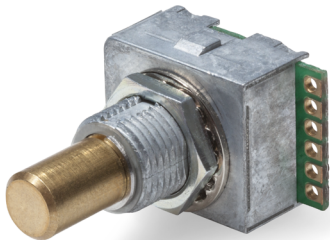


Data Sheet for Panel Encoders

Optoelectronic Panel Encoder

Series MRS



- Resolution 4, 6 or 8 pulses per revolution
- With 16, 24 or 32 detent positions
- With or without push switch
- 5 V or 3,3 V supply voltage
- Compact design
- Optional board connection

The well priced and space saving encoder is commonly used for detecting the angle value in manual operations. With the optional push switch it is possible to acknowledge the set value.

Electrical Data

Resolution	4, 6 oder 8 ppr. <small>Please note the number of pulses is not equal to the number of detent positions</small>	
Output signal	A, B	
Output electronics	Open Collector, Pull Up Resistor ≥ 10 kOhm	
Supply voltage	5 V \pm 5 %	3,3 V \pm 5 %
Output Voltage High	$\geq 3,0$ V	$\geq 2,3$ V
Output Voltage Low	$\leq 1,0$ V	$\leq 0,8$ V
Current consumption (no load)	< 20 mA	
Isolation resistance	100 MOhm @ 250 VDC	
Dielectric strength	250 VAC, 1 min	
Maximum voltage push switch	12 VDC	
Maximum current push switch	50 mA	
Contact resistance push switch	< 200 mOhm	

Mechanical and Environmental Data

Number of detent positions per revolution	
Resolution 4 ppr.	16
Resolution 6 ppr.	24
Resolution 8 ppr.	32
Life expectancy	> 1 x 10 ⁶ revolutions <small>Tested under room temperature +20 °C, with radial load 1N, without sealing ring</small>
Life expectancy push switch	> 1 x 10 ⁶ actuations
Starting torque / Detent torque	
Without detent	<0,2 Ncm
With detent	0,4 \pm 0,2 Ncm
With increased detent torque	1,1 \pm 0,5 Ncm
Travel push switch	0,2...0,8 mm
Force push switch	4,5 \pm 1 N
Protection class electronics	IP40
Protection class shaft sealing	
Standard	IP00
Option D	IP54, IP55S
Operating temperature	0..+60 °C
Storage temperature	-20..+80 °C
Mechanical vibration	10-55 Hz; 1,5 mm peak to peak
Mechanical shock	50 g (11 ms, half sine)
Humidity	max. 95 % @ 40°C no dewing

Data Sheet for Panel Encoders

Optoelectronic Panel Encoder

Series MRS

Mechanical and Environmental Data

Max. fastening torque of the mounting nut	1 Nm
Mounting parts (included in delivery)	Hexagonal nut, teeth washer
Weight	ca. 10 g

Order code

Description	Options									
Series MRS	MRS									
Shaft diameter										
Ø 6 mm		-								
Ø 6,35 mm (1/4")		6,35								
Without detent (*)			- (*)							
With detent			C							
Without push switch				-						
With push switch				T						
4 ppr. (*)						4 (*)				
6 ppr. (*)						6 (*)				
8 ppr.						8				
Supply voltage										
5 V							5			
3,3 V (*)							3,3 (*)			
Output signal A+B								B		
Sealing ring in the bushing									D	
Design options										
Standard with solder pads										
Solder pins to the front side (*)										-
Solder pins to the rear side										V1 (*)
Solder pins rectangular to the axis										V2
100 mm cable with solder connector 6P-SAN (*)										V3
										V4 (*)
Increased detent torque 1,1 ± 0,5 Ncm (*)										V5 (*)

short-term stock types can be found on: <http://www.megatron.de/en/stocklists/angle-sensors/lagerliste.html>

bold print = standard option

(*) = on request available for projects

For higher quantities or on-going demand, additional options are available as described below

For example:

- Other resolutions
- Other number of detents
- Customized detent torque
- Special shaft design

For technical advice, projects, samples, questions about pricing, delivery times and availability please contact us

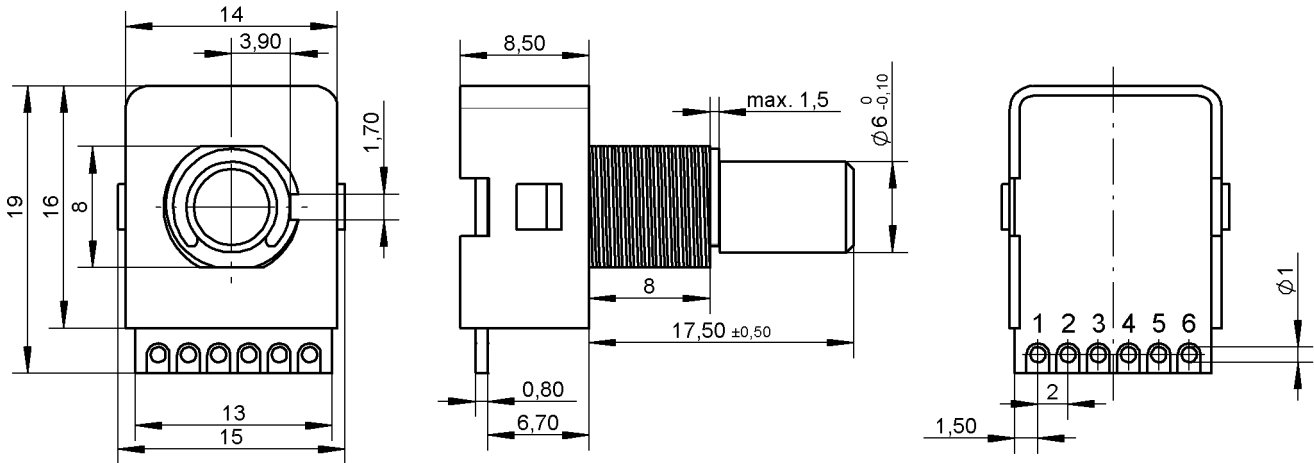
Tel.: +49 89 46094-500
export@megatron.de

Data Sheet for Panel Encoders

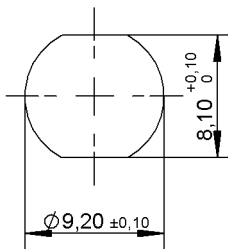
Optoelectronic Panel Encoder

Series MRS

Drawing

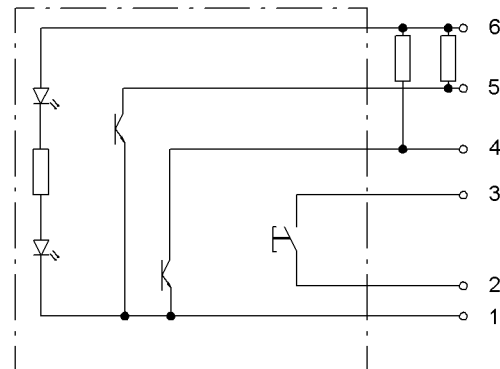
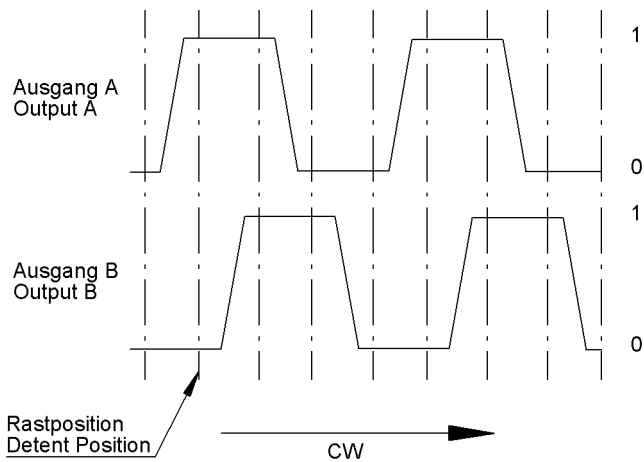
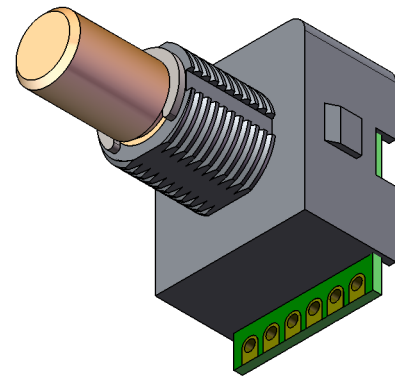


Mounting hole



Pin assignment

1	GND
2	Push switch for option T
3	Push switch for option T
4	Channel B
5	Channel A
6	Supply voltage



09.07.2013

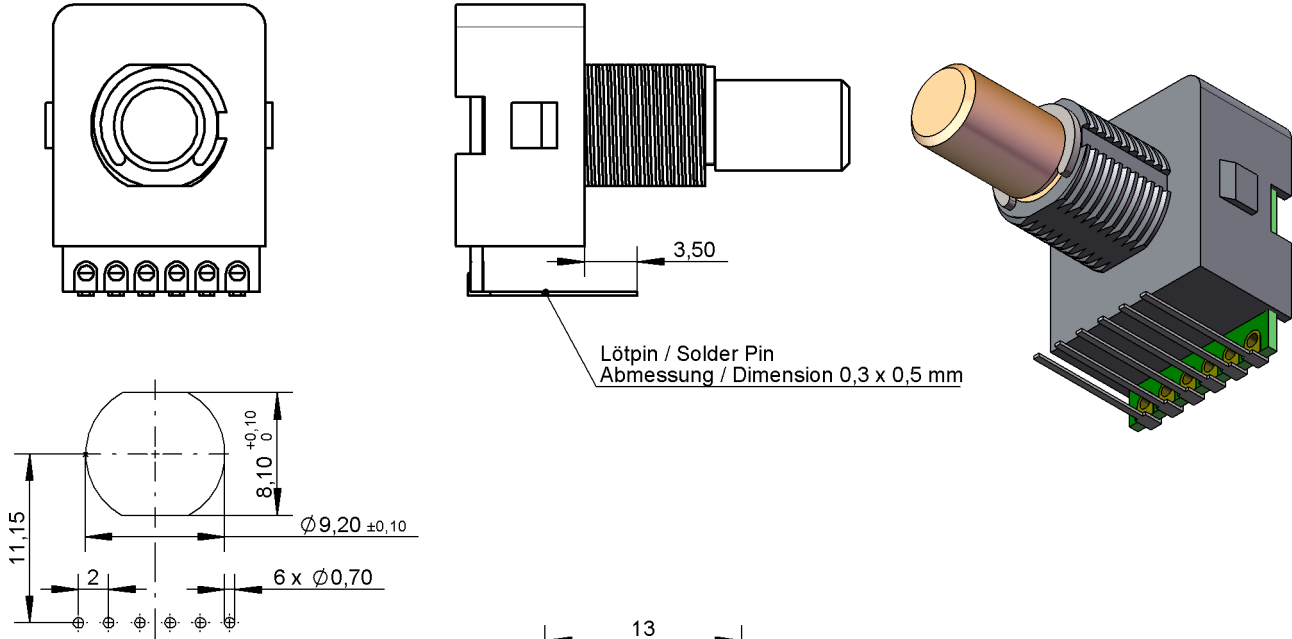
Data Sheet for Panel Encoders

Optoelectronic Panel Encoder

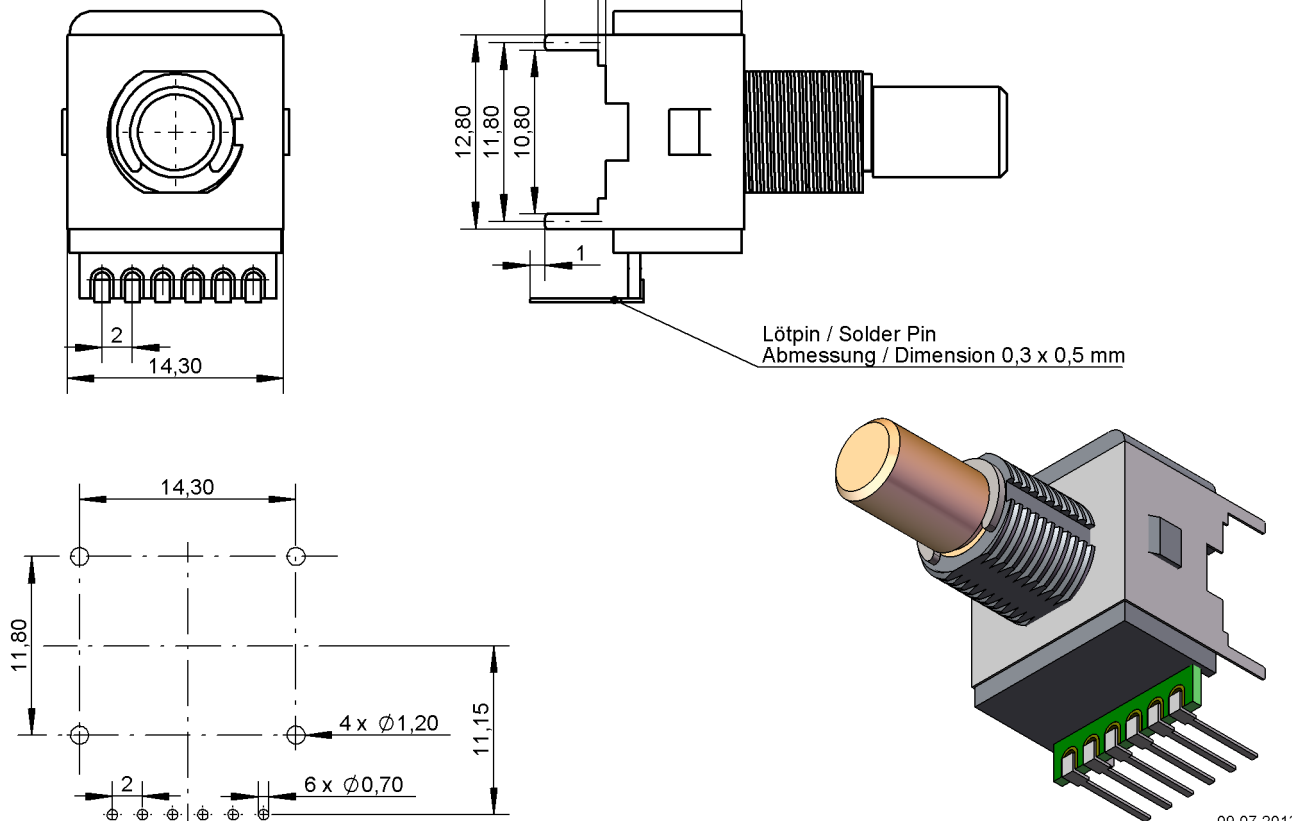
Series MRS

Drawing

Option V1:



Option V2:



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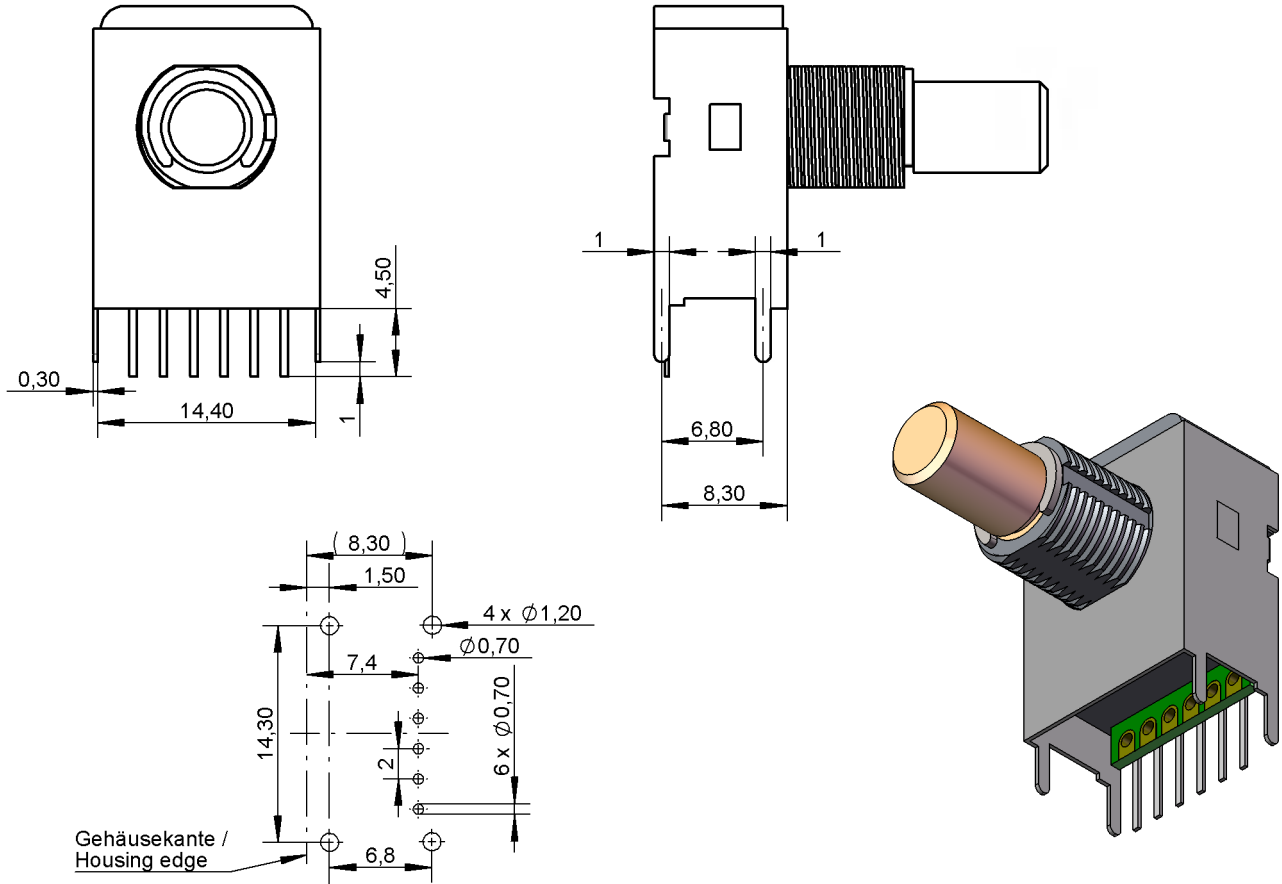
Data Sheet for Panel Encoders

Optoelectronic Panel Encoder

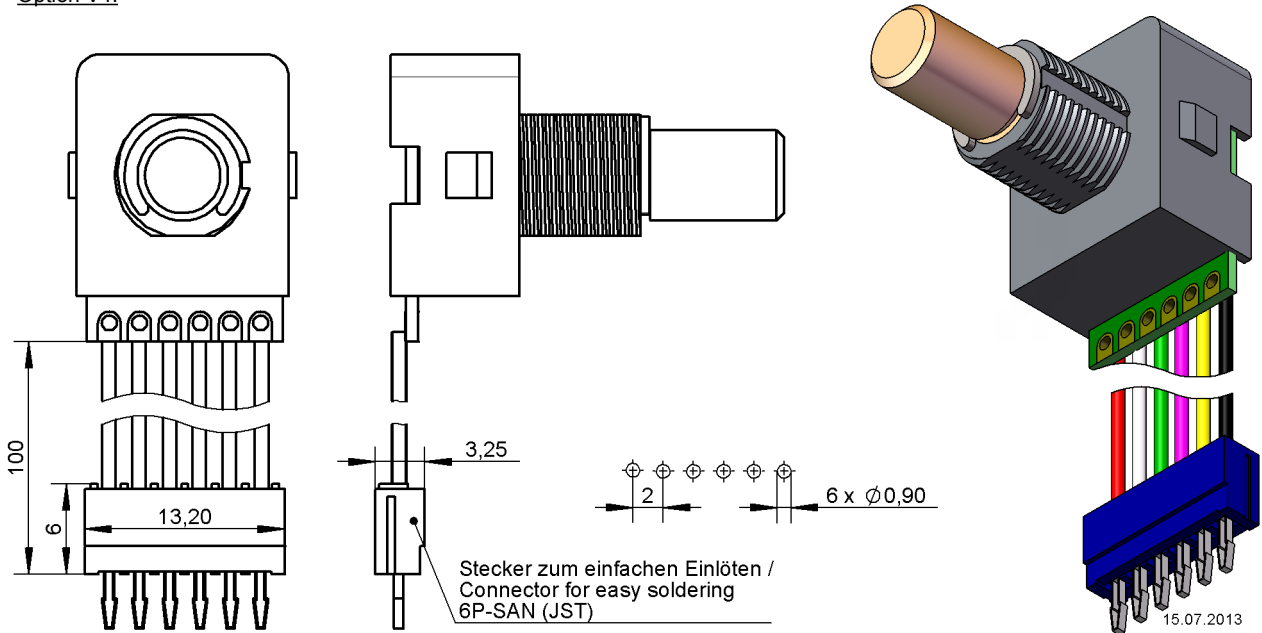
Series MRS

Drawing

Option V3:



Option V4:



15.07.2013