ABSOLUTE ENCODER MyAbs

CA xx 58

- Compact design: 50 mm length for singleturn or multiturn versions
- Startup and operating aids: Diagnostics LED, preset key with optical feedback, status message
- Interfaces: Standard SSI, extended SSI mode, parallel interface or BiSS
- Sine/cosine signals available for dynamic control loops
- Max. 30 Bit

Fieldbus Versions

- Overall length: 63 mm (singleturn), 73 mm (multiturn) including bus cover
- Availability of all common field bus interfaces
- The complete bus-specific electronics is accommodated in the bus cover
- Versions: Profibus DP, DeviceNet, CAN, CANopen and Interbus

DeviceNet™ PROFIBUS CANopen INTERBUS BISS SSI

Benefits of BiSS:

- Eliminates the costs of interpolation electronics
- Offering a high degree of transmission reliability
- Representing the only fully digital, open motor feedback interface for real-time applications.

Warning is better than alarming ...

MyAbs encoders are designed for longlife and reliability. At Meyle, the term reliability also includes the ability to detect system faults as early as possible and report them to the control unit via a warning Bit. So, if necessary, this will give you sufficient time to have your encoder exchanged during the next regular maintenance - an important factor especially in the processing industry, where system or installation shutdowns are associated with extremely high costs. Ultimate fault conditions are signaled by a separate alarm Bit. Therefore, maintenance intervals can be prolonged and longterm operating safety is ensured. Separate output of warnings and alarm messages via field bus, BiSS (fully digital bidirectional sensor interface) or extended SSI protocol.

Moreover, the operating status of the encoder – including the operating temperature – can be retrieved at any time via the interface. The temperature can also be monitored by means of limit values, which are stored in the encoder: MyAbs will send a warning or alarm message as soon as an upper or lower limit has been exceeded.

MyAbs encoders with fieldbus allow fast and trouble-free installation. A compact 5-pin connector between the bus cover and encoder ensures easy access to the switches and address settings, even if the bus cable is connected. Bus cables can be mounted quickly into reliable cage clamps for wire cross-sections up to 1.5 mm^2. Optionally, a small external indicator unit can be connected via a 4 pin M12 connector to the encoder to read out the bus node address, diagnostic messages and current position values during installation or operation.

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ABSOLUTE ENCODER MyAbs

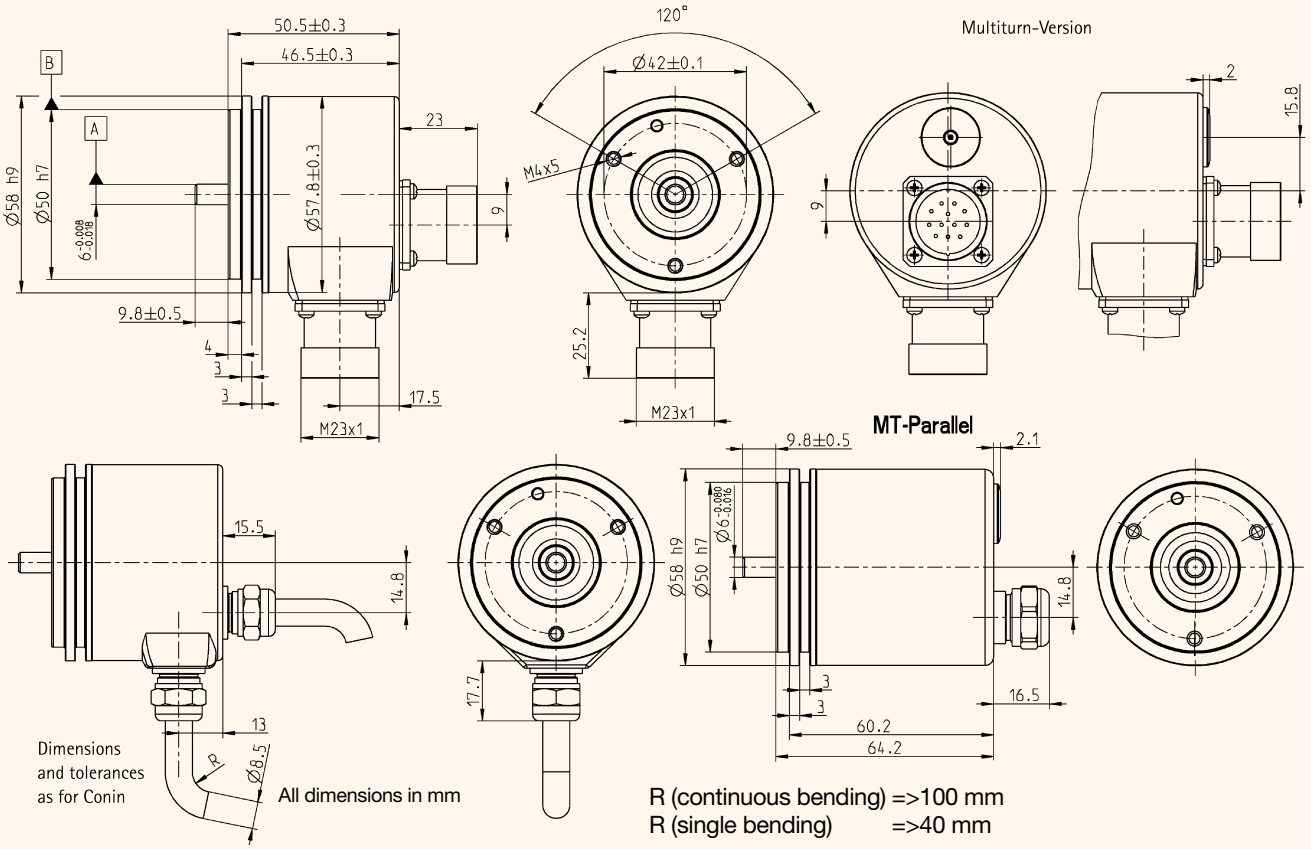
CA xx 58

Electrical Data:	SSI, BiSS	Parallel	Profibus other Bus Interfaces on request
Supply voltage	5 V, –5 %/+10 % or 10–30 V	10–30 V	10–30 V
Intrinsic current consumption ST/MT	50 mA/100 mA	200 mA/300 mA	220 mA/250 mA
Interface	Standard SSI or BiSS	Parallel	Profibus-DP, Encoder Profile
Lines/Drivers	Clock and data/RS422		
Output code	Binary Gray;	Binary, Gray, Gray Excess	Binary
Singleturn resolution	10–17 Bits depending on version; max: 13 Bits in SSI-MT Gray Excess: 360, 720 steps	10–14 Bit depending on version 12 Bit in MT version Gray Excess: 360, 720 steps	10–14 Bit depending on version
Multiturn resolution	12 Bit	12 Bit	12 Bit
Incremental signals, optional	Sine – cosine 1 Vpp		
Number of increments	2,048		
3 dB limiting frequency	500 kHz		
Absolute accuracy	± 35˝		
Repeatability	± 7˝		
Connection	Cable for flange-connector (Conin, axial or radial)	Cable or flange-connector (Conin 17-pole), axial or radial, Sub-D 37-pin	Bus cover with T-manifold
Parameterization	Resolution, code type, sense of rotation, warning, alarm		According to Class 2: Resolution, Preset, Direction 9,6 kBaud–12 MBaud
Linearity		± 1/2 LSB	
Output current		30 mA per Bit, short circuit proof	
Alarm output	Alarm Bit (SSI option), warning Bit and alarm Bit (BiSS)	NPN o.c. max. 5 mA	
Control input	$\overline{\text{Direction}}$	$\overline{\text{Latch}}$, $\overline{\text{Direction}}$, $\overline{\text{Tristate}}$	
Reset Key	Latch via parameterization		
Status LED	Green = ok.; Red = Alarm		
Integrated Special functions			Speed, Acceleration, Operating Time

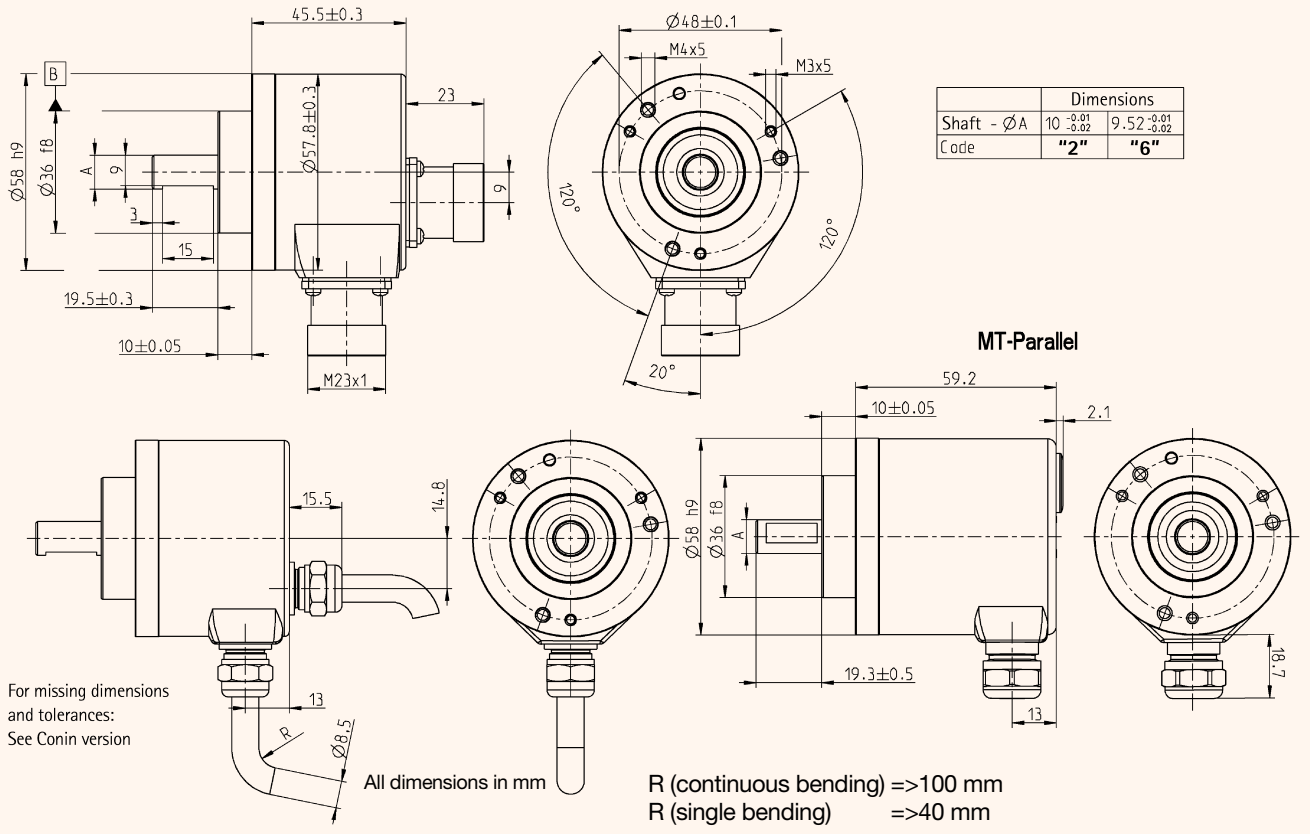
Mechanical Data:	SSI, BiSS	Parallel	Profibus
Housing diameter	58 mm	58 mm	58 mm
Protection, shaft input	IP 64 or IP 67	IP 64 or IP 67	IP 64 or IP 67
IP Protection class, housing	IP 67	IP 67	IP 67
Flange types	Synchro-flange, clamping flange, spring tether	Synchro-flange, clamping flange, spring tether	Synchro-flange, clamping flange, spring tether
Shaft diameter	Solid shaft 6 mm, 10 mm; Hub shaft 10 mm, 12 mm	Solid shaft 6 mm, 10 mm; Hub shaft 10 mm, 12 mm	Solid shaft 6 mm, 10 mm; Hub shaft 10 mm, 12 mm
Max. speed	Continuous operation 10,000 min^{-1} short-term 12,000 min-1	Continuous operation 10,000 min^{-1} short-term 12,000 min-1	Continuous operation 10,000 min^{-1} short-term 12,000 min-1
Starting Torque	≤ 0,01 Nm	≤ 0,01 Nm	≤ 0,01 Nm
Moment of inertia, rotor	3.8 x 10^{-6} kgm^2	3.8 x 10^{-6} kgm^2	3.8 x 10^{-6} kgm^2
Tolerance axial	± 1.5 mm	± 1.5 mm	± 1.5 mm
Tolerance radial	± 0.2 mm	± 0.2 mm	± 0.2 mm
Absolute max. shaft load	axial 40 N radial 60 N	axial 40 N radial 60 N	axial 40 N radial 60 N
Shock resistance DIN EN 60068-2-27	1,000 m/s^2 (6 ms)	1,000 m/s^2 (6 ms)	1,000 m/s^2 (6 ms)
Vibration resistance DIN EN 60068-2-6	100 m/s^2 (10 ... 2,000 Hz)	100 m/s^2 (10 ... 2,000 Hz)	100 m/s^2 (10 ... 2,000 Hz)
Working temperature	–40...+100 °C	–40...+100 °C	–40 °C... +85 °C
Storage temperature	–40...+85 °C (due to packaging)	–40...+85 °C (due to packaging)	–40...+85 °C (due to packaging)
Weight, approx. (ST/MT)	260 g/310 g	350 g/400 g	350 g/400 g

Dimensioned drawing

Synchro Flange



Clamping Flange



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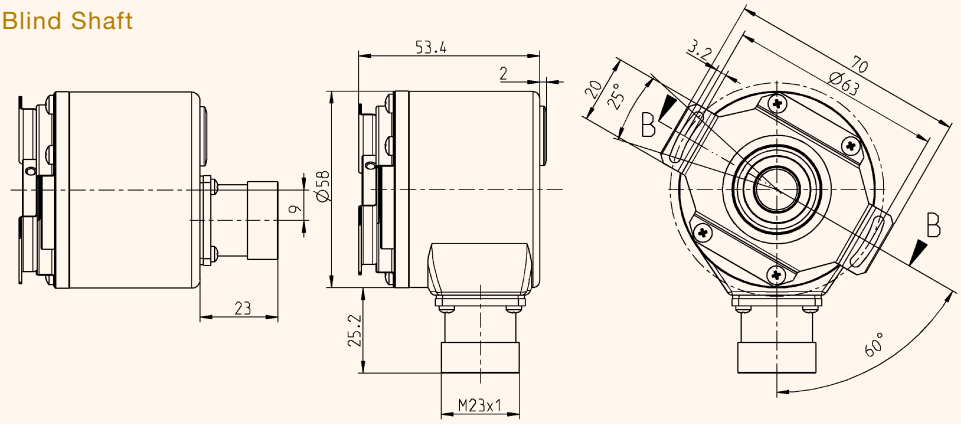
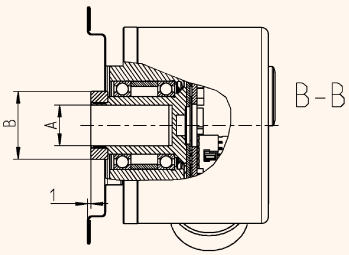
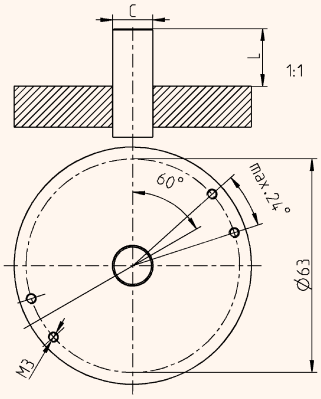
Dimensioned drawing

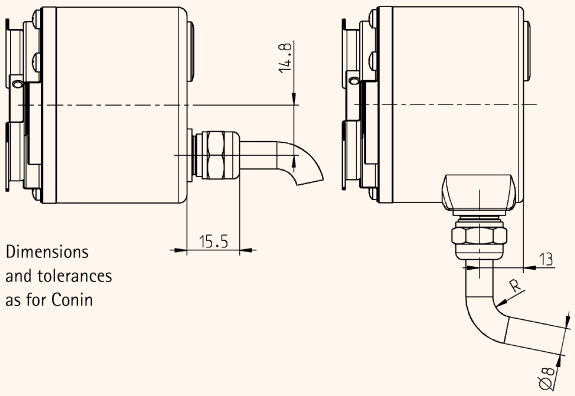
Blind Shaft



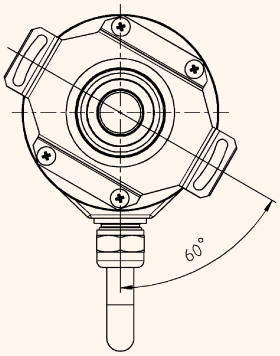


Connection Shaft





Dimensions and tolerances as for Conin



	Dimensions		Unit
Hub Shaft–Ø A	$10^{+0.012}$	$12^{+0.012}$	mm
Connection Shaft–Ø A	10_{g7}	12_{g7}	mm
Clamping Flange–Ø B	18	20	mm
L min.	15	18	mm
L max.	20	20	mm
Shaft code	"2"	"7"	

L = Depth of insertion of connection shaft in encoder

All dimensions in mm

R (continuous bending) =>100 mm
R (single bending) =>40 mm

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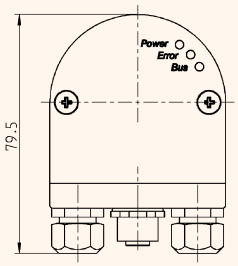
Bus Covers

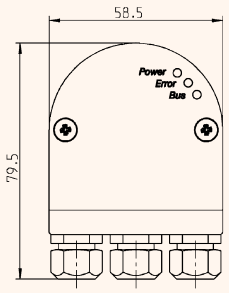
Bus Covers

Connection: “I“

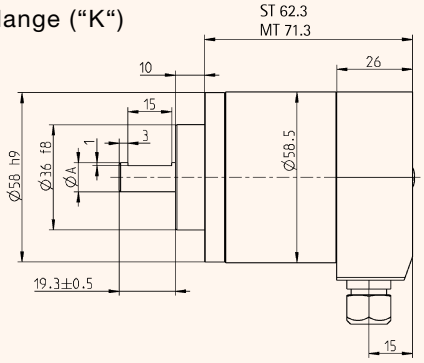
Connection: “T“

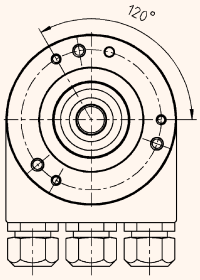


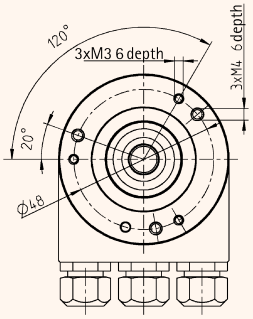
Connection “Z“



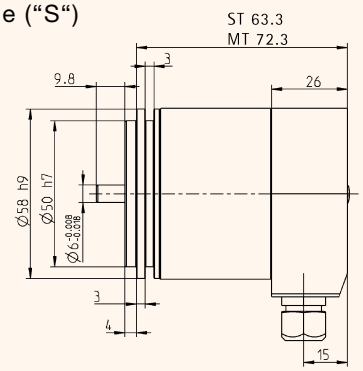
Clamping Flange (“K“)

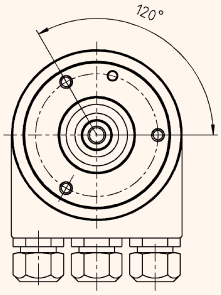


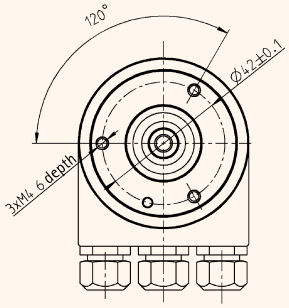




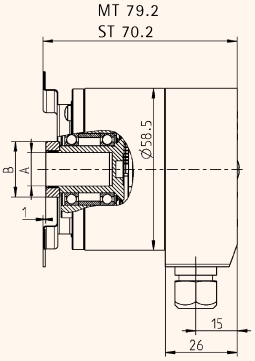
Synchro Flange (“S“)

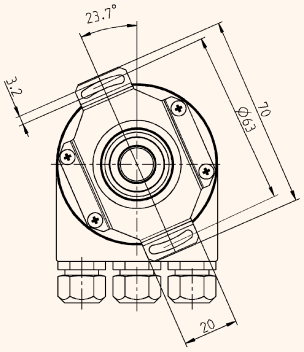


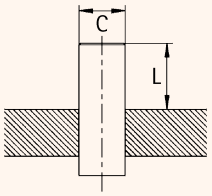




Hub Shaft (“F“)





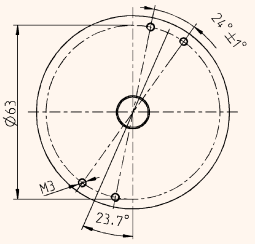


Dimensions

	Dimensions		Unit
Hub Shaft–Ø A	$10^{+0.012}$	$12^{+0.012}$	mm
Connection Shaft–Ø A	10_{g7}	12_{g7}	mm
Clamping Flange–Ø B	18	20	mm
L min.	15	18	mm
L max.	20	20	mm
Shaft code	“2“	“7“	

L = Depth of insertion of connection shaft in encoder

Connection Shaft



ST=Singleturn
MT=Multiturn

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ORDERING CODE SSI

CASS58
Absolute singleturn shaft encoder

CAMS58
Absolute multiturn shaft encoder

CASB58
Absolute singleturn blind shaft encoder

CAMB58
Absolute multiturn blind shaft encoder

Resolution	Supply voltage	Flange, Protection, Shaft-Ø	Interface	Connection
0010 = 10 Bit ST 0012 = 12 Bit ST 0013 = 13 Bit ST 0014 = 14 Bit ST 0017 = 17 Bit ST 1212 = 12 Bit MT + 12 Bit ST 1213 = 12 Bit MT + 13 Bit ST	A = 5 V E = 10–30 V	S41 = Synchro, IP 64, 6 mm S71 = Synchro, IP 67, 6 mm K42 = Clamping, IP 64, 10 mm K72 = Clamping, IP 67, 10 mm F42 = Spring tether, IP 64, 10 mm Blind shaft F47 = Spring tether, IP 64, 12 mm Blind shaft	SB = SSI Binary SG = SSI Gray	A = cable axial B = cable radial C = Conin 12 pol. axial cw D = Conin 12 pol. radial cw G = Conin 12 pol. axial ccw H = Conin 12 pol. radial ccw 7 = M12, 8 pol. axial 8 = M12, 8 pol. radial

ORDERING CODE BiSS

CASS58
Absolute singleturn shaft encoder

CAMS58
Absolute multiturn shaft encoder

CASB58
Absolute singleturn blind shaft encoder

CAMB58
Absolute multiturn blind shaft encoder

Resolution	Supply voltage	Flange, Protection, Shaft-Ø	Interface	Connection
0010 = 10 Bit ST 0012 = 12 Bit ST 0013 = 13 Bit ST 0014 = 14 Bit ST 0017 = 17 Bit ST 0360 = 360 increments ST 0720 = 720 increments ST 1212 = 12 Bit MT + 12 Bit ST 1213 = 12 Bit MT + 13 Bit ST 1214 = 12 Bit MT + 14 Bit ST 1217 = 12 Bit MT + 17 Bit ST	A = 5 V E = 10–30 V	S41 = Synchro, IP 64, 6 mm S71 = Synchro, IP 67, 6 mm K42 = Clamping, IP 64, 10 mm K72 = Clamping, IP 67, 10 mm F42 = Spring tether, IP 64, 10 mm Blind shaft F47 = Spring tether, IP 64, 12 mm Blind shaft	BI = BiSS (Digital) BC = BiSS (+SinCos 1VSS)	A = cable axial B = cable radial C = Conin 12 pol. axial cw D = Conin 12 pol. radial cw G = Conin 12 pol. axial ccw H = Conin 12 pol. radial ccw 7 = M12, 8 pol. axial 8 = M12, 8 pol. radial

ORDERING CODE PARALLEL INTERFACE

CASS58
Absolute singleturn shaft encoder

CAMS58
Absolute multiturn shaft encoder

CASB58
Absolute singleturn blind shaft encoder

CAMB58
Absolute multiturn blind shaft encoder

Resolution	Supply voltage	Flange, Protection, Shaft-Ø	Interface	Connection
0010 = 10 Bit ST 0012 = 12 Bit ST 0013 = 13 Bit ST 0014 = 14 Bit ST 0360 = 360 increments ST 0720 = 720 increments ST 1212 = 12 Bit MT + 12 Bit ST	E = 10–30 V	S41 = Synchro, IP 64, 6 mm S71 = Synchro, IP 67, 6 mm K42 = Clamping, IP 64, 10 mm K72 = Clamping, IP 67, 10 mm F42 = Spring tether, IP 64, 10 mm Blind shaft F47 = Spring tether, IP 64, 12 mm Blind shaft	PB = Parallel Binary PG = Parallel Gray	A = cable axial (ST, MT) B = cable radial (ST, MT) U = Conin 17 pol. axial ccw (ST) V = Conin 17 pol. radial ccw (ST) W = Conin 17 pol. axial cw (ST) Y = Conin 17 pol. radial cw (ST) A-A1-F = 0,1 m cable axial + 37 pol. Sub-D (MT) B-A1-F = 0,1 m cable radial + 37 pol. Sub-D (MT)

ORDERING CODE PROFIBUS–DP

CASS58
Absolute singleturn shaft encoder

CAMS58
Absolute multiturn shaft encoder

CASB58
Absolute singleturn blind shaft encoder

CAMB58
Absolute multiturn blind shaft encoder

Resolution	Supply voltage	Flange, Protection, Shaft-Ø	Interface	Connection
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 = 10–30 V	S41 = Synchro, IP 64, 6 mm S71 = Synchro, IP 67, 6 mm K42 = Clamping, IP 64, 10 mm K72 = Clamping, IP 67, 10 mm F42 = Spring tether, IP 64, 10 mm Blind shaft F47 = Spring tether, IP 64, 12 mm Blind shaft	DP = Profibus DP	Z = Bus cover 3x cable gland T = Bus cover 4 pol. M12 2 x cable gland

Note: Bus Connections radial/axial via connector and cable, optional on request.

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