

# ERC10 BISS ERC10 SSI

## BISS / SSI Interface Encoder

Feedback encoder for synchronous gearless motors  
BISS or SSI interface

- Optical absolute encoder
- Absolute 13 bit rotor feedback data (max. 21 bit)
- Additional 1 Vpp/2048 ppr SinCos incremental signals

Physically compatible with SSI and EnDat layer

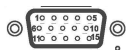
Fast transmission rates at 10 Mhz clock frequency

Protected data transmission with CRC sum. (failure check)



### Technical Specifications

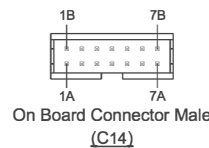
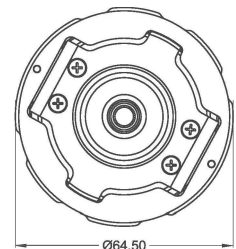
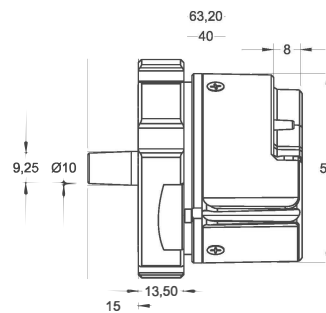
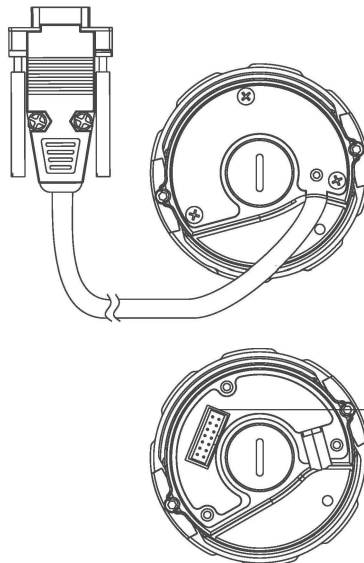
Interface	BISS / SSI (up to 10 Mhz)
Clock input	via full duplex I.C
Clock frequency	20 kHz up to 10 Mhz
Data output driver	RS485 transceiver type
Data output code	gray or binary
Supply voltage	5 - 20 VDC ±%5
Current consumption	130 mA max.
Resolution	13 bit (up to 21 for BISS)
Output circuit	BISS / SSI interface
Pulse frequency	< 200 kHz
Working principal	optical
Accuracy	<2048 / ±40"
Incremental channels	A, A inv. B, B inv. (sine 1 Vpp)
Flange	special motor feedback flange
Case diameter	Ø56 mm
Shaft diameter	Cone 1/10
Shaft axial / radial loading	30 N max.
Starting torque	0,17 Ncm min.
Electrical connections	18 pin pcb type connector or DB15 connector with 20 cm cable
Weight	340 gr. (without cable)
Shock	100 g, 5 ms
Vibrations	10 g, 5-2000 Hz
Protection	IP47
Operating temperature range	-20°C ... +85°C
Storage temperature range	-20°C ... +85°C



D-SUB15 Connector Male  
(C15)

#### PIN CONFIGURATION

PIN	Color	Function
1	Red - Black	A <sup>+</sup>
2	NC	A <sup>-</sup>
3	NC	0V
4	NC	B <sup>+</sup>
5	Green - Black	5V
6	Yellow - Black	CLK <sup>-</sup>
7	Green - White	CLK <sup>+</sup>
8	Blue - Black	DATA <sup>+</sup>
9	Green - Brown	DATA <sup>-</sup>
10	Yellow	NC
11	Purple	Inner Shield
12	Gray	Outter Shield
13	Pink	NC
14	NC	NC
15	NC	NC
Cover		



On Board Connector Male  
(C14)

PIN	COLOR	FUNCTION
1A	Yellow	CLK <sup>-</sup>
1B	Brown - Green	+V
2A	Yellow - Black	A <sup>-</sup>
2B	Gray	DATA <sup>+</sup>
3A	N.C.	GND Sense
3B	Blue - Black	B <sup>+</sup>
4A	Black	NC
4B	Red	NC
5A	Red - Black	B <sup>-</sup>
5B	White - Green	GND
6A	Pink	DATA <sup>-</sup>
6B	Green - Black	A <sup>+</sup>
7A	N.C.	+V Sense
7B	Purple	CLK <sup>+</sup>

Model	Case Diameter	Case Type	Shaft Diameter	Interface	Resolution	Output Channels	Supply Voltage	Connector / Cable
(example) PRA	56	ERC	10	BSB	2048	VP	V1	0m5 C15
PRA	56mm	ERC	10	BSB : BISS Binary BSG : BISS Gray SSIB : SSI Binary SSIG : SSI Gray	2048	VP : 1 Vpp LD : RS422 TTL VPLD: 1 Vpp + RS422 TTL	V1: 5 VDC	0m5 C15 C14