DXM5S

OPTICAL INCREMENTAL ENCODERS

Features

- Adapted to food and beverage – pharmaceutic - river – offshore applications
- Stainless steel encoder (316) with hygienic design
- Flanges and shaft adapted to the market needs
- Robustness and excellent resistance to shocks / vibrations
- Double ball bearings with safety lock system
- Solid shaft version Ø10mm
- High protection level IP69K
- Universal power supply 5 to 30Vdc
- Industrial standard electronic RS422/TTL and HTL
- High performances in temperature –30°C to +100°C
- Optical technology, contactless
- Resolutions available : up to 80 000 ppr
- Adapted axial cable gland output

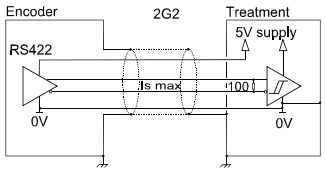
SPECIFICATIONS

Material	**Shaft:** Stainless steel 316 **Cover:** Stainless steel 316 **Body:** Stainless steel 316
Bearings	Double ball bearings
Maximum Loads	Axial: 250 N Radial: 500 N
Shaft Inertia	$\leq 1{,}2.10^{-6}$ kg.m^2
Torque	$\leq 90.10^{-3}$ N.m
Permissible Max. Speed	4,000 min^{-1}
Continuous max. speed	3,000 min^{-1}
Shocks (EN60068-2-27)	$\leq$ 500m.s^{-2} (during 6 ms)
Vibrations (EN60068-2-6)	$\leq$ 100m.s^{-2} (55 … 2,000 Hz)
EMC	EN 50081-1, EN 61000-6-2
Isolation	1,000 Veff
Encoder weight (approx.)	0,600 kg
Operating temperature	- 30 ... + 100 °C (encoder T°)
Storage temperature	- 40 ... + 100 °C
Protection(EN 60529)	IP 69K

Theoretical mechanical lifetime 10^9 turns (F_{axial} / F_{radial})	
50 N / 100 N	12
250 N / 500 N	0,5

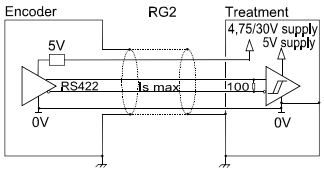
DIGITAL OUTPUT SIGNALS (SQUARE WAVE SIGNALS)

Electronic 2G2 (100°C,300kHz)



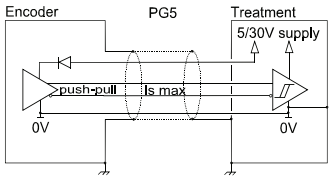
Supply	5Vdc ± 10%
Cons. without load	75mA max
Current per channel	40mA max
0 max (Is=20mA)	V_{ol} = 0,5Vdc
1 min (Is=20mA)	V_{oh} = 4Vdc

Electronic RG2 (100°C,300kHz)



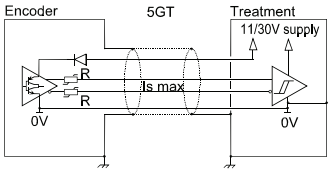
Supply	4,75 to 30Vdc
Cons. without load	75mA max
Current per channel	40mA max
0 max (Is=20mA)	V_{ol} = 0,5Vdc
1 min (Is=20mA)	V_{oh} = 4Vdc

Electronic PG5 (100°C, 300kHz)



Supply	5 to 30Vdc
Cons. without load	75mA max
Current per channel	40mA max
0 max (Is=20mA)	V_{ol} = 0,5Vdc
1 min (Is=20mA)	V_{oh} = Vcc-2,5Vdc

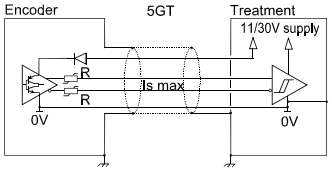
Electronic 5GT (70°C, 120kHz)



Supply	11 to 30Vdc
Cons. without load	75mA max
Current per channel	40mA max
0 max (Is=20mA)	V_{ol} = 1,5Vdc
1 min (Is=20mA)	V_{oh} = Vcc-2,5Vdc

SINE WAVE OUTPUT SIGNALS

Electronic 5GT (70°C, 120kHz)



Supply	11 to 30Vdc
Cons. without load	75mA max
Current per channel	40mA max
0 max (Is=20mA)	V_{ol} = 1,5Vdc
1 min (Is=20mA)	V_{oh} = Vcc-2,5Vdc

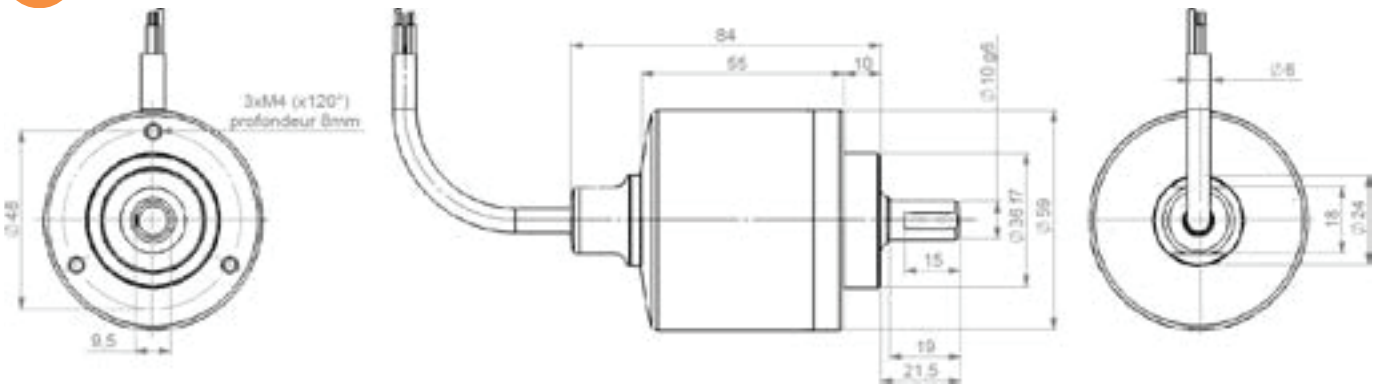
ELECTRONIC PROTECTIONS

Protection against short circuits of the electronics: 2G2, RG2, PG5, 5GT and 2WT
Protection against reverse polarity for all the electronics except 2G2 and 2WT
Consult us for special electronics: programmable resolution, 5 to 36Vdc, 100mA per channel…

STANDARD CONNECTIONS

Type	Cable	0V	+V	A or S	B or C	Z	A/ or S/	B/ or C/	Z/	Ground
G3	PVC cable 8 wires 8230/020	WH white	BN brown	GN green	YE yellow	GY grey	PK pink	BU blue	RD red	General shielding

DIMENSIONS



ORDERING OPTIONS

Example : DXM5S10/AA/RG59//01024//TEA050

DXM5S | 10/AA / RG5 | 9 // 010024 // TEA | 050

Family
DXM5S: Solid shaft encoderencoder

Shaft Bore/ Mechanics
10/AA/: 10mm shaft
316 stainless steel encoder with IP69K

Voltage/ Output
5GT: 11-30V voltage and push-pull output
RG5: 4.75-30V voltage and push-pull output
2G2: 5V voltage and RS422 output
RG2: 4.75-30V voltage and RS422 output
2WT: 5V voltage and 1Vpp output

Channels
9: AA/ BB/ ZZ/ B before A Z gated A&B
For 2WTelectronic,
N: SS/ CC/ ZZ/ C before S Z ungated

Cycles/ Turns
(Enter Cycles)
See available resolutions above

Output Termination
TEA: Silicone cable

Cable Lenght
XXX: cable length ex. 020 = 2meters

AVAILABLE RESOLUTIONS

Available resolutions digital signals: 50 60 100 120 125 127 150 180 200 240 250 256 300 314 360 375 400 500 512 600 720 750 768 800 927 1000 1024 1200 1250 1280 1440 1500 1800 2000 2048 2400 2500 3000 3600 4000 4096 5000
Interpolated available resolutions digital signals (limited to 70°C): 1080 1536 2560 2880 3072 4320 4500 5120 5400 5760 6000 6144 7200 7500 8000 8192 9000 10000 10240 10800 12000 12500 12288 14400 15000 16000 16384 18000 20000 20480 21600 24000 24576 25000 28800 30000 32000 32768 36000 40000 40960 43200 48000 49152 50000 57600 60000 64000 65536 80000
Available resolutions sine wave signals (2WT electronic) : 250 256 360 500 512 1000 1024 1500 1800 2000 2048 2500

AGENCY APPROVALS & CERTIFICATIONS

CE

WARNINGS

RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE
- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

Failure to follow these instructions can result in serious injury, or equipment damage.

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH
- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

Failure to follow these instructions will result in death or serious injury.

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