

- Absolute single- and multiturn encoders with Bit Parallel, SSI, Profibus, CAN, DeviceNet, Interbus and Ethernet outputs
- Shaft and blind shaft 58 mm diameter versions
- Aluminium flange and housing
- Stainless steel shaft
- Precision ball bearings with sealing or cover rings
- Code disc made of unbreakable and durable plastic

- Applications: Sensing of
 - Angels
 - Distances
 - Tracks
 - Inclinations
 - Differences between two or more axes
- Compact and heavy-duty industrial types
- Housing: 58 mm Ø
- Shaft: 6 or 10 mm Ø, blind shaft 15 mm Ø, reduction hubs of 8, 10 and 12 mm Ø
- Max. 65,536 steps per revolution (16 bit)
- Max. 16,384 revolution (14 bit)
- EMC: EN61000-6-2, EN61000-6-4, CE

- Interface:
 - SSI (RS 422/485)
 - Bit parallel, push pull
 - Profibus DP
 - CAN, CANopen
 - Interbus
 - Device Net
 - Ethernet



DeviceNet™

PROFI
BUS

CANopen



SSI
ETHERNET



Electrical Data:

SSI

Parallel

Profibus

(other Bus-Interfaces on request)

Outputs/Interface	Driver RS 485 / RS 422 Transfer distance up to 1200 mm Transmission rate up to 10 MBaud	Bit-parallel, push pull (max. 20 mA each channel)	Line-driver according to RS 485, galvanically isolated by opto-couplers (max. 12 MBaud Transmission rate)
Clock input/frequency	Via opto-coupler / 100 kHz-1 MHz		
Supply voltage	10-30 V DC	10-30 V DC	10-30 V DC
Current consumption	Version SL max. 1 W, version S1 max 1.5 W, version S2 max. 1.5 W, version S3 max. 2.2 W	max. 400 mA (10 V DC), max. 180 mA (24 V DC)	max. 230 mA with 10 V DC, max. 100 mA with 24 V DC
Output code	Binary or Gray	Binary or Gray	Binary
Singleturn resolution	(10, 11), 12, 13, 16 Bits	(10, 11), 12, 13, 16 Bits	(10, 11), 12, 13, 16 Bits
Multiturn resolution	12, 14 Bits	4, 8, 12, 14 Bits	12, 14 Bits
Incremental signals optional	Line driver RS 422		
Number of increments	1024, Channel A, $\bar{A}$, B, $\bar{B}$		
Accuracy of division	$\pm 1/2$ LSB (12 bit), ± 2 LSB (16 bit)	$\pm 1/2$ LSB (12 bit), ± 2 LSB (16 bit)	$\pm 1/2$ LSB (12 bit), ± 2 LSB (16 bit)
Internal cycle time		< 3 μ s	
Step frequency LSB	Max. 800 kHz (valid code)	12 Bit Resolution up to 12 000 rpm 16 Bit Resolution up to 1 000 rpm	800 kHz
Connection	Connector or cable exit 1 meter	Connector or cable exit 1 meter	Bus cover
Optional	Built-in RS 485 / 422 interface for bus mode (strobe-function) Up to 32 encoders can be used on the same data line!	Binary code transmission with integrated latch function	



Meyer Industrie-Electronic GmbH – MEYLE

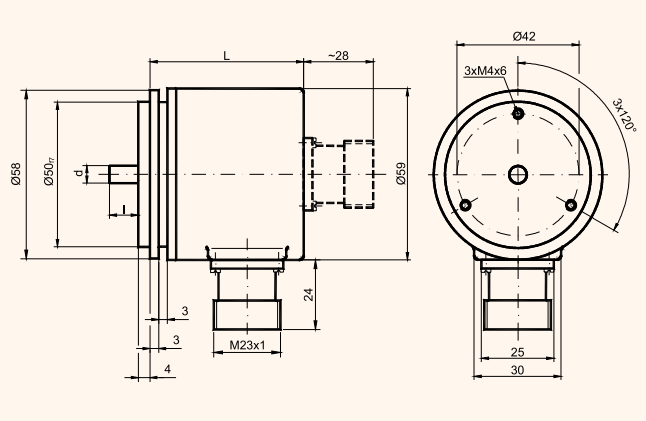
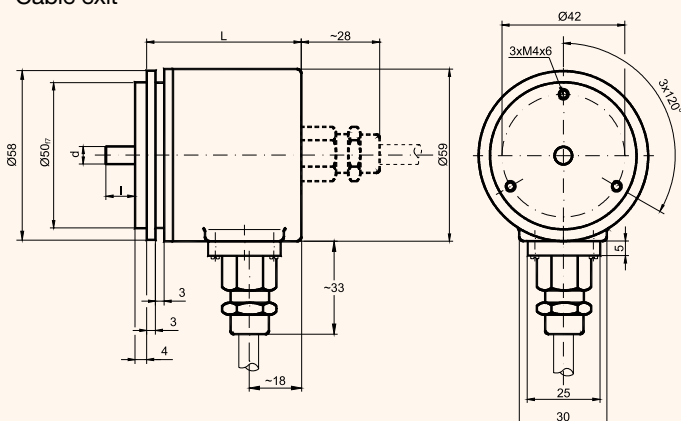
Carl-Bosch-Straße 8 Tel.: (+49) 05481-9385-0 Internet: www.meyle.de
49525 Lengerich/Germany Fax: (+49) 05481-9385-12 E-Mail: sales@meyle.de

Mechanical Data:		SSI		Parallel		Profibus (other Bus-Interfaces on request)	
Housing		Aluminium, optional stainless steel		Aluminium, optional stainless steel		Aluminium, optional stainless steel	
Max. shaft loading		Axial 40 N, radial 110 N		Axial 40 N, radial 110 N		Axial 40 N, radial 110 N	
Inertia of rotor		$\leq 30 \text{ gcm}^2$		$\approx 30 \text{ gcm}^2$		$\leq 30 \text{ gcm}^2$	
Friction torque		$\leq 3 \text{ Ncm}$ (without shaft sealing)		$\leq 3 \text{ Ncm}$ (without shaft sealing)		$\leq 3 \text{ Ncm}$ (without shaft sealing)	
RPM (continuous operation)		Single turn: max. 12 000 rpm Multi turn: max. 6 000 rpm		Single turn: max. 12 000 rpm Multi turn: max. 6 000 rpm		Single turn: max. 12 000 rpm Multi turn: max. 6 000 rpm	
Shock (EN 60068-2-27)		$\leq 30 \text{ g}$ (halfsine, 11 ms)		$\leq 30 \text{ g}$ (halfsine, 11 ms)		$\leq 30 \text{ g}$ (halfsine, 11 ms)	
Permanent shock (EN 60068-2-29)		$\leq 10 \text{ g}$ (halfsine, 16 ms)		$\leq 10 \text{ g}$ (halfsine, 16 ms)		$\leq 10 \text{ g}$ (halfsine, 16 ms)	
Vibration (EN 60068-2-6)		$\leq 10 \text{ g}$ (10 Hz...1 000 Hz)		$\leq 10 \text{ g}$ (10 Hz...1 000 Hz)		$\leq 10 \text{ g}$ (10 Hz...1 000 Hz)	
Weight (standard version)		Single turn: $\approx 200 \text{ g}$ Multi turn: $\approx 300 \text{ g}$		Single turn: $\approx 200 \text{ g}$ Multi turn: $\approx 300 \text{ g}$		Single turn: $\approx 550 \text{ g}$ Multi turn: $\approx 600 \text{ g}$	
Weight (stainless steel version)		Single turn: $\approx 400 \text{ g}$ Multi turn: $\approx 600 \text{ g}$		Single turn: $\approx 400 \text{ g}$ Multi turn: $\approx 600 \text{ g}$		Single turn: $\approx 1100 \text{ g}$ Multi turn: $\approx 1200 \text{ g}$	
Flange		Synchro (S)	Clamp (C)	Blind shaft (B)	Synchro (S)	Clamp (C)	Blind shaft (B)
Shaft diameter	mm	6	10	10	6	10	10
				15			15
				8, 10, 12 (with hub)			8, 10, 12 (with hub)
Shaft length	mm	10	20	20	10	20	20
Hollow shaft depth							
min./max.	mm	–	–	–	–	–	–
				15/30			15/30
Environmental Conditions							
Working temperature		$-40^\circ\text{C} \dots +85^\circ\text{C}$		$-30^\circ\text{C} \dots +70^\circ\text{C}$		$-40^\circ\text{C} \dots +85^\circ\text{C}$	
Storage temperature		$-40^\circ\text{C} \dots +85^\circ\text{C}$		$-40^\circ\text{C} \dots +85^\circ\text{C}$		$-40^\circ\text{C} \dots +85^\circ\text{C}$	
Humidity		98 % (non condensing)		98 % (non condensing)		98 % (non condensing)	
Protection Class (EN 60529)		Housing side: IP 65 Shaft side: IP 64 (optional with shaft sealing: IP 66)		Housing side: IP 65 Shaft side: IP 64 (optional with shaft sealing: IP 66)		Housing side: IP 65 Shaft side: IP 64 (optional with shaft sealing: IP 66)	

Mechanical Drawings SSI, Parallel Output

Synchro flange (S)
Cable exit

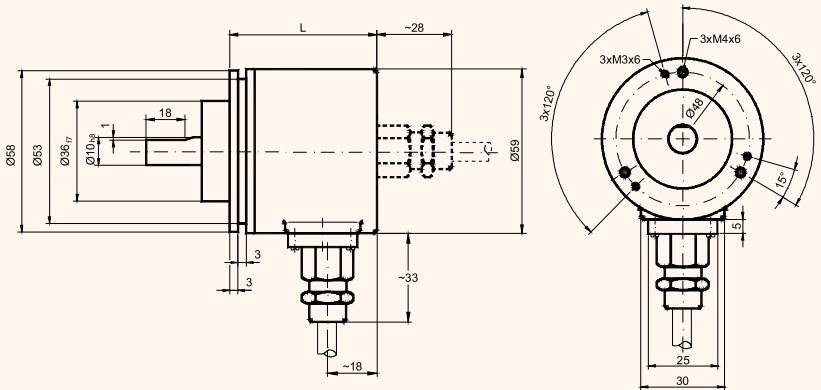
Connector exit



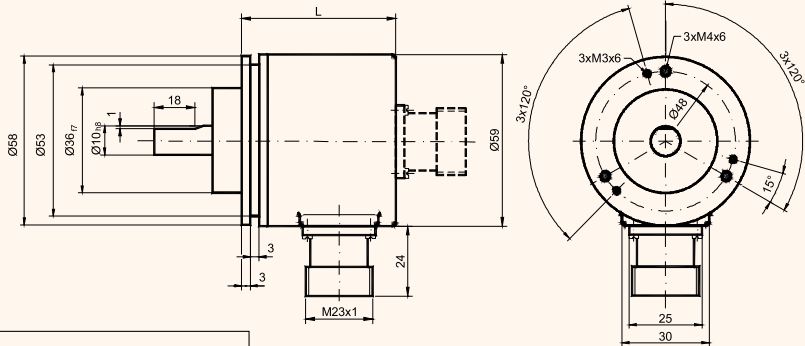
Synchro flange	d / mm	l / mm
Version S06	6 _{f6}	10
Version S10	10 _{h8}	20

Mechanical Drawings SSI, Parallel Output

Clamp flange (C)
Cable exit



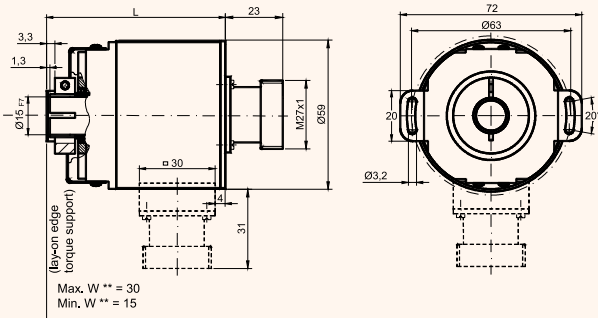
Connector exit



		L			
		SSI	SSI Preset	Parallel	Parallel Preset
Single turn	axial cable / connector	42	53	42	53
	radial cable	53	53	53	53
	radial connector	53	53	53	53
Multi turn	axial cable / connector	62	62	–	53
	radial cable	54	62	–	53
	radial connector	54	62	–	78

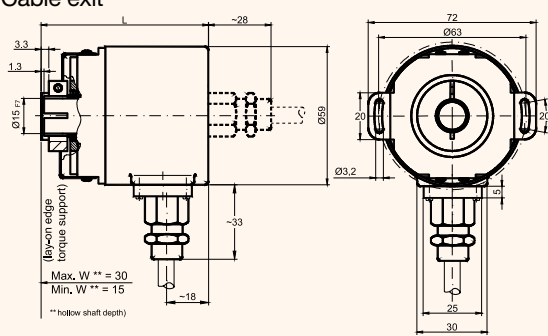
Connector height		
SSI	M23 x 1	Length axial = 28 mm
		Length radial = 24 mm
Parallel ≤ 13 Bit	M23 x 1	Length axial = 28 mm
		Length radial = 24 mm
Parallel 14-21 Bit	M27 x 1	Length axial = 23 mm
		Length radial = 31 mm

Blind Shaft (B)
Connector exit



		L			
		SSI	SSI Preset	Parallel	Parallel Preset
Single turn	axial cable / connector	61	72	61	72
	radial cable	72	72	72	72
	radial connector	72	72	72	72
Multi turn	axial cable / connector	81	81	–	71
	radial cable	73	81	–	71
	radial connector	73	81	–	96

Cable exit

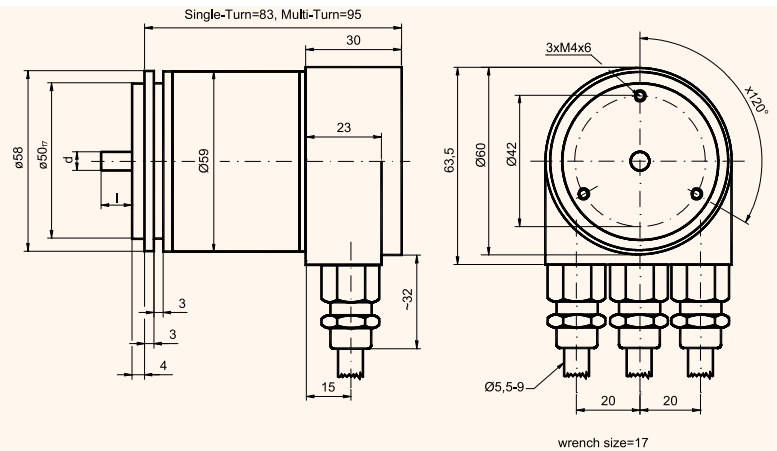


Connector exit (only for 21 Bit)		
SSI	1123 x 1	Length axial = 28 mm
		Length radial = 24 mm
Parallel ≤ 13 Bit	1123 x 1	Length axial = 28 mm
		Length radial = 24 mm
Parallel 14-21 Bit	1127 x 1	Length axial = 23 mm
		Length radial = 31 mm

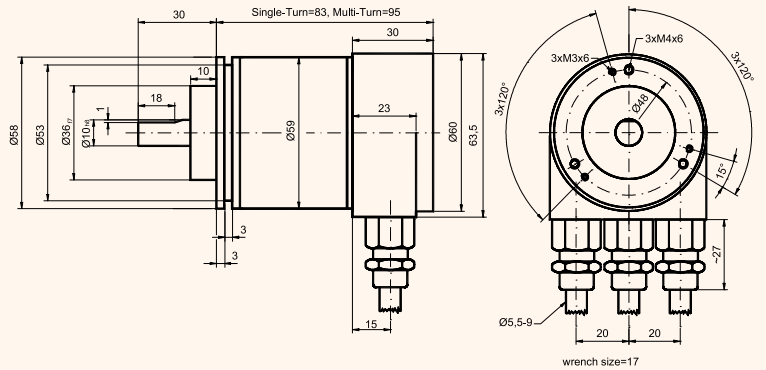
Mechanical Drawings Profibus

Synchro flange (S)

Synchro flange	d / mm	l / mm
Version S06	$\varnothing 6_{f6}$	10
Version S10	$\varnothing 10_{h8}$	20



Camp flange (C)



Blind shaft (B)

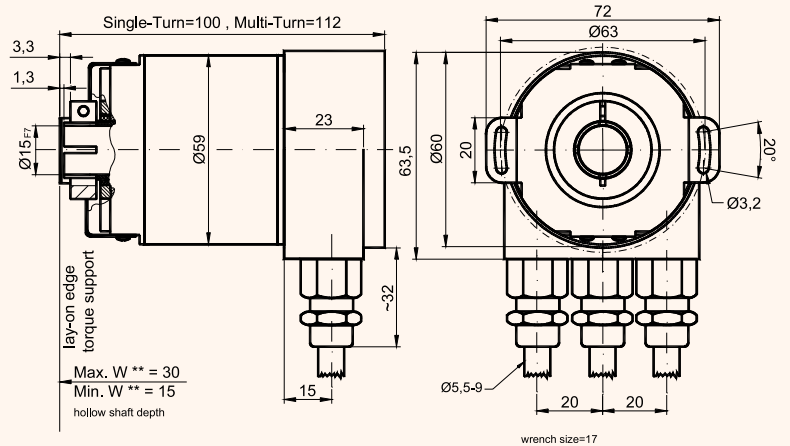
Mounting instructions

The clamp ring may only be tightened if the shaft of the driving elements is in the hollow shaft.

The diameter of the hollow shaft can be reduced to 12 mm, 10 mm or 8 mm by using an adapter (this reducing adapter can be pushed into the hollow shaft).

Allowed shaft movements of the drive element are listed in the table.

	axial	radial
static	± 0.3 mm	± 0.5 mm
dynamic	± 0.1 mm	± 0.2 mm



ORDERING CODE SSI



EASS58

Absolute singleturn shaft encoder

EAMS58

Absolute multiturn shaft encoder

EASB58

Absolute singleturn blind shaft encoder

EAMB58

Absolute multiturn blind shaft encoder



Interface

SL = SSI
S1 = SSI + Preset
S2 = SSI + Inkr.



Code

G = Gray
B = Binary



Resolution

(0010 = 10 Bit ST)
(0011 = 11 Bit ST)
0012 = 12 Bit ST
0013 = 13 Bit ST
0016 = 16 Bit ST
(1210 = 12 Bit MT + 10 Bit ST)
(1211 = 12 Bit MT + 11 Bit ST)
1212 = 12 Bit MT + 12 Bit ST
1213 = 12 Bit MT + 13 Bit ST
1216 = 12 Bit MT + 16 Bit ST
(1410 = 14 Bit MT + 10 Bit ST)
(1411 = 14 Bit MT + 11 Bit ST)
1412 = 14 Bit MT + 12 Bit ST
1413 = 14 Bit MT + 13 Bit ST
1416 = 14 Bit MT + 16 Bit ST



Flange

C = Clamp flange
S = Synchro flange
B = Blind shaft



Shaft diameter

06 = 6 mm
10 = 10 mm
15 = 15 mm (Blind shaft)



Mechanical options

O = Without
S = Shaft sealing (IP 66)
V = Stainless steel



Connection

8A = Connector axial
8R = Connector radial
3A = 1 m cable exit, axial
3R = 1 m cable exit, radial*

* not in stainless steel version
ST = Single turn
MT = Multi turn

ORDERING CODE PARALLEL INTERFACE



EASS58

Absolute singleturn shaft encoder

EAMS58

Absolute multiturn shaft encoder

EASB58

Absolute singleturn blind shaft encoder

EAMB58

Absolute multiturn blind shaft encoder



Interface

P1 = push pull reset



Code

G = Gray
B = Binary



Resolution

(0010 = 10 Bit ST)
(0011 = 11 Bit ST)
0012 = 12 Bit ST
0013 = 13 Bit ST
0016 = 16 Bit ST
0360 = 360 increments ST
(0410 = 4 Bit MT + 10 Bit ST)
(0411 = 4 Bit MT + 11 Bit ST)
0412 = 4 Bit MT + 12 Bit ST
0413 = 4 Bit MT + 13 Bit ST
0416 = 4 Bit MT + 16 Bit ST
(0810 = 8 Bit MT + 10 Bit ST)
(0811 = 8 Bit MT + 11 Bit ST)
0812 = 8 Bit MT + 12 Bit ST
0813 = 8 Bit MT + 13 Bit ST
0816 = 8 Bit MT + 16 Bit ST
(1210 = 12 Bit MT + 10 Bit ST)
(1211 = 12 Bit MT + 11 Bit ST)
1212 = 12 Bit MT + 12 Bit ST
1213 = 12 Bit MT + 13 Bit ST
(1410 = 14 Bit MT + 10 Bit ST)
(1411 = 14 Bit MT + 11 Bit ST)



Flange

C = Clamp flange
S = Synchro flange
B = Blind shaft



Shaft diameter

06 = 6 mm
10 = 10 mm
15 = 15 mm (Blind shaft)



Mechanical options

O = Without
S = Shaft sealing
V = Stainless steel (only axial exit possible)



Connection

26A = Connector*** axial, max. 21 bit
26R = Connector*** radial, max. 21 bit**
3A = 1 m cable exit, axial, max. 25 bit
3R = 1 m cable exit, radial, max. 25 bit**

* total Resolution on connector exit max. 21 bit, on cable exit max. 25 bit
** not in stainless steel version
*** ST <14 bit: connector 16 pin (16A / 16R)
ST = Single turn
MT = Multi turn

ORDERING CODE PROFIBUS-DP



EASS58

Absolute singleturn shaft encoder

EAMS58

Absolute multiturn shaft encoder

EASB58

Absolute singleturn blind shaft encoder

EAMB58

Absolute multiturn blind shaft encoder



Interface

DP = Profibus



Code

B = Binary



Resolution

(0010 = 10 Bit ST)
(0011 = 11 Bit ST)
0012 = 12 Bit ST
0013 = 13 Bit ST
0016 = 16 Bit ST
(1210 = 12 Bit MT + 10 Bit ST)
(1211 = 12 Bit MT + 11 Bit ST)
1212 = 12 Bit MT + 12 Bit ST
1213 = 12 Bit MT + 13 Bit ST
1216 = 12 Bit MT + 16 Bit ST
(1410 = 14 Bit MT + 10 Bit ST)
(1411 = 14 Bit MT + 11 Bit ST)
1412 = 14 Bit MT + 12 Bit ST
1413 = 14 Bit MT + 13 Bit ST
1416 = 14 Bit MT + 16 Bit ST



Flange

C = Clamp flange
S = Synchro flange
B = Blind shaft



Shaft diameter

06 = 6 mm
10 = 10 mm
15 = 15 mm (Blind shaft)



Mechanical options

O = Without
S = Shaft sealing (IP 66)
V = Stainless steel version



Connection

Z = Bus Cover to be ordered separately

ST = Single turn
MT = Multi turn