



With bus terminal box



With cable

## VARIANTS

## TECHNICAL DATA mechanical

## DIMENSIONED DRAWINGS

## TECHNICAL DATA electrical

- Stainless steel encoder with max protection
- High corrosion resistance
- Choice of cable connections
- Field bus versions with removable bus terminal box
- Applications:
  - packaging machines in food area
  - ship equipment (e.g. cranes, winches, cable laying ships)
  - offshore applications

The stainless steel encoder is available in following versions:

- Single- or multiturn with cable radial and interfaces Parallel, SSI, INTERBUS
- Single- or multiturn with bus terminal box and the interfaces CAN, CANopen, Profibus DP, INTERBUS, DeviceNET

Flange	square flange, 63.5 x 63.5 mm
Shaft diameter	10 mm
Absolute maximum speed	10,000 RPM (short term), 6,000 RPM (continuous duty)
Torque	≤1 Ncm (IP 67)
Moment of inertia	ca. 20 gcm <sup>2</sup>
Protection class (EN 60529)	Housing IP 67, bearings IP 67
Operating temperature	-25 ... +85 °C (Interbus -10 ... +60 °C)
Storage temperature	-25 ... +85 °C
Vibration proof (IEC 68-2-6)	100 m/s <sup>2</sup> (10 ... 500 Hz) <sup>2)</sup>
Shock resistance (IEC 68-2-27)	1,000 m/s <sup>2</sup> (6 ms) <sup>2)</sup>
Connection radial	1.5 m cable <sup>1)</sup> or bus terminal box
Housing	stainless steel 1.4305
Weight	Singleturn: RA 58-S approx. 300g, RA 59-S approx. 620 g Multiturn: RA 58-M approx. 350 g

<sup>1)</sup> Other cable length on request

<sup>2)</sup> For applications with higher vibration and shock values, see "Accessories, Encoder with Shock Module"

see section "Absolute Encoders – dimensioned drawings"

The electrical data depends on the type of interface.  
Please refer to the specific interface section in this catalogue.

# Absolute Encoders

# Type RA 59 Stainless steel

## ORDERING DATA Parallel

Version	Supply voltage	Mounting	Protection	Shaft diam.	Interface
S Singleturn	A 5 VDC <sup>2)</sup>	K clamping flange (10 mm-shaft)	4 IP 64 <sup>5)</sup>	1 6 mm (S)	P parallel (output K)
M Multiturn	E 10 ... 30 VDC	S synchro flange (6 mm-shaft) Q square flange 63.5 x 63.5 <sup>3)</sup> (10 mm-shaft)	7 IP 67 <sup>3)</sup>	2 10 mm (K)	

Type	Resolution <sup>1)</sup>	Output	Connection
RA 59 stainless steel <sup>1)</sup>	0360 360 Incr. (S)	K push-pull short-circuit proof	B cable, radial
	0009 9 Bit (S)		
	0720 720 Incr. (S)		
	0010 10 Bit (S)		
	3600 3600 Incr. (S)		
	0012 12 Bit (S)		
	0013 13 Bit (S)		
	0014 14 Bit (S)		
	0412 16 Bit (M)		
	0812 20 Bit (M)		
	1212 24 Bit (M)		

Code  
B Binary  
G Gray

<sup>1)</sup> S = Singleturn, M = Multiturn (4, 8 or 12 bit revolutions)  
<sup>2)</sup> only for Singleturn

## ORDERING DATA SSI

Version	Supply voltage	Mounting	Protection	Shaft diam.	Interface
S Singleturn	A 5 VDC	Q Quadratfl. 63.5 x 63.5	7 IP 67	2 10 mm	S SSI
M Multiturn	E 10 ... 30 VDC				

Type	Resolution <sup>1)</sup>	Output	Connection
RA 59 Stainless steel	0360 360 Incr. (S)	T RS 485	B cable, radial
	0009 9 Bit (S)		
	0720 720 Incr. (S)		
	0010 10 Bit (S)		
	3600 3600 Incr. (S)		
	0012 12 Bit (S)		
	0013 13 Bit (S)		
	0014 14 Bit (S)		
	1212 24 Bit (M)		
	1213 25 Bit (M)		
	1214 26 Bit (M)		

Code  
B Binary  
G Gray

<sup>1)</sup> S = Singleturn, M = Multiturn with 12 Bit revolutions

# Absolute Encoders

# Type RA 59 Stainless steel

## ORDERING DATA INTERBUS K2/K3

Note for first ordering:  
Please include in your order:  
- User Manual IB (K3) English,  
ordering code 2 543 030  
Or download from  
[www.hengstler.com](http://www.hengstler.com)

Version <sup>1)</sup>	Supply voltage	Mounting	Protection	Shaft diam.	Interface
S Singleturn M Multiturn P Programmable	E 10 ... 30 VDC	Q Square flange 63.5 x 63.5	7 IP 67	2 10 mm	I INTERBUS

Resolution <sup>1)</sup>	Output	Connection	Code
0360 360 Incr. (S)	T RS 485	B cable, radial <sup>2)</sup>	B Binary
0009 9 Bit (S)		Z Bus terminal box (3-fold PG), radial (integrated T-manifold)	
0720 720 Incr. (S)			
0010 10 Bit (S, P)			
0012 12 Bit (S, P)			
1212 24 Bit (M, P)			

Typ RA 59 Stainless steel

Plug <sup>2)</sup>  
C Conin 12-pole

1) S = Singleturn, Profile K2  
M = Multiturn, Profile K2  
P = programmable (Single- or Multiturn), Profil K3

2) generally for Connection B: 1.5 m cable including plug 12pole turning right

## ORDERING DATA CAN

Note for first ordering:  
Please include in your order:  
- Technical manual, German or  
English ordering code 2 542 051  
or 2 542 052 for CAN resp. 2 542  
092 or 2 542 093 CANopen  
- Disc with EDS-file,  
ordering code 1 543 061 for  
CANopen  
Or download from  
[www.hengstler.com](http://www.hengstler.com)

Version	Supply voltage	Mounting	Protection	Shaft diam.	Interface
P programmable	E 10 ... 30 VDC	Q Square flange 63.5 x 63.5	7 IP 67	2 10 mm	C CAN O CANopen

Resolution <sup>1)</sup>	Output	Connection	Code
0360 360 Incr. (S) <sup>3)</sup>	C CAN Transceiver	B cable, radial	B Binary
0009 9 Bit (S) <sup>3)</sup>	L Bus lines carried out double <sup>2)</sup>	Z bus terminal box (3-fold PG), radial (integrated T-manifold)	
0720 720 Incr. (S) <sup>3)</sup>			
0010 10 Bit (S)			
0012 12 Bit (S)			
0013 13 Bit (S)			
0014 14 Bit (S)			
1212 24 Bit (M)			
1213 25 Bit (M)			
1214 26 Bit (M)			

Typ RA 59 Stainless steel

1) S=Singleturn  
M=Multiturn with 4096 (12 Bit) revolutions

2) not with connection with integrated T-manifold (Z)

3) not with Interface CANopen (O)

# Absolute Encoders

# Type RA 59 Stainless steel

## ORDERING DATA DEVICENET

Note for first-time orders:

Please also order the following:

- Technical manual:

Ord. code 2 543 069 (German)

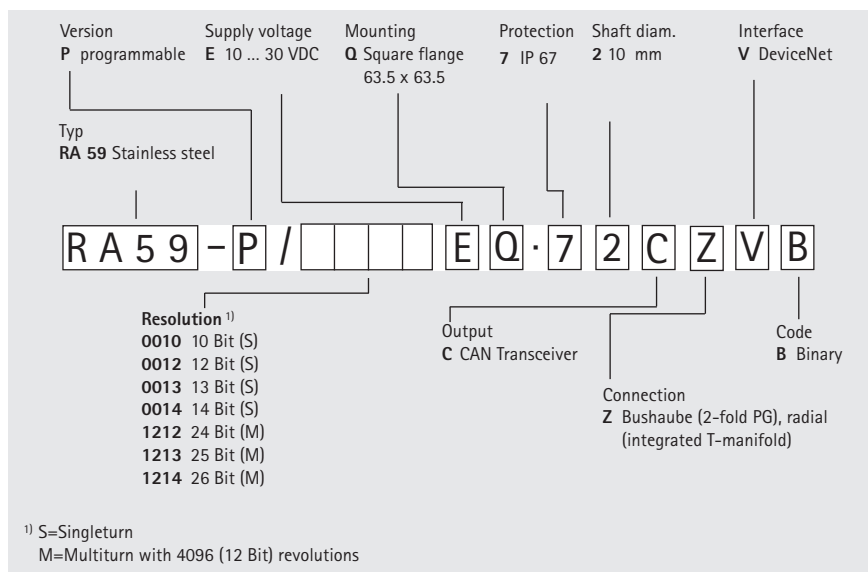
Ord. code 2 543 070 (English)

- Disk with EDS file

Ord. code 1 543 083

Or download from

[www.hengstler.com](http://www.hengstler.com)



## ORDERING DATA PROFIBUS DP

Note for first ordering:

Please include in your order:

- Technical Manual German or

English ordering code 2 543 037

or 2 543 062

- Disc with GSD-file,

ordering code 1 543 062

Or download from

[www.hengstler.com](http://www.hengstler.com)

