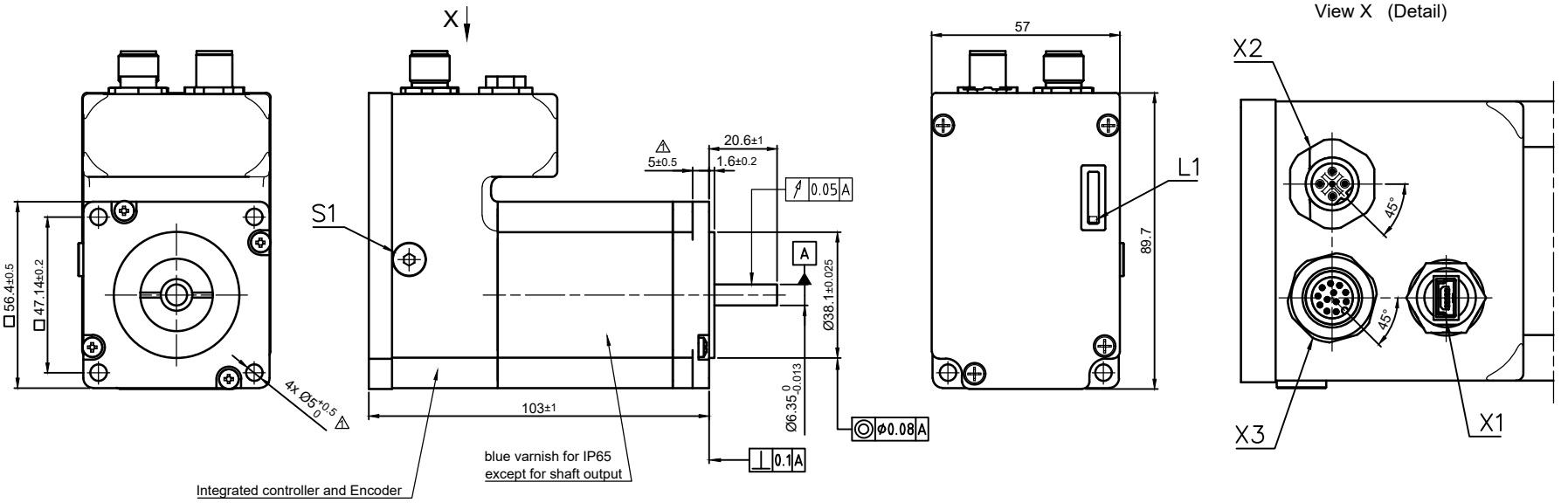
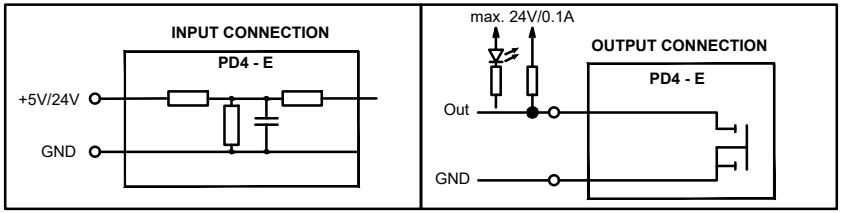


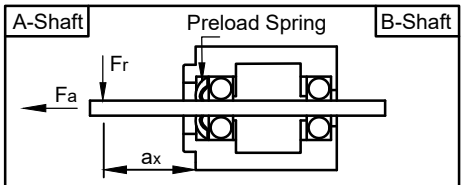
X1	Mini-USB

X2	POWER
M12 / 5-Pole /B-Coding / male	
Pin No.	Function
1	+UB (12-48V)
2	+UB (12-48V)
3	GND
4	GND
5	N.C.

X3	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)

MOTOR SPECIFICATION			
Min. Operating Voltage	V DC	12	
Max. Operating Voltage	V DC	48	
Current per Winding	A	4.2	
Holding Torque	Nm	1.87	
Step Angle	°	1.8	±5%
Rotor Inertia	kg m²	48	x10^{-6}
Singleturn Encoder Resolution	bit	12	





Max. Axial Force	Fa	N	15
Max. Radial Force	Fr (a1 = 20 mm)	N	52
Axial Play	Fa = 200N	mm	0.2
Radial Play	Fr = 4.5 N	mm	0.02

GENERAL MOTOR SPECIFICATION					
Interface		USB			
Ambient Temperature	°C	Min.	-10	Max.	40
Switch-off Temperature	°C	75			
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 (exept shaft outlet)		IP65			

ISO 8015	ISO 1302	ISO 2768 cK	ISO 13715

					Date	Name
				Drawn	04.12.2017	Import
				Reviewed	11.01.2018	Wang_X
				Released	11.01.2018	Wang_X

REV	Rev. Text	Name	Date
01	change tol. diameter 5	Reith_S	19.07.2022

Nanotec® PLUG & DRIVE

Weight: ~1.3 kg

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State: Released | Rev: 01 | CONFIDENTIAL