

## 1. Functional Description

The EGD50.5.. is an encoder with CAN Open interface. The EGD50 series has been designed in accordance to CiA DSP-406 CANOpen device profile for encoders and provides NMT slave functionality. The Node ID is selected by hardware. 7 ID's are available.

Encoder EGD50.7.. is a double encoder with two independent measuring devices, build up to be conform to the latest Solas rules for main drives and rudder systems.

## 2. Technical Data

### Electrical Data

Power supply: 24VDC -20% + 25%  
Power consumption: about 2 W  
Operating temperature -5 °C ... +70 °C  
Storage temperature -10 °C .. 85 °C

### Mechanical Data

Friction torque: <2.5 Ncm  
Housing: Aluminum  
Dimensions:  
Flange Synchro  
Shaft loading: Axial/Radial 45N  
Vibration: IEC 68 section 2-6 diagram 2  
Shock: IEC 68 section 2-27  
Protection Class:  
Housing IP 67  
Shaft inlet IP 65 according DIN 40050  
Relative humidity: < 90%, non condensing

### Accuracy Data:

Measurement range: 360°  
Resolution: 12 bit  
Linearity: <±0.3 % typically, <±0,5 % max full scale.

### CANOpen output:

Transmission rate: 125kbit/s, max cable length 500 m  
CAN-Bus termination 120Ω programmable by 1 wire (cabling)  
NMT: Slave  
Error Control: Heartbeat  
Node ID programmable by 3 wire (cabling)  
No. of PDOs: 0 Rx 1 Tx  
PDO modes: asynchron (even-triggered)  
PDO linking: no  
PDO mapping event time  
No. of SDOs: 1 Server 1 Client  
Emergency Message: yes  
CANOpen Version DS-301 V4.01  
Device Profile: DSP-406 V2.0  
Framework: DSP-302 V3.1

### 4 - 20 mA output

Range: 4 - 20 mA  
Burden: max. 5000  
Design: galvanic isolated from the power supply.  
Classification: GL

## 3. Table for programming ID

flex colour =>	White (WH) connected with	Grey (GY) connected with	Pink (PK) connected with
CAN-Adress			
1	GND	NC	NC
2	NC	GND	NC
3	GND	GND	NC
4	NC	NC	GND
5	GND	NC	GND
6	NC	GND	GND
7	GND	GND	GND

NC = not connected ; GND = Ground

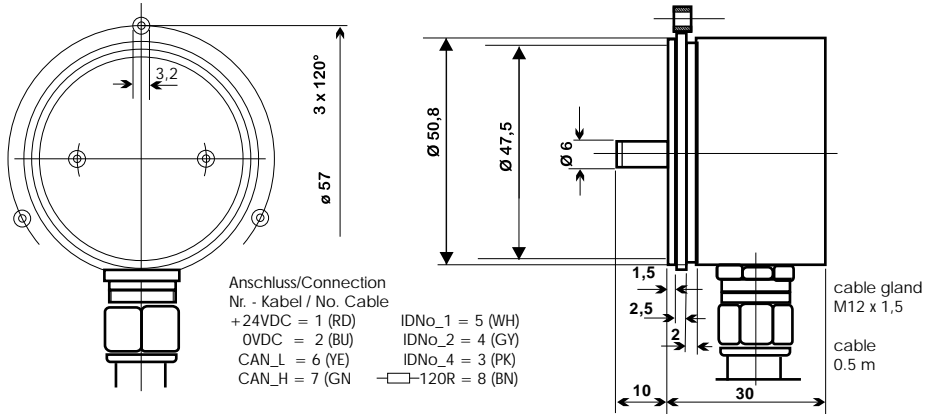
The termination resistor is activated if cable GN and BN are bridged. Please obey, that if only channel B of a two channel unit is used, also channel A must be supplied with power.

## 4. Dimensions

Special flange.shaft executions upon request

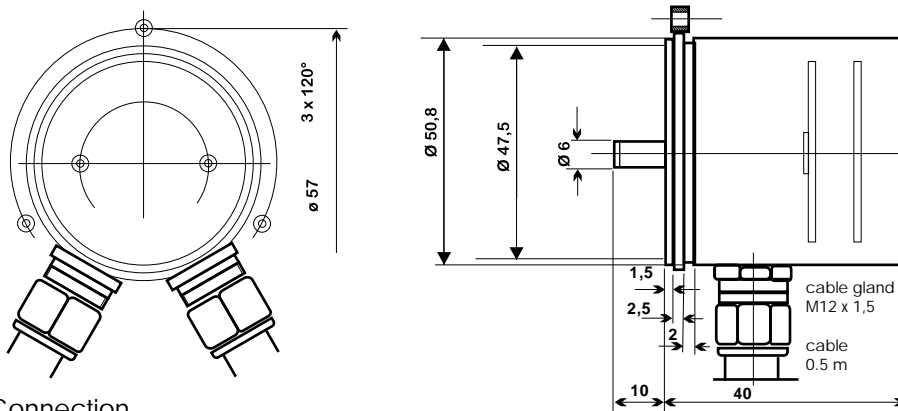
### EGD 50.51 fl S1

with one CANOpen output or one 4-20mA output



### EGD 50.52 fl S1

with two CANOpen or two 4-20 mA outputs or one of each output



Connection

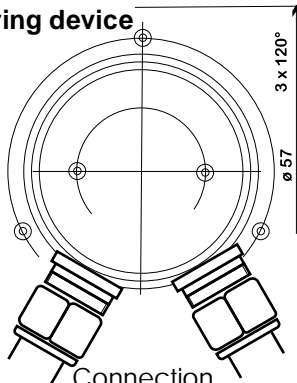
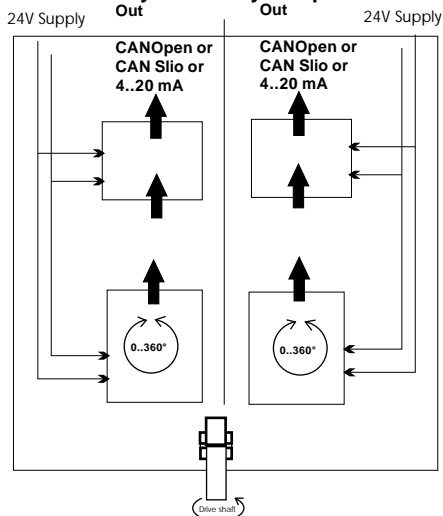
No. - Cable

+24VDC = 1 (RD)	IDNo_1 = 5 (WH)	+24VDC = 1 (RD)	IDNo_1 = 5 (WH)
0VDC = 2 (BU)	IDNo_2 = 4 (GY)	0VDC = 2 (BU)	IDNo_2 = 4 (GY)
CAN_L = 6 (YE)	IDNo_4 = 3 (PK)	CAN_L = 6 (YE)	IDNo_4 = 3 (PK)
CAN_H = 7 (GN)	□-120R = 8 (BN)	CAN_H = 7 (GN)	□-120R = 8 (BN)

### EGD 50.7. fl S1

with double measuring device

**Double encorder EGD 50.7 ..**  
 Both systems fully independent



Connection

No. - Cable

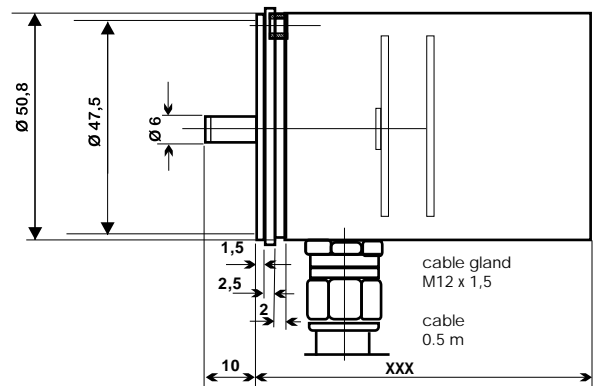
CANOpen

+24VDC = 1 (RD) IDNo\_1 = 5 (WH)

0VDC = 2 (BU) IDNo\_2 = 4 (GY)

CAN\_L = 6 (YE) IDNo\_4 = 3 (PK)

CAN\_H = 7 (GN) □-120R = 8 (BN)



4 .. 20 mA

+24VDC = 1

0VDC = 2

SET = 3

+24 mA = 4

GND 20mA = 5