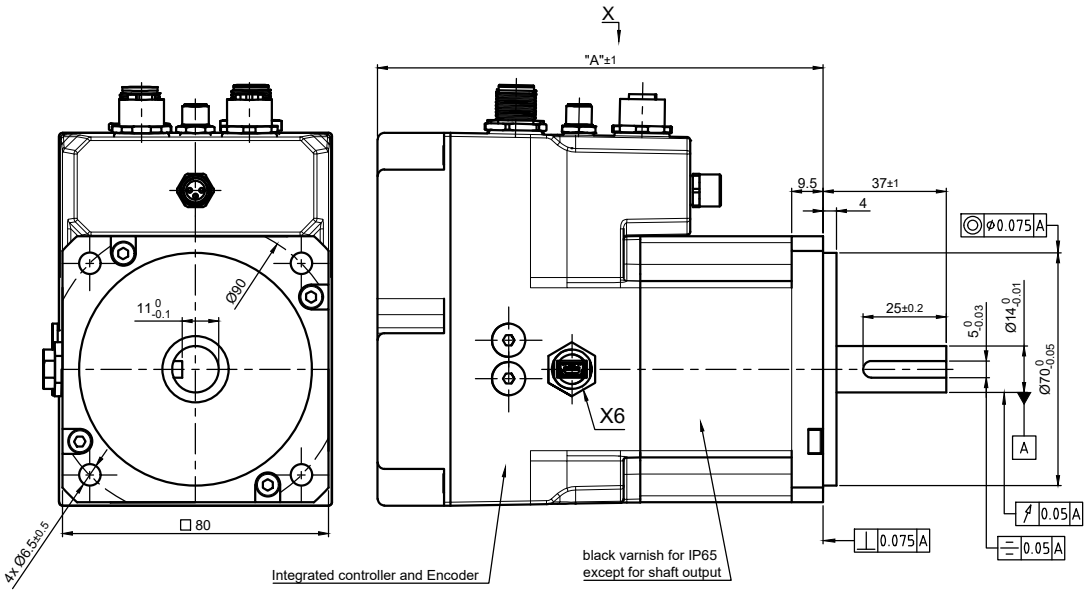
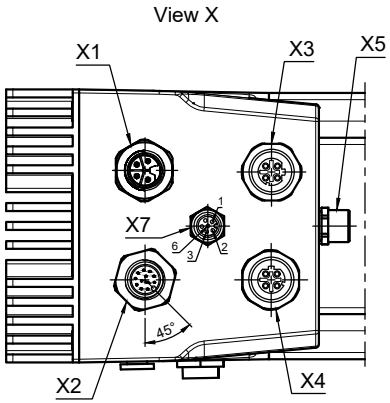
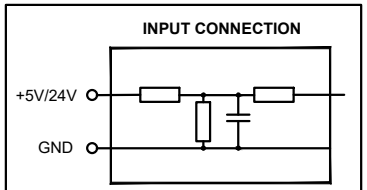
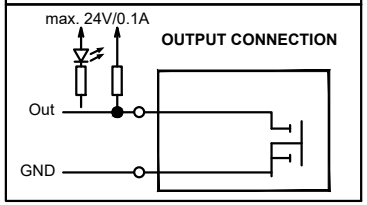



| X1 | POWER |
|---|---|
| M12 / 4-Pole / L-Coding / male | |
| Pin No. | Function |
| 1 | +UB |
| 2 | +UB |
| 3 | GND |
| 4 | GND |
| cable shield on housing | |

| X2 | IO |
|---|---|
| M12 / 12-Pole / A-Coding / male | |
| Pin No. | Function |
| 1 | GND |
| 2 | Input 1 (+5V/+24V) |
| 3 | Input 2 (+5V/+24V) |
| 4 | Input 3 (+5V/+24V) |
| 5 | Input 4 (+5V/+24V) |
| 6 | Input 5 (+5V/+24V) |
| 7 | Input 6 (+5V/+24V) |
| 8 | Analog Input (0-10V/0-20mA) |
| 9 | Output 1 (open drain) |
| 10 | Output 2 (open drain) |
| 11 | +5V Voltage Supply (max. 100mA) |
| 12 | +UB Logic (24V) |
| cable shield on housing | |



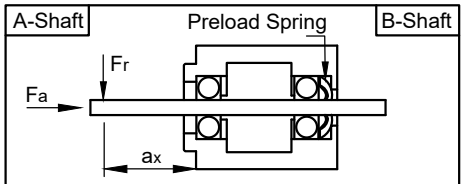

| X5 | Brake OUT |
|---|---|
| M8/ 3-Pole / A-Coding / female | |
| PIN No. | Function |
| 1 | Vcc |
| 3 | GND |
| 4 | n.c. |
| cable shield on housing | |

| X6 | Mini-USB |
|---|---|

| X7 | STO |
|---|---|
| M8/ 6-Pole / A-Coding / female | |
| Pin No. | Function |
| 1 | STO-A-IN |
| 2 | STO-A-RTN |
| 3 | STO-FBH |
| 4 | STO-FBL |
| 5 | STO-B-IN |
| 6 | STO-B-RTN |
| cable shield on housing | |

| X3 | EtherCAT IN |
|---|---|
| M12/ 4-Pole / D-Coding / female | |
| cable shield on housing | |

| X4 | EtherCAT OUT |
|---|---|
| M12/ 4-Pole / D-Coding / female | |
| Pin No. | Function |
| 1 | TD+ |
| 2 | RD+ |
| 3 | TD- |
| 4 | RD- |
| cable shield on housing | |




| MOTOR SPECIFICATION | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PD6-EB80xx-xx-65-1 | | SD-MS | SD-ES | MD-MS | MD-ES | LD-MS | LD-ES | CD-MS | CD-ES |
| Motor Length "A" | mm | 134 | | 155 | | 170 | | 190 | |
| No. of Poles | | 8 | | | | | | | |
| Rated Voltage | V DC | 48 | | | | | | | |
| Min. Operating Voltage | V DC | 12 | | | | | | | |
| Max. Operating Voltage | V DC | 57.6 | | | | | | | |
| Current - Rated / Peak | A | 6.9 / 20 | | 14 / 40 | | 18.75 / 65 | | 25 / 75 | |
| Torque - Rated / Peak | Nm | 0.9 / 2.5 | | 1.7 / 5 | | 2.25 / 6.5 | | 3 / 9 | |
| Torque Constant | Nm/A | 0.13 | | 0.12 | | 0.12 | | 0.12 | |
| Power Rated | W | 283 | | 534 | | 706 | | 940 | |
| Speed - No Load / Rated ±10% | rpm | 4100 / 3000 | | 4250 / 3000 | | 4300 /3000 | | 4250 /3000 | |
| Rotor Inertia | kg m² | 54.4 x10$^{-6}$ | | 102 x10$^{-6}$ | | 136 x10$^{-6}$ | | 190 x10$^{-6}$ | |
| Multiturn Encoder Resolution | bit | 16 | - | 16 | - | 16 | - | 16 | - |
| Singleturn Encoder Resolution | bit | 17 | 12 | 17 | 12 | 17 | 12 | 17 | 12 |
| Weight | kg | ±10% 2.0 | | ±10% 2.7 | | ±10% 3.1 | | ±10% 3.8 | |

| | | |
|---|---|---|
| Max. Axial Force | Fa | N 45 |
| Max. Radial Force | Fr (a1 = 20 mm) | N 115 |
| Radial Play | Fr = 5 N | mm 0.02 |

| GENERAL MOTOR SPECIFICATION | | |
|---|---|---|
| Interface | | ETHERCAT |
| Ambient Temperature | °C | -10 ...40 |
| Storage Temperature | °C | -10 ...85 |
| Max. Ambient Humidity (non condensing) | % | 85 |
| Protection Class (except shaft outlet) | | IP65 |
| Protection Class (shaft outlet) | | IP54 |

| ISO 8015 | ISO 1302 | ISO 2768 c | ISO 13715 |
|---|---|---|---|

| REV | Rev. Text | Name | Date |
|---|---|---|---|

| | Date | Name |
|---|---|---|
| Drawn | 15.05.2025 | Schneid_A |
| Reviewed | 02.10.2025 | Reith_S |
| Released | 02.10.2025 | Reith_S |

Nanotec PLUG & DRIVE

PD6-EB80xD-xS-65-1

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State: Released | Rev: 00 | CONFIDENTIAL