

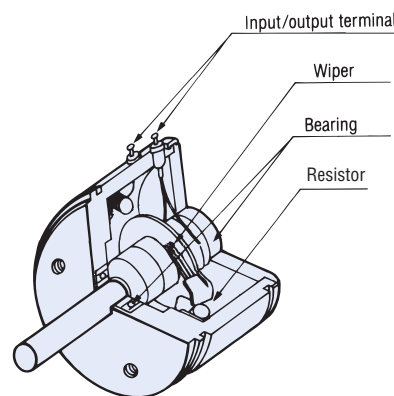
WIREWOUND SINGLE TURN TYPE

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

	<u>J 50 S</u>	<u>5 0 0</u>	
Series name		Nominal resistance value (Ω)	
J40S		500, 1 k, 2 k, 5 k, 10 k, 20 k, 50 k	
J45S			
J50S			

LIST OF PART NUMBERS

Size	Item	Nominal resistance value	Part number
ϕ 40 mm		500 Ω	J40S 500
		1 k Ω	J40S 1 k
		2 k Ω	J40S 2 k
		5 k Ω	J40S 5 k
		10 k Ω	J40S 10 k
ϕ 44.45 mm		500 Ω	J45S 500
		1 k Ω	J45S 1 k
		2 k Ω	J45S 2 k
		5 k Ω	J45S 5 k
		10 k Ω	J45S 10 k
		20 k Ω	J45S 20 k
ϕ 50.8 mm		50 k Ω	J45S 50 k
		500 Ω	J50S 500
		1 k Ω	J50S 1 k
		2 k Ω	J50S 2 k
		5 k Ω	J50S 5 k
		10 k Ω	J50S 10 k
		20 k Ω	J50S 20 k
		50 k Ω	J50S 50 k

※ Verify the above part numbers when placing orders.

STANDARD SPECIFICATIONS

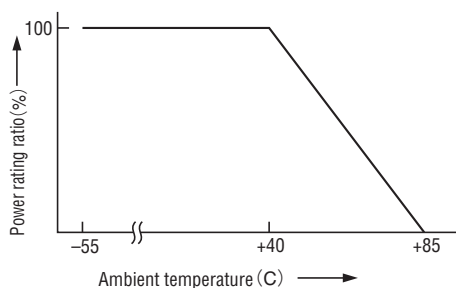
Item	Part number	J40S	J45S	J50S
Resistance tolerance	%	± 5		
Effective electrical angle		$350^\circ \pm 1.5^\circ$	$353^\circ \pm 1.5^\circ$	$355^\circ \pm 1.5^\circ$
Mechanical angle		360° continuous		
Power rating (at 40 $^\circ\text{C}$)	W	1	1.3	1.5
Dielectric strength	Vrms	1000 1 min		
Insulation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

POTENTIOMETERS

■ RESISTANCE VALUES, RESOLUTION, INDEPENDENT LINEARITY, ROTATIONAL LIFE

Nominal resistance value (Ω)	Resolution (%)			Independent linearity (%)			Rotational life (million cycles)		
	J40S	J45S	J50S	J40S	J45S	J50S	J40S	J45S	J50S
500	0.13	0.12	0.1	±0.15	±0.1	±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						
10 k		0.07	0.05						
20 k	—	0.05		—	±0.15	±0.15	1	1	1
50 k		0.04	0.03						

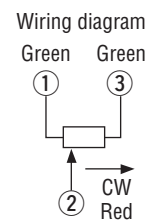
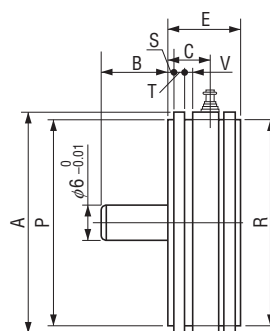
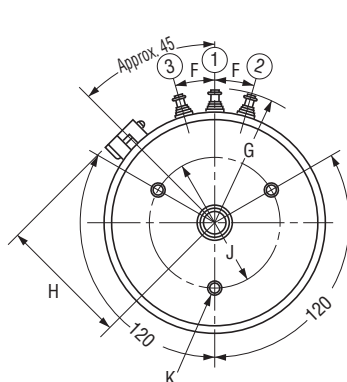
■ RATED POWER DERATING CURVE



■ 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	$\varphi 40$	20	13.3	20	16°	R25	25	$\varphi 30$	M 3 (P = 0.5) D = 3.0 minimum	$\varphi 37^{+0}_{-0.03}$	$\varphi 37$	1.57	2.36	1.86
J45S	$\varphi 44.45$		10.5	16.6	14°	R26.8	26.7			$\varphi 39.68^{+0}_{-0.025}$	$\varphi 40.6$			
J50S	$\varphi 50.8$				12°	R30	30			$\varphi 47.62^{+0}_{-0.025}$	$\varphi 47.6$			