

Accessories

Problem solutions from a single source.

Our wide range of accessory modules completes the encoder programme.

With these modules, we offer you an optimum means of meeting your application demands.

Position Indicator signo 727 SSI

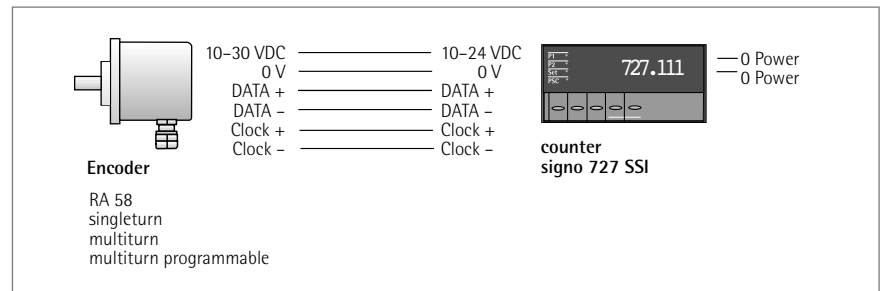
for absolute encoder connection



- large, 6-digit, 14 mm high LED display
- predetermined offset
- 2 variable limit values
- easy direct selection by 2 function keys
- relay outputs with change-over contacts
- chain value or absolute value indication
- npn/pnp programming of inputs
- synchronous/serial Interface

APPLICATION FIELDS

Indication of infeed values, lengths, support- or machine positions, totalizing values etc. The coupling to the machine may be done with an absolute encoder with SSI-Interface from the wide and comprehensive Hengstler program of types RA 58.

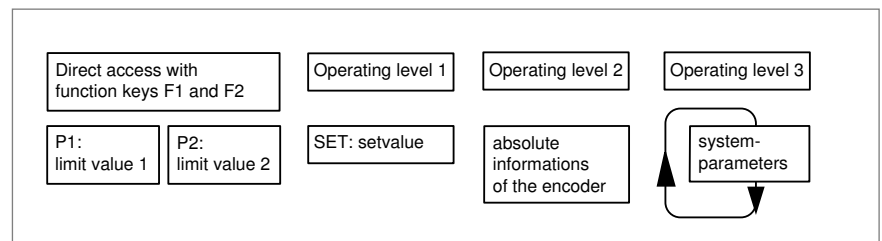


DISPLAY



Section A: shows the actual count value when in counting mode, and the changeable parameters when in programming mode.
Section B: LED indicators showing the active output signal, and in programming mode indicating the changeable parameter.

PROGRAMMING



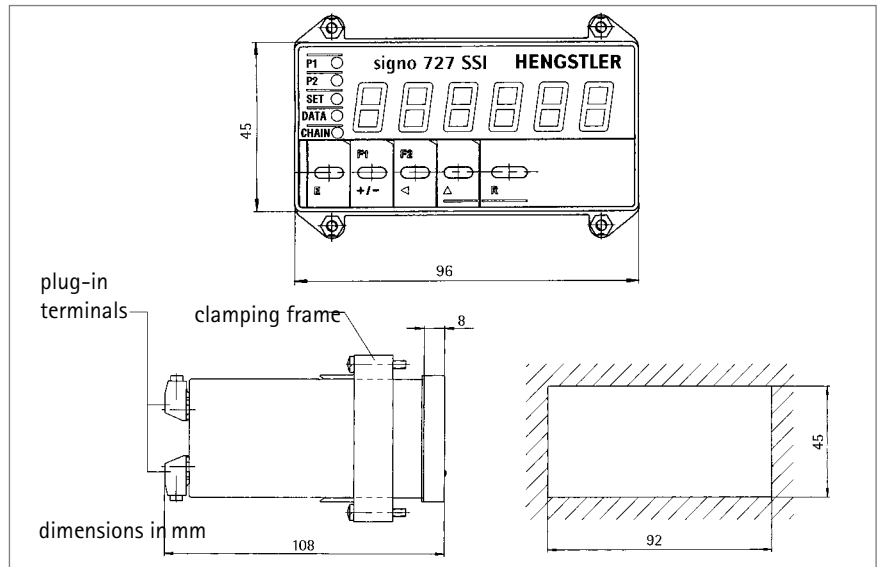
Programming of signo 727 is possible by direct access and in the 3 operating levels
 Direct access: Limit values are set with the function keys F1, F2
Operating level 1: Set value
Operating level 2: Includes absolute informations of the encoder
Operating level 3: Includes system parameters, which are normally programmed during start-up procedure only.
 Unauthorized programming of the signo 727 is prevented by a control input, which can lock the operating levels.

TECHNICAL DATA

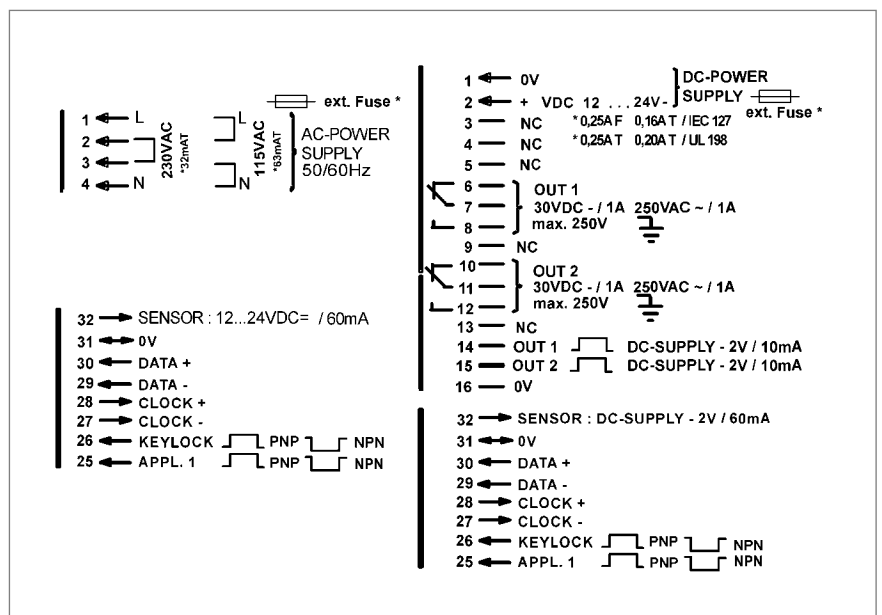
Display	LED, indication value/preselection 6 digits, suppression of leading zeros, programmable decimal point, minus sign
Digit Height	14 mm
Power Supply Voltage U_b	12...24 VDC or 115/230 VAC, depending on version
Current Consumption	12...24 VDC < 250 mA, 115/230 VAC < 60 mA
Sensor Supply	AC operation 12...24 VDC, DC operation $U_B - 2 V$, $I_{max} = 60 mA$
Data Retention	non-volatile memory > 10 years
Operating Temperature	0...50° C
Storage Temperature	-20...+70° C
Electrical Connection	plug-in terminals
Mounting	with clamping frame
Protection Class (IEC 144)	front side IP 54, terminals IP 20
Noise Immunity EMC	severity 3 according to IEC 801, part 2 + part 4
Vibrostability	10 m/s ² (10...150 Hz) according to IEC 68-part 2-6
Shock Stability	100 m/s ² (18 ms) according to IEC 68-part 2-27
General Rating	according to VDE 0411, DIN 57411, protection class II
Inputs:	SSI Data + SSI Data -
Baud rate:	approx. 100 kHz
Control Input:	Application Input 1, static Display hold, Reset or Chain Reset (programmable)
Keylock	static
Outputs:	SSI measure + SSI measure -
Relay ¹⁾	Out 1 and Out 2
Contact Type	changeover relay
Switching Voltage	max. 250 VAC/30 VDC, mind 5 VAC/DC
Switching Current	max. 1A, min. 10 mA

¹⁾ for versions with limit value only

DIMENSIONAL DRAWING



CONNECTION DIAGRAM



ORDERING DATA

Type	absolute encoder connection	Supply	Ordering code
signo 727 without limit values	SSI	12...24 VDC	0 727 111
signo 727 without limit values	SSI	115/230 VAC	0 727 112
signo 727 with 2 limit values	SSI	12...24 VDC	0 727 131
signo 727 with 2 limit values	SSI	115/230 VAC	0 727 132

opt. with interface RS 485, RS 232 on request

Please note:

Absolute encoders with capped Gray Code (e.g. 360 or 720) must not be connected
 Max. encoder resolution: 12 Bit ST (singleturn) and
 24 Bit MT (multiturn 12 + 12 Bit)

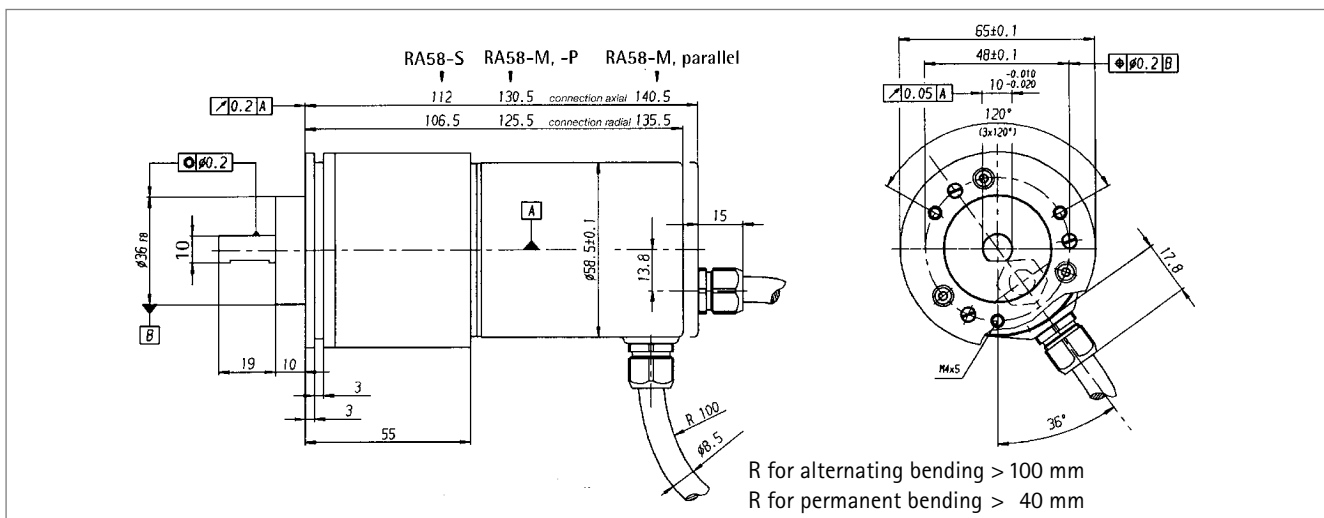
Accessories, Encoder with Shock Module

RA58-S/M/P WITH OPTIONAL SHOCK MODULE

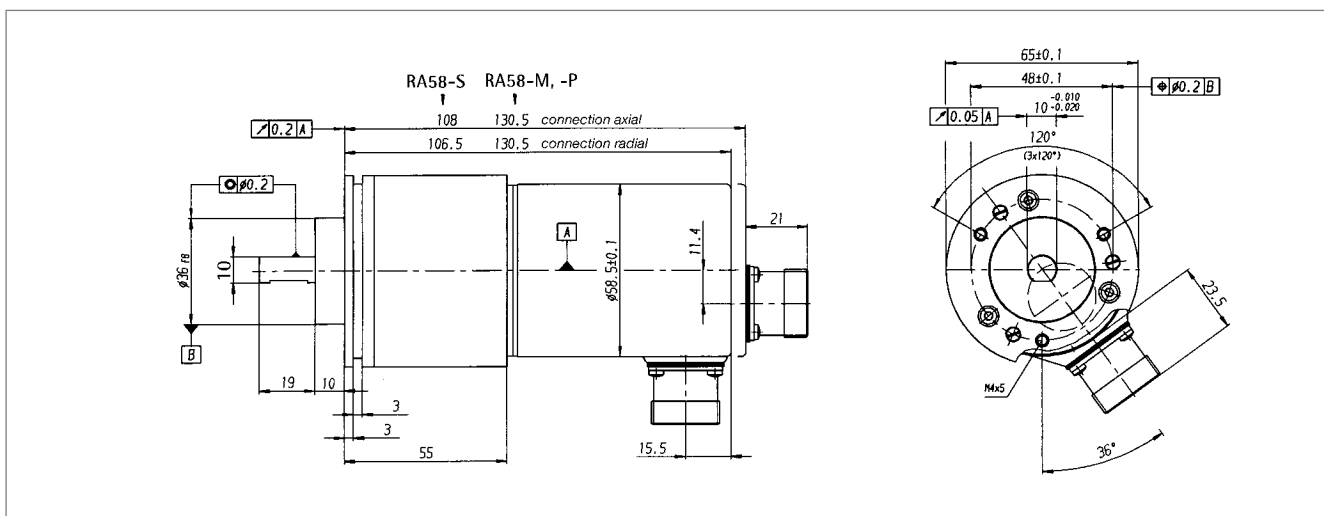
Applications with vibration rates of up to $>100 \text{ m/s}^2$ and shock rates $>1000 \text{ m/s}^2$ require the use of a shock module. By means of integrated attenuating elements, these encoder ratings are reduced.

Fixing	flange by means of clamping flange or clamping eccentric, shaft by means of flexible coupling
Absolute max. shaft load	axial 30 N, radial 100 N
Shaft diameter	10 mm

DIMENSIONED DRAWING Encoder with shock module, connecting cable



DIMENSIONED DRAWING Encoder with shock module, flange connector



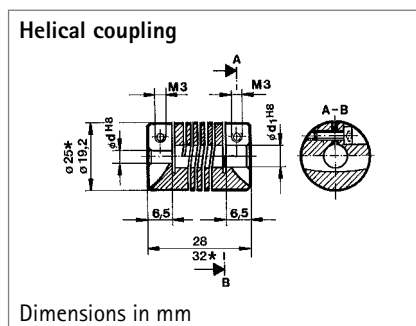
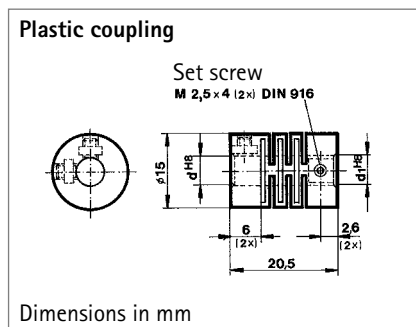
ORDERING DATA

For the encoder option with shock module, please enquire by stating your desired encoder type.

Accessories, Flexible Couplings

Shaft encoders must be protected against excessive mechanical stresses, which occur whenever there are angular, axial, or radial misalignments between the machine and shaft encoder shafts.

Our flexible couplings can compensate for this within limits.



* applies for with * marked hub diameters

Absolute max. speed	10,000 RPM
Torque max.	20 Ncm
Moment of inertia	1.1 gcm ²
Torsional spring constant	25 Ncm/degree
Max. angular misalignment	± 2.5°
Max. shaft misalignment radial / axial	± 0.3 mm / ±0.2 mm
Max. tightening torque of set screws	30 Ncm
Material	polyamide 6.6 glass-fibre reinforced
Weight	3.5 g approx.

Hub diameter

5/5 mm	Ordering code 3 520 034	Suitable for encoder type RI 39
5/6 mm	Ordering code 3 520 033	RI 32, RI 41, RI 42
6/6 mm	Ordering code 1 761 026	

Absolute max. speed	6,000 RPM
Torque max.	80 Ncm
Moment of inertia	8.7 gcm ²
Torsional spring constant	14 Ncm/degree
Max. angular misalignment	± 4°
Max. shaft misalignment radial/axial	± 0.25 mm / ± 0.4 mm
Max. tightening torque of set screws	80 Ncm
Material	AlCuMgPb, chromed
Weight	16 g

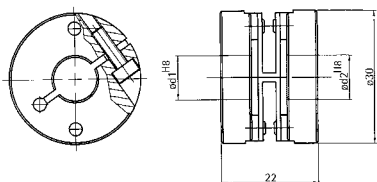
Hub diameter

5/5 mm	Ordering code 3 520 036	Suitable for encoder type RI 30, RI 32,
5/6 mm	Ordering code 3 520 035	RI 36, RI 41, RI 42, RI 58, RA 58
6/6 mm	Ordering code 0 070 653	
6/6.35 mm	Ordering code 3 520 051	
¹⁾ 6/9.53 mm	Ordering code 3 520 052	
¹⁾ 6/10 mm	Ordering code 3 520 066	
6.35/6.35 mm	Ordering code 3 520 057	
¹⁾ 6.35/9.52 mm	Ordering code 3 520 062	
¹⁾ 10/12 mm	Ordering code 3 520 065	
¹⁾ 10/10 mm	Ordering code 3 520 074	

¹⁾ The dimensions marked with ¹⁾ apply for the dimensional drawings

Flexible Couplings

Spring washer coupling



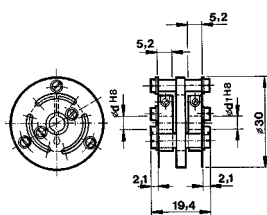
Dimensions in mm

Absolute max. speed	12,000 RPM
Torque max.	60 Ncm
Max. shaft misalignment	
Radial	± 0.3 mm
Axial	± 0.4 mm
Angular	$\pm 2.5^\circ$
Torsional spring constant	50 Nm/rad
Material	
Flanges	aluminium, surface-protected
Spring disc	plastic, glassfibre-reinforced

Hub diameter

5/6 mm	Ordering code 3 520 080
6/6 mm	Ordering code 3 520 081
6/10 mm	Ordering code 3 520 082
6/6.35 mm	Ordering code 3 520 083
6/9.53 mm	Ordering code 3 520 084
6.35/6.35 mm	Ordering code 3 520 085
7/7 mm	Ordering code 3 520 086
10/6.35 mm	Ordering code 3 520 087
10/10 mm	Ordering code 3 520 088

Flange-face coupling

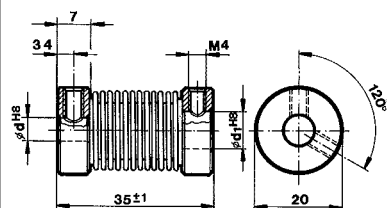


Dimensions in mm

Absolute max. speed	12,000 RPM
Torque max.	80 Ncm
Moment of inertia	19 gcm ²
Torsional spring constant	130 Ncm/degree
Max. angular misalignment	$\pm 3.0^\circ$
Max. shaft misalignment	
radial	± 0.3 mm
axial	± 0.4 mm
Max. tightening torque of set screws	80 Ncm
Hub diameter d and d1	6 mm H 8
Material	
coupling body, flange	AlCuMgPb, anodized aluminium
preloaded disc	CuSn6, stainless steel
Weight	14.5 g approx.

Ordering code 0 070 663 Suitable for encoder type RI 36, RI 58, RA 58

Bellows coupling



Dimensions in mm

Absolute max. speed	8,000 RPM
Torque max.	80 Ncm
Moment of inertia	22 gcm ²
Torsional spring constant	230 Ncm/degree
Max. angular misalignment	$\pm 4.0^\circ$
Max. shaft misalignment	
radial	± 0.3 mm
axial	± 0.5 mm
Max. tightening torque of set screws	150 Ncm
Material	
flange	CuZn39Pb3, nickel-plated
bellows	CuZn20, nickel-plated
Weight	34 g

Hub diameter

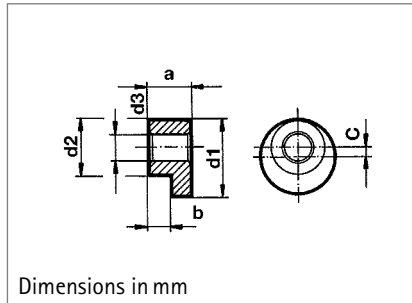
12/12 mm	Ordering code 0 070 666	Suitable for encoder type RI 58, RA 58
10/10 mm	Ordering code 3 520 037	
9.53/9.53 mm	Ordering code 3 520 038	
6/6 mm	Ordering code 3 520 068	

Accessories, Mounting

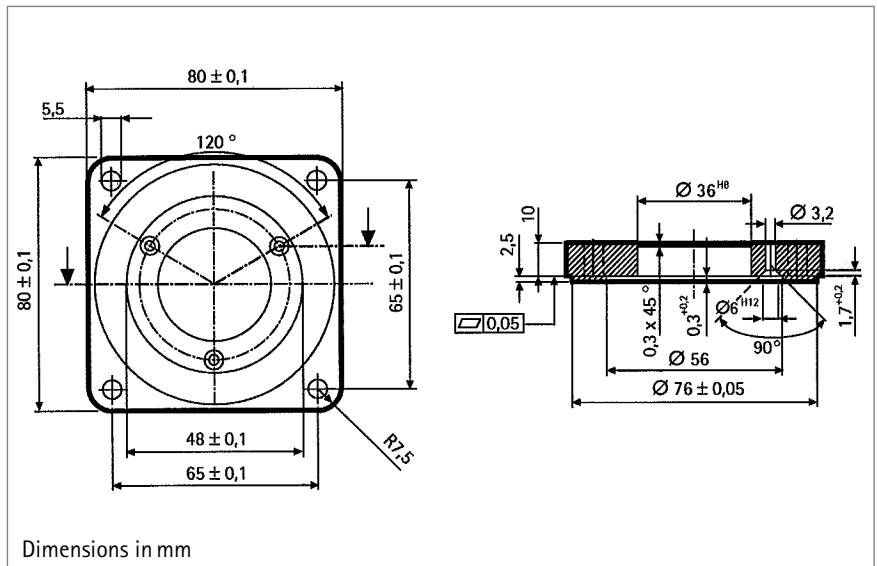
CLAMPING ECCENTRIC

Material CuZn39Pb3 Surface nickel-plated Set of three
Suitable for encoders with synchro flange type RI 30, RI 36, RI 58, RA 58

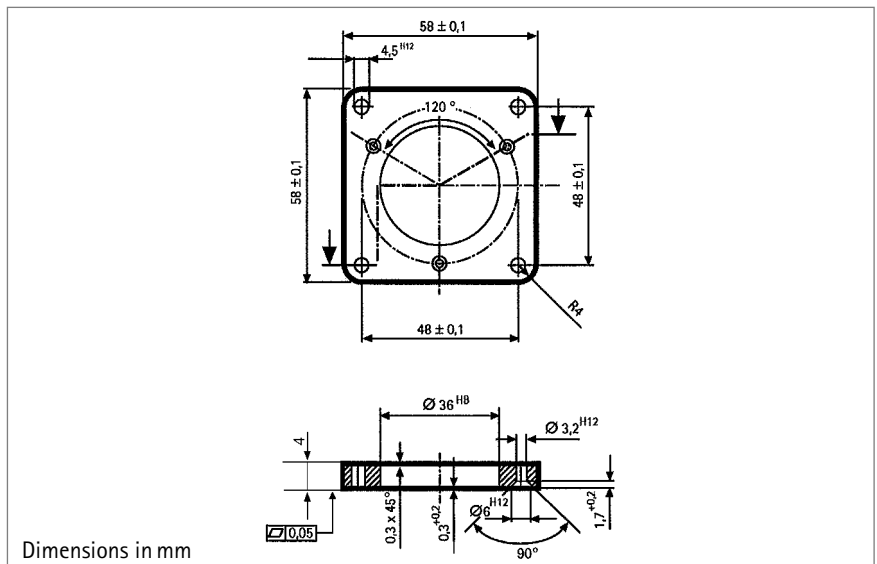
	$\varnothing d1$	$\varnothing d2$	$\varnothing d3$	a	b	c
Ordering code 0 070 655 (RI 58, RA 58)	8.9	6.5	3.2	4.9-0.1	2.9-0.1	1.2
Ordering code 0 070 657 (RI 30, RI 36)	6.8	5	2.8	4.4-0.1	2.9-0.1	0.9



SQUARE FLANGE ADAPTER
80 x 80 mm for clamping flange
RI 58, RA 58
(fastening material included)
Ordering code 1 522 327

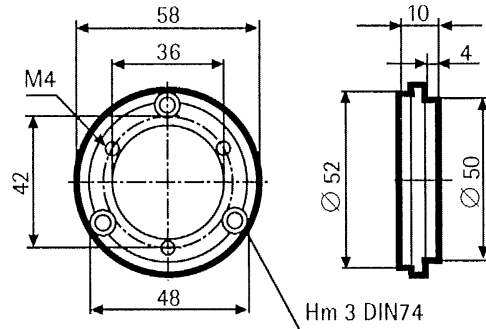


SQUARE FLANGE ADAPTER
58 x 58 mm for clamping flange
RI 58, RA 58
(fastening material included)
Ordering code 1 522 326



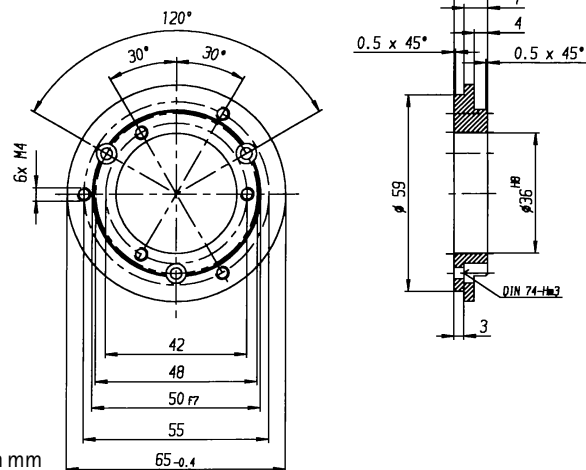
Accessories, Mounting

SYNCHRO FLANGE ADAPTER
for clamping flange RI 58, RA 58
(fastening material included)
Ordering code 1 522 328



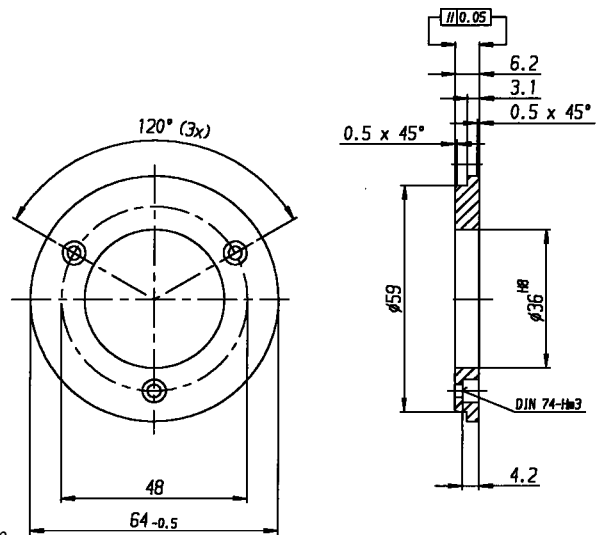
Dimensions in mm

SYNCHRO FLANGE ADAPTER
for clamping flange RI 58
(same dimensions as TR HE 65)
(fastening material included)
Ordering code 1 522 542



Dimensions in mm

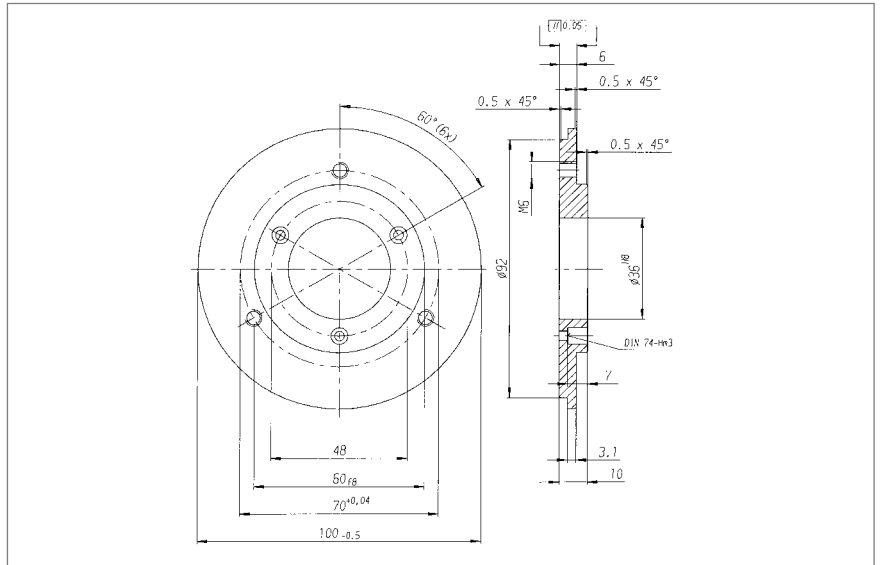
SYNCHRO FLANGE ADAPTER
for clamping flange RI 58
(same dimensions as AG 661)
(fastening material included)
Ordering code 1 522 547



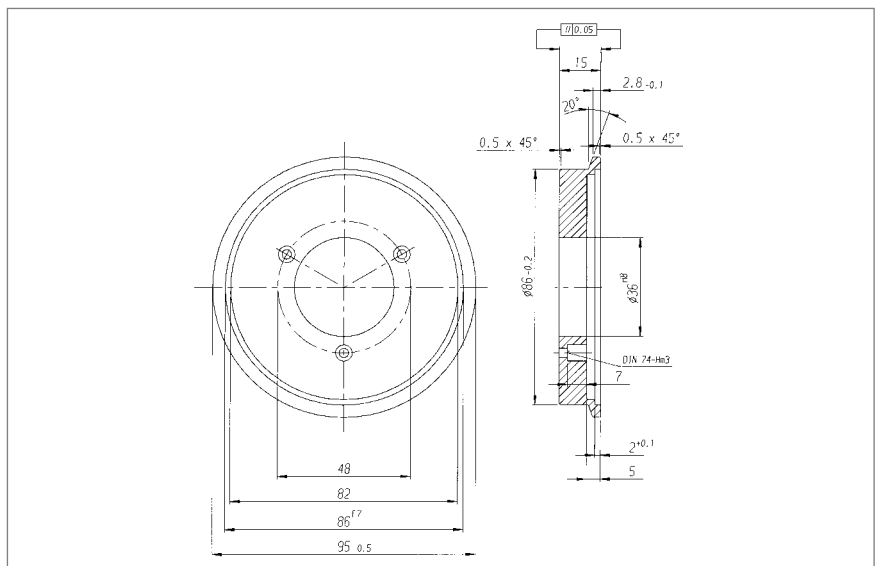
Dimensions in mm

Accessories, Mounting

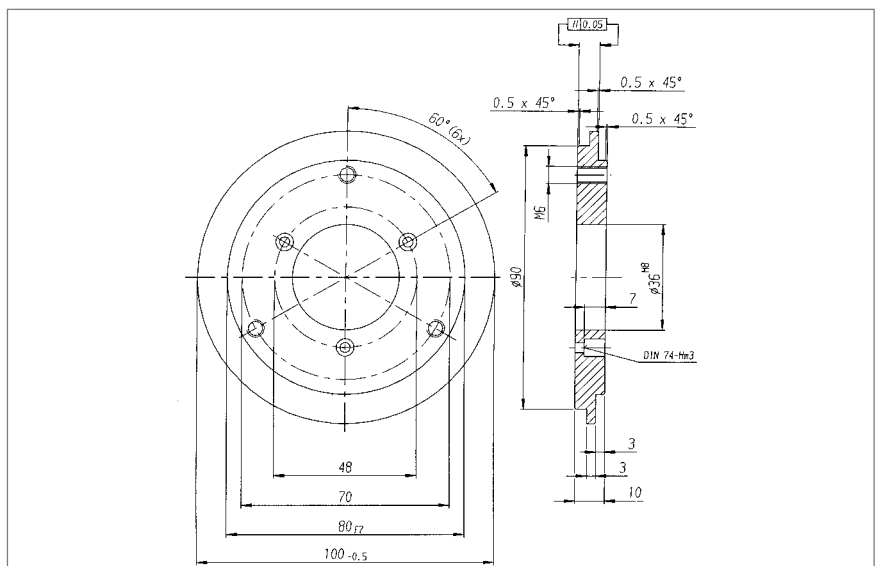
SYNCHRO FLANGE ADAPTER
for clamping flange RI 58
(same dimensions as AG 100/110)
(fastening material included)
Ordering code 1 522 548



PROFILE FLANGE ADAPTER
for clamping flange RI 58
(same dimensions as AG 101/110)
(fastening material included)
Ordering code 1 522 543



SYNCHRO FLANGE ADAPTER
for clamping flange RI 58, RA 58
(same dimensions as TR CE 100)
(fastening material included)
Ordering code 1 522 745

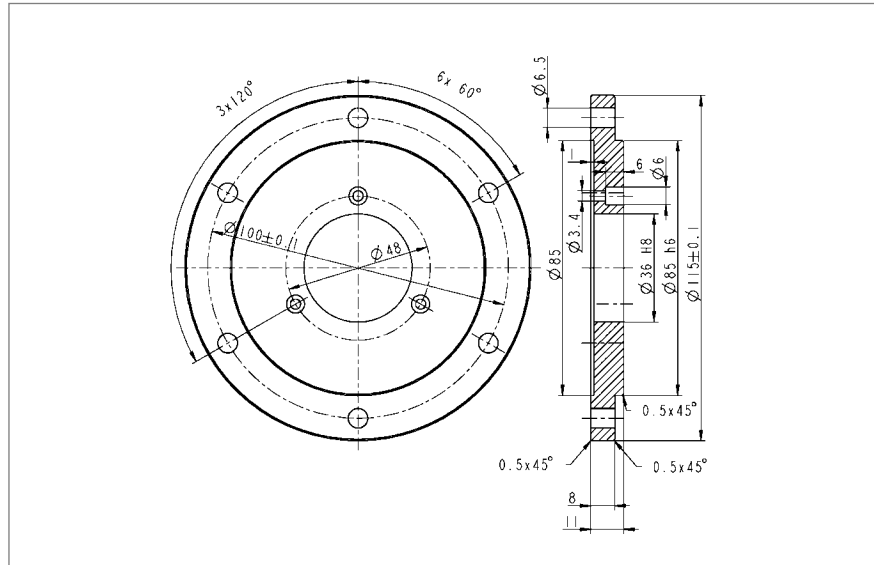


Further flange adapters on request

Accessories, Mounting

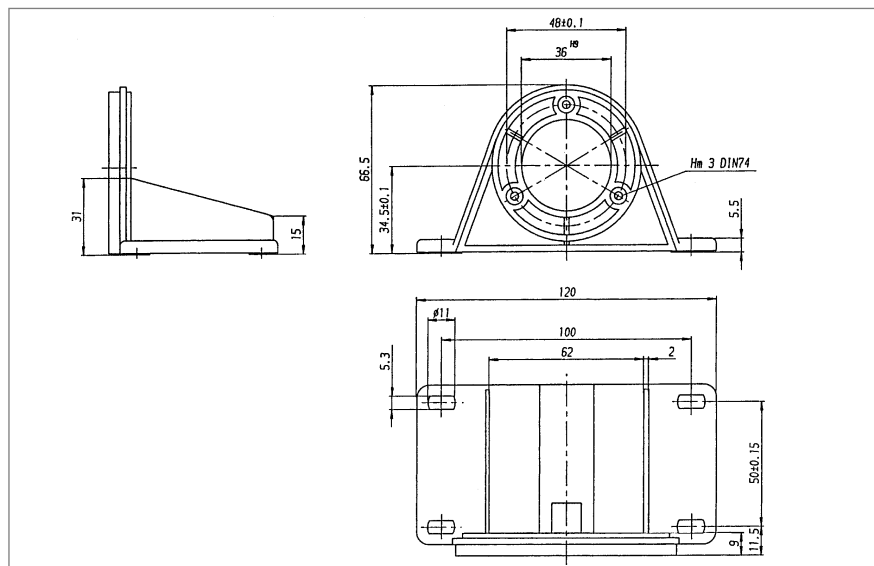
FLANGE ADAPTER

for clamping flange RA 58
 (same dimensions as Gelma RAD 5)
 (fastening material included)
 Ordering code 1 540 336



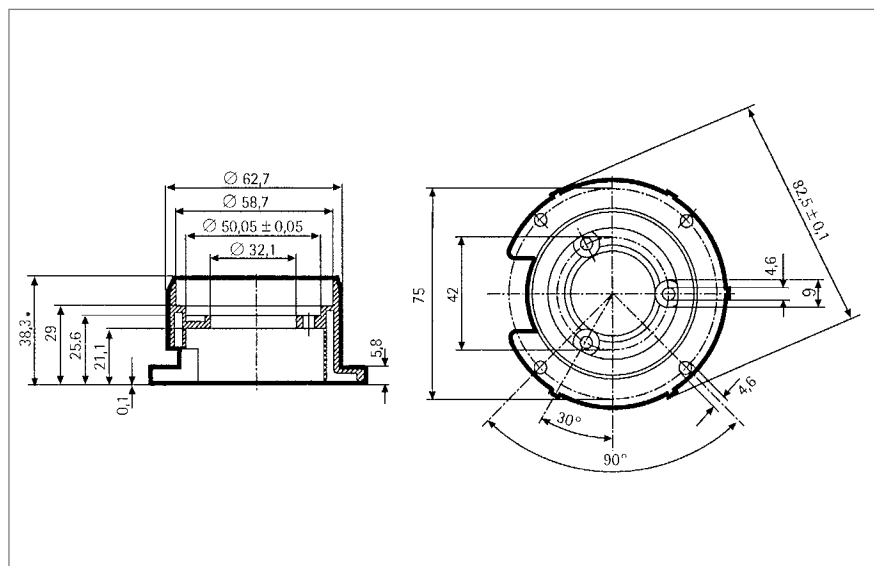
ANGLE BRACKET (PLASTIC)

for clamping flange RI 58, RA 58
 (fastening material included)
 Ordering code 1 522 329

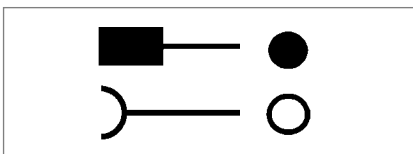
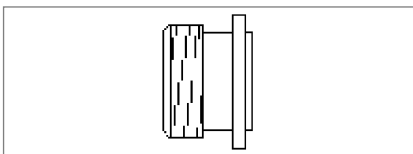
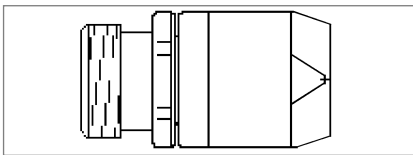
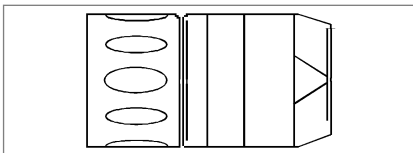
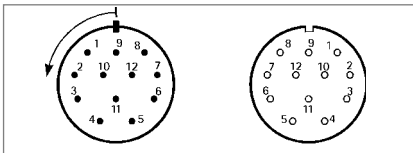
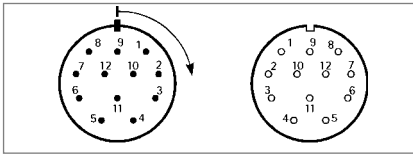


MOUNTING BELL (PLASTIC)

for Synchro flange RI 58, RA 58
 (clamping eccentric and fastening
 material included)
 Ordering code 1 522 330



Connectors



NUMBERING OF PINS

Clockwise system:

A connector with pin contacts, which is numbered clockwise, and the corresponding counter-plug connector with socket contacts (which consequently must be numbered counter-clockwise), is called right-turning.

Counter clockwise system:

A connector with pin contacts, which is numbered counter clockwise, and the corresponding counter-plug connector with socket contacts (which consequently must be numbered clockwise), is called left-turning.

PLUG

A connector with coupling nut is called plug, without regard to its pin or socket contacts.

COUPLING

A connector with outer thread is called coupling without regard to its pin or socket contacts.

CONNECTOR

A connector is fastened to the encoder or the machine's housing, has an outer thread (like the coupling) and is available with pin or socket contacts.

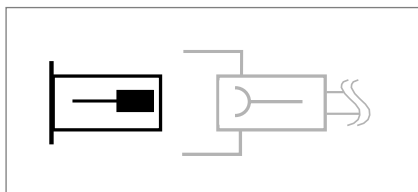
CONTACTS

Sign for pin contact

Sign for socket contact

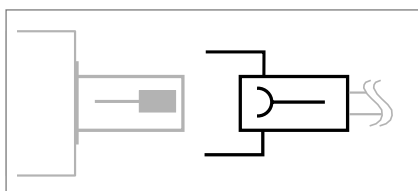
Connectors

CONNECTOR FOR MOUNTING IN ENCODER HOUSING (IDENTICAL WITH ENCODER CONNECTOR CONIN 12 POLE)



Connector (pins)	Ordering code
CONIN 12 pole, clockwise	3 539 198
CONIN 12 pole, counter clockwise	3 539 230

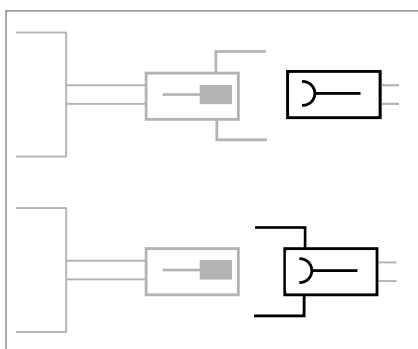
CONNECTOR MATCHING WITH ENCODER CONNECTOR ¹⁾



Encoder connector (pins)	Suitable plug (socket)
Conin 12 pole, clockwise (C, D) (3 539 198)	3 539 202 (PG 9)
Conin 12 pole, counter clockwise (G, H) (3 539 230)	3 539 229 (PG 9)
Conin 17 pole, counter clockwise (U, V)	3 539 256
Conin 17 pole, clockwise (W, Y)	3 539 254
Conin 21 pole, clockwise	1 540 232
Binder 6 pole (J)	3 539 472 (straight, IP 67)
	3 539 209 (bent, IP 40)
MIL 6 pole (M, Q)	3 539 261
MIL 7 pole (L, P)	3 539 262
MIL 10 pole (K, O, R, T)	3 539 258
KPT 12-8P (1, 2)	3 539 333

¹⁾ Extension cables with plug refer to "Extension Cables"

CONNECTOR MATCHING WITH ENCODER CABLE WITH CONNECTOR

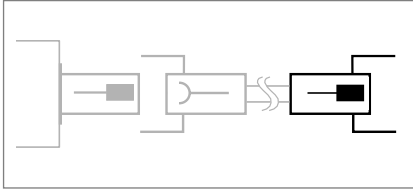


Encoder plug (pins)	Suitable coupling (socket)
Conin 12 pole, clockwise (-C) (3 539 186)	3 539 187
VDW ¹⁾ , 12 pole, clockwise (-B) (3 539 252)	3 539 304
SUB-D, 37pol., (-F) (1 542 025)	1 542 024
Encoder coupling (pins)	Suitable plug (socket)
Conin 12 pole, counter clockwise (-D) (3 539 273)	3 539 229
VDW ¹⁾ , 12 pole, counter clockwise (-E) (3 539 274)	3 539 305

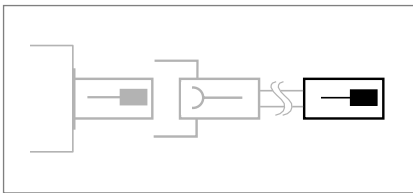
¹⁾ VDW corresponding to Conin plastic-coated

Connectors

CONNECTOR ON CONNECTING CABLE SUITABLE FOR DOWNSTREAM LOGIC CIRCUIT



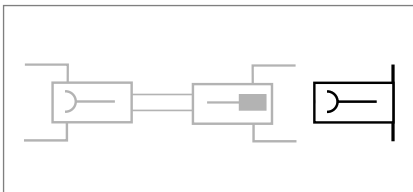
Plug (pins)	Ordering code
Conin 12 pole, clockwise	3 539 186
Conin 12 pole, counter clockwise	3 539 316
Conin 9 pole, clockwise	3 539 293
VDW ¹⁾ 12 pole, clockwise	3 539 252
Conin 17 pole, clockwise	3 539 317
Conin 17 pole, counter clockwise	3 539 309



Coupling (pins)	Ordering code
Conin 12 pole, clockwise	3 539 301
Conin 12 pole, counter clockwise	3 539 273
VDW ¹⁾ 12 pole, counter clockwise	3 539 274
Conin 17 pole, clockwise	3 539 302
Conin 17 pole, counter clockwise	3 539 303

¹⁾ VDW corresponding with Conin plastic-coated

CONNECTOR FOR MOUNTING INTO DOWNSTREAM LOGIC CIRCUIT HOUSING



Connector (socket)	Ordering code
Conin 12 pole, clockwise	3 539 318
Conin 12 pole, counter clockwise	3 539 319

MOUNTING ACCESSORIES

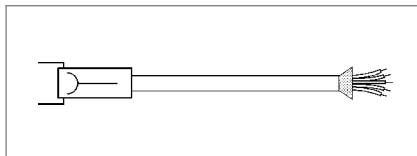
mounting spanner for Conin-connectors	Ordering code
	3 539 343

OTHER CONNECTORS

Conin 9 pole, clockwise, socket	Ordering code
	3 539 294

Extension Cables

EXTENSION CABLES WITH PLUG (SOCKET) ON ONE END



CONIN 12 POLE FOR RI 58 (CABLE TPE)

Pin	Colour ¹⁾	Lead Ø mm ²
1	pink	0,14
2	blue	0,14
3	red	0,14
4	black	0,14
5	brown	0,14
6	green	0,14
7	violet	0,14
8	grey	0,14
9	Screen	0,14
10	white/green	0,5
11	white	0,14
12	brown/green	0,5
Housing	Screen	

¹⁾ cable version 3 280 112

	clockwise ¹⁾	counter clockwise ²⁾
Length	Ordering code	Ordering code
3 m	1 522 348	1 522 394
5 m	1 522 349	1 522 395
10 m	1 522 350	1 522 396
15 m	1 522 454	1 522 447
20 m	1 522 456	1 522 461
25 m	1 522 457	1 522 462
30 m	1 522 464	1 522 463

¹⁾ matching with encoder connector 12 pole, clockwise (C/D)

²⁾ matching with encoder connector 12 pole, counter clockwise (G/H)

BINDER 6 POLE FOR RI 30, RI 36, RI 58 (CABLE PVC)

Pin	Colour ¹⁾	Lead Ø mm ²
1	red	0,5
2	white	0,14
3	yellow	0,14
4	green	0,14
5	yellow/black	0,14
6	black	0,5
Housing	Screen	

¹⁾ cable version 3 280 113

Length	Ordering code
3 m	1 522 405
5 m	1 522 404
10 m	1 522 340

matching with encoder connector (BINDER) 6 pole (J, N)

CONIN 12 POLE FOR RA 58-S AND RA 58-M WITH SSI-INTERFACE (CABLE TPE)

Pin	Colour ¹⁾	Lead Ø mm ²
1	brown	0,5
2	pink	0,14
3	yellow	0,14
4		0,14
5	blue	0,14
6		0,14
7		0,14
8	white	0,5
9		0,14
10	grey	0,14
11	green	0,14
12	black	0,14
Housing	Screen	

¹⁾ cable version 3 280 220

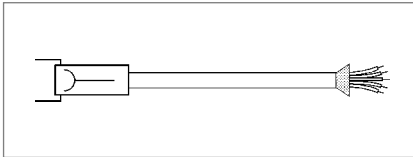
	clockwise ¹⁾	counter clockwise ²⁾
Length	Ordering code	Ordering code
3 m	1 542 003	1 542 010
5 m	1 542 004	1 542 011
10 m	1 542 005	1 542 012
15 m	1 542 006	1 542 013
20 m	1 542 007	1 542 014
25 m	1 542 008	1 542 015
30 m	1 542 009	1 542 016
40 m	1 542 026	1 542 028
50 m	1 542 027	1 542 029

¹⁾ matching with encoder connector 12 pole, clockwise (C/D)

²⁾ matching with encoder connector 12 pole, counter clockwise (G/H)

Extension Cables

EXTENSION CABLES WITH PLUG (SOCKET) ON ONE END



MIL 10 POLE FOR RI 58 (CABLE TPE)

Pin	Colour ¹⁾	Lead Ø mm ²
A	brown	0,14
B	grey	0,14
C	red	0,14
D	brown/green	0,5
E	violet	0,14
F	white/green	0,5
G	green	0,14
H	pink	0,14
I	black	0,14
J	Screen	0,14

Length	Ordering code
3 m	1 522 610

¹⁾ cable version 3 280 112

CONIN 12POLE FOR RA 58-P WITH SSI-INTERFACE (CABLE TPE)

Pin	Colour ¹⁾	Lead Ø mm ²
1	green	0,14
2	yellow	0,14
3	pink	0,14
4	grey	0,14
5	brown	0,14
6	white	0,14
7	black	0,14
8	blue	0,14
9	red	0,14
10	violet	0,14
11	white	0,5
12	brown	0,5
Housing	Screen	

Length	counter clockwise ¹⁾ Ordering code
3 m	1 543 002
5 m	1 543 003
10 m	1 543 004
15 m	1 543 005
20 m	1 543 006
25 m	1 543 007
30 m	1 543 008
40 m	1 543 015
50 m	1 543 016

¹⁾ matching with encoder connector 12 pole, counter clockwise (G/H)

¹⁾ cable version 3 280 220

SUB-D 37 POLE FOR RA 58-M WITH PARALLEL INTERFACE (CABLE TPE)

Colour ¹⁾	Pin	Colour ¹⁾	Pin
brown	2	white/blue	14
green	21	brown/blue	33
yellow	3	white/red	15
grey	22	brown/red	34
pink	4	white/black	16
violet	23	brown/black	35
grey/pink	5	grey/green	17
red/blue	24	yellow/grey	36

Colour ¹⁾	Pin	Colour ¹⁾	Pin
white/green	6	pink/green	18
brown/green	25	yellow/pink	10
white/yellow	7	green/blue	30
yellow/brown	26	yellow/blue	12
white/grey	8	red	13
grey/brown	27	white	31
white/pink	9	blue	1
pink/brown	28	black	20

¹⁾ cable version 3 280 221

Length	Ordering code
1 m	1 542 163
3 m	1 542 020
5 m	1 542 021
10 m	1 542 022
15 m	1 542 172

Length	Ordering code
20 m	1 542 173
25 m	1 542 174
30 m	1 542 175
40 m	1 542 176
50 m	1 542 177

Extension Cables

CONIN 17 POLE FOR RA 58-S WITH PARALLEL INTERFACE (CABLE PVC)

Pin	Colour ¹⁾	Lead Ø mm ²
1	brown/grey	0,14
2	red/blue	0,14
3	violet	0,14
4	white/brown	0,14
5	white/green	0,14
6	white/yellow	0,14
7	white/grey	0,14
8	white/pink	0,14
9	white/blue	0,14
10	white/red	0,14
11	white/black	0,14
12	brown/green	0,14
13	pink	0,14
14	green	0,14
15	black	0,5
16	red	0,5
17	brown	0,14
Housing	Screen	

¹⁾ cable version 3 280 100

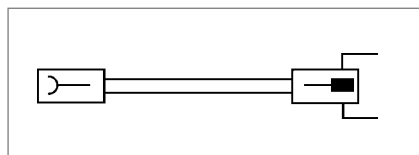
Length	clockwise ¹⁾	counter clockwise ²⁾
	Ordering code	Ordering code
3 m	1 540 100	1 540 097
5 m	1 540 101	1 540 098
10 m	1 540 102	1 540 099
15 m	1 540 142	1 540 138
20 m	1 540 143	1 540 139
25 m	1 540 144	1 540 140
30 m	1 540 145	1 540 141
40 m	1 540 205	1 540 207
50 m	1 540 206	1 540 208

¹⁾ matching with encoder connector 17 pole, clockwise (W/Y)

²⁾ matching with encoder connector 17 pole, counter clockwise (U/V)

Connection diagram see RA 58-S, parallel interface with connector.

EXTENSION CABLES WITH CONNECTOR ON BOTH ENDS



CONIN 12 POLE FOR RA 58 WITH INTERBUS-S-INTERFACE (CABLE TPE)

Length ¹⁾	clockwise Ordering code
3 m	1 542 017
5 m	1 542 018
10 m	1 542 019

¹⁾ cable version 3 280 220

CABLE NOT MADE UP WITH CONNECTORS

	Ordering code
TPE-cable for RI (12-core + screen)	3 280 112 + length
PVC-cable for RI (10-core + screen)	3 280 114 + length
PVC-cable for RI (6-core + screen)	3 280 113 + length
PVC-cable for RA 58-S with parallel (20-core + screen)	3 280 100 + length
TPE-cable for RA 58 with SSI or IB-S (12-core + screen)	3 280 220 + length
TPE-cable for RA 58-M with parallel (32-core + screen)	3 280 221 + length

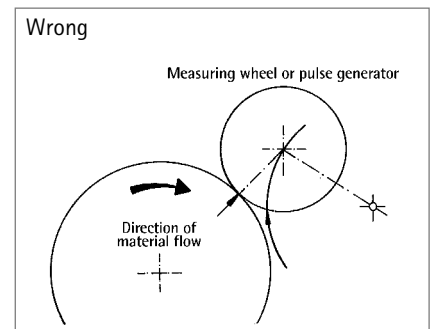
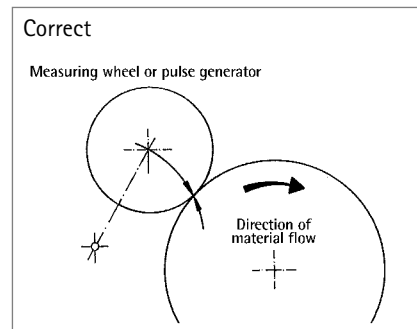
Accessories, Measuring Wheels

GENERAL ASPECTS

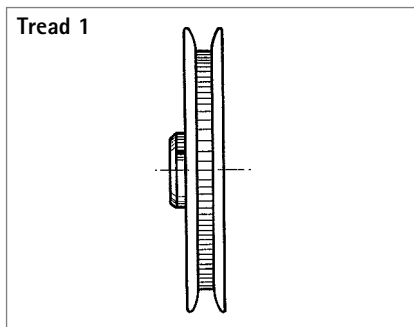
In order to prevent the result being distorted when the shaft encoder is driven by a measuring wheel make sure that the slip is as small as possible. When selecting the tread (surface), take into account the structure, stretchability, thickness, and resistance to being carried along of the material being measured.

The slip is also affected by the width of the measuring wheel, the contact pressure, the tension in the material being measured, and the arc of contact. The arc of contact should be as large as possible. The wheel bodies are made of cast aluminium or plastic (as marked).

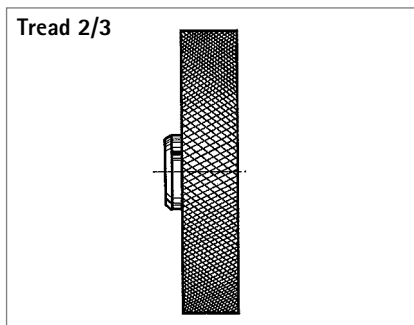
The position of the measuring wheel should be chosen so that the direction of movement of the material is away from the shaft encoder's bearing point.



MEASURING WHEEL TREADS



Tread 1
with rim and fine crosshatched knurl
Material: aluminium
Applications such as threads and yarns



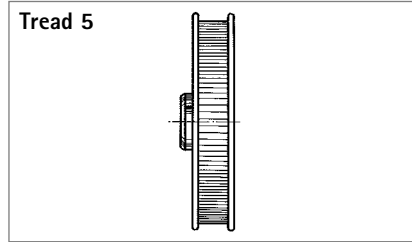
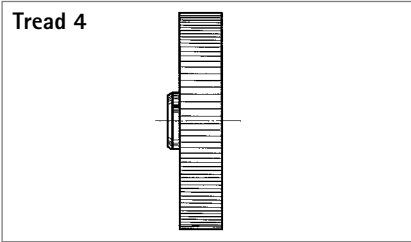
Tread 2
with glued-on rubber profile
A = soft specially clinging rubber surface (red)
B = low-wear rubber surface with good grip (white)

Applications such as paper and cardboard, measuring cables, nongreasy metals, fleece, undressed or surface-treated wood, soft and hard plastics.

Tread 3
vulcanized rubber surface with parallel knurl

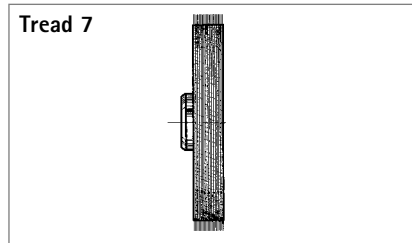
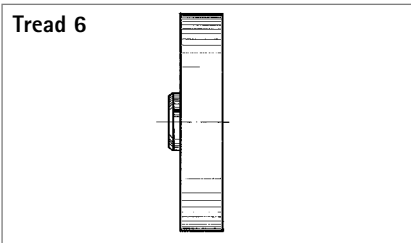
Applications such as rubber, leather, fabrics, flooring, and glass.

Accessories, Measuring Wheels



Tread 4
aluminium with parallel knurl Applications such as rubber, soft plastics, wood with rough surface, and to a limited extent for fabrics.

Tread 5
with rim, aluminium with parallel knurl Applications such as threads, yarns, and bands.



Tread 6
plastic surface Applications such as wire, greasy metals, and steel sections.

Tread 7
carding belt Applications such as carpets and coarse fabrics.

ORDERING DATA Aluminium

Diameter	Circumference	Tread	Width of bearing surface mm	Bore diameter			
				4.0 mm	6.0 mm	7.0 mm	10.0 mm
6.37 cm	0.2 m	1	4	0 601 014	0 601 015	0 601 017	--
		2 A	12	0 601 018	--	--	--
		2 B	12	0 601 118	0 601 048	--	0 601 049
		2 A	24	0 601 020	--	0 601 092	--
		2 B	24	--	--	0 601 192	--
		4	20.5	0 601 023	--	--	--
15.92 cm	0.5 m	4	20	--	--	0 601 093	--
		5	16.5	0 601 026	--	0 601 094	--
		2 A	25	--	--	0 601 050	--
		2 B	--	--	--	0 601 150	0 601 151
		3	25	--	--	0 601 059	0 601 156
		4	25	--	--	0 601 121 ¹⁾	0 601 157
5.73 cm	1/5 yd.	5	16	--	--	0 601 052	--
		6	25	--	--	0 601 063 ¹⁾	0 601 163
		7	26.5	--	--	0 601 054	--
		1	4	0 601 034	--	0 601 037	--
14.33 cm	1/2 yd.	2 A	24	0 601 042	--	0 601 095	--
		5	16.5	--	--	0 601 096	--
		2 A	25	--	--	0 601 060	--
9.70 cm	1 Fuß	4	25	--	--	0 601 061	--
		2 A	25	--	--	0 601 071	--
		2 B	25	--	--	0 601 171	--
		4	25	--	--	0 601 070	--
6.37 cm	0.2 m	1	4	0 601 100	--	--	--
15.92 cm	0.5 m	4	25	--	--	0 601 301	--
		6	25	--	--	0 601 300	--

¹⁾ PTB approved

Other measuring wheels available on request.

PLASTIC