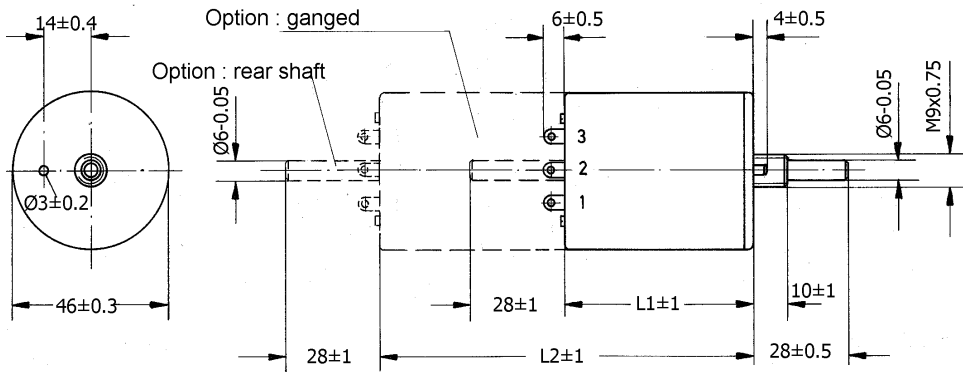


**4603-4605-4610  
4615-4620**

**MULTI-TURN  
WIREWOUND  
POTENTIOMETER**

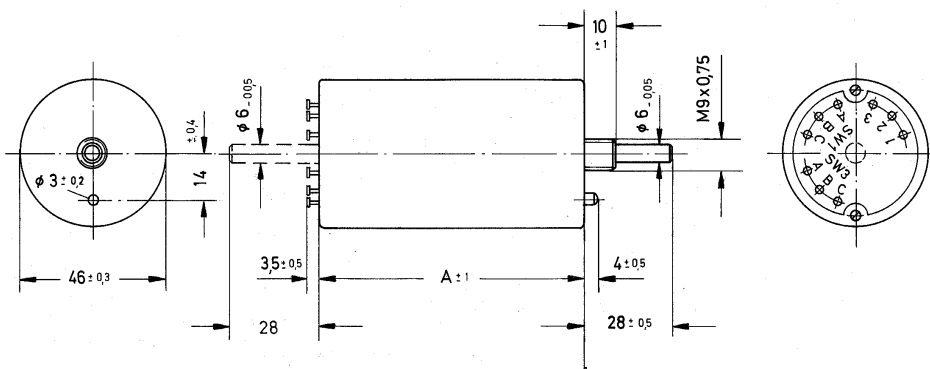
This multi-turn potentiometer is available up to 20 turns.

Tandem version and integrated microswitches are possible.

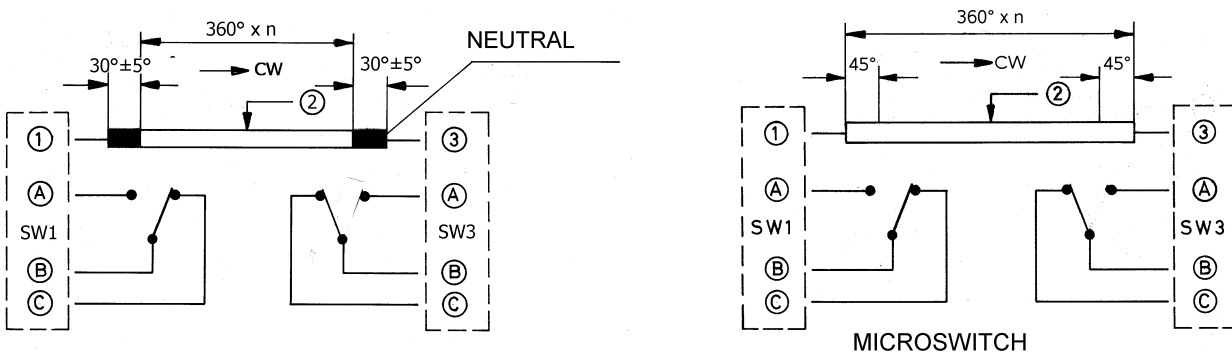


- 3 to 20 turns
- Microswitches
- Tandem version
- Bushing

Housing dimensions	4603	4605	4610	4615	4620
Standard version L1 (mm)	39	39	56	75	95
Tandem version L2 (mm)	76	76	111	149	188



With micro-switches	4603	4605	4610	4615	4620
A (mm)	67	67	84	103	123



Electrical specs					
	4603	4605	4610	4615	4620
Resistance value ( $\Omega$ )	0.5-50k	0.5-100k	0.5-200k	0.5-300k	0.5-500k
Standard tolerance (%)	$\pm 5$				
Best possible tolerance (%)	$\pm 1$				
Standard linearity (%)	$\pm 0.3$				
Best possible linearity (%)	$\pm 0.1$				
Power at 40°C (0W to 105°C)	2	2.5	5	7.5	10
Electrical angle ( $^\circ$ ) +5° -0°	1080	1800	3600	5400	7200
Residual – Value < 2k $\Omega$ Value > 2KV	1 $\Omega$ ou 0.2 % ( the highest value) 0.1 %				
Insulation	100 M $\Omega$ à 1000 VDC				
E.N.R.	< 100 $\Omega$				

Mechanical specs					
Whole turns	3	5	10	15	20
Mechanical stroke ( $^\circ$ )	1080	1800	3600	5400	7200
Operating friction (Ncm)	1	1.1	1.2	1.5	2
Rotation torque (Ncm)	0.8	0.9	1	1.2	1.6
Stopper strength (Ncm)	60	60	60	60	60
(mm)	0.3				
Jeu radial (mm)	0.1				
Life time (turns)	2x10 <sup>6</sup> for all types and 1x10 <sup>6</sup> for values with infinite resolution				
Guiding	2 sleeves				

Environment specs	
Operating temperature ( $^\circ$ C)	-55 à 105
Dielectric strength	1000 VAC / 1 min
General conditions	Selon MIL-R-12934

$\Omega$	Resolution (%)					Voltage max (V)					Wiper current max. (mA)					$\pm$ ppm/ K
	4603	4605	4610	4615	4620	4603	4605	4610	4615	4620	4603	4605	4610	4615	4620	
0.5	$\infty$	$\infty$	$\infty$	$\infty$	$\infty$	1	1.1	1.6	1.9	2.2	1000	1000	1000	1000	1000	80
1	$\infty$	$\infty$	$\infty$	$\infty$	$\infty$	1.4	1.5	2.2	2.7	3.1	1000	1000	1000	1000	1000	80
2	$\infty$	$\infty$	$\infty$	$\infty$	$\infty$	2	2.7	3.1	3.8	4.4	1000	925	1000	1000	1000	80
5	$\infty$	$\infty$	$\infty$	$\infty$	$\infty$	3	3.5	5	6.1	7	666	710	1000	1000	1000	80
10	0.180	$\infty$	$\infty$	$\infty$	$\infty$	4.4	5	7	8.6	10	450	500	710	870	1000	80
20	0.145	0.107	$\infty$	$\infty$	$\infty$	6	7	10	12	14	333	360	500	625	710	80
50	0.105	0.078	0.0500	0.0390	0.0330	10	11	16	19	22	200	230	310	390	450	80
100	0.084	0.061	0.0400	0.0310	0.0250	14	16	22	27	31	140	160	227	270	320	80
200	0.066	0.048	0.0310	0.0240	0.0190	20	22	31	38	44	100	113	161	197	227	80
500	0.048	0.035	0.0230	0.0170	0.0140	31	35	50	61	70	64	71	100	123	142	80
1k	0.054	0.039	0.0260	0.0130	0.0110	45	50	70	86	100	44	50	71	87	100	20
2k	0.043	0.031	0.0200	0.0110	0.0080	63	70	100	122	141	32	35	50	61	71	20
5k	0.031	0.024	0.0150	0.0110	0.0100	100	112	158	193	223	20	22	32	39	45	20
10k	0.024	0.017	0.0120	0.0090	0.0080	141	158	223	273	316	14	16	22	27	32	20
20k	0.019	0.013	0.0090	0.0070	0.0060	200	223	316	387	447	10	11	16	20	22	20
30k	0.017	0.012	0.0080	0.0060	0.0050	245	270	387	474	547	8	9	13	16	14	20
50k	0.014	0.009	0.0070	0.0050	0.0042	316	316	500	612	707	6	8	10	12	11	20
100k	-	0.008	0.0050	0.0040	0.0032	-	500	707	866	900*	-	5	7	9	10	20
150k	-	-	0.0045	0.0030	0.0026	-	-	866	900*	900*	-	-	6	8	10	20
200k	-	-	0.0040	0.0031	0.0026	-	-	900*	900*	900*	-	-	5	8	10	20
300k	-	-	-	0.0027	0.0022	-	-	-	-	900*	-	-	-	-	10	20
500k	-	-	-	-	0.0018	-	-	-	-	900*	-	-	-	-	10	20

\* Maximum voltage is 900VDC, maximum wiper current must be 80mA.

$\infty$  means that the element is made with a resistive wire, not wound and so resolution is infinite'

Versions with microswitches	
Differential angle open/close	25° of the travel
Actuation force	8 N

Switches specs	
Contacts	inverter
Max voltage	125 VDC
Current rating	2 A
Lifetime	2x10 <sup>6</sup> cycles (no-load)

Mechanical options :  
 Special shaft (Diam & length)  
 Rear shaft  
 Multi-ganged version  
 1 or 2 microswitches  
 Special travels and stops

Electrical options :  
 Better resistance tolerance  
 Better linearity