ABSOLUTE ENCODER MyAbs

EA xx 58

- 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™

PROFIBUS

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 Transmition 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 Transmisson 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), $\pm$ 2 LSB (16 bit)	$\pm$ $^1/_2$ LSB (12 bit), $\pm$ 2 LSB (16 bit)	$\pm$ $^1/_2$ LSB (12 bit), $\pm$ 2 LSB (16 bit)
Internal cycle time		< 3 µs	
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 encorders can be used on the same data line!	Binary code transmission with integrated latch function	

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

ABSOLUTE ENCODER MyAbs

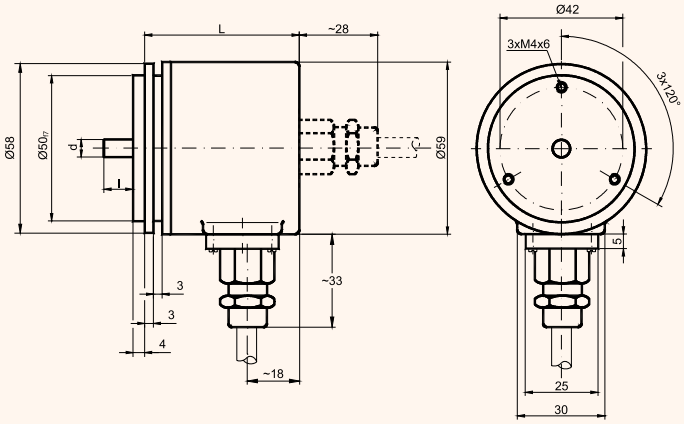
EA xx 58

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	≤ 30 gcm²	≈ 30 gcm²	≤ 30 gcm²
Friction torque	≤ 3 Ncm (without shaft sealing)	≤ 3 Ncm (without shaft sealing)	≤ 3 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)	≤ 30 g (halfsine, 11 ms)	≤ 30 g (halfsine, 11 ms)	≤ 30 g (halfsine, 11 ms)
Permanent shock (EN 60068-2-29)	≤ 10 g (halfsine, 16 ms)	≤ 10 g (halfsine, 16 ms)	≤ 10 g (halfsine, 16 ms)
Vibration (EN 60068-2-6)	≤ 10 g (10 Hz...1 000 Hz)	≤ 10 g (10 Hz...1 000 Hz)	≤ 10 g (10 Hz...1 000 Hz)
Weight (standard version)	Single turn: ≈ 200 g Multi turn: ≈ 300 g	Single turn: ≈ 200 g Multi turn: ≈ 300 g	Single turn: ≈ 550 g Multi turn: ≈ 600 g
Weight (stainless steel version)	Single turn: ≈ 400 g Multi turn: ≈ 600 g	Single turn: ≈ 400 g Multi turn: ≈ 600 g	Single turn: ≈ 1100 g Multi turn: ≈ 1200 g

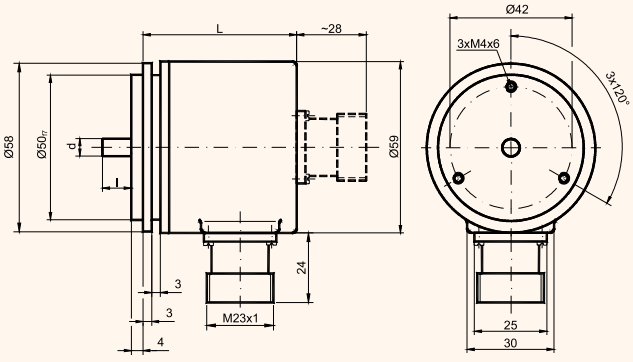
Flange		Synchro (S)		Clamp (C)	Blind shaft (B)	Synchro (S)		Clamp (C)	Blind shaft (B)	Synchro (S)		Clamp (C)	Blind shaft (B)
Shaft diameter	mm	6	10	10	15 8, 10,12 (with hub)	6	10	10	15 8, 10,12 (with hub)	6	10	10	15 8, 10,12 (with hub)
Shaft length	mm	10	20	20	–	10	20	20	–	10	20	20	–
Hollow shaft depth min./max.	mm	–	–	–	15/30	–	–	–	15/30	–	–	–	15/30
Environmental Conditions													
Working temperature		– 40 °C...+ 85 °C				– 30 °C...+ 70 °C				– 40 °C...+ 85 °C			
Storage temperature		– 40 °C...+ 85 °C				– 40 °C...+ 85 °C				– 40 °C...+ 85 °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



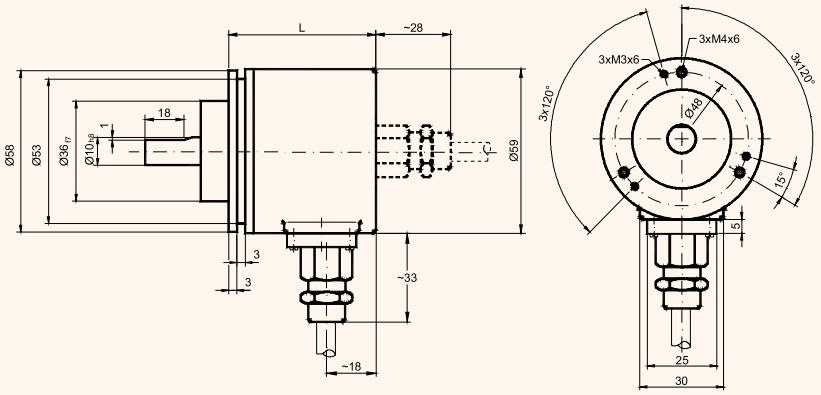
Synchro flange	d / mm	l / mm
Version S06	6_{f6}	10
Version S10	10_{h8}	20

MEYLE

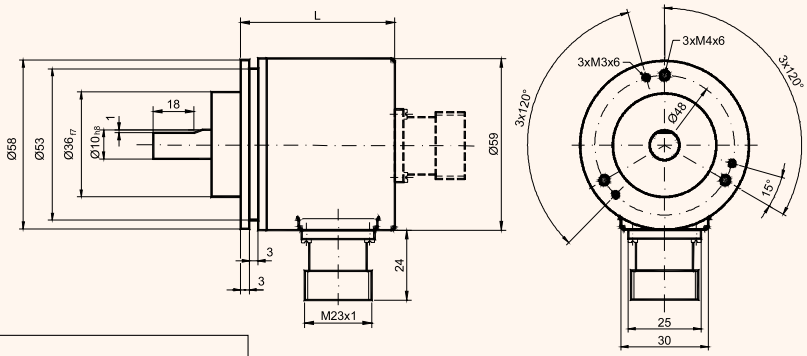
Meyer Industrie-Electronic GmbH – MEYLE
Carl-Bosch-Straße 8
49525 Lengerich/Germany
Tel.: (+49) 05481-9385-0
Fax: (+49) 05481-9385-12
Internet: www.meyle.de
E-Mail: sales@meyle.de

Mechanical Drawings SSI, Parallel Output

Clamp flange (C)
Cable exit



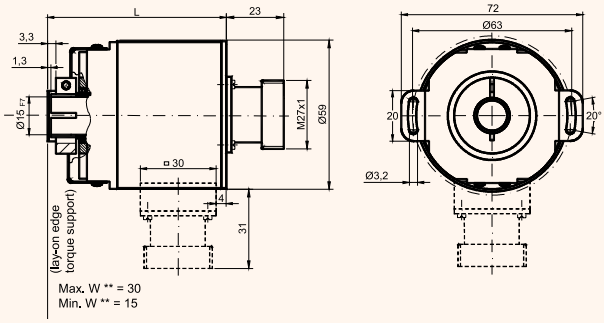
Connector exit



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

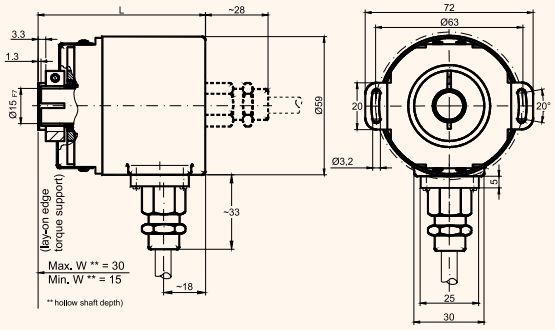
Connector height		
SSI	M23 x 1	Length axial = 28 mm
		Length radial = 24 mm
Parallel ≤ 13 Bit	M23 x 1	Length axial = 28 mm
		Length radial = 24 mm
Parallel 14-21 Bit	M27 x 1	Length axial = 23 mm
		Length radial = 31 mm

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



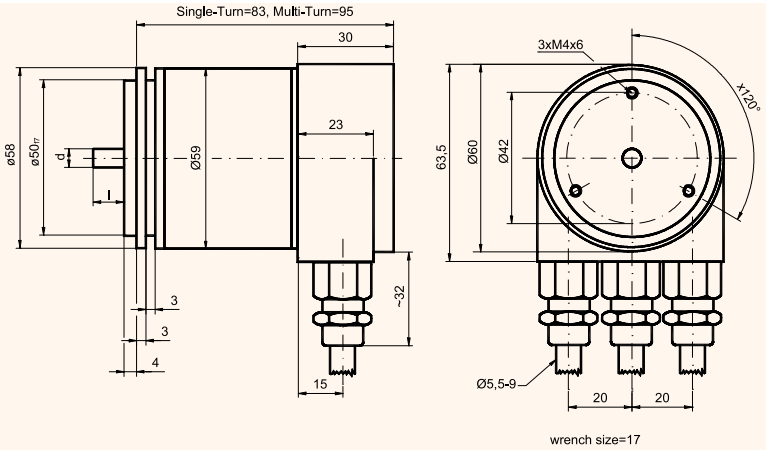
Connector exit (only for 21 Bit)		
SSI	1123 x 1	Length axial = 28 mm
		Length radial = 24 mm
Parallel ≤ 13 Bit	1123 x 1	Length axial = 28 mm
		Length radial = 24 mm
Parallel 14-21 Bit	1127 x 1	Length axial = 23 mm
		Length radial = 31 mm

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

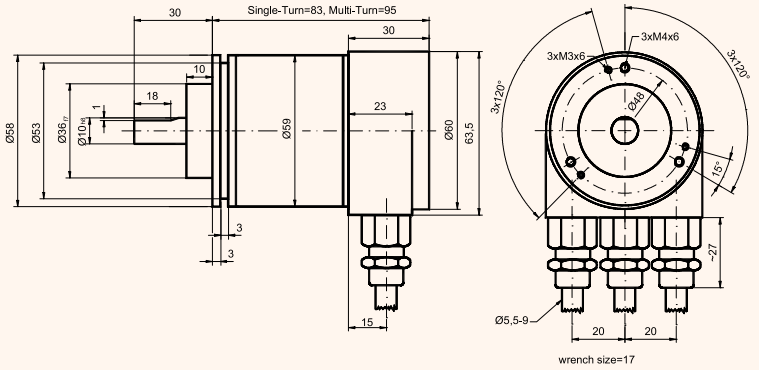
Mechanical Drawings Profibus

Synchro flange (S)

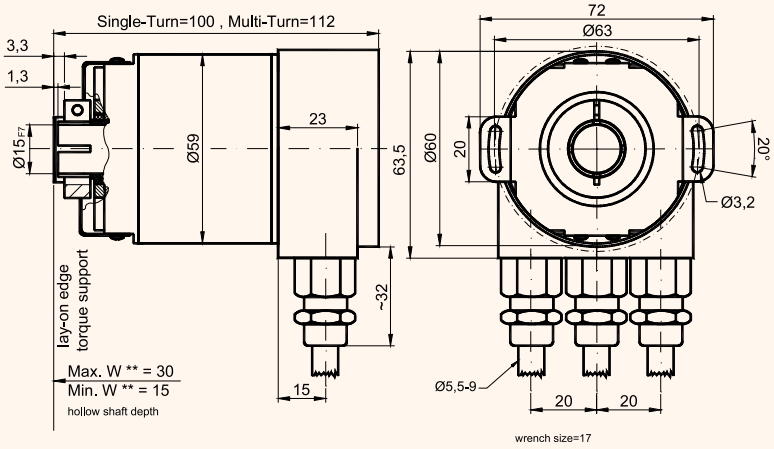
Synchro flange	d / mm	l / mm
Version S06	$Ø6_{f6}$	10
Version S10	$Ø10_{h8}$	20



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

ABSOLUTE ENCODER MyAbs

EA xx 58

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	Code	Resolution	Flange	Shaft diameter	Mechanical options	Connection
SL = SSI S1 = SSI + Preset S2 = SSI + Inkr.	G = Gray B = Binary	(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	C = Clamp flange S = Synchro flange B = Blind shaft	06 = 6 mm 10 = 10 mm 15 = 15 mm (Blind shaft)	O = Without S = Shaft sealing (IP 66) V = Stainless steel	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	Code	Resolution	Flange	Shaft diameter	Mechanical options	Connection
P1 = push pull reset	G = Gray B = Binary	(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)	C = Clamp flange S = Synchro flange B = Blind shaft	06 = 6 mm 10 = 10 mm 15 = 15 mm (Blind shaft)	O = Without S = Shaft sealing V = Stainless steel (only axial exit possible)	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	Code	Resolution	Flange	Shaft diameter	Mechanical options	Connection
DP = Profibus	B = Binary	(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	C = Clamp flange S = Synchro flange B = Blind shaft	06 = 6 mm 10 = 10 mm 15 = 15 mm (Blind shaft)	O = Without S = Shaft sealing (IP 66) V = Stainless steel version	Z = Bus Cover to be ordered separately

ST = Single turn
MT = Multi turn

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