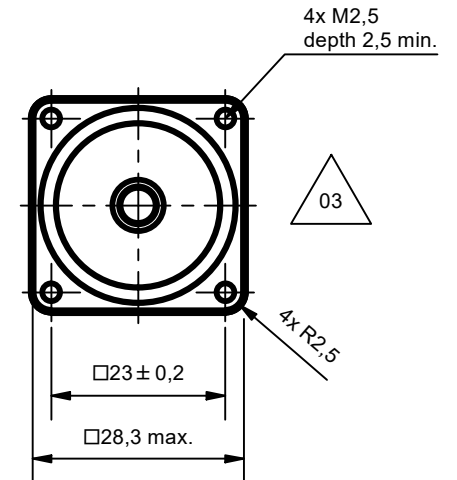
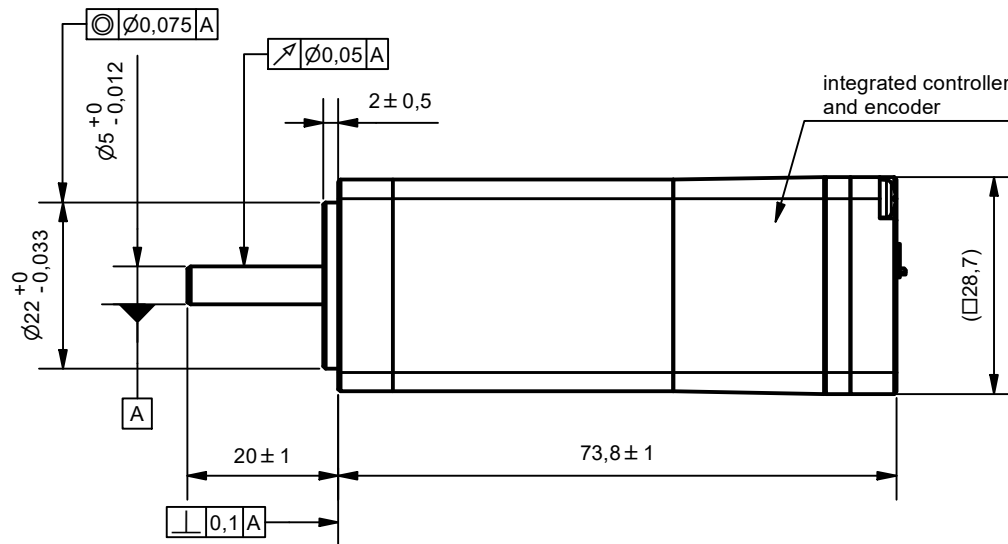
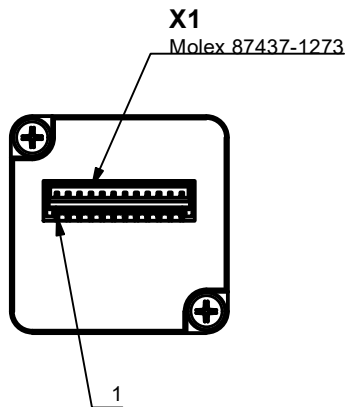




| MOTOR SPECIFICATION           |                                     |      |
|-------------------------------|-------------------------------------|------|
| Min. Operating Voltage        | V DC                                | 12   |
| Max. Operating Voltage        | V DC                                | 30   |
| Current per Winding           | A                                   | 1.5  |
| Holding Torque                | Nm                                  | 0.18 |
| Step Angle                    | ±5% °                               | 1.8  |
| Rotor Inertia                 | x10 <sup>-6</sup> kg m <sup>2</sup> | 0.9  |
| Singleturn Encoder Resolution | cpr                                 | 4096 |



| GENERAL MOTOR SPECIFICATION                    |      |             |
|------------------------------------------------|------|-------------|
| Interface                                      |      | CANOPEN     |
| Ambient Temperature                            | °C   | -10 ... +40 |
| Max Ambient Humidity (non condensing)          | %    | 85          |
| Insulation Class                               |      | B           |
| Insulation Resistance                          | MΩ   | 100         |
| Dielectric Strength (for 1 min - coil to case) | V AC | 500         |
| Protection Class (except shaft outlet)         |      | IP20        |

| ISO 8015 |                       | ISO 1302 |            | ISO 2768 mK                                                                           |            | ISO 13715 |      |
|----------|-----------------------|----------|------------|---------------------------------------------------------------------------------------|------------|-----------|------|
|          |                       |          |            |                                                                                       | Date       |           | Name |
| 03       | Pin Function, Format  | Rehse_P  | 17.05.2024 | Drawn                                                                                 | 04.01.2023 | Pinther_M |      |
| 02       | MFrame, Cover, Tables | Rehse_P  | 29.11.2023 | Reviewed                                                                              | 25.08.2023 | Rehse_P   |      |
| 01       | Updated Parts         | Rehse_P  | 12.10.2023 | Released                                                                              | 25.08.2023 | Rehse_P   |      |
| REV      | Rev. Text             | Name     | Date       |  |            |           |      |

| X1      |                                   |
|---------|-----------------------------------|
| Pin No. | Function                          |
| 1       | Output 1 (Push-pull)              |
| 2       | Output 2 (Push-pull)              |
| 3       | Input 1 (+5V/+24V)                |
| 4       | Input 2 (+5V/+24V)                |
| 5       | Input 3 (+5V/+24V)                |
| 6       | Analog Input (0-30V)<br>/ Input 4 |
| 7       | CAN_H                             |
| 8       | CAN_L                             |
| 9       | Reserved                          |
| 10      | Reserved                          |
| 11      | +UB                               |
| 12      | GND                               |



| A-Shaft           |               | Preload Spring |     | B-Shaft |  |
|-------------------|---------------|----------------|-----|---------|--|
|                   | Fr            |                |     |         |  |
|                   | Fa            |                |     |         |  |
|                   | ax            |                |     |         |  |
| Max. Axial Force  | Fa            | N              | 7   |         |  |
| Max. Radial Force | Fr (a1= 5 mm) | N              | 28  |         |  |
| Max. Radial Force | Fr (a2= mm)   | N              | -/- |         |  |
| Axial Play        | Fa=           | N              | mm  | 0.08    |  |
| Radial Play       | Fr =          | N              | mm  | 0.02    |  |

|                      |  |              |  |
|----------------------|--|--------------|--|
| Weight: ±10% 0.22 kg |  |              |  |
| PD1-C281L15-E-20-2   |  |              |  |
| 20001836             |  | Scale: 1 : 1 |  |
| State: Released      |  | A4 Page 1    |  |
| Rev: 03              |  | CONFIDENTIAL |  |