HENGSTLER

TECHNICAL DATASHEET

Absolute Encoder AC 58 - DeviceNet

Synchro flange

- Programmable: Resolution, Preset, Direction
- Allan-Bradley compatible
- Scalable
- Preset function
- Diagnostic LED
- Option: Display "tico"

TECHNICAL DATA
mechanical

Housing diameter	58 mm
Shaft diameter	6 mm / 10 mm (Solid shaft) 10 mm / 12 mm (Hub shaft)
Flange (Mounting of housing)	Synchro flange, Clamping flange, Tether, Square flange
Protection class shaft input (EN 60529)	IP64 or IP67
Protection class housing (EN 60529)	IP67
Shaft load axial / radial	40 N / 60 N
Axial endplay of mounting shaft (hubshaft)	± 1.5 mm
Radial runout of mating shaft (hubshaft)	± 0.2 mm
Max. speed	max. 10 000 rpm (continuous), max. 12 000 rpm (short term)
Starting torque typ. [1]	≤ 0.01 Nm
Moment of inertia	ca. 3.8 x 10^{-6} kgm²
Vibration resistance (DIN EN 60068-2-6)	100 m/s² (10 ... 500 Hz)
Shock resistance (DIN EN 60068-2-27)	1000 m/s² (6 ms)
Operating temperature	-40 °C ... +85 °C
Storage temperature	-40 °C ... +85 °C
Material shaft	Stainless Steel
Material housing	Aluminum
Weight	approx. 350 g (ST) / 400 g (MT)
Connection	Bus cover with 2 sealed cable exits Bus cover with 2 sealed cable exits + 1 x M12 connector for "tico" display, 4 pole Bus cover with 1x M12 connectors (Conin), 5 pole

[1] at 20°C

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	Noise emission according to EN 50081-2 Immunity to interference according to EN 50082-2
Resolution singleturn	10 - 14 Bit
Resolution multiturn	12 Bit

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TECHNICAL DATA
electrical (continued)

Output code	Binary
Interface	CAN High-Speed according to ISO/DIS 11898 CAN specification 2.0 A (11-Bit-Identifier)
Linearity	± ½ LSB (± 1 LSB for resolution 13, 14, 25, 26 Bit)
Profile/ protocol	DeviceNet according to Rev. 2.0, progammable encoder
Programmable	Resolution, Preset, Direction
Baud rate	set via DIP switches to 125, 250, 500 KBaud
Bus termination resistor	set via DIP switches
Updating of values	every 5 Milliseconds
MAC-ID	set via DIP switches

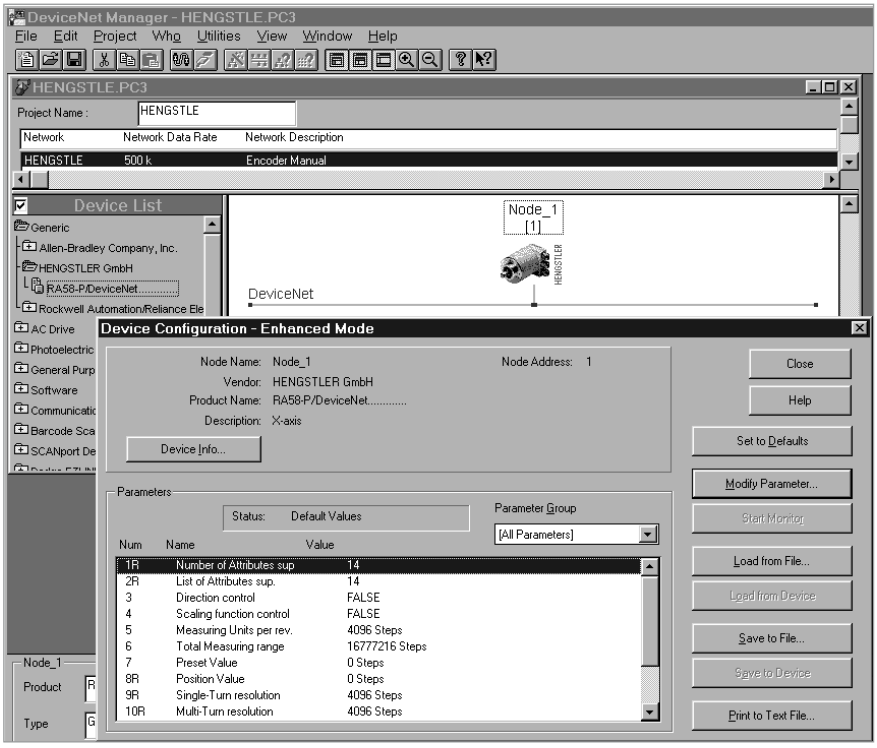
RECOMMENDED DATA TRANSFER Lead type A

Shaft resistance	135...165 Ω (3...20MHz)
Operating capacity	< 30pF/m
Loop impedance	< 110 Ω/km
Strand diameter	> 0.64 mm
Strand cross section	> 0.34 mm ^{2}

Transfer speeds

Segment length	**kbit/s**
500 m	125
250 m	250
100 m	500

STARTUP (the encoder can be easily and quickly installed and programmed with the EDS file)



TECHNICAL DATASHEET

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ELECTRICAL CONNECTIONS
Bus cover with 2 sealed cable exits

Terminals	
No.	**Signal name**
1	UB in (DC 10 - 30V)
2	0 V in
3	CAN-L
4	CAN-H
5	DRAIN
6	DRAIN
7	DRAIN
8	CAN-L
9	0 V out
10	UB out (DC 10 - 30V)

ELECTRICAL CONNECTIONS
Bus cover with 1x M12, 5 pole

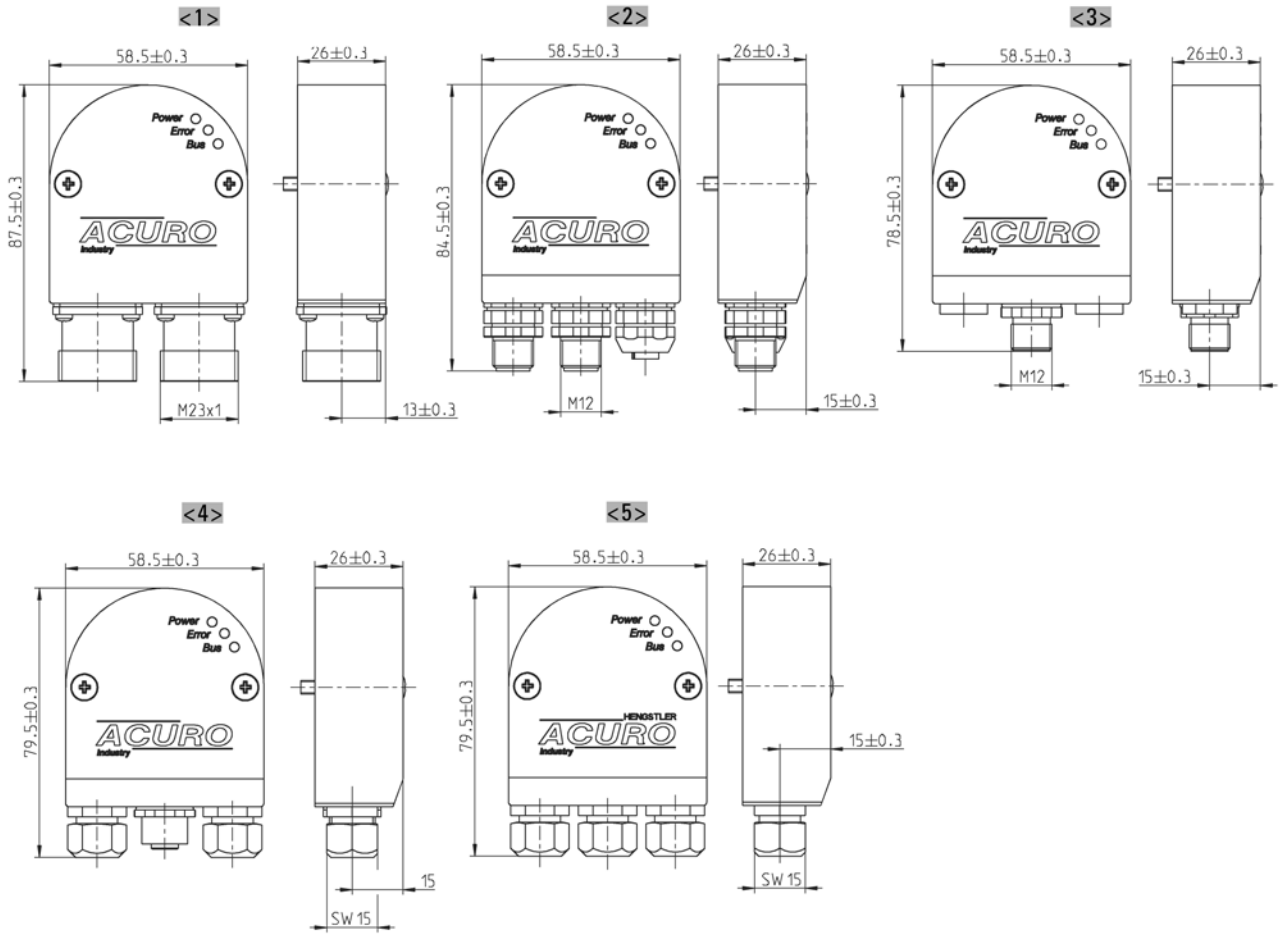
Pin	Connector	Colour
1	UB in (DC 10 - 30V)	white
2	0 V in	blue
3	CAN-L	green/yellow
4	CAN-H	black
5	DRAIN	brown

TECHNICAL DATASHEET

Absolute Encoder AC 58 - DeviceNet

DIMENSIONED DRAWINGS

Bus covers

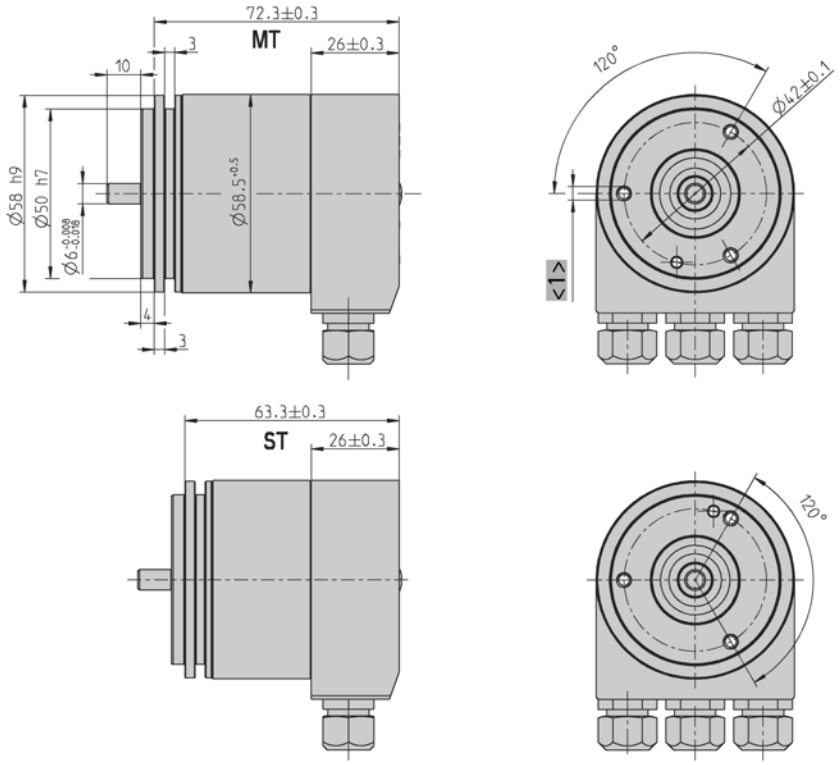


<1> Connection "I"
<2> Connection "R"
<3> Connection "S"
<4> Connection "T"
<5> Connection "Z"

Dimensions in mm

DIMENSIONED DRAWINGS (continued)

Synchro flange "S"

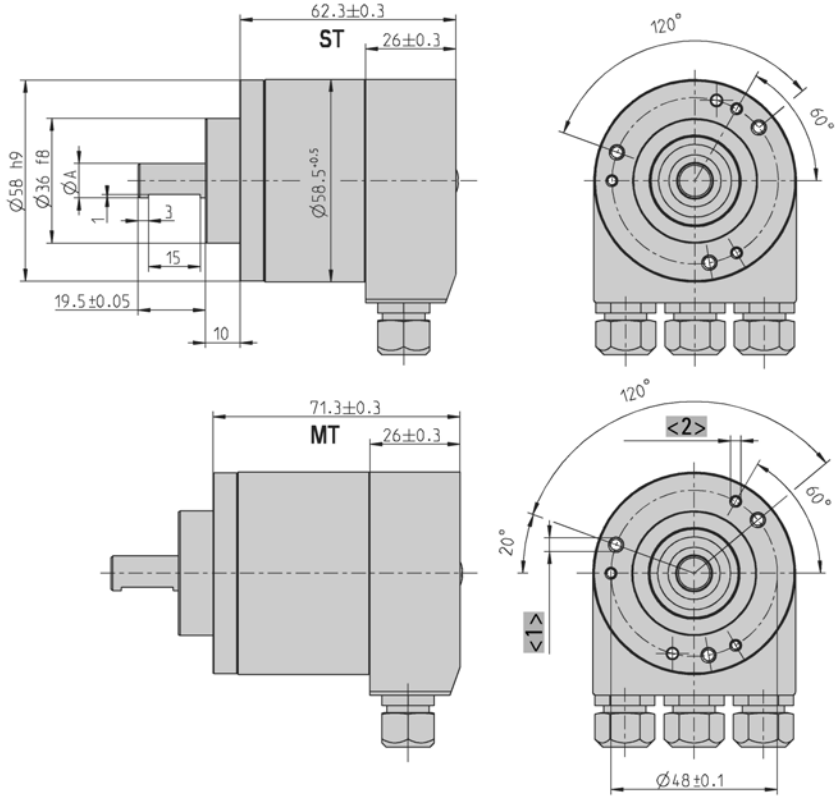


<1> 3xM4 (6 deep)

Dimensions in mm

DIMENSIONED DRAWINGS (continued)

Clamping flange "K"



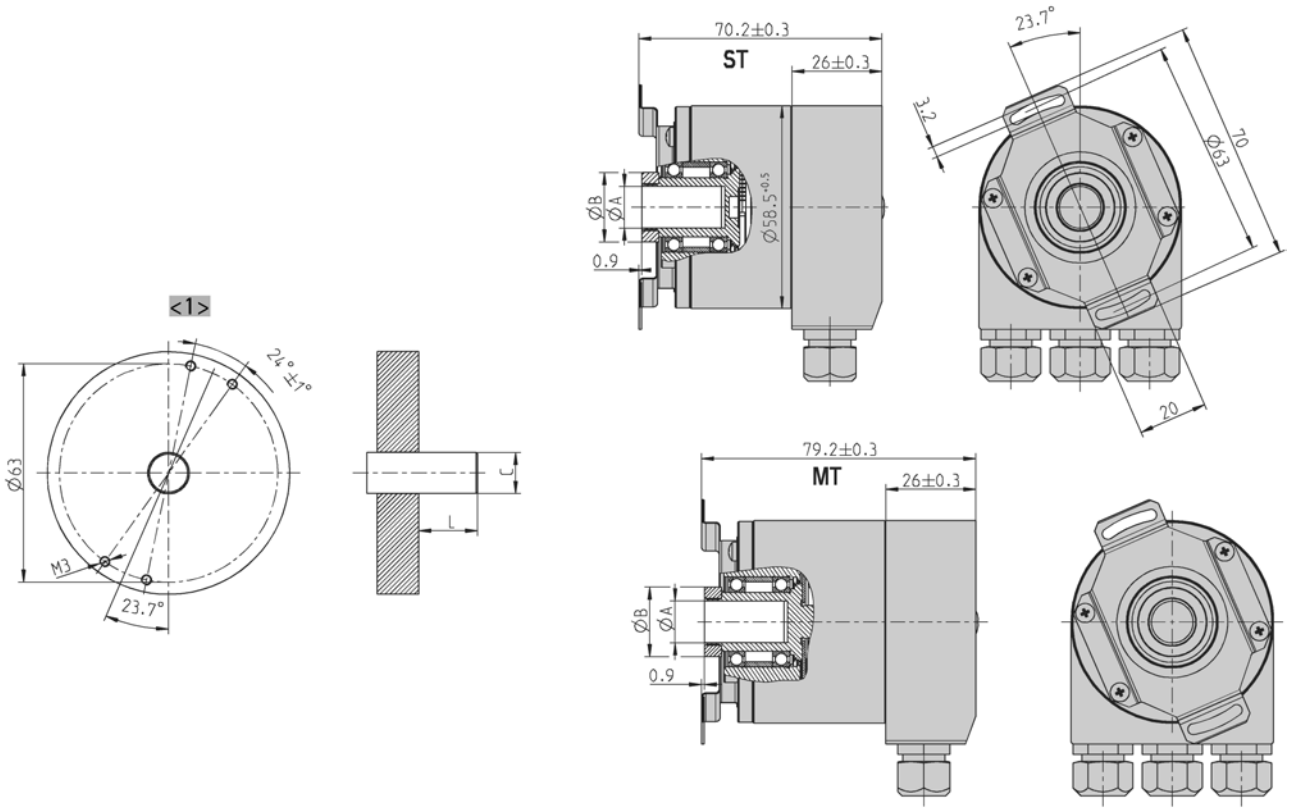
	Dim.		Unit
Shaft Ø A	10 -0.01/-0.02	9.52 -0.01/-0.02	mm
Shaft code	"2"	"6"	

<1> 3xM4 (6 deep)
<2> 3xM3 (6 deep)

Dimensions in mm

DIMENSIONED DRAWINGS (continued)

Hollow shaft "F"



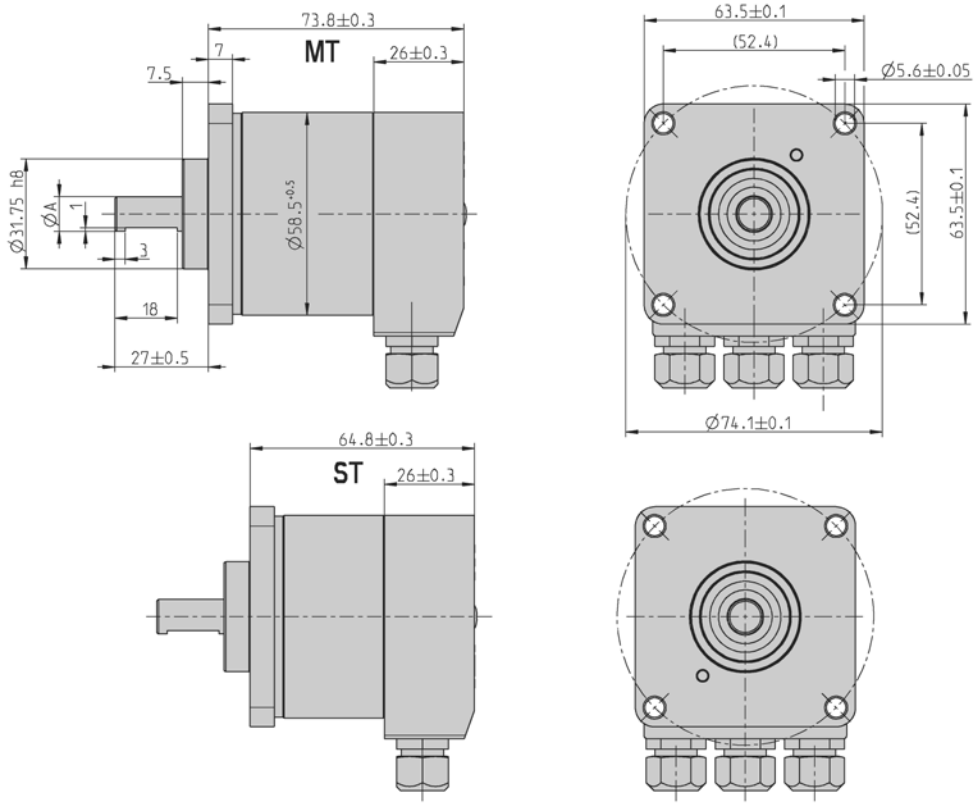
	Dim.				Unit
Hollow shaft Ø A	10 +0.012	12 +0.012	9,52 +0.012	12,7 +0.012	mm
Connecting shaft Ø C	10 g7	12 g7	9,52 g7	12,7 g7	mm
Clamping ring Ø B	18	20	18	22	mm
L_{min}	15	18	15	18	mm
L_{max}	20	20	20	20	mm
Shaft code	"2"	"7"	"6"	"E"	
L = Inside length of connection shaft					

<1> Customer side

Dimensions in mm

DIMENSIONED DRAWINGS (continued)

Square flange "Q"



	Dim.		Unit
Shaft Ø A	10 -0.01/-0.02	9.52 -0.01/-0.02	mm
Shaft code	"2"	"6"	

Dimensions in mm

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ORDERING INFORMATION

Type	Resolution	Supply voltage	Flange, Protection, Shaft	Interface	Connection
AC58	**0010** 10 Bit ST **0012** 12 Bit ST **0013** 13 Bit ST **0014** 14 Bit ST **1212** 12 Bit MT + 12 Bit ST **1213** 12 Bit MT + 13 Bit ST **1214** 12 Bit MT + 14 Bit ST	**E** DC 10 - 30 V	**S.41 Synchro, IP64, 6 mm** **S.71 Synchro, IP67, 6 mm** **K.42 Clamping, IP64, 10 mm** **K.46** Clamping, IP64, 9.52 mm **K.72 Clamping, IP67, 10 mm** **K.76** Clamping, IP67, 9.52 mm **F.46** Spring tether, IP64, hubshaft 9.52 mm, mounting with clamping ring front **F.42 Spring tether, IP64, hubshaft 10 mm, mounting with clamping ring front** **F.47 Spring tether, IP64, hubshaft 12 mm, mounting with clamping ring front** **Q.46** Square, IP64, 9.52 mm **Q.42** Square, IP64, 10 mm **Q.76** Square, IP67, 9.52 mm **Q.72** Square, IP67, 10 mm	**VD** DeviceNet	**S** Bushaube mit 1x M12-Stecker, 5-polig, radial **T** Bus cover with 2 sealed cable exits + 1 x M12 connector for "tico" display, 4 pole **Z** Bus cover with 2 sealed cable exits

Preferably available versions are printed in bold type.

TECHNICAL DATASHEET

Absolute Encoder AC 58 - DeviceNet Accessories

FLEXIBLE COUPLINGS

Bellows coupling

Disk coupling

Helical coupling

Isolated disk coupling

		Ordering code
Bellows coupling	10 mm / 10 mm	3 520 037
Bellows coupling	6 mm / 6 mm	3 520 068
Bellows coupling	8 mm / 10 mm	3 520 077
Disk coupling	6 mm / 6 mm	0 070 663
Helical coupling 19/28	5 mm / 6 mm	3 520 035
Helical coupling 19/28	6 mm / 6 mm	0 070 653
Helical coupling 19/28	6 mm / 6.35 mm	3 520 051
Helical coupling 25/32	6 mm / 9.53 mm	3 520 052
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 / 6 mm	3 520 081
Isolated disk coupling	6 mm / 10 mm	3 520 082
Isolated disk coupling	10 mm / 10 mm	3 520 088

MOUNTING

	Ordering code
Clamping eccentric, For M4 (set of three)	1 522 300
Clamping eccentric for synchro flange, d6,5 for M3 (set of three)	0 070 655
Fastening angle (plastic), for clamping flange RI 58, AC 58 (fastening material included)	1 522 329
Mounting bell (plastic), for synchro flange RI 58, AC 58 (clamping eccentric and fastening material included)	1 522 330
Square flange adapter 58 x 58 mm, for clamping flange RI 58, AC 58 (fastening material included)	1 522 326
Square flange adapter 80 x 80 mm, for clamping flange RI 58, AC 58 (fastening material included)	1 522 327
Synchro flange adapter , for clamping flange RI 58, AC 58 (fastening material included)	1 522 328
Torque support	1 531 188

CONNECTING CABLES

Cable not made up with connectors	Ordering code
TPE cable, 12-core + screen	3 280 220 + length

DISPLAYS

	Ordering code
"Tico" display for connection T	0 731 205
Connection cable bus cover (connection T) to "tico", 1.5 m	3 539 516

TECHNICAL MANUALS

	Ordering code
Technical manual, English	2 565 255 (or homepage)
Technical manual, German	2 565 090 (or homepage)

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Absolute Encoder AC 58 - DeviceNet Accessories

SOFTWARE

	Ordering code
EDS-file, as download from our homepage	www.hengstler.com