

Single-Turn Potentiometers

Series A 4000

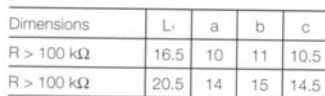


Special features

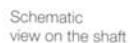
- precious-metal winding and wiper
- good resolution
- long life - 10×10^6 cycles
- gangable

Size 13 precision wirewound potentiometer featuring high linearity, resolution and reliability, designed for a wide range of industrial-type measuring and control circuits.

With precision ball bearings and stainless steel shaft. Winding, wiper and slipring of precious metals with outstanding contact properties; solder terminals gold-flashed; all other metal parts protected against corrosion. The cups of a gang are assembled by clamp rings and may be adjusted to any position relative to each other. More than one potentiometer can be ganged together.



Dimensions	L _i	a	b	c
R > 100 k Ω	16.5	10	11	10.5
R > 100 k Ω	20.5	14	15	14.5



Dimensions	see drawing	
Mounting	servo-mount size 13 and 3 clamps type Z 1-15	
Weight: pot. with servo-mount each additional cup	30 15	g g
Ganged cups, maximum	3	
Bearings	precision ball bearings	
Starting torque for one wiper for each additional wiper	≤0.02 ≤0.015	Ncm Ncm
Mechanical travel	360 continuous	°
Electrical connections, per cup	3 to 12 solder terminals	
Maximum number of taps per cup	9	
Angular tolerance of tap locations	±1 (0.5 on request)	°
Minimum angle between taps	3	°
Environmental Data		
Life to MIL-R-12934 at 25°C	mean value 10×10^6	cycles

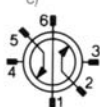
Electrical Data

Actual electrical travel	355°	355°	355°	355°	355°	355°	355°	355°	355°	±1°
Nominal resistance	0.25	0.6	1	2	5	10	25	50	100	kΩ
Resistance toleranz	5	5	5	5	5	5	5	5	10	%
Number of turns	640	850	890	1315	1100	1385	1920	2340	2340	
Angular resolution	1.8	2.4	2.5	3.7	3.1	3.9	5.4	6.6	6.6	turns per degree
Repeatability	0.155	0.118	0.115	0.075	0.09	0.07	0.05	0.045	0.045	%
Resistance per turn	0.39	0.7	1.12	1.52	4.55	7.22	13.02	21.37	42.74	Ω
Temperature coefficient	230	230	230	230	60	60	60	20	20	ppm/°C
Independent linearity standard	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	±%
Tracking (series A 5000 only)	on request 0.4 to 0.2									±%
Residual noise (MIL-R-12934)	±100									mV
Max. permissible applied voltage	27	42	42	42	42	42	42	42	42	VDC
Max. current through wiper terminal	100	100	100	100	100	100	100	100	100	mA
Insulation resistance (500 VDC, 2s, 1 bar)	≥10									MΩ
Dieelectric strength (50 Hz, 2 s, 1 bar, 500 VAC)	≤100									μA

Standard Models

Shaft extension	10 mm at the mounting end	10 mm each 2 shaft ends
Model	A 4101	A 4102

Standard Windings of Single Potentiometers

Actual electrical angle	355° ±1°	355° ±1°	kΩ	4 x 90°	kΩ
Winding type	a) 	b) 	Total resistance between terminals 1 and 3 kΩ	c) 	Total resistance between terminals 1 and 6 or 3 and 4 resp. (KΩ)
Resistance winding	..a 301	..b 321	0.25	..c 341	0.0625
	..a 302	..b 322	0.6	..c 342	0.15
	..a 303	..b 323	1	..c 343	0.25
	..a 304 *)	..b 324	2	..c 344	0.5
	..a 305 *)	..b 325	5	..c 345	1.25
	..a 306	..b 326	10	..c 346	2.5
	..a 307	..b 327	25	..c 347	6.25
	..a 308	..b 328	50	..c 348	12.5
	..a 309	..b 329	100	..c 349	25

*) preferred types. Special windings on request.

Complete type designation

Example	A 4101 code letter and potentiometer model
	a winding type
	304 resistance element

For ganged potentiometers and special types, the complete type designation will be specified upon receipt of order.

Included in delivery
Fixing clamps type Z 1-15

Recommended accessories
Fork coupling
type Z 103 g 2.5

Order designations for preferred types		
Type	Art.no.	R in KΩ
A4101a304	003303	2
A4101a305	003304	5
A4101a6001	003321	2+2