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# HENGSTLER

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**HENGSTLER**

# Absolute Shaft Encoders Type AC 58

## ACURO industry CANopen



- Diagnostic LED
- Programmable: Resolution, Preset, Offset, Direction
- Output of speed and acceleration
- Operation timer
- Alarm and warning display
- Direction
- Option: display „tico“
- Address and baud rate via interface parameterizable (optional)

### TECHNICAL DATA mechanical

Housing diameter	58 mm
Protection class shaft input	IP64 or IP67
Protection class housing	Connection bus cover IP67 Connection cable, conin IP64 (IP67 optional)
Flange	Synchro flange, clamping flange, hubshaft with tether, square flange
Shaft diameter	Solid shaft 6 mm, 10 mm; hub shaft 10 mm, 12mm
Max. speed	12 000 min <sup>-1</sup> (short term), 10 000 min <sup>-1</sup> (continuous)
Starting torque	≤ 0.5 Ncm
Moment of inertia	3.8 10 <sup>-6</sup> kgm <sup>2</sup>
Spring tether (hollow shaft)	
Tolerance axial	± 1.5 mm
Tolerance radial	± 0.2 mm
Max. shaft load	axial 40 N / radial 60 N
Vibration resistance (IEC 68-2-6)	100 m/s <sup>2</sup> (10 - 500 Hz)
Shock resistance (IEC 68-2-27)	1000 m/s <sup>2</sup> (6 ms)
Operating temperature	-40...+85 °C
Storage temperature	-40...+85 °C
Material shaft	Stainless steel
Material housing	Aluminium
Weight approx.	350 g (ST), 400 g (MT)

### TECHNICAL DATA electrical

Supply voltage	DC 10 - 30 V
Max. current w/o load ST/MT	220 mA/ 250 mA
EMC	Noise emission according to EN 50081-2 Immunity to interference according to EN 50082-2
Interface	CAN High-Speed according to ISO/DIS 11898
Protocol	CANopen according to DS301 with profile DSP 406, programmable encoder according class C2
General design	as per EN 61010-Part 1, protection class III, contamination level 2, overvoltage class II
Programmable	Resolution, Preset, Offset, Direction
Resolution singleturn	10 to 14 Bit
Resolution multiturn	12 Bit
Linearity	± ½ LSB (± 1 LSB for resolution 13, 14, 25, 26 Bit)
Output code	Binary
Integrated special functions	Speed, acceleration, round axis, limit values, operation timer

# Absolute Shaft Encoders

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### TECHNICAL DATA electrical (continued)

Updating of values	every millisecond (adjustable), on request
Basic identifier	set via DIP switches
Baud rate	set via DIP switches within a range of 10 through 1000 Kbit/s
Bus termination resistor	set via DIP switches
Connection	Cable radial or axial Conin radial or axial, cw or ccw Bus cover with: · 3 sealed cable exits · double conin 9 pole cw radial · 4 pole M12 f. "tico" display + 2 sealed cable exits

### DIMENSIONAL DRAWINGS

see chapter "Dimensional drawings ACURO industry", starting page 146

### PIN ASSIGNMENT Bus cover with double conin

Conin-PIN	Bus cover with	
	Pin insert (IN)	Socket insert (OUT)
1	CAN in +	CAN out +
2	CAN in -	CAN out-
3	CAN GND in	CAN GND out
4	N.C.	N.C.
5	N.C.	N.C.
6	N.C.	N.C.
7	UB in	UB out
8	0 V in	0 V out
9	N.C.	N.C.
screen	screen <sup>1</sup>	screen <sup>1</sup>

<sup>1</sup> screen connected with encoder housing

### PIN ASSIGNMENT with conin or cable

Conin Pin	TPE cable	Cable pairs	Signal
7	yellow	Pair 1	CAN in+
2	green		CAN in -
4	pink	Pair 2	CAN out +
5	grey		CAN out -
3	blue	Pair 3	CAN GND in
11	brown		CAN GND out
12	white 0.5 mm	Pair 3	UB in
10	brown 0.5 mm		0 V in
screen		screen	screen

### PIN ASSIGNMENT Bus cover with 3 sealed cable exits

Connecting block KL 1 (10 pole)	
No.	Signal name
1	UB in (DC 10-30V)
2	0 V in
3	CAN in - (dominant L)
4	CAN in + (dominant H)
5	CAN GND in
6	CAN GND out
7	CAN out + (dominant H)
8	CAN out - (dominant L)
9	0 V out
10	UB out (DC 10-30V)

# Absolute Shaft Encoders Type AC 58

## ACURO industry CANopen

### ACCESSORIES

	Ordering code
EDS-file as download from our homepage	www.hengstler.com
Technical manual, German	2 565 250 (Web)
Technical manual, English	2 565 329 (Web)
Clamping eccentric for synchro flange	0 070 655
Diaphragm coupling (hub 6/6 mm)	3 520 081
Diaphragm coupling (hub 10/10 mm)	3 520 088
Mating connector for connection I (Bus input, 9 pole, bushing, cw)	3 539 294
Mating connector for connection I (Bus output, 9 pole, pins, ccw)	3 539 293
Mating connector for connection C; D (12 pole, cw)	3 539 202
Mating connector for connection G; H (12 pole, ccw)	3 539 229
"Tico" display for connection T	
<b>(Caution: Neutralizes ohmic isolation)</b>	0 731 205
Connection cable bus cover (connection T) to "tico" 1.5m	3 539 575

### ORDERING INFORMATION

Type	Resolution	Supply voltage	Flange, Protection, Shaft	Interface	Connection
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>AC58</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>S.41</b> Synchro, IP64, 6x10mm <b>S.71</b> Synchro, IP67 <sup>1</sup> , 6x10mm <b>K.42</b> Clamping, IP64, 10x19.5mm <b>K.72</b> Clamping, IP67 <sup>1</sup> , 10x19.5mm <b>K.46</b> Clamping, IP64, 9.52x19.5mm <b>K.76</b> Clamping, IP67 <sup>1</sup> , 9.52x19.5mm <b>F.42</b> Hubshaft with tether, IP64, 10x19.5mm hollow shaft <b>F.47</b> Hubshaft with tether, IP64, 12x19.5mm hollow shaft <b>F.46</b> Hubshaft with tether, IP64, 9.52x19.5mm hollow shaft <b>Q.42</b> Square, IP64, 10x19.5mm <b>Q.72</b> Square, IP67 <sup>1</sup> , 10x19.5mm <b>Q.46</b> Square, IP64, 9.52x19.5mm <b>Q.76</b> Square, IP67 <sup>1</sup> , 9.52x19.5mm	<b>OL</b> CANopen  <b>OC</b> CANopen (on request)	<b>A</b> Cable axial <b>B</b> Cable radial <b>C</b> Conin 12 pole axial cw <b>D</b> Conin 12 pole radial cw <b>G</b> Conin 12 pole axial ccw <b>H</b> Conin 12 pole radial ccw <b>I</b> Bus cover with double conin 9 pole radial cw <b>Z</b> Bus cover with 3 sealed cable exits

<sup>1</sup> Protection class IP67 in combination with connection A - H: Version without DIP switches and LED. Setting over fieldbus  
**Preferably available versions are printed in bold type.**