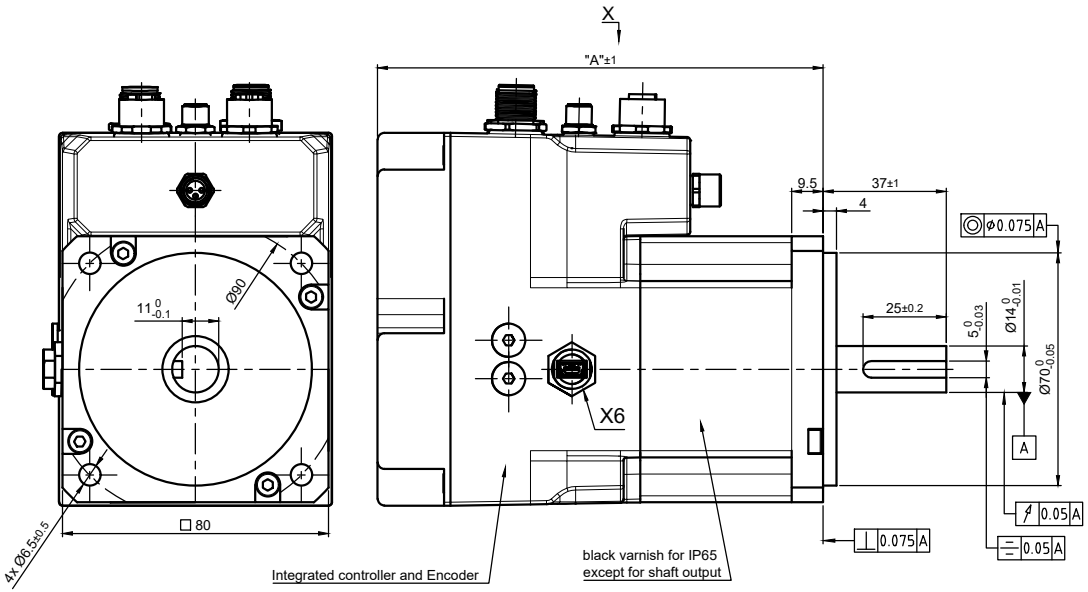
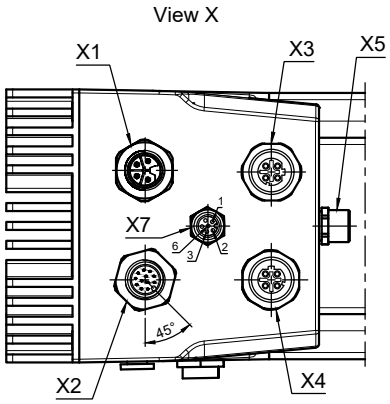
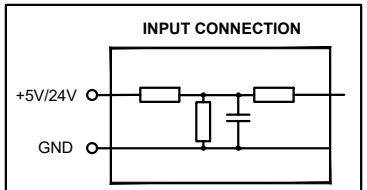
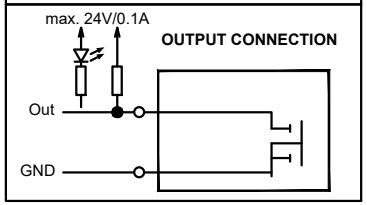




X1	POWER
M12 / 4-Pole / L-Coding / male	
Pin No.	Function
1	+UB
2	+UB
3	GND
4	GND
cable shield on housing	

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	





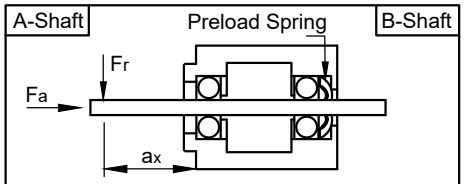
X5	Brake OUT
M8/ 3-Pole / A-Coding / female	
PIN No.	Function
1	Vcc
3	GND
4	n.c.
cable shield on housing	

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	Modbus TCP IN
M12/ 4-Pole / D-Coding / female	
cable shield on housing	

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



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

MOTOR SPECIFICATION									
PD6-EB80xx-xx-65-4		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	

GENERAL MOTOR SPECIFICATION		
Interface		MODBUS TCP
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-65-4

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