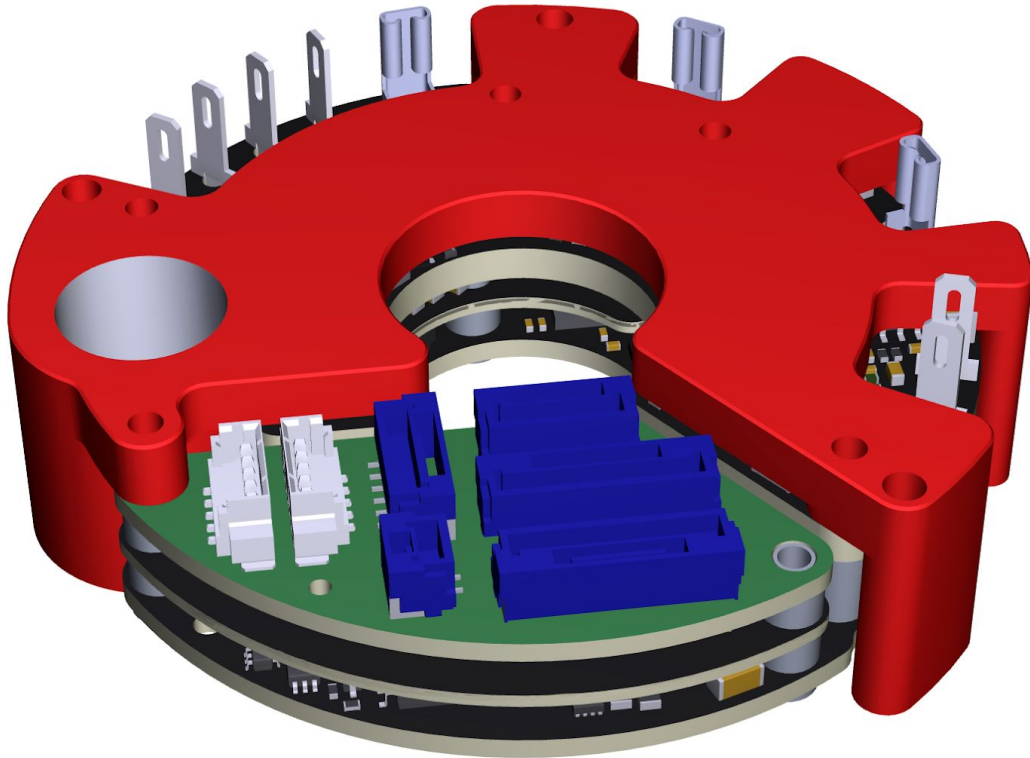


# SOMANET Servo Node Circulo 700/1800

*Preliminary Datasheet*



## Ordering Information

Product designation and options	Circulo 700	Circulo 1800
SOMANET Servo Node Circulo	SN-018-1	SN-024-1
SOMANET Servo Node Circulo Sense	SN-019-1	SN-025-1
SOMANET Servo Node Circulo Dual Sense	SN-020-1	SN-026-1
SOMANET Servo Node Circulo Safe Motion	SN-021-1	SN-027-1
SOMANET Servo Node Circulo Sense Safe Motion	SN-022-1	SN-028-1
SOMANET Servo Node Circulo Dual Sense Safe Motion	SN-023-1	SN-029-1

## Power Specification

	Circulo 700	Circulo 1800
Rated supply voltage DC	12-48 V	
Maximum voltage DC	65 V	
Logic supply voltage (optional)	12V-24 V (27 V max.)	
Continuous phase current RMS	8 A	20 A
Maximum phase current RMS (Load-cycle: 0.5s every 1.5 s)	24 A	60 A
Maximum efficiency	99 %	
Standby power consumption	TBD	

## General Specification

	Circulo 700	Circulo 1800
Number of phases	3	
Supported motors	BLDC, PMSM	
Hardware protections	Overcurrent, overvoltage, undervoltage, overtemperature, PWM deadtime, PWM shoot through	
Dimensions	ID 20 mm, OD 72 mm	ID 40 mm, OD 92 mm
Operating temperature	TBD	
Storage temperature	-35 to 85 °C	
Humidity	Max 90 % rH	
Sensors on-board	3 x $I_{\text{phase}}$ , $I_{\text{DC}}$ , $U_{\text{DC}}$ , $t_{\text{MOSFET}}$ , $t_{\text{core}}$	
Encoder interface (ext.)	1 x ABZ / SSI / BiSS-C / Nikon / Tamagawa	
Brake pwr. output	1A @ 48V	
GPIO	4 x DIO (5V), 1 x DI (24V), 2 x Analog In (+/-5V)	
Heatsink	Aluminum (customizable)	

Integrated encoder (motor)	Yes (optional)
Integrated encoder (joint)	Yes (optional)
Integrated brake	Yes (optional)

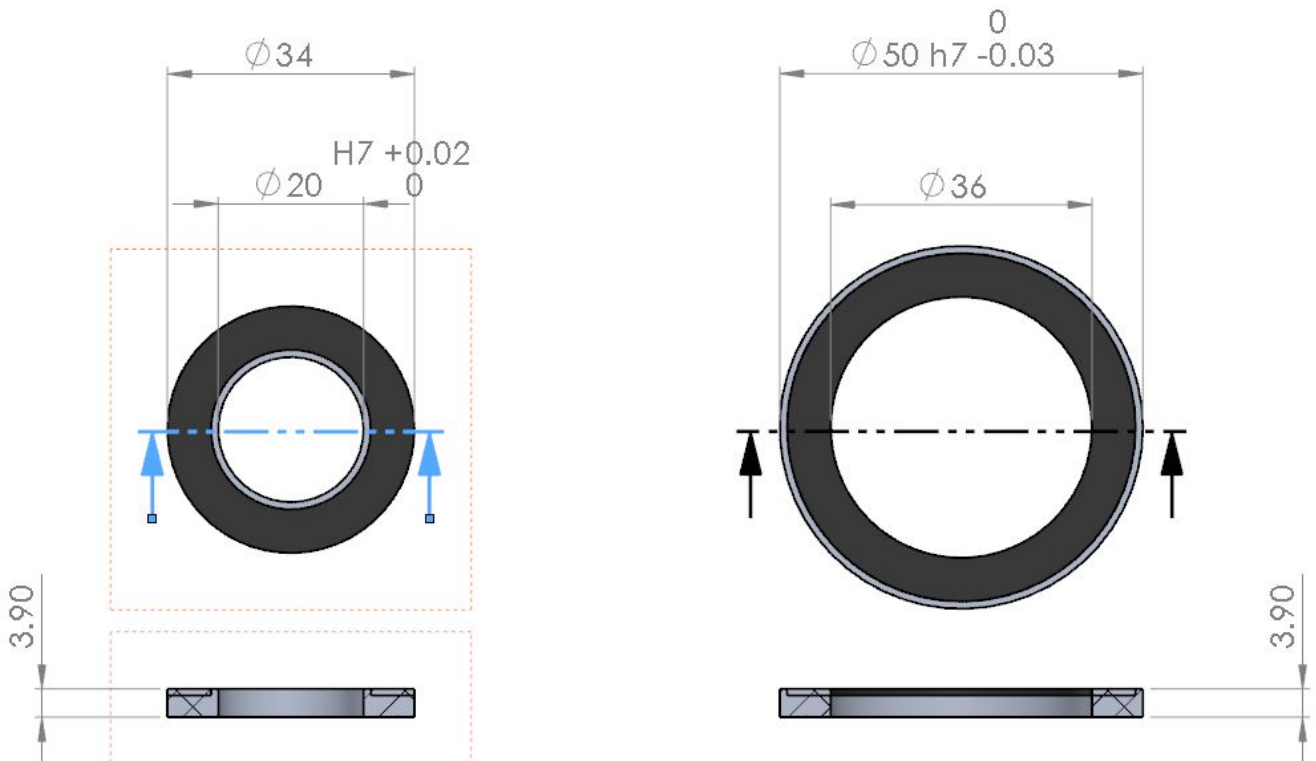
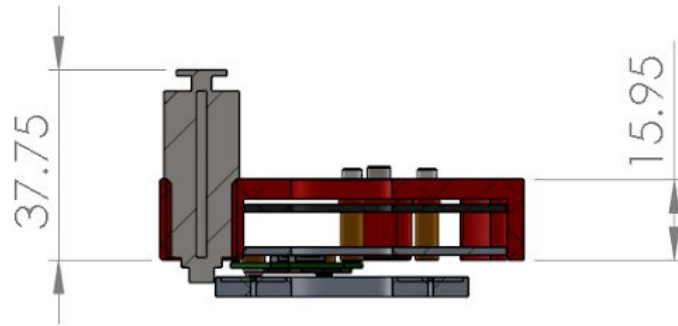
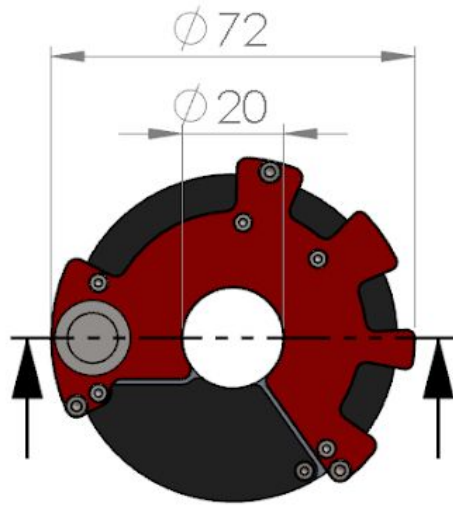
### Optional Integrated Encoders

Encoder 1 (inner)	Circulo 700	Circulo 1800
Resolution	18 bit	
Accuracy (INL)	TBD	TBD
Multi-turn	14 bit (battery based)	
Mounted on	Configuration 1: joint Configuration 2: motor	
Functions	Configuration 1: position Configuration 2: position/velocity/commutation	
Encoder 2 (outer)	Circulo 700	Circulo 1800
Resolution	18 bit	
Accuracy (INL)	TBD	TBD
Multi-turn	No	
Mounted on	Configuration 1: motor Configuration 2: -	
Functions	Configuration 1: velocity/commutation Configuration 2: -	

### Optional Integrated Brake

	Circulo 700	Circulo 1800
Type	Solenoid latch	
Detailed specifications	TBD	TBD

### Mechanical Dimensions Circulo 700



### Mechanical Dimensions Circulo 1800

