

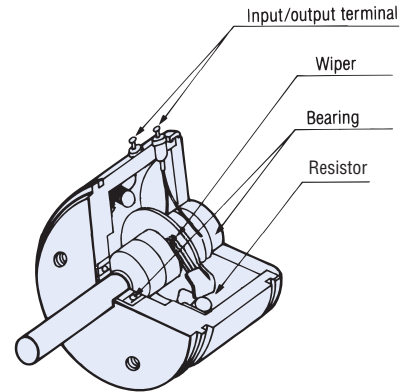
# WIREWOUND SINGLE TURN TYPE

# J series

## RoHS compliant



## Basic construction Wirewound single turn type



## FEATURES

- High linearity through precision wire winding
- Long life
- High following characteristics
- Low noise
- RoHS compliant

## PART NUMBER DESIGNATION

J 50 S 500

Series name

J40S  
J45S  
J50S

Nominal resistance value ( $\Omega$ )

500, 1 k, 2 k, 5 k, 10 k, 20 k, 50 k

## LIST OF PART NUMBERS

Size	Item	Nominal resistance value	Part number
$\phi$ 40 mm		500 $\Omega$	J40S 500
		1 k $\Omega$	J40S 1 k
		2 k $\Omega$	J40S 2 k
		5 k $\Omega$	J40S 5 k
		10 k $\Omega$	J40S 10 k
$\phi$ 44.45 mm		500 $\Omega$	J45S 500
		1 k $\Omega$	J45S 1 k
		2 k $\Omega$	J45S 2 k
		5 k $\Omega$	J45S 5 k
		10 k $\Omega$	J45S 10 k
		20 k $\Omega$	J45S 20 k
$\phi$ 50.8 mm		50 k $\Omega$	J45S 50 k
		500 $\Omega$	J50S 500
		1 k $\Omega$	J50S 1 k
		2 k $\Omega$	J50S 2 k
		5 k $\Omega$	J50S 5 k
		10 k $\Omega$	J50S 10 k
	20 k $\Omega$	J50S 20 k	
	50 k $\Omega$	J50S 50 k	

※ Verify the above part numbers when placing orders.

## STANDARD SPECIFICATIONS

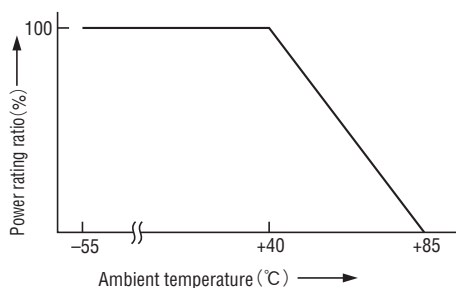
Item	Part number	J40S	J45S	J50S
Resistance tolerance	%	$\pm 5$		
Effective electrical angle		$350^\circ \pm 1.5^\circ$	$353^\circ \pm 1.5^\circ$	$355^\circ \pm 1.5^\circ$
Mechanical angle		360° continuous		
Power rating (at 40 °C)	W	1	1.3	1.5
Dielectric strength	Vrms	1000 1 min		
Insulation resistance	M $\Omega$ minimum	1000 (at DC500 V)		
Rotational torque	mN·m {gf·cm} maximum	0.59 {6}		0.69 {7}
Peak noise	$\Omega$ maximum	10 (4 min <sup>-1</sup> )		
Temp. coefficient of resistance	ppm/°C	$\pm 50$		
Operating temp. range	°C	-55 ~ 85		
Maximum rotational speed	min <sup>-1</sup>	100	200	
Net weight	g	Approx. 58	Approx. 60	Approx. 73
Connecting accuracy		$\pm 1^\circ$ Based on No. 1 terminal		
Protection grade		IP40		

# J40S/J45S/J50S POTENTIOMETERS

## RESISTANCE VALUES, RESOLUTION, INDEPENDENT LINEARITY, ROTATIONAL LIFE

Nominal resistance value ( $\Omega$ )	Resolution (%)			Independent linearity (%)			Rotational life (million cycles)		
	J40S	J45S	J50S	J40S	J45S	J50S	J40S	J45S	J50S
500	0.13	0.12	0.1	$\pm 0.15$	$\pm 0.1$	$\pm 0.1$	5	10	10
1 k	0.1	0.1	0.08						
2 k	0.08	0.07	0.06						
5 k	0.07	0.08	0.07	—	$\pm 0.15$	$\pm 0.15$	1	1	1
10 k		0.07	0.05						
20 k	—	0.05	0.05	—	$\pm 0.15$	$\pm 0.15$	1	1	1
50 k		0.04	0.03						

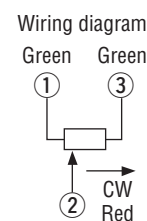
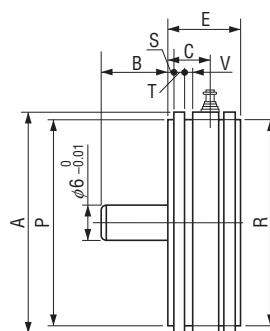
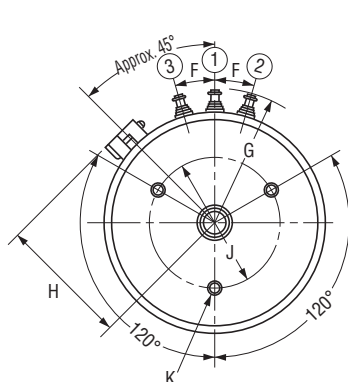
## RATED POWER DERATING CURVE



## OUTLINE DIMENSIONS

(Unit : mm)

- J40S
- J45S
- J50S



### List of outline dimensions

Part number	Marks	A	B	C	E	F	G	H	J	K	P	R	S	T	V			
J40S	$\phi 40$	20	13.3	20	16°	R25	25	$\phi 30$	M 3 (P = 0.5) D = 3.0 minimum	$\phi 37_{-0.03}$	$\phi 37$	1.57	2.36	1.86				
J45S	$\phi 44.45$					10.5	16.6								14°	R26.8	26.7	$\phi 40.6$
J50S	$\phi 50.8$					10.5	16.6								12°	R30	30	$\phi 47.6$