



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

BDG
Encoders

a Principle
E = Incremental

bb Version
B2 = Aluminum axial (24)

cc Flange size
24 = 24 mm

dd Shaft form, flange
PF = Shaft with flat, synchro flange (not fixed) (IP67)
SF = Shaft with flat, synchro flange (not fixed)

ee Shaft diameter
06 = 6 mm

f Interface category
R = Incremental digital basic

g Interface
C = HTL, /HTL
F = TTL, /TTL
Q = TTL
R = HTL

hh Interface details
AK = AB 200 kHz
NK = ABN 200 kHz

i Supply voltage
U = 5..30 VDC
5 = 5 VDC

jjkk Resolution [pulses per revolution]
0010 = 10 pulses per revolution
(max. 1024)

ll Shielded cable
00 = no cable

mm Cable length
00 = no cable

nn connector
P8 = M8 connector 8-pin

oo Wire assignments (connector / cable)
H3 = HTL/TTL inv. connector 8-pin
T2 = HTL/TTL connector 8-pin

Basic features

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

Electrical connection

Connection	Connector
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Electrical data

Current consumption max. at 24 V DC	i = U: 40 mA
Current consumption max. at 5 V DC	i = 5: typ. 40 mA
Mean life expectancy	0,55x 10 ⁹ revs. at 100 % rated shaft load 8,5x 10 ¹⁰ revs. at 40 % rated shaft load 6,8x 10 ¹¹ revs. at 20 % rated shaft load
Operating voltage U _B	30 VDC
Phase shift	90° ± ≤ 25 % of a period
Pulse frequency	≤ 200 kHz
Pulse/pause ratio	≤ 128 PPR: 50 % ± ≤ 7 % ≤ 256 PPR: 50 % ± ≤ 9 % ≤ 512 PPR: 50 % ± ≤ 13 % ≤ 1024 PPR: 50 % ± ≤ 18 %
Pulses per revolution	≤ 1024
Speed max.	dd = SF: 12000 U/min dd = PF: 3500 U/min

Environmental conditions

Ambient temperature	-20...80 °C
IP rating	dd = SF: IP65 dd = PF: IP67
Storage temperature	-20...80 °C

Functional safety

Diagnostic coverage	0 %
MTTF (40 °C)	200 a
Mission Time	25 a

Interface

Channels	AB, ABN
Interface	Digital pulse

Material

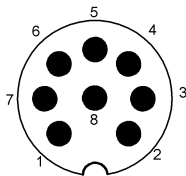
Housing material	Aluminum
Material flange	Aluminium

Mechanical data

Bearings type	2x precision ball bearings
Flange type	Synchro flange
Housing diameter	24 mm
Shaft diameter	6 mm
Shaft length	12 mm
Shaft load axial max.	dd = SF: 50 N dd = PF: 30 N
Shaft load radial max.	dd = SF: 80 N dd = PF: 45 N
Starting torque typ.	dd = SF: ca. 0,2 Ncm bei Raumtemperatur dd = PF: ca. 1,2 Ncm bei Raumtemperatur

Connector Diagramm

M8x1-male, 8-pin



Wiring diagramm

H3 (HTL/TTL inv. connector 8 pin)

HTL/TTL inv.	H3	
Schaltung	Pin	Color
GND	1	WH
UB	2	BN
A	3	GN
B	4	YE
N	5	GY
Ainv	6	RD
Binv	7	PK
Ninv	8	BU
Shield	housing	housing

T2 (HTL/TTL connector 8 pin)

HTL/TTL	T2
Schaltung	Pin
GND	1
UB	2
A	3
B	4
N	5
n.c.	6,7,8
Shield	housing

Product View

Connector outlet axial

