

Series AL17xxM, AL19xxM - Multiturn Wirewound Potentiometer

AL17xxM - 6,35 mm shaft \varnothing

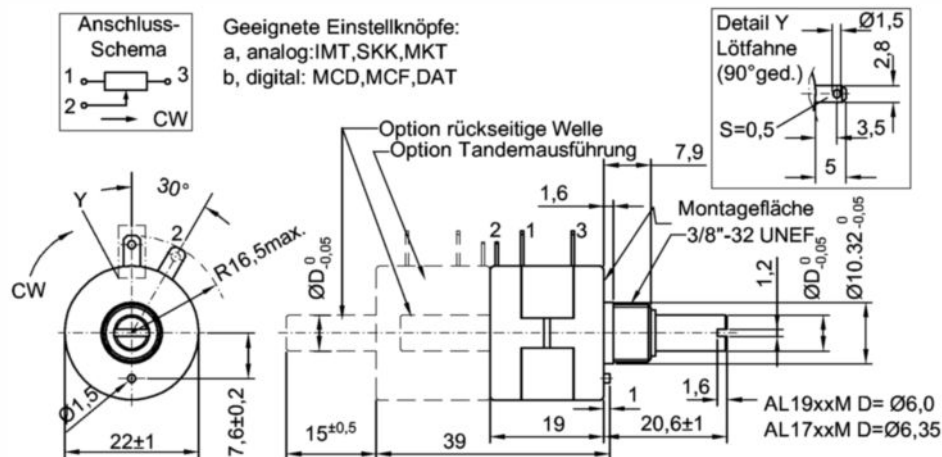
AL19xxM - 6 mm shaft \varnothing

- Housing 22 mm with brass bushing
- Resistance value 20 Ohm to 100 kOhm
- Linearity tolerance $\pm 0,25\%$ ($\pm 0,1\%$)
- Options such as:
 - Tandem- or multigangung
 - shaft sealing (IP65)

The AL1710M / AL1910M are applicable as precision set-point device or as mechanical driven angle sensor. Preference types from stock.



Drawing (with optional tandem version and rear shaft extension)



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Electrical Data	3 turn	5 turn	10 turn
Electrical rotation angle	1080° ± 5°	1800° ± 5°	3600° ± 5°
Resistance value	20 ... 50kOhm	20 ... 50kOhm	20 ... 100kOhm
Resistance tolerance	± 5% (± 1%)		
Linearity tolerance	± 0,25% (± 0,2%)	± 0,25% (± 0,15%)	± 0,25% (± 0,1%)
Noise (ENR)	< 100 Ohm		
Power rating at + 70°C (0W at 105°C)	0,5 W	1 W	2 W
Wiper current	35 mA max. / < 0,02 mA recomb.		
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.		
Live (n x 90% elec. angle)	300.000 rev.	500 000 rev.	1 x 10 ⁶ rev.
Starting torque	< 1 Ncm		
Stopper strength	< 35 Ncm		
Max. torque mounting nut	< 150 Ncm		

Other Data	
Protection class	IP40 Standard IP65 shaft sealing, optional
Operating temperature	-55° C ... + 105° C
Bearing	sleeve bearing, brass
Housing material	glass-fiber reinforced nylon
Shaft material	stainless steel
Connection	gold-plated solder lugs for connector like AMP series Faston 110, Part-No. 42236-1
Mounting parts	hex-nut, inner tooth washer (included in delivery)
Weight	24 g

Windings, Resolution										
Resistance value	100	200	500	1k	2k	5k	10k	20k	50k	100k
AL1705/1905 winding	1240	1560	2000	2510	2400	3200	3900	4800	5500	--
AL1710/1910 windings	2100	2480	3300	4000	5020	5000	6400	7800	10100	11000

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Options and Order Description										
Description	Series	Options (Code)								
3 turn - 6,35mm shaft	AL1703M	M = metal bushing								
3 turn - 6mm shaft	AL1903M									
5 turn - 6,35mm shaft	AL1705M									
5 turn - 6mm shaft	AL1905M									
10 turn - 6,35mm shaft	AL1710M									
10 turn - 6mm shaft	AL1910M									
Res. values 20, 50, 100, 200, 500, 1k, 2k, 5k, 10k , 20k, 50k		R5K								
Res. value 100k for 10-turn only		100K								
Rear shaft length (Standard 15 mm)			RA ...							
Rear shaft Ø (Standard 6 bzw. 6,35mm)				RADM ...						
Resistance tolerance					W5% W2% W1%					
Linearity tolerance, Standard						L0,25%				
10-turn optional $\pm 0,1\%$ $\geq 5K$ / $\pm 0,15\%$ $< 5K$ 5-turn optional $\pm 0,15\%$ $\geq 5K$ / $\pm 0,2\%$ $< 5K$ 3-turn optional $\pm 0,2\%$ $\geq 5K$ / $\pm 0,25\%$ $< 5K$						L ...				
Center tapping							CT			
Front shaft length (Standard 20,6mm)								A ...		
Front shaft Ø (Standard 6 / 6,35mm)									DM ...	
Sealing ring in the bushing										D
Example ordercode, standard	AL1710M	R2k			W5%	L0,25%				
Example ordercode, special version	AL1710M	R500	RA9	RADM4	W1%	L0,15%	CT	A9	DM5	D
* Standard	AL1710, metal bushing, resistance value 2kOhm, resistance tolerance $\pm 5\%$, linearity tolerance $\pm 0,25\%$, front shaft length 20,6mm, front shaft diameter 6,35mm									
** Special	AL1710, metal bushing, resistance value 500Ohm, rear shaft length 9mm, rear shaft diameter 4mm, resistance tolerance $\pm 1\%$, linearity tolerance $\pm 0,15\%$, center tapping, front shaft length 9mm, front shaft diameter 5mm, sealing ring									

Please ask for more options and accessories.

Preference types (bold) from stock.

The specifications and information in this datasheet cannot consider all special demands that are caused by the application. Because of this, they are no general description of the properties of the product.

2009 November 03. All specifications are subject to change without notice.