



BDG abbcc-ddee-fghhi-jjkk-llmm-nnoo

BDG
Encoders

a Principle
F = absolute

bb Design (housing diameter)
B0 = Cast aluminum powder coated mag. shielded radial (58)

cc Size of flange
58 = 58 mm

dd Shape of shaft, flange
BC = Blind hole shaft, clamp flange (clamp ring, spring plate w/ hole)

ee Diameter of shaft
12 = 12 mm
14 = 14 mm
15 = 15 mm
R6 = 6 mm with adapter sleeve (basis 12 mm)
R7 = 7 mm with adapter sleeve (basis 12 mm)
R8 = 8 mm with adapter sleeve (basis 12 mm)
RA = 10 mm with adapter sleeve (basis 12 mm)
S2 = 1/4" with adapter sleeve (basis 12 mm)
S3 = 3/8" with adapter sleeve (basis 12 mm)

f Interface category
N = Absolute digital, bidirectional

g Interface
E = EtherCAT

hh Interface details
BA = EtherCAT, v1

i Power supply
3 = 10...32 VDC

jj Resolution single turn [bit]
1 - 16

kk Resolution multi turn [bit]
0 - 43

ll Shielded cable
00 = No cable

mm Cable length in m
00 = No cable

nn Connectors
S5 = M12 male 5 pin A coded
S8 = M12 male 8 pin A coded

oo Pinout (Cable / Connector)
C1 = Sin/Cos (1 Vpp) for M12 connector and shielded cable
H1 = HTL/TTL inv. M23 male + shielded cable
H3 = HTL/TTL inv. M12, M16 male 8 pin + shielded cable
H5 = HTL/TTL inv. M12 male 12 pin + shielded cable
J1 = CAN/SAE J1939 for M12 connector and shielded cable
J3 = CAN/SAE J1939 for 2x M12
R1 = RS485/SSI for M12 connector and shielded cable
T1 = HTL/TTL shielded cable
T2 = HTL/TTL M16 male 5/7/8 pin, M12 male 8 pin
T4 = HTL/TTL M8 male 6 pin
TA = HTL/TTL M12 male 4 pin
TB = HTL/TTL M12 male 12 pin
TD = HTL/TTL M12 male 5 pin

Basic features

Approval/Conformity	CE
	cULus
	WEEE
	UKCA
Measuring principle	absolute measuring system

Display/Operation

Function indicator	LED red/green
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Electrical connection

Connection	Bus hood
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Electrical data

Mean life expectancy	1x 10 ⁹ revs. at 100 % rated shaft load
	1x 10 ¹⁰ revs. at 40 % rated shaft load
	1x 10 ¹¹ revs. at 20 % rated shaft load
Multi turn technology	Wiegand wire
Operating voltage U _B	10 ... 32 VDC
Single turn accuracy	± 0.0878° (≤ 12 bits)
Single turn repeat accuracy	± 0.0878° (≤ 12 bits)
Single turn technology	Hall sensor
Speed max.	6000 U/min
Switch-on delay max.	1.5 s

Environmental conditions

Ambient temperature	-40...85 °C
IP rating	Housing: IP65, IP67 Shaft entrance: IP65
Storage temperature	-40...100 °C

Functional safety

Diagnostic coverage	0 %
MTTF (40 °C)	300 a
Mission Time	20 a

Interface

Interface	EtherCAT
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Material

Housing material	Die cast aluminum
Housing material, surface protection	Powder coated
Material flange	Aluminium

Mechanical data

Bearings type	2x precision ball bearings
Flange type	End hollow shaft
Housing diameter	58 mm
Shaft load axial max.	50 N
Shaft load radial max.	80 N
Starting torque typ.	ca. 1,6 Ncm bei Raumtemperatur

