

Quality - made in Germany



RSN 58

Programming cam controller with 16 parallel outputs

- Total count from 2 to 4096 steps in two-power-steps programmable
- 16 outputs up to 250 cams programmable
- Code-distribution parameterizable normal/inverse
- on-board diagnosis systems
- Electronical zero-point- and Offset-adjustment

Technical data

Resolution	24 Bit
Steps/Turn	4096 (programmable) optional
Turns	4096 (programmable) in two-power-steps

Code	Binary
Interface	RS 232

Elektrical data

Operating voltage	UB = 10...30 VDC
Current consumption	Max. 50 mA (w/o load), at 24 VDC

Code change frequency	Max. 400 kHz
Accuracy	± 0,03° with 200 kHz ± 0,05° with 400 kHz

Inputs

Level High	> 0,7 UB
Level Low	< 0,3 UB

Connection:

CW/CCW input with 10 kohms against UB; without zeroing input with 10 kohms against GND

Outputs

Level High (PNP)	≥ UB - 4,5 V (with I = -15 mA)
Level Low	≤ 3,5 V (with I = 15 mA)

Loading High (PNP)	≤ -20 mA
Loading Low (NPN)	≤ 20 mA
Tristate	≤ 200 µA

All outputs with short-circuit-proof PNP or NPN Open Collector output stages.

Mechanical data

Speed (mechanical)	max. 10.000 min ⁻¹
Speed (electrical)	max. 6.000 min ⁻¹
Start-up torque	< 0,015 Nm
Shaft loading	< 40 N radial < 20 N axial
Moment of inertia	2 x 10 ⁻⁶ kgm ²

Material

Housing	Steel
Flange	Aluminium
Weight	approx. 600 g

Ambient conditions

Vibration	DIN EN 60068-2-6 ≤ 100 ms ⁻² , 16...2000 Hz
Shock	DIN EN 60068-2-27 ≤ 2.000 m/s ² , 6 ms
Operating temperature	- 20...+ 70° C
Humidity	Max. relative humidity 95 % no-condensing
Protection type	IP 65
Interference resistance	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4

Description of diagnostic functions

- The following is monitored during operation:
- Consistency test of code
 - Exceeding of the permissible signal frequency
 - LED failure, aging
 - Receiver failure
 - Code disk, glass breakage
 - Power supply of electronic gear unit

Special functions

- Two „limit switch function“ preselection
- Programmable speed monitoring
- Diagnosis and operating status

Contact Description

1 - 16 SO-S15	16 cam outputs. Up to 250 cams can be programmed on these 16 outputs. With PNP, Pull-DOWN is recommended for each data line, and for NPN Pull-UP r resistors with 4.7 kohms.
17 - 19	Outputs without function. These outputs may be not connected external.
20 - 24 D19 - D23	Special outputs This outputs may be optionally assigned the special functions preselection 1, preselection 2, speed monitoring and diagnosis status by programming.
27 Adjustment	Electronic adjustment (takeover of the pre-programmed value) can be done by generating a steep edge from GND to UB (is activated with a falling edge). Adjustment must be done after selecting the direction of rotation (CW/CCW). Set to GND for max. immunity after adjustment. Impulse length ³ 100 ms.
28 ENABLE	If this input is connected to Low level, the output drivers are activated. If it is connected to High potential (or unconnected), the output drivers switch into the high-resistance state (tristate).
30 CW/CCW	CW/CCW determines the direction of turn. From the point of view of the shaft CW means that the code increases when the shaft turns to the right. When the GND is added, the code changes to CCW (descending sequence). The unit leaves the factory in CW.
34 GND-Sense	This contact is internally connected to GND and is used together with UBSense for measuring the supply voltage at the encoder by the downstream electronics.
35 UB-Sense	This contact is internally connected to UB. If the sensor line is not used, this contact must be isolated (danger of short circuit).
36 UB	Encoder power supply connection
37 GND	Encoder ground connection relating to UB

Condition for programming:

- PC with RS 232 interface and Windows system software
- Programming software ProGeber and handbook
- Programming cable, which connected the absolute-encoder with the PC.

Connection assignment

Plug	Cable colour	Assignment
1	white	S0
2	brown	S1
3	green	S2
4	yellow	S3
5	gray	S4
6	pink	S5
7	black	S6
8	violett	S7
9	gray-pink	S8
10	red-blue	S9
11	white-green	S10
12	brown-green	S11
13	white-yellow	S12
14	yellow-brown	S13
15	white-gray	S14
16	gray-brown	S15
17	white-pink	-
18	pink-brown	-
19	white-black	-
20	brown-black	D19
21	gray-green	D20
22	yellow-gray	D21
23	pink-green	D22
24	yellow-pink	D23
25	-	-
26	-	-
27	yellow-blue	Adjustment
28	brown-blue	ENABLE
29	-	-
30	green-blue	CW/CCW
31	-	-
32	-	-
33	-	-
34	white-blue	GND-Sense
35	white-red	UB-Sense
36	red	UB
37	blue	GND

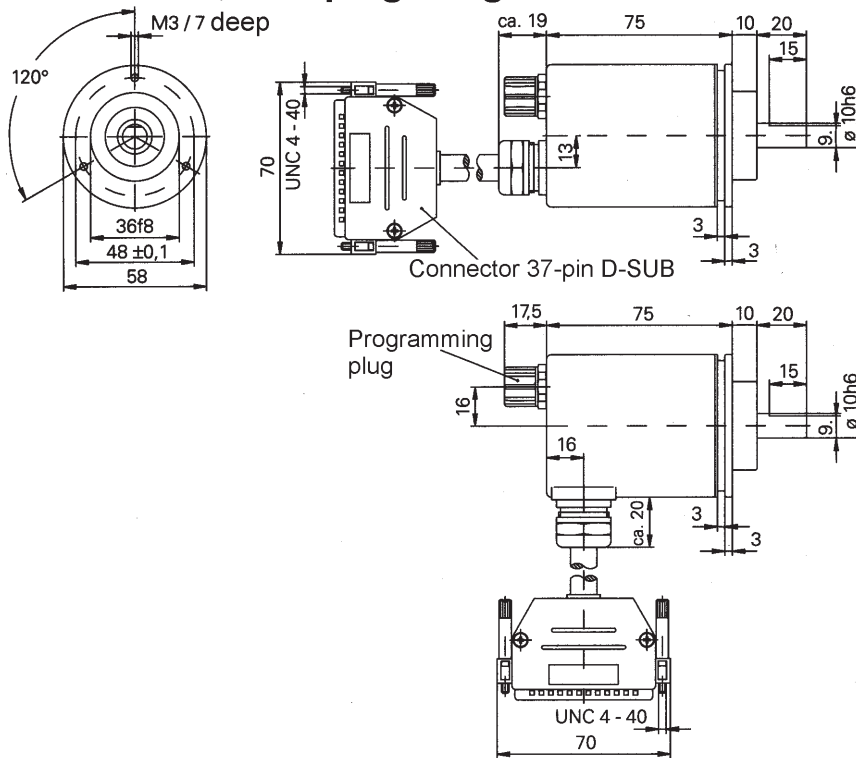
Commendation: Please use leads twisted in pairs for extension cables

Connection assignment programming cable

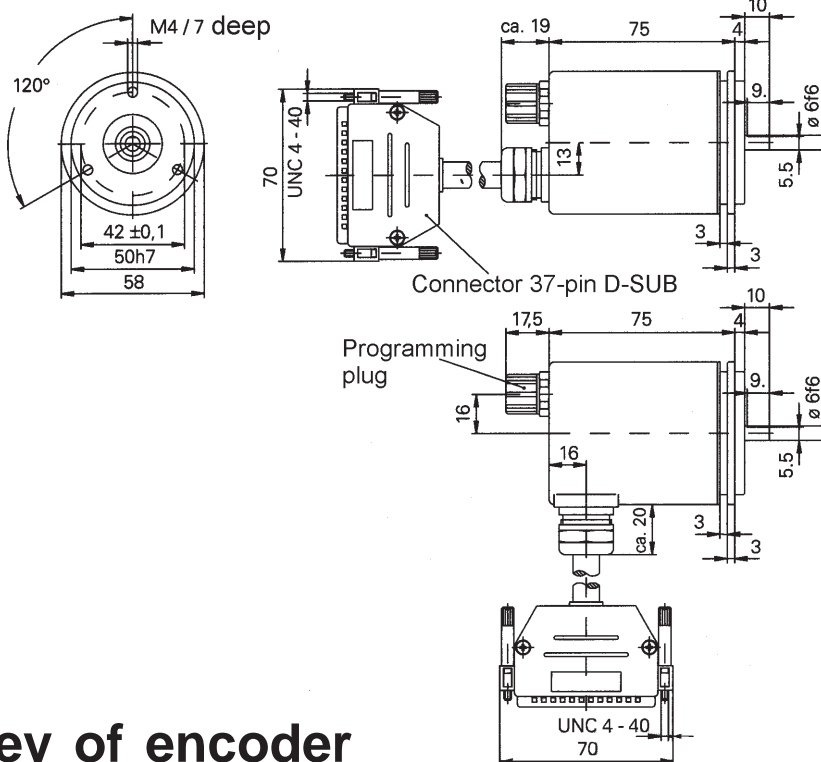
Encoder-function	5-pol. Encoder plug	Cable colour	PC-Connection 9pol. D-SUB	PC-Connection 25pol. D-SUB
-	Pin 1	brown	-	-
RxD	Pin 2	white	Pin 3	Pin 2
GND	Pin 3	blue	Pin 5	Pin 7
P/R Mode	Pin 4	black	Pin 5	Pin 7
TxD	Pin 5	gray	Pin 2	Pin 3
-	-	-	Br. 4-6	Br. 4-5
-	-	-	Br. 7-8	Br. 6-20

Dimension and cutout RSN 58

10 mm shaft, clamping flange



6 mm shaft, servo flange



Type key of encoder

Encoder type	Bit/Turn	Turns	Driver	Voltage	Flange	Output
RSN 58	12 = 4096 T	12 = 4096T	P = OC PNP	3 = 10 - 30 VDC	W 1 = 10 mm shaft clamping flange	KG = cable axial
RSN 58			N = OC NPN		V 6 = 6 mm shaft servo flange	KS = cable radial
RSN 58	12	12	_____	3	_____	_____

