HENGSTLER

TECHNICAL DATASHEET

Absolut Encoder AC58 – CANopen

Clamping flange

- Diagnostic LED
- Programmable: Resolution, Preset, Offset, Direction, Heartbeat
- Output of speed, acceleration
- Operating Timer
- Address and baud rate can be parameterized via interface (optional)

ACURO® industry CANopen® CE c UL us LISTED RoHS

TECHNICAL DATA
mechanical

Housing diameter	58 mm
Shaft diameter	6 mm / 10 mm (Solid shaft) 10 mm / 12 mm (Hub shaft)
Flange	Synchro flange, Clamping flange, Tether, Square flange
Protection class shaft input (EN 60529)	IP64 or IP67
Protection class housing (EN 60529)	Connection bus cover: IP67 Connection cable or M23: IP64 (IP67 optional)
Shaft load axial/ radial	40 N / 60 N
Axial endplay of mounting shaft (Hub shaft)	±1.5 mm
Radial endplay of mounting shaft (Hub shaft)	±0.2 mm
Max. Speed	max. 10,000 U/min (continuous) max. 12,000 U/min (short term)
Starting torque typ.[1]	≤ 0.01 Nm
Moment of inertia	ca. 3.8 x 10^{-6} kgm^2
Vibration resistance (DIN EN 60068-2-6)	100 m/s^2 (10 - 2000 Hz)
Shock resistance (DIN EN 60068-2-27)	1000 m/s^2 (6 ms)
Operating temperature	-40 °C ... +85 °C
Storage temperature	-40 °C ... +85 °C
Material shaft	Stainless steel
Material housing	Aluminum
Weight	ca. 350 g (ST) / 400 g (MT)
Connection	Cable, axial or radial M23 connector, 12-pole, axial or radial Bus cover with 3x sealed cable exits Bus cover with 2x M23-connector, 9-pole Bus cover with 2x cable exits + 1x M12-connector, 5–pole Bus cover with 1x M12-Stecker, 5-pole Bus cover with 2x M12-Stecker, 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
Current max.	220 mA (ST), 250 mA (MT)

Specifications subject to change without notice

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TECHNICAL DATA
electrical

Resolution Singleturn	12-16 Bit
Resolution Multiturn	12 Bit
Output code	Binary
Linearity	±½ LSB (±LSB) at Resolution 13, 14, 25, 26 Bit)
Profile/ protocol	CANopen according DS 301 with profile DSP 406, programmable according class C2
Programmable	Resolution, Preset, Offset, Direction
Integrated special functions	Speed, Acceleration, Limit values, Operating time
Baud rate	via DIP-switches within a range of 10 trough 1.000 Kbit/s
Bus terminal resistor	Set via DIP switches
Updating of values	every millisecond (adjustable), on request
Node ID/ Bus identifier	Set via DIP switches

ELECTRICAL CONNECTIONS
Bus cover „I“ with 2x M23-connector, 9-pole

M23-Connector	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[1]	Screen[1]

[1]Screen connected with housing.

ELECTRICAL CONNECTIONS
Bus cover „R“ with 2x M12-connector

M12-Connector	Signal
1	GND (0V)
2	UB
3	CAN GND
4	CAN_H
5	CAN_L

ELECTRICAL CONNECTIONS
Bus cover „S“ with 1x M12-connector

M12-Connector	Signal
1	GND (0V)
2	UB
3	CAN GND
4	CAN_H
5	CAN_L

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ELECTRICAL CONNECTIONS
Bus cover "T" with
2x sealed cable exits
+1x M12– connector 5-pole

Connecting block KL1 (10-pole) Nr.	5-pole M12 connector	Signal
1	1	UB in (DC 10-30 V)
2	3	0 V in
3	2 (TXD) - TTL -Clock	Can in- (dominant L)
4	4 (RXD) - TTL-Data	Can in+ (dominant H)
5	N.C.	Can GND in
6	N.C.	Can GND out
7	N.C.	Can out+ (dominant H)
8	N.C.	Can out- (dominant L)
9	N.C.	0 V out
10	N.C.	0 V in out (DC 10-30V)

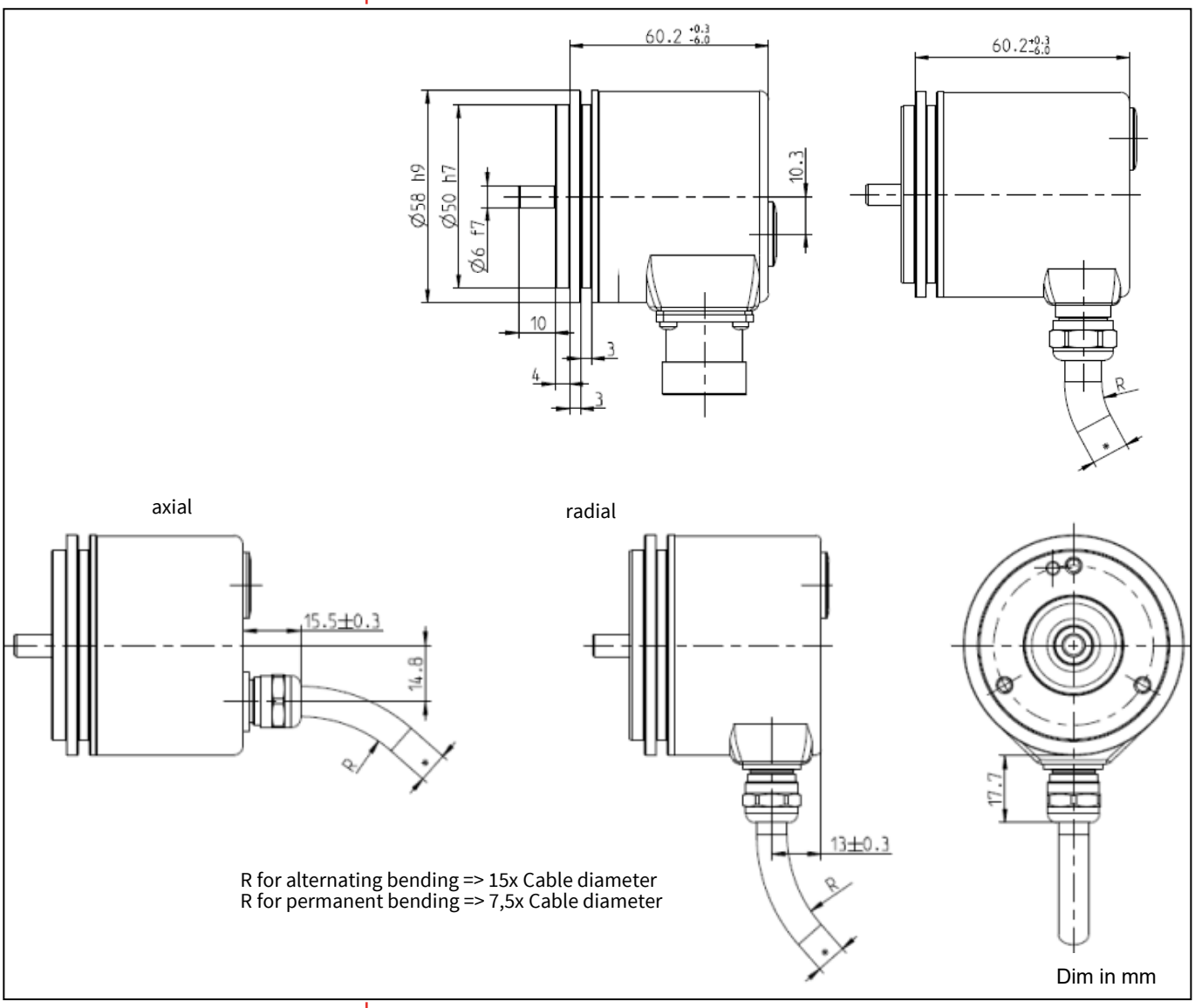
ELECTRICAL CONNECTIONS
Bus cover „Z" with 3x
sealed cable exits

Connecting block KL1 (10-pole) Nr.	Signal
1	UB in (DC 10-30 V)
2	0V 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	0 V in out (DC 10-30V)

ELECTRICAL CONNECTIONS
M23-connector, 12-pole / cable

M23-connector	TPE cable	Socket insert (OUT)	Signal
7	yellow	pair 1	Can in+
2	green		Can in-
4	pink	pair 2	Can out +
5	grey		Can out -
3	blue		Can GND in
11	black		Can GND out
12	white	pair 3	UB in
10	brown		0 V in
Screen		Screen	Screen

DIMENSIONED DRAWING
Synchro flange „S“



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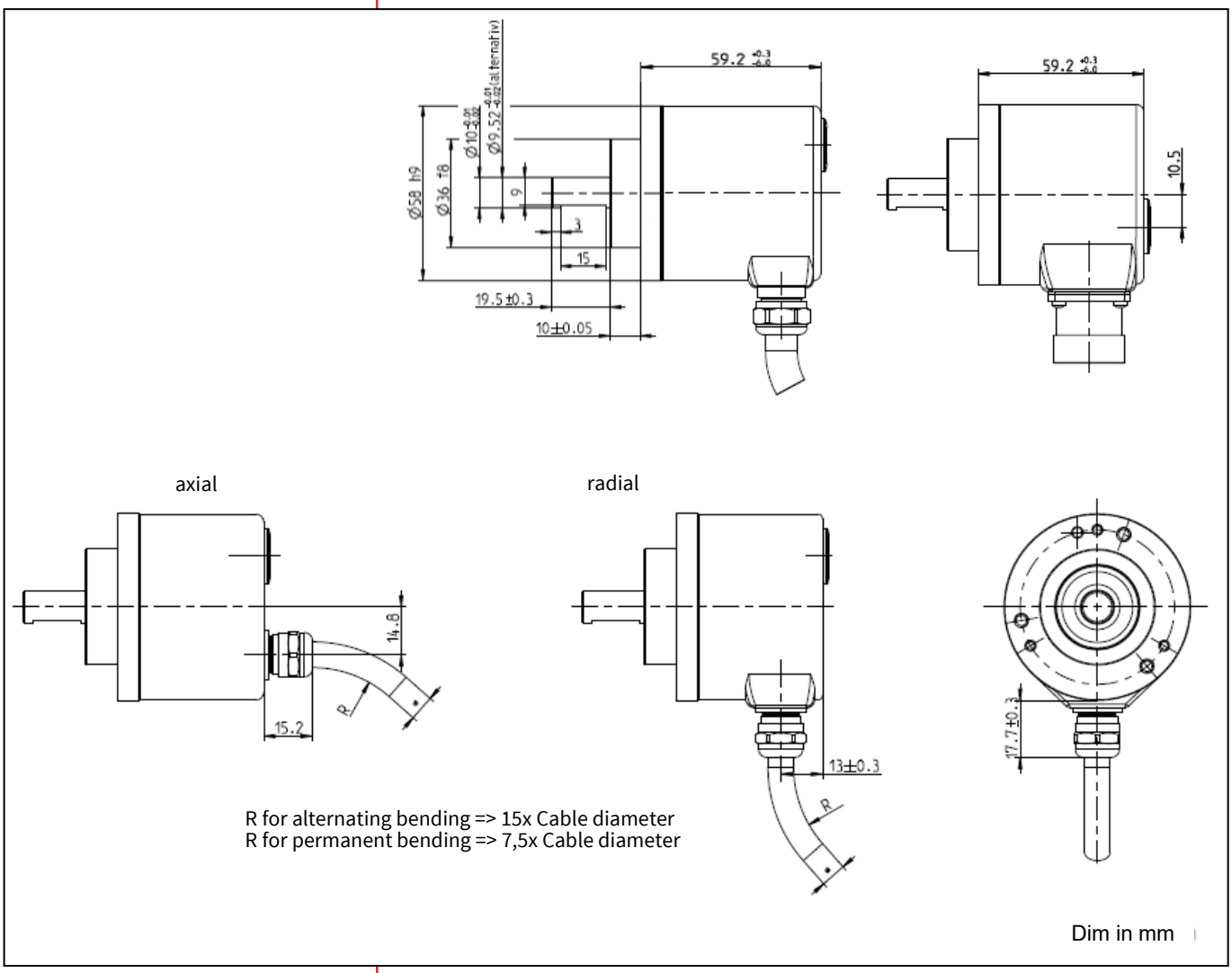
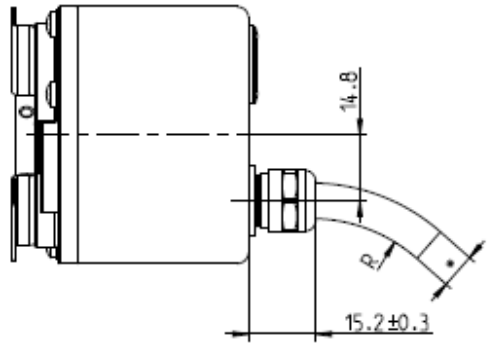
DIMENSIONED DRAWING
Clamping flange „K“



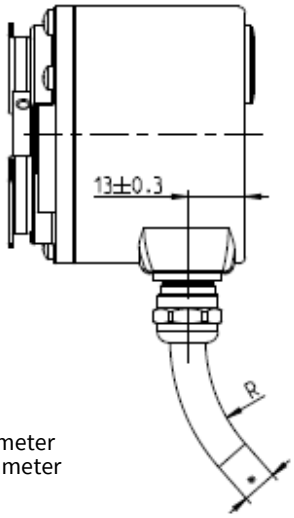
Specifications subject to change without notice

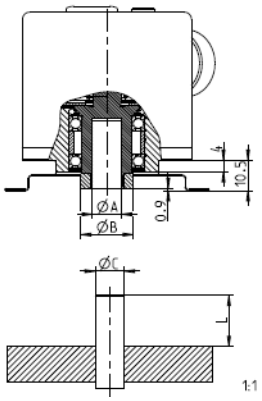
DIMENSIONED DRAWING
Hub shaft „F“

axial

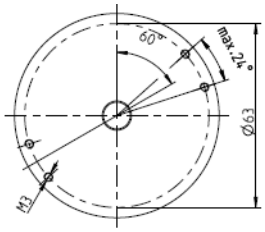


radial

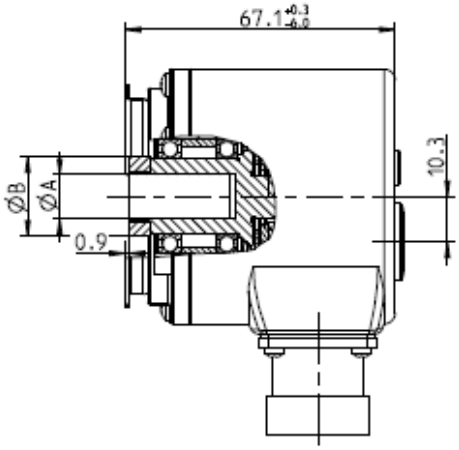


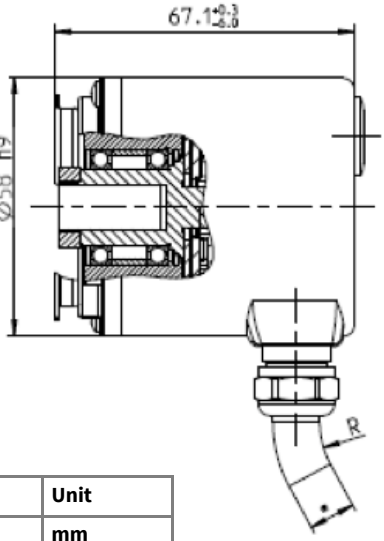


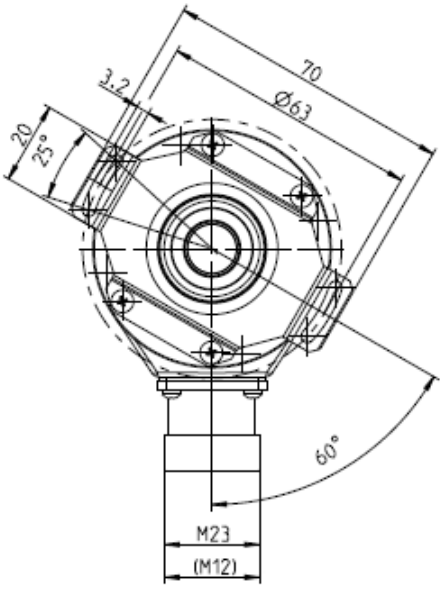
Customer side



R for alternating bending => 15x Cable diameter
R for permanent bending => 7,5x Cable diameter







	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 g^7**	**12 g^7**	**9,52 g^7**	**12,7 g^7**	**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					

Dim in mm

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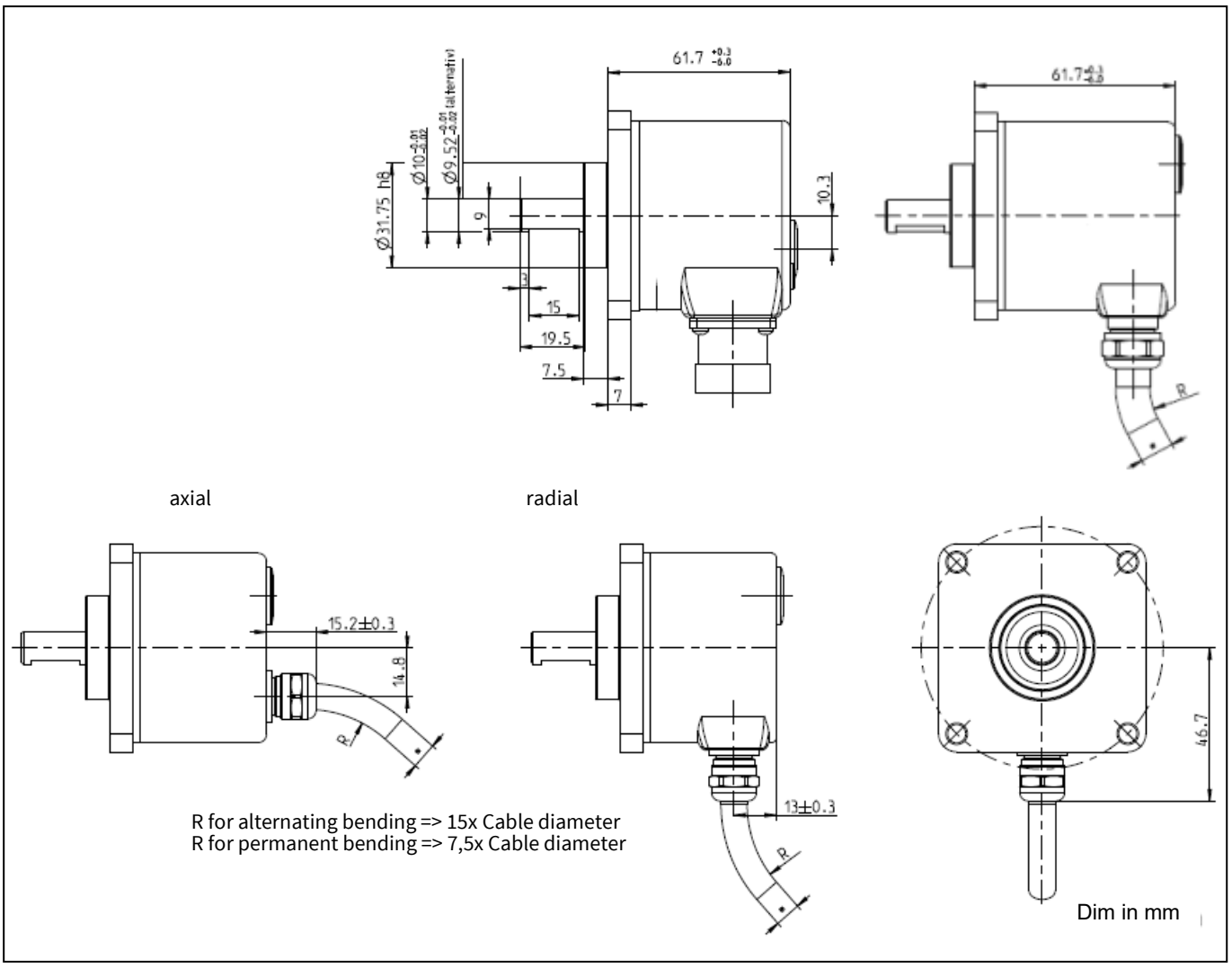
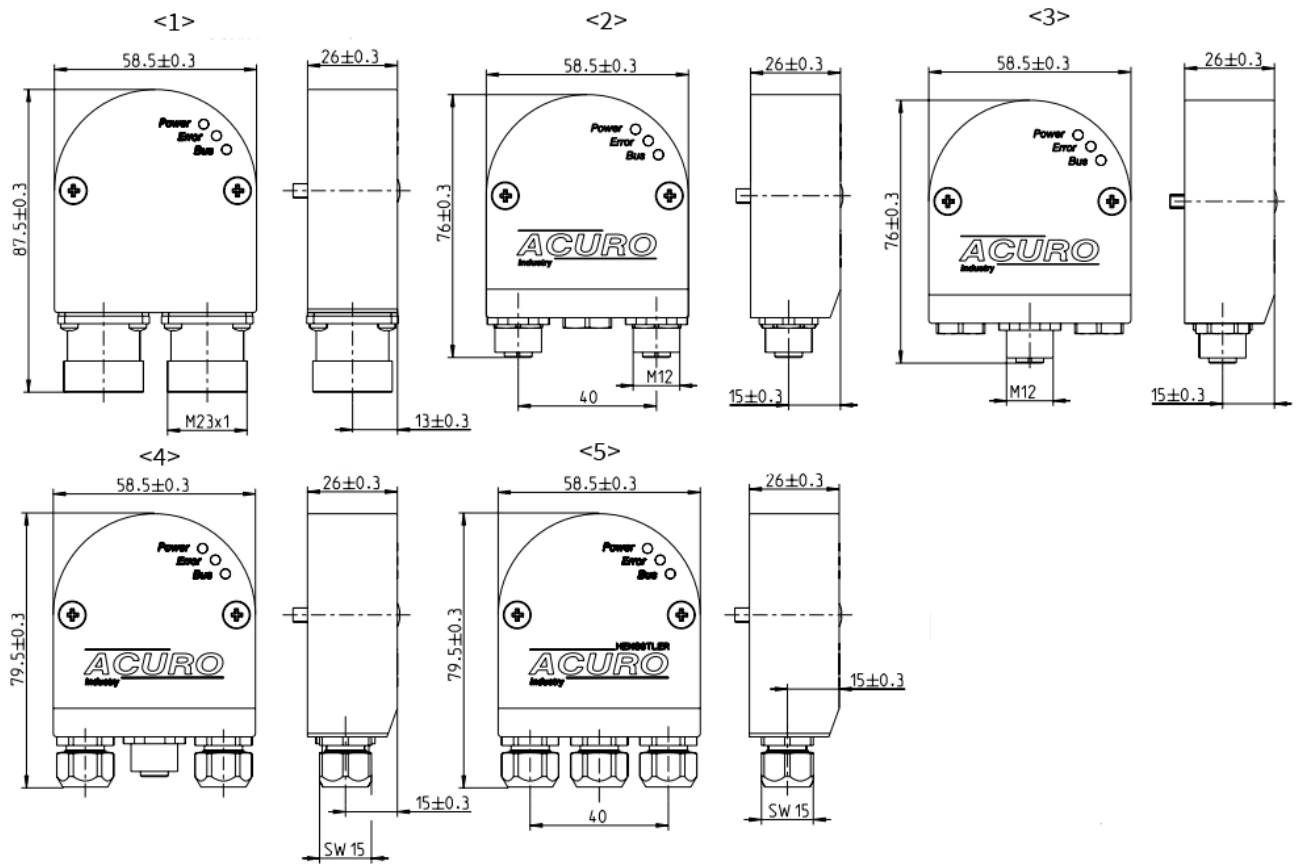
DIMENSIONED DRAWING
Square flange „Q“



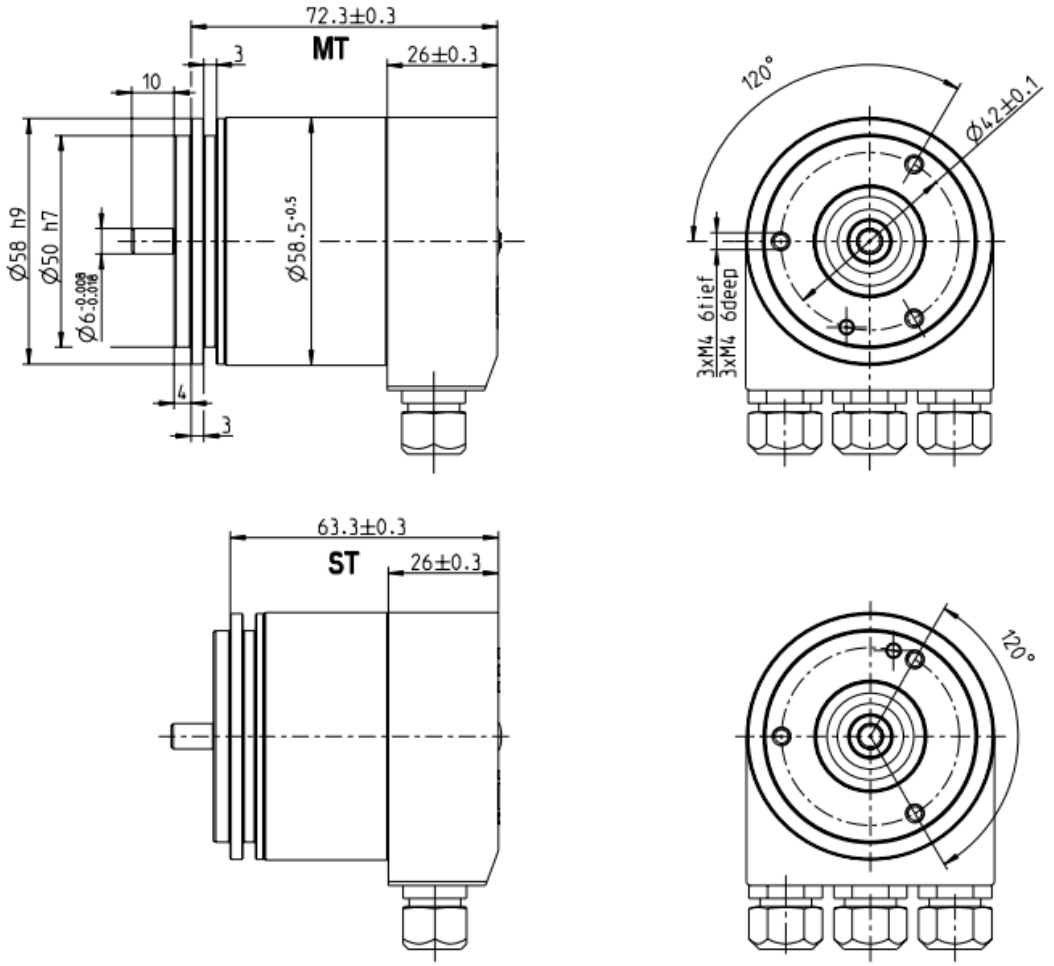
DIMENSIONED DRAWING
Bus Cover



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

Dim in mm

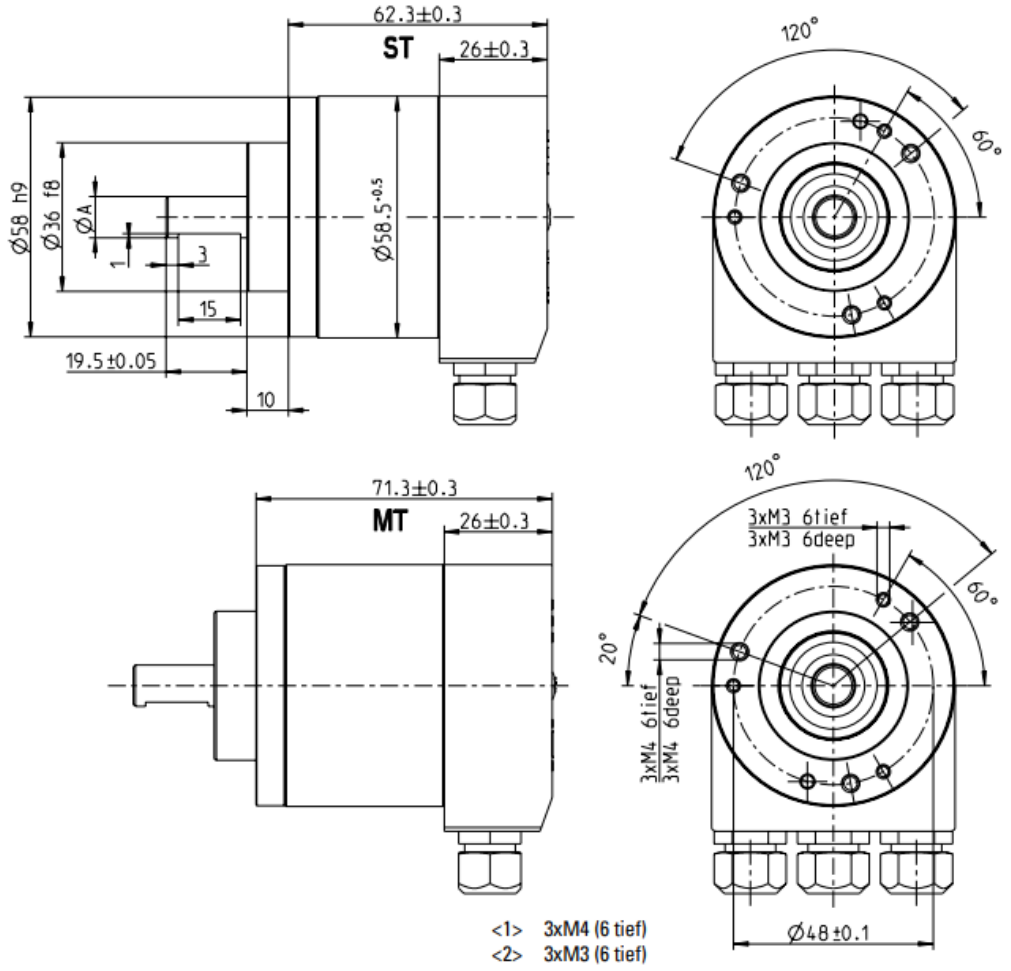
DIMENSIONED DRAWING
(continued)
Synchro flange „S“



Dim in mm

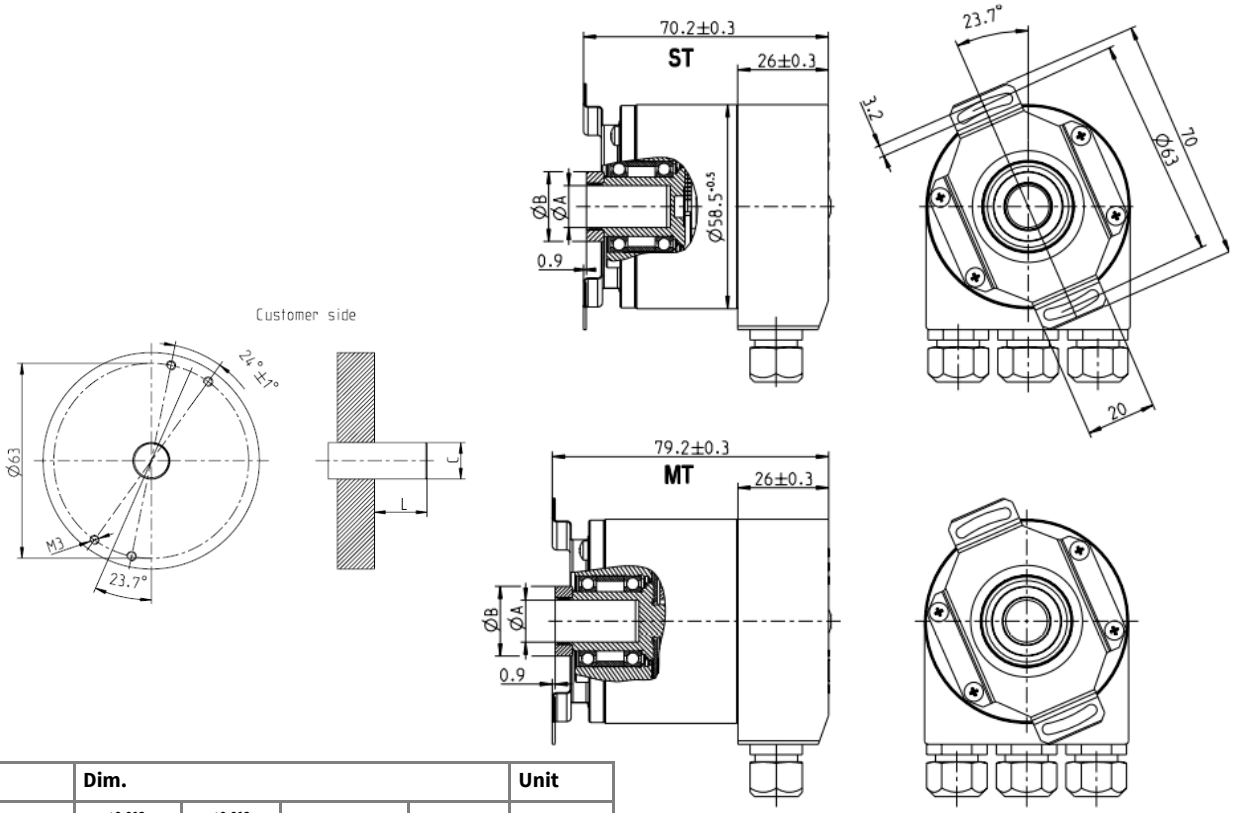
Specifications subject to change without notice

DIMENSIONED DRAWING
(continued)
Clamping flange „K“



Dim in mm

DIMENSIONED DRAWING
(continued)
Hub shaft „F“

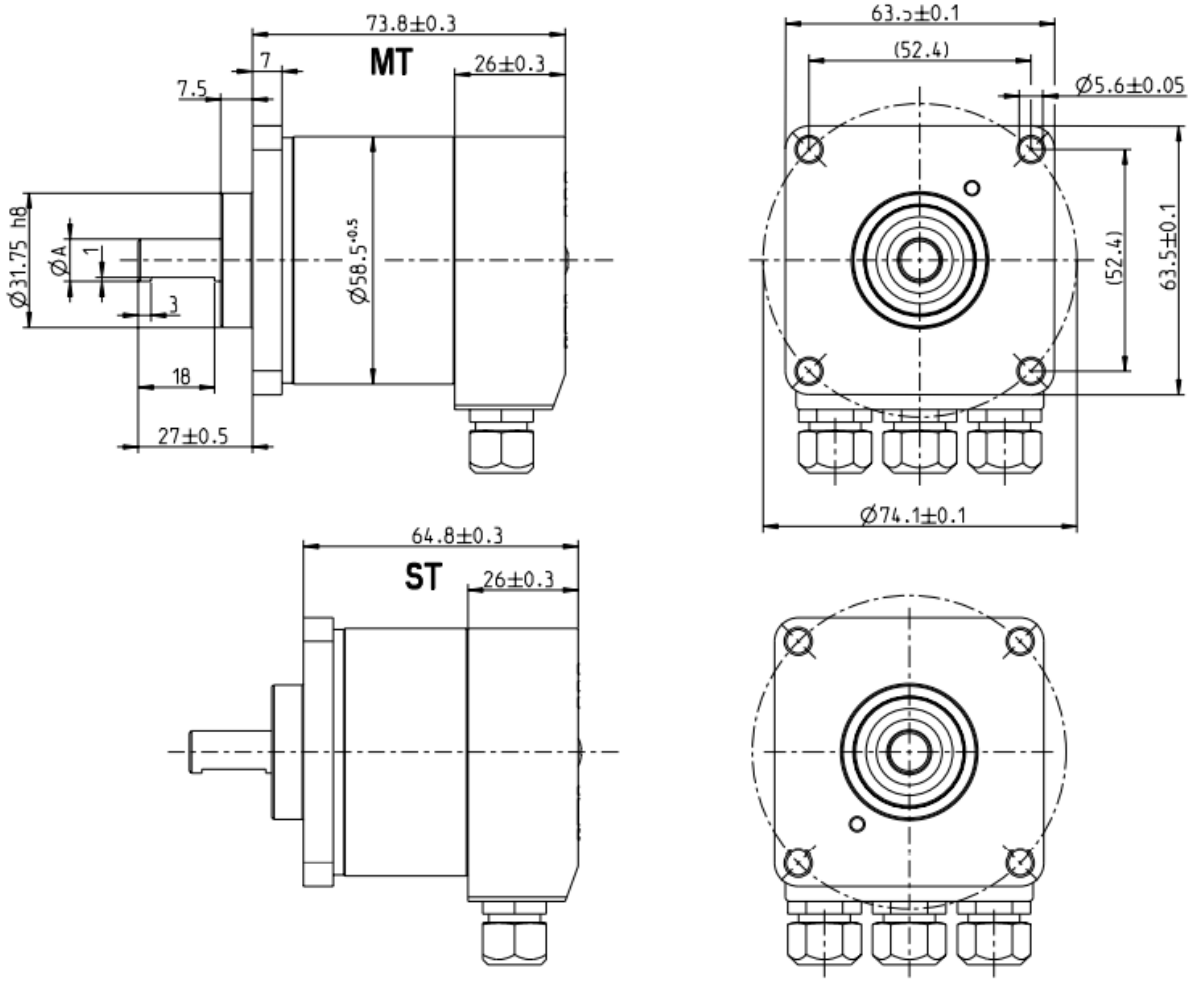


	Dim.				Unit
Hollow shaft- Ø A	**10** $^{+0,012}$	**12**$^{+0,012}$	**9,52** $^{+0,012}$	**12,7** $^{+0,012}$	**mm**
Connection shaft Ø C	**10 g**^{7}	**12 g**^{7}	**9,52 g**^{7}	**12,7 g**^{7}	**mm**
Clamping ring- Ø B	**18**	**20**	**18**	**22**	**mm**
L min	**15**	**18**	**15**	**18**	**mm**
L max	**20**	**20**	**20**	**20**	**mm**
Shaft-Code	**“2“**	**“7“**	**“6“**	**“E“**	
L= Inside length of connection shaft					

Dim in mm

Specifications subject to change without notice

DIMENSIONED DRAWING
(continued)
Square flange „Q“



Dim in mm

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ORDERING INFORMATION

Type	Resolution	Supply voltage	Flange, Protection, Shaft[1]	Interface	Connection
AC58	**0010** 10 Bit ST **0012** 12 Bit ST **0013** 13 Bit ST **0014** 14 Bit ST **0016** 16 Bit ST[2] **1212** 12 Bit MT+ 12 Bit ST **1213** 12 Bit MT + 13 Bit ST **1214** 12 Bit MT + 14 Bit ST	**E** DC 10 - 30V	**S.41 Synchro, IP64, 6 mm** **S.71 Synchro, IP67, 6 mm[1]** **K.42 Clamping, IP64, 10 mm** **K.46** Clamping, IP64, 9,52 mm **K.72 Clamping, IP67, 10 mm[1]** **K.76** Clamping, IP67, 9,52 mm **K.77** Clamping, IP67, 12 mm **F.42 Spring tether, IP64, Hub shaft 10mm, mounting with clamping front ring** **F.46 Spring tether, IP64, Hub shaft 9,52mm, mounting with clamping front ring** **F.47 Spring tether, IP64, hubshaft 12mm, mounting with clamping front ring** **Q.46** Square, IP64, 9,52 mm **Q.42** Square, IP64, 10mm **Q.76** Square, IP67, 9,52 mm[1] **Q.72** Square, IP67, 10 mm[1]	**OL** CANopen **OC** CANopen- on request	**A** Cable, axial **B** Cable, radial **C** M23-Connector, 12-pole, axial, cw **D** M23-Connector, 12-pole, radial, cw **G** M23– Connector, 12-pole, axial, ccw **H** M23-Connector, 12-pole, radial, ccw **I** Bus cover with 2x M23-connector, 9-pole, radial, cw **T** Bus cover with 2x sealed cable exits + 1x M12–connector 5-pole **Z** Bus cover with 3x sealed cable exits **S** Bus cover with 1x M12 connector-5 pole **R** Bus cover with 2x M12 connector-5 pole

[1] Protection IP67 in combination with connection A - H : Version without DIP switches and LED. Setting over fieldbus (LSS)
[2] 16 Bit Version only with cable or M23 connector available. (Only Singleturn possible)
- Preferably available versions are printed in bold type

ORDERING INFORMATIONS
Selection of cable length

Versions with cable outlet (connection A, B, E or F) are available with various of cable lengths. To get your desired cable length, please add the corresponding code to the end of the ordering code. For variants with a connector at the end of the cable, insert the code between the cable length selection and the connector. Other cable lengths on request.

Code	Cable length
Without Code	1,5 m
- D0	3 m
- F0	5 m
- K0	10 m
- P0	15 m
- U0	20 m
- V0	25 m

Example:
Cable with 3 m length: ...B –D0
Cable with 3m length and M23 connector, cw: ...B– D0 - I

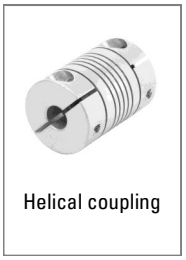
Absolut Encoder AC58 – CANopen

FLEXIBLE COUPLINGS


Bellows coupling


Disk coupling


Isolated disk coupling

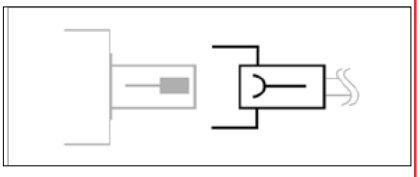

Helical coupling

	Connecting dia. d1/d2	Ordering Code
Bellows coupling	6 mm / 6 mm	3 520 068
Bellows coupling	8 mm / 10 mm	3 520 077
Bellows coupling	10 mm / 10 mm	3 520 037
Disk couplings	6 mm / 6 mm	0 070 663
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
Helical coupling 19/28	5 mm / 6 mm	3 520 035
Helical coupling 19/28	6 mm / 6 mm	0 070 653
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

MOUNTING

	Ordering code
Clamping eccentric, for M4 (Set of 3 pcs)	1 522 300
Fastening angle (plastic), for clamping flange AC58 (fastening material included)	1 522 329
Tether AC58 (Hub shaft)	1 531 188
Mounting bell (plastic) for clamping flange AC58 (clamping eccentric and fastening material included)	1 522 330
Square flange adapter 58x58mm for clamping flange AC58 (fastening material included)	1 522 326
Square flange adapter 80x80 mm for clamping flange AC58 (fastening material included)	1 522 327
Synchro flange adapter for clamping flange AC58 (fastening material included)	1 522 328
Synchro flange Clamping eccentric, d6,5 for M3-Screws (Set of 3 pcs)	0 070 655

CONNECTORS



CONNECTOR (socket) matching with encoder connector	Ordering code
M23, 12– pol, PG9, cw, mating connector for connection C/D/-I	3 539 202

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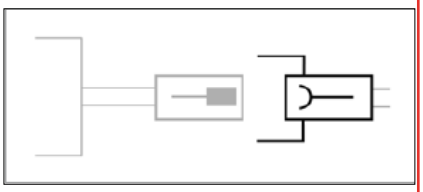
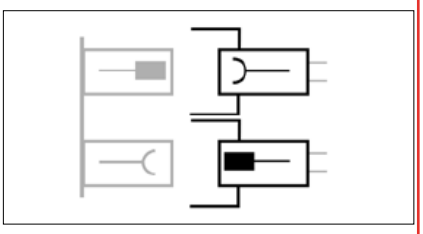
CONNECTORS



Connector (socket) matching with encoder connector	Ordering code
M23, 12– pole, PG9, ccw, mating connector for connection G/H/-D/-H	3 539 229

CONNECTORS



Connector for connecting bus cover with 2x M23	Ordering code
M23, 9– pole, PG9, cw, female	3 539 294
M23, 9– pole, PG9, cw, male	3 539 293

CONNECTING CABLES

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

TECHNICAL MANUALS

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

SOFTWARE

	Ordering code
ESD file, as download from our homepage	www.hensgtler.com

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