Shaft version economy Type 3700

- Economical version
- Compact size only ø 37 x 33 mm
- Temperature- and ageing compensation
- Short circuit proof outputs
- Resolution up to 1024 ppr
- Protection up to IP 67
- Ex available as explosion proof zone 2 and 22
- Flange and cover made from a new High-Tech-Material (composite material)
- High component integration leads to low profile design, high performance and economical pricing
- "Tube Tech®" cable outlet guarantees 10x higher strain relief than traditional cabling methods and ensures IP 67
- 1 ½" (37 mm) diameter housing suitable for replacing resolvers

Mechanical characteristics:

Speed:	max. 6000 min^{-1}
Rotors moment of inertia:	approx. 0,4 x 10^{-6} kgm^2
Starting torque:	< 0,007 Nm
Radial load capacity of the shaft:	20 N
Axial load capacity of the shaft:	10 N
Weight:	approx. 0,1 kg
Protection acc. to EN 60 529:	bearing, shaft: IP 65 cable outlet: IP67
Working temperature:	–20° C up to +70 °C[1)3)]
Operating temperature:	–20° C up to +80 °C[2)3)]
Materials:	shaft: stainless steel; housing, flange: composite PPA, 40% KF (carbon fibre) cable: PVC
Shock resistance acc. to DIN-IEC 68-2-27:	1000 m/s^2, 6 ms
Vibration resistance acc. to DIN-IEC 68-2-6:	100 m/s^2, 10 ... 2000 Hz

1) At push pull output and Supply voltage >15 V DC: max. 55 °C
2) At push pull output and Supply voltage >15 V DC: max. 60 °C
3) Higher temperatures up to 100 °C on request

Pulse rates available at short notice:

10, 50, 60, 100, 180, 200, 250, 300, 360, 400, 500, 512, 600, 1000, 1024

Other pulse rates available on request

Electrical characteristics:

Output circuit:	RS 422 (TTL-compatible)	Push-pull (7272)	Push-pull (7272)
Supply voltage:	5 V (±5%)	5 ... 30 V DC	10 ... 30 V DC
Power consumption (no load) with inverted signal:	typ. 40 mA / max. 90 mA	typ. 50 mA/ max.100 mA	typ. 50 mA/ max.100 mA
Permissible load/channel:	max. ±20 mA	max. ±20 mA	max. ±20 mA
Pulse frequency:	max. 250 kHz	max. 250 kHz	max. 250 kHz
Signal level high:	min. 2,5 V	min. U_B–2,0 V	min. U_B–2,0 V
Signal level low:	max. 0,5 V	max. 0,5 V	max. 0,5 V
Rise time t_r	max. 200 ns	max. 1 µs	max. 1 µs
Fall time t_f	max. 200 ns	max. 1 µs	max. 1 µs
Short circuit proof outputs[1)]:	yes[2)]	yes	yes
Reverse connection protection at U_B:	no	no	yes
Conforms to CE requirements acc. to EN 61000-6-1, EN 61000-6-4 and EN 61000-6-3			

1) When supply voltage correctly applied
2) Only one channel at a time:
(at U_B = 5 V short circuit to channel, 0 V, or +U_B is permitted).

Applications:

– Substitute for resolvers
– Packaging machines
– Electrical machines
– Vehicles
– Conveyers, elevators
– Semiconductor machines e.g pick & place, cutting ...
– Material handling
– Special machines.

Shaft version economy Type 3700

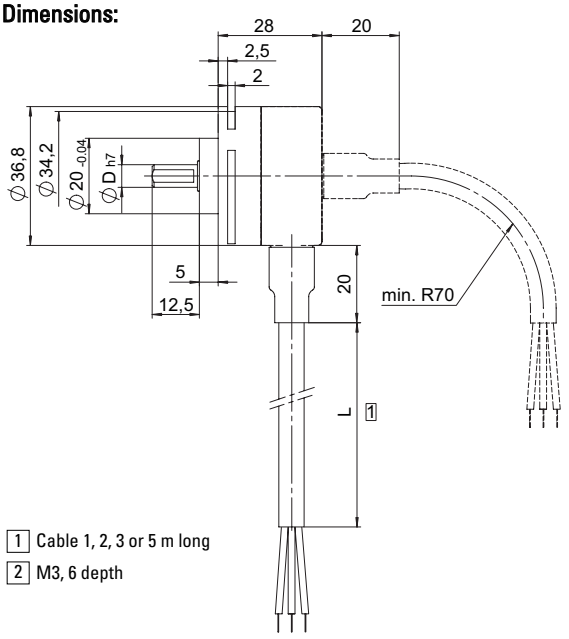
Signal:	0 V	$+U_B$	A	$\overline{A}$	B	$\overline{B}$	0	$\overline{0}$	Shield
Colour:	WH	BN	GN	YE	GY	PK	BU	RD	

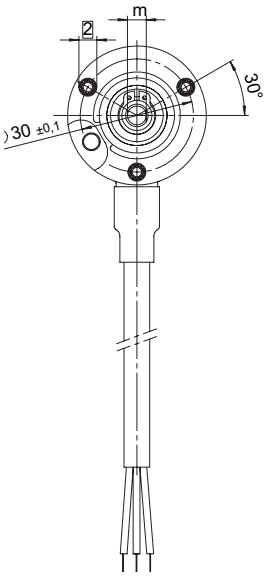
Using RS 422 outputs and long cable distances, a wave impedance has to be applied at each cable end.

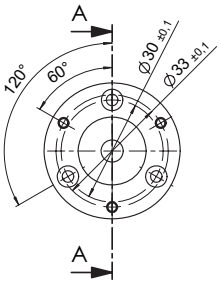
Insulate unused outputs before initial startup.

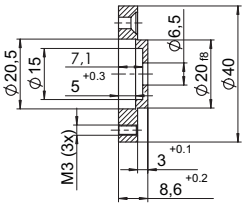
Adapting flange Typ 3700.0003

Dimensions:









Includes flange and screws M3x8 DIN 63 (3x)for encoder mounting.

Best.-Nr.: 8.0010.2220.0000

1 Cable 1, 2, 3 or 5 m long

2 M3, 6 depth

D	4	5	6	7	1/4"	8
m	3,7	4,6	5,5	6,5	5,8	7,5

Mounting advice:
Do not connect the encoder and drive rigidly to one another at the shaft and flange!
Always use a coupling to prevent shaft overload (see chapter accessories).

Order code:

8.3700.XXXX.XXXX

Range

Flange
- **1 = flange**

Shaft
- 1 = ø 4 mm
- 2 = ø 5 mm
- **3 = ø 6 mm**
- 4 = ø 1/4"
- 6 = ø 8 mm

Pulse rate
(e.g. 250 pulses => 0250)

Type of connection
- 1 = Cable* axial (1 m PVC-cable)
- **2 = Cable* radial (1 m PVC-cable)**
- 3 = Cable* axial (2 m PVC-cable)
- 4 = Cable* radial (2 m PVC-cable)
- 5 = Cable* axial (3 m) PVC-cable)
- 6 = Cable* radial (3 m PVC-cable)
- 7 = Cable* axial (5 m PVC-cable)
- 8 = Cable* radial (5 m PVC-cable)

Output and voltage display
- 1 = RS 422: 5 V DC ±5 %
- **3 = push pull with inverted signals: 5 ... 30 V DC**
- **4 = push pull with inverted signals: 10 ... 30 V DC**

Preferred types are ***fat*** *marked*

Accessories:

Couplings see encoder catalogue, chapter accessories

Stock types
- 8.3700.1322.0050
- 8.3700.1322.0360
- 8.3700.1322.0500
- 8.3700.1322.1000
- 8.3700.1322.1024

* "Tube Tech®" cable outlet guarantees 10x higher strain relief than traditional cabling methods plus higher IP-Protection.
Other cable lengths on request.