

## TECHNICAL DATASHEET

### Stainless Steel Encoders AC 61 - Profibus



Version AC 61 with bus cover

- Compact design
- Protection class IP67
- High corrosion resistance
- Robust design
- Resolution up to 26 Bit (14 Bit ST, 12 Bit MT)
- Bus cover
- Programmable: Resolution, Preset, Direction
- Output of speed, acceleration
- Applications: packaging machine for food and beverage, ship equipment (e.g. cranes, winches, cable laying ships), offshore applications



#### GENERAL INFORMATION

The absolute stainless steel encoders are available in the Versions AC 59 and AC 61.

- AC 59: drawn stainless steel housing, only together with cable outlet, no access to control elements
- AC 61: machined housing, possible with cable or bus cover, access to control elements (DIP switch, Reset switch)

#### TECHNICAL DATA mechanical

Housing diameter	61.5 mm
Shaft diameter	9.52 mm / 10 mm (Solid shaft)
Flange (Mounting of housing)	Square flange 63.5 mm
Protection class shaft input (EN 60529)	IP67
Protection class housing (EN 60529)	IP67
Shaft load axial / radial	40 N / 60 N
Max. speed	max. 6000 rpm (continuous), max. 10 000 rpm (short term)
Torque	≤ 1 Ncm
Moment of inertia	approx. 20 gcm <sup>2</sup>
Vibration resistance (DIN EN 60068-2-6)	100 m/s <sup>2</sup> (10 ... 500 Hz)
Shock resistance (DIN EN 60068-2-27)	1000 m/s <sup>2</sup> (6 ms)
Operating temperature	-40 °C ... +85 °C
Storage temperature	-40 °C ... +85 °C
Material shaft	Stainless Steel
Material housing	Stainless Steel
Weight	approx. 1180 g
Connection	Bus cover with 3 sealed cable exits

#### TECHNICAL DATA electrical

General design	as per DIN EN 61010-1, protection class III, contamination level 2, overvoltage class II
Supply voltage	DC 10-30 V
Max. current w/o load	220 mA (ST), 250 mA (MT)
EMC	EN 61326: Class A

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#### TECHNICAL DATA electrical (continued)

Resolution singleturn	10 - 14 Bit
Resolution multiturn	12 Bit
Output code	Binary
Drives	RS 485
Linearity	± ½ LSB (± 1 LSB for resolution 13, 14, 25, 26 Bit)
Profile/ protocol	Profibus DP with encoder profile class C2 (parameterizable)
Programmable	Resolution, Preset, Direction
Integrated special functions	Speed, Acceleration, Operating time
Baud rate	is automatically set within a range of 9.6 Kbaud through 12 Mbaud
Device address	adjustable with DIP switches, via fieldbus (optional)
Bus termination resistor	set via DIP switches

**STARTUP** (The encoder can be easily and quickly installed and programmed with the GSD file.)

Parameter Name	Value
0 Suppress timecounter in diag	No
0 Always class 1 diag length	No
0 Suppress store offset to EEPROM	No
1 Positive rotation	clockwise
1 Class 2 functionality	active
1 Commis. diagnostics	not active
1 Scaling function	active
1 Sampling rate (velocity only)	1 ms
4 Steps per turn	4096
6 Total measuring range(units)hi	1024
8 Total measuring range(units)lo	0

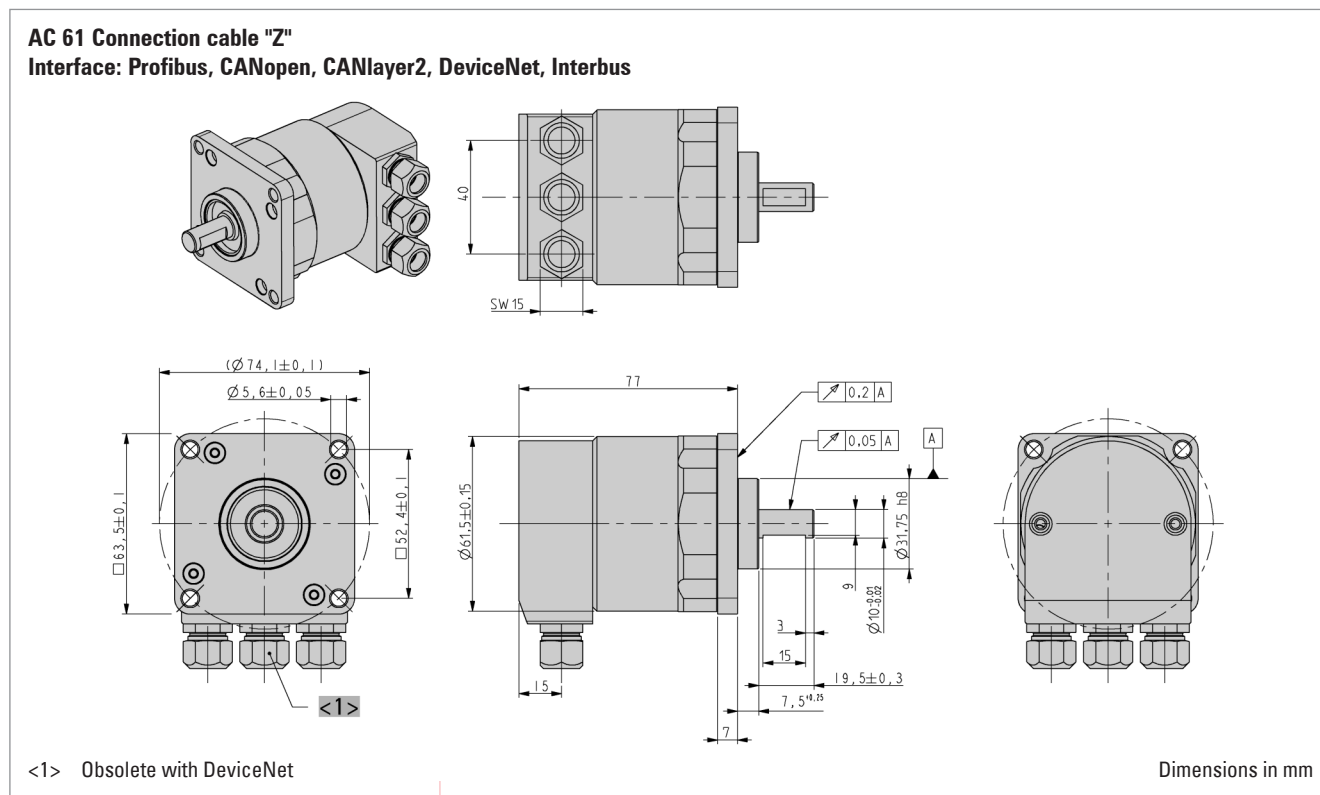
#### ELECTRICAL CONNECTIONS Bus cover with 3 sealed cable exits

Connecting Terminal	Signal
1	UB in (DC 10 - 30V)
2	0 V in
3	UB out
4	0 V out
5	B in
6	A in
7	B out
8	A out

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#### DIMENSIONED DRAWINGS



#### ORDERING INFORMATION

Type	Resolution	Supply voltage	Flange, Protection, Shaft	Interface	Connection
<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>AC61</b>	<b>0010</b> 10 Bit ST <b>0012</b> 12 Bit ST <b>0013</b> 13 Bit ST <b>0014</b> 14 Bit ST <b>1212</b> 12 Bit MT + 12 Bit ST <b>1213</b> 12 Bit MT + 13 Bit ST <b>1214</b> 12 Bit MT + 14 Bit ST	<b>E</b> DC 10 - 30 V	<b>0.76</b> Square, IP67, 9.52 mm <b>0.72</b> Square, IP67, 10 mm	<b>DP</b> Profibus	<b>Z</b> Bus cover with 3 sealed cable exits

## TECHNICAL DATASHEET

### Stainless Steel Encoders AC 61 - Profibus Accessories

#### FLEXIBLE COUPLINGS



Bellows coupling



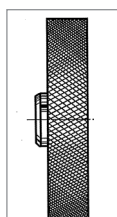
Helical coupling



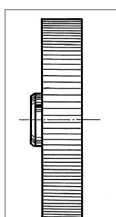
Isolated disk coupling

		Ordering code
Bellows coupling	10 mm / 10 mm	3 520 037
Bellows coupling	8 mm / 10 mm	3 520 077
Helical coupling 25/32	6 mm / 10 mm	3 520 066
Helical coupling 25/32	10 mm / 12 mm	3 520 065
Helical coupling 25/32	10 mm / 10 mm	3 520 074
Isolated disk coupling	6 mm / 10 mm	3 520 082
Isolated disk coupling	10 mm / 10 mm	3 520 088

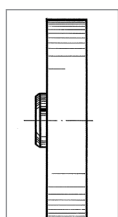
#### MEASURING WHEELS



Tread 2 + 3



Tread 4



Tread 6

#### Tread 2 B

with glued-on rubber profile B = low-wear rubber surface with good grip (white)  
Applications such as paper and cardboard, measuring cables, nongreasy metals, fleece, undressed or surface-treated wood, soft and hard plastics

#### Tread 3

vulcanized rubber surface with parallel knurl  
Applications such as rubber, leather, fabrics, flooring and glass

#### Tread 4

Aluminum with parallel knurl  
Applications such as rubber, soft plastics, wood with rough surface, and to a limited extent for fabrics

#### Tread 6

plastic surface  
Applications such as wire, greasy metals and steel sections

Material	Bore diameter (mm) fitting to encoder shaft	Circumference	Tread	Width of bearing surface	Ordering code
Aluminum	10 mm	0.2 m	2 B	12 mm	0 601 049
Aluminum	10 mm	0.5 m	2 B	25 mm	0 601 151
Aluminum	10 mm	0.5 m	3	25 mm	0 601 156
Aluminum	12 mm	0.5 m	3	25 mm	0 601 159
Aluminum	10 mm	0.5 m	6	25 mm	0 601 163
Aluminum	10 mm	0.5 yd	4	25 mm	0 601 157

**TECHNICAL DATASHEET****Stainless Steel Encoders AC 61 - Profibus  
Accessories****TECHNICAL MANUALS**

	<b>Ordering code</b>
Technical manual, English	2 565 255 (or homepage)
Technical manual, German	2 565 090 (or homepage)

**SOFTWARE**

	<b>Ordering code</b>
GSD-file, as download from our homepage	<a href="http://www.hengstler.com">www.hengstler.com</a>