Absolute Shaft Encoders — Type AC 58

ACURO industry — Profibus-DP

- Overall length: 63 mm for single turn, 73 mm for multi turn including bus cover
- All current fieldbus interfaces are available
- The complete bus specific electronics is integrated in the connection cover
- Versions: profibus DP, DeviceNet, CAN, CANopen and Interbus
- Option: Indication "tico"

TECHNICAL DATA
mechanical

Housing diameter	58 mm
Protection shaft input	IP 64 or IP 67
Protection housing	IP 67
Flange	Synchro flange, clamping flange, spring plate
Shaft diameter	Full shaft 6 mm, 10 mm; hollow shaft 10 mm, 12 mm
Max. speed	Continuous: 10,000 min^{-1}, short term: 12,000 min^{-1}
Starting torque	≤ 0.01 Nm
Inertia of rotor	3.8 x 10^{-6} kgm^2
Spring tether (hollow shaft)	
Tolerance axial	± 1.5 mm
Tolerance radial	± 0.2 mm
Max. shaft load	axial 40 N, radial 60 N Ø 6 mm axial 60 N (13 lbs), radial 110 N (24 lbs) Ø 10 mm axial 107 N (24 lbs), radial 160 N (35 lbs)
Bearing life	1 x 10^{10} revolutions (typ.) at 35% of full rated shaft load 1 x 10^{9} revolutions (typ.) at 75% of full rated shaft load 1 x 10^{8} revolutions (typ.) at 100% of full rated shaft load For example 30,000 h at 6,000 RPM
Shock resistance DIN EN 60068-2-27	1,000 m/s^2 (6 ms)
Vibration resistanceDIN EN 60068-2-6	100 m/s^2 (10 ... 2,000 Hz)
Operating temperature	- 40 ... 85 °C
Storage temperature	- 40 ... 85 °C
Weight ST / MT	approx. 350 g / 400 g

TECHNICAL DATA
electrical

Supply voltage	10-30 V
Intrinsic current consumption ST/MT	220 mA / 250 mA
Interface	Profibus-DP, encoder profile
Certification	PNO
Programmable	According to Class 2: Resolution, Preset, Direction
Output code	Binary
Baud rate	9.6 KBaud - 12 MBaud
Resolution single turn	10-14 Bit, depend. on version
Resolution multi turn	12 Bit
Integrated special functions	Speed, Acceleration, On time
Connections	Bus cover as T-manifold

Note: Preset only via bus, no key

PROFIBUS DP

CONNECTION DIAGRAM PROFIBUS
Connector 2-fold 12 pole (integrated T-manifold)

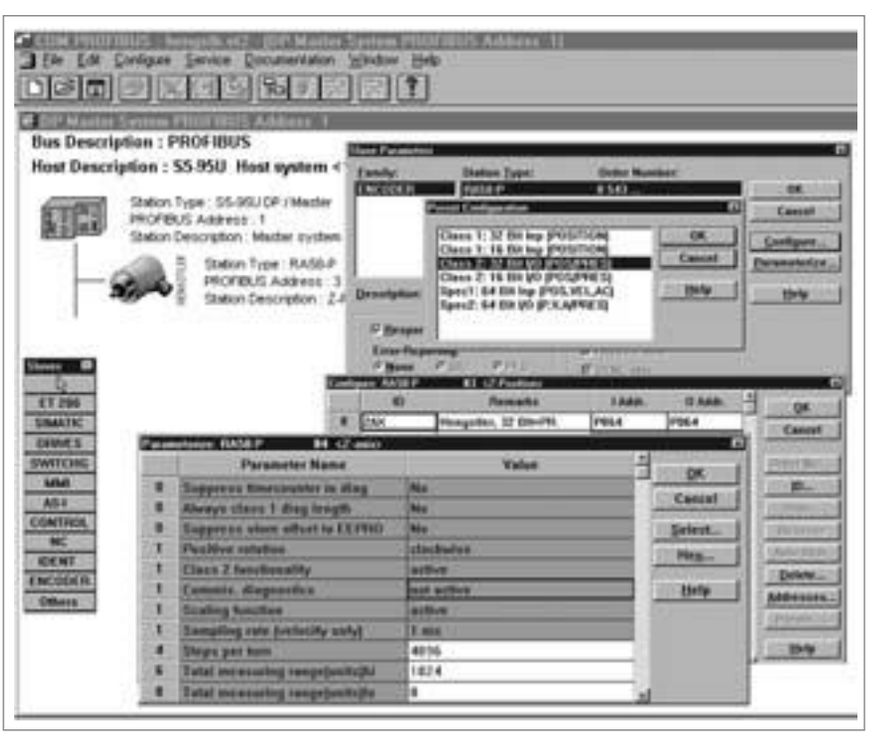
Pin	Connector, 2-fold (I) IN (pins)	OUT (socket)	Description
1		GND1	Data Ground (M5V) [1]
2	A	A	Receive/Transmit Data-Negative (A)
3			
4	B	B	Receive/Transmit Data-Positive (B)
5			
6		VCC1	+5 V signal output (P5V) [1]
7	10...30 VDC	10...30 VDC	supply voltage $+U_B$ (P24)
8	0 V	0 V	supply voltage ground (M24)
9			
10			
11			
12			
screen	screen	screen	screen connected with encoder housing

[1] Used as power supply for an external bus termination resistor

PIN ASSIGNMENT PROFIBUS
Bus cover

Connection Cable Clamp (Bus cover)	
Pin	**Signal**
1	UB in (10...30V)
2	0V in
3	UB out (10...30V)
4	0V out
5	B in
6	A in
7	B out
8	A out

STARTUP
The encoder can be easily and quickly installed and programmed with the GSD file



ACCESSORIES

	Art.No.
Synchro flange clamping eccentric	0 070 655
Diaphragm coupling (hub 6/6 mm)	3 520 081
Diaphragm coupling (hub 10/10 mm)	3 520 088
Mating connector (12 pole bushing, turning right) for bus input [1]	3 539 202
Mating connector (12 pole pins, turning right) for bus output [1]	3 539 186
Technical Manual Profibus, German	Internet, www.hengstler.de
Technical Manual Profibus, English	Internet, www.hengstler.com

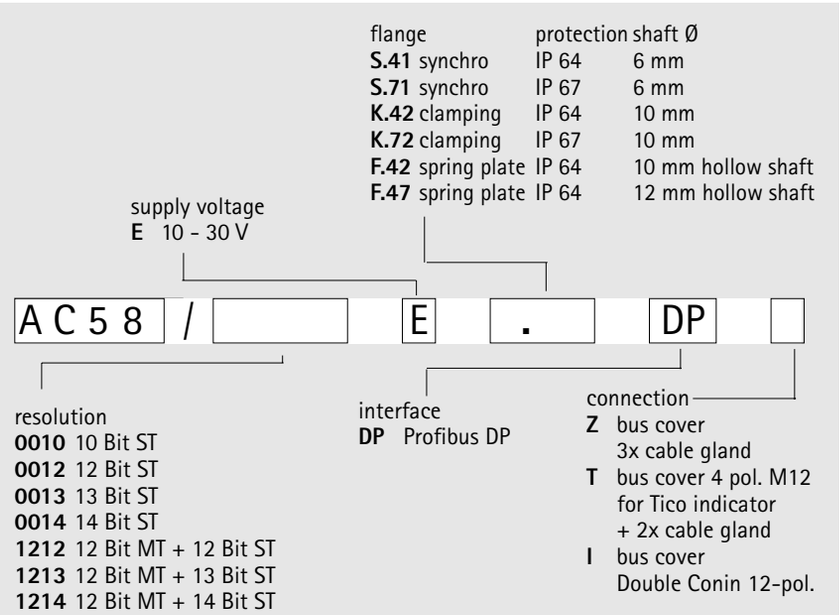
	Art.No.
Diagnostic kit 230 VAC for encoder with bus cover, incl. ACURO soft and "tico"-indicator (suited for supply voltage E and connection G and H)	1 565 070
"tico" indicator	0 731 205
Connection cable, bus cover (T) to "tico, 1.5 m	3 539 575

[1] suited for connection I (twin flange connector with integrated T-manifold) for Profibus-DP

DIMENSIONAL DRAWINGS

See chapter "Absolute Encoders ACURO industry – dimensional drawings"

ORDERING DATA



Note:
Bus connections radial/axial via plug and cable optional, on request.