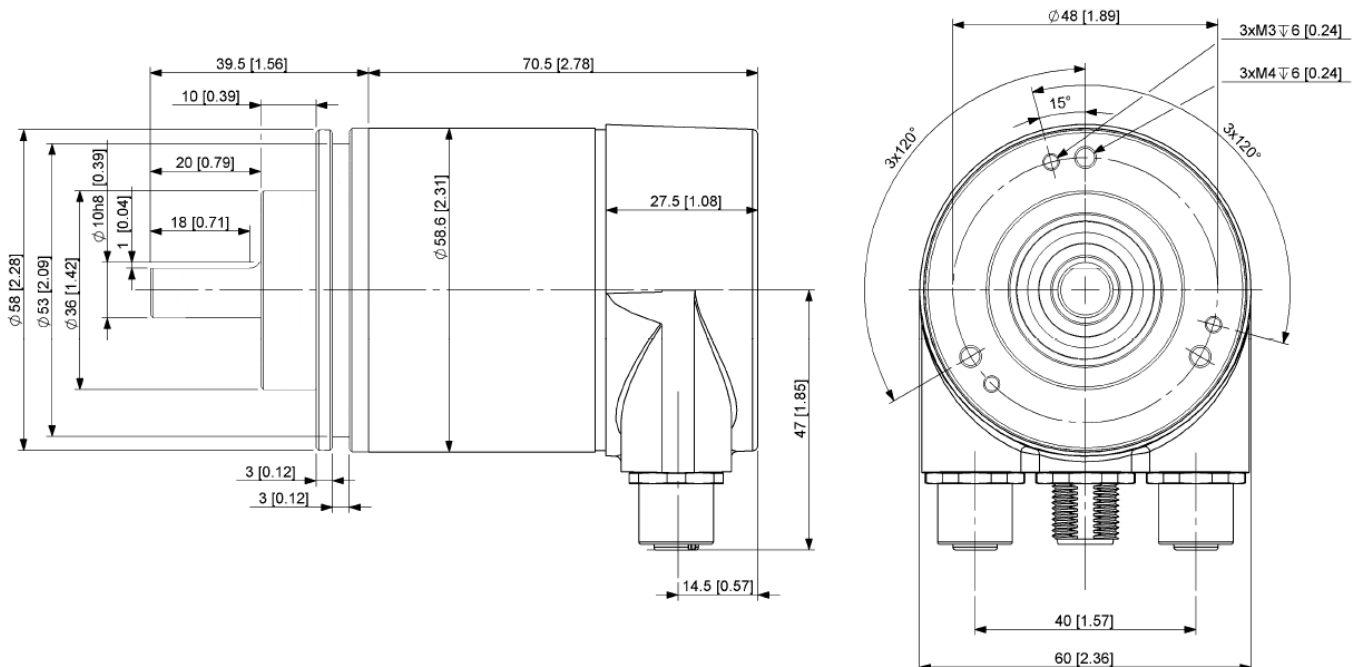


ETHERCAT ABSOLUTE MULTI-TURN ENCODER, MHM5 RANGE

- MHM5, standard encoder Ø58mm with Ethercat interface:
- Robust and compact conception.
- Solid shaft version Ø 10 mm (06 mm available upon request).
- Precision ball bearings with sealing flange.
- High temperatures performances -40°C ... +85°C.
- Code disc made of unbreakable and durable plastic.
- Mechanical memorisation of the number of turns by gears.
- Resolution: 13 bits = 8192 steps/turn (max 16 bits).
- Number of turns: 12 bits = 4096 turns (max 14 bits).
- Polarity inversion and short circuit protection.
- Highly integrated circuit in SMD-technology.



MHM510 Ethercat dimensions



MECHANICAL DATA

| | | | | | |
|-----------------------------|--------------------------|---|---------------------------|--------------|--|
| Material | Cover : steel | Vibrations (EN 60068-2-6) | ≤ 10 g (10Hz... 1 000Hz) | | |
| | Body : aluminum | Weight | 400 g | | |
| | Shaft: stainless steel | Operating temperature | - 40 ... + 85°C | | |
| Max. shaft loading | Axial : 40 N | Storage temperature | - 40 ... + 85°C | | |
| | Radial : 110 N | Humidity | 98 % without condensation | | |
| Shaft Inertia | ≤ 30 g.cm ² | Protection class (EN 60529) | IP65 | | |
| Torque | ≤ 3 N.cm | Lifetime in 10 ⁹ revolutions with F _a / F _r (axial/radial) | | | |
| RPM (continuous operation)) | 12 000 rpm | 20 N / 40 N | 40 N / 60 N | 40 N / 110 N | |
| Shock (EN 60068-2-27) | ≤ 100 g (half-sine, 6ms) | 43 | 15 | 5 | |
| Shock (EN 60028-2-29) | ≤ 10 g (half-sine, 16ms) | | | | |

ETHERCAT ABSOLUTE MULTI-TURN ENCODER, MHM5 RANGE

SENSOR

| | |
|-----------------------|---|
| Technology | Optical |
| Resolution Singleturn | 13 bit |
| Resolution multiturn | 12 bit |
| Multiturn technology | Mechanical gearing |
| Accuracy (INL) | ± 0.0220° (14-16bit), ± 0.0439 (≤13bit) |
| Code | Binary |

INTERFACE

| | |
|-----------------------|---|
| Interface | Ethercat – Ethernet output driver |
| Profile | CoE (CANopen over EtherCAT, DS-301+DS406) |
| Diagnostics | Optoasic, Memory, LED |
| Programming functions | Resolution, preset, counting direction |
| Transmission rate | 10 / 100 Mbits |
| Interface cycle time | ≥62.5ms |

ELECTRICAL DATA

| | |
|-----------------------------|--|
| Supply voltage | 10-30Vdc (on power supplies comply with EN50178) |
| Current consumption | ≤ 230mA @ 10Vdc, ≤100mA @ 24Vdc |
| Power consumption | ≤ 2.5 W |
| Start-up time | < 250 ms |
| Reverse polarity protection | Yes |
| Short circuit protection | Yes |
| EMC: Emitted Interference | DIN EN 61000-6-4 |
| EMC: Noise immunity | DIN EN 61000-6-2 |
| MTTF | 65 years @ 40°C |
| Electrical lifetime | > 10 ⁵ h |

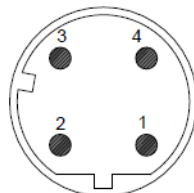
CONNECTION

Ethernet

4 pinouts, female, D coded

| Pinout | Signal |
|--------|--------|
| 1 | Tx+ |
| 2 | Rx+ |
| 3 | Tx- |
| 4 | Rx- |

Encoder view

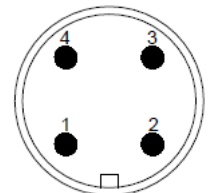


Power supply

4 pinouts male, A coded

| Pinout | Signal |
|--------|---------------|
| 1 | VS (10-30Vdc) |
| 2 | N.C. |
| 3 | GND (0V) |
| 4 | N.C. |

Encoder view



ORDERING REFERENCE Contact the factory for special versions, ex: electronics, special flanges, connections...)

| MHM5 | EC00 | B | 12 | 13 | C | 10 | 0 | PRM |
|----------------------------|----------|---------------|--|---|--------------|-------------------------|---------------------------|----------------|
| Absolute multiturn encoder | Ethercat | Code : Binary | Number of turns 2 ¹² (4 096) | Resolution (pos./turn) 2 ¹³ (8 192) | Clamp Flange | Shat diameter : 10mm | Without mechanical option | M12 connection |

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