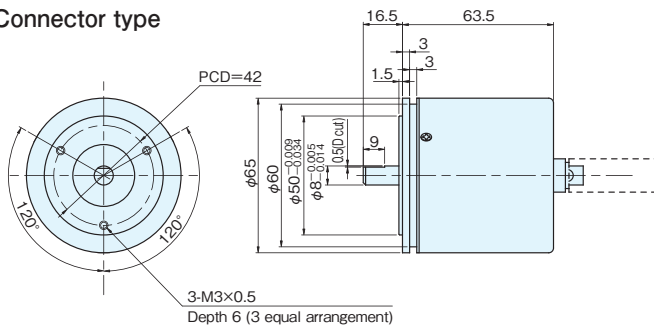


Outside dimensions

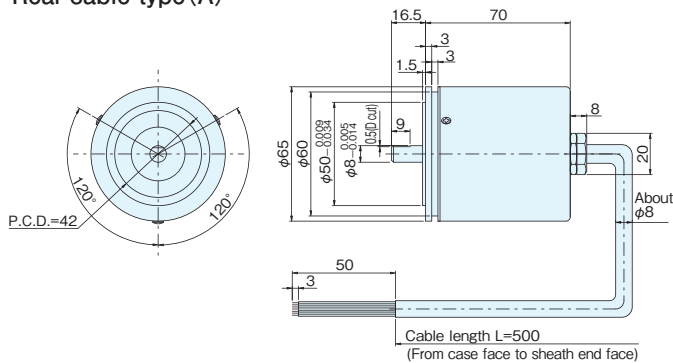
Standard type



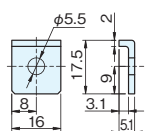
Connector type



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