

## Series ALIR17xxM, ALIR19xxM - Multiturn Wirewound Potentiometer

**ALIR17xxM - 6.35 mm shaft diameter**

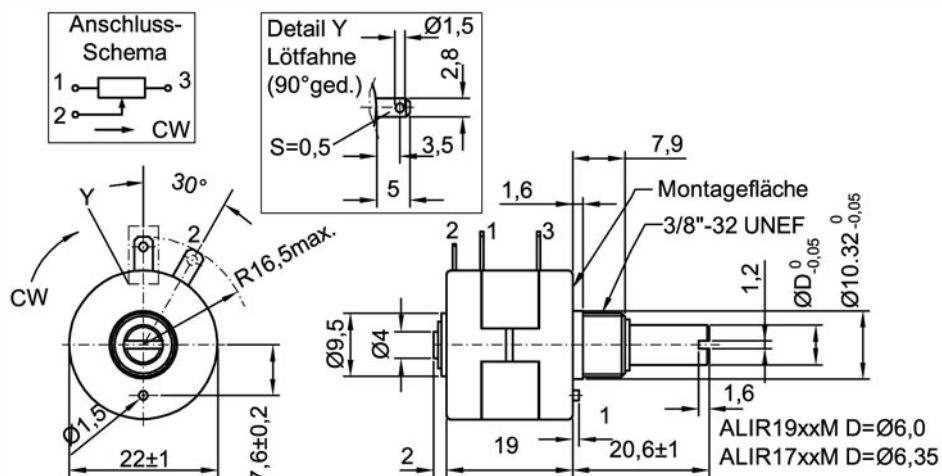
**ALIR19xxM - 6 mm shaft diameter**

- For radial shaft load up to 4N (depends on application)
- With integrated friction clutch
- 22 mm housing with brass bushing
- Linearity tolerance  $\pm 0,25\%$  ( $\pm 0,1\%$ )
- Optional front shaft sealing (IP65)
- Customized adaptations

The series ALIR were designed for applications with radial shaft load. Particularly in case of forces at the shaft end, the bearing at the rear lid takes an important function. We use a precision sleeve bearing. The ALIR has an integrated friction clutch, which protects the potentiometer in case of overwinding the stops. This function is also a cost reduction in the production, because the zero point setting is no longer necessary.



### Drawing



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Electrical Data	3 turn	5 turn	10 turn
Electrical rotation angle	1080° ± 5°	1800° ± 5°	3600° ± 5°
Resistance values	20 ... 50kOhm	20 ... 50kOhm	20 ... 100kOhm
Resistance tolerance	± 5% (± 1%)		
Linearity tolerance, independent	± 0,25% (± 0,2%)	± 0,25% (± 0,15%)	± 0,25% (± 0,1%)
Noise (ENR)	< 100 Ohm		
Power at +40°C (0W at 125°C)	0,5 W	1 W	2 W
Wiper current	35 mA max./ < 0,02 mA recommended		
Insulation	1000 MOhm at 500 VDC		
Dielectric strength	1000 VAC (1min.)		

Mechanical Data	3 turn	5 turn	10 turn
Mechanical rotation angle	1080° + 10	1800° + 10	3600° + 10
Rotational speed	40 rpm max.		
Life (n x 90% elec. angle)	300.000 rev.	500 000 rev.	1 x 10 <sup>6</sup> rev.
Starting torque	< 1 Ncm		
Slipping torque	≈ 2 ... 7 Ncm		
Torque mounting nut	< 150 Ncm		

Other Data	
Protection class	Standar: IP40 / Optional sealed shaft: IP65
Operating temperature	-55 ... + 105° C
Bearing	Bushing: brass sleeve bearing Rear lid: High performance polymer sleeve bearing
Housing material	glasfaserverstärktes Nylon
Shaft material	stainless steel
Terminals	gold-plated solder lugs for connector AMP-Faston 110, Part-No. 42236-1
Mounting parts	hex-nut, tooth washer
Weight	25 g

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## Windings / Resolution

Resistance value	100	200	500	1k	2k	5k	10k	20k	50k	100k
ALIR1705/1905 Windings	1240	1560	2000	2510	2400	3200	3900	4800	5500	--
ALIR1705/1905 Resolution % (100% / Anz. Wdg.)	0,081	0,064	0,050	0,039	0,041	0,031	0,026	0,021	0,018	--
ALIR1710/1910 Windings	2100	2480	3300	4000	5020	5000	6400	7800	10100	11000
ALIR1710/1910 Resolution in % (100% / Anz. Wdg.)	0,048	0,040	0,030	0,025	0,020	0,020	0,016	0,013	0,010	0,009

## Optionens and Order Code

Description	Series	Options / Code								
5 turn, shaft 6.35 mm	ALIR1705M	M = metal bushing								
5 turn, shaft 6 mm	ALIR1905M									
10 turn, shaft 6.35 mm	ALIR1710M									
10 turn, shaft 6 mm	ALIR1910M									
Resistance values (further on request)		<b>R1K</b>								
		<b>R5K</b>								
		<b>R10K</b>								
Resistance tolerance				<b>W5%</b>						
				W1%						
Linearity tolerance						<b>L0.25%</b>				
						L0.2%				
						L0.15%				
						L0.1%				
Special shaft length on request (Standard 20,6mm)							A ...			
Special shaft diameter on request (Standard 6 bzw. 6,35 mm)								DM..		
Sealing ring in the bushing on request										D
Example Order Code	ALIR1710M	R10k		W5%		L0,25%				

Preference types (bold) from stock.

## Our speciality are customized solutions, even for small quantities

Special shaft (length, shape, flat, slot, etc.), o-ring for shaft sealing, sealed housing, special electrical and mechanical angles, tighter tolerances, center tap. Mounting of gear wheels and other mechanical parts, assembling of cables and connectors. Please contact us.

All the specifications and informations in this datasheet can not consider the special demands that are caused by the application. Because of this, they are no general description of the properties of the product.  
2010 December 09. All specifications are subject to change without notice.