

Applications

- Time delay in turning off the auxiliary winding of single-phase AC motors (e.g. refrigerator compressors)
- Type A 314 suitable for airconditioning systems applications

Features

- Metallization: CrNi (sputtered) + Ag (screen-printed), except A 314 (screen-printed Ag)
- Excellent long-term reliability
- Suitable for clamp contacting
- UL approval to UL 1434 (file number E69802), except A 502 and A 196
- VDE approval (license number 87406 E), except A 524 and A 314
- CSA approval for A 506 (certificate No. 1109600)

Options

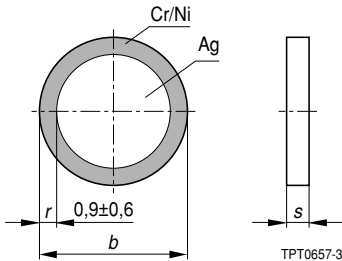
- Other dimensions and ratings on request

Delivery mode

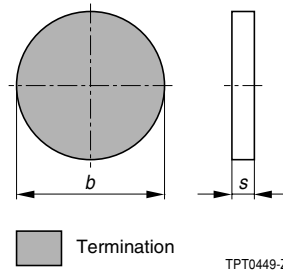
- Bulk

Dimensional drawing

A 19*, A 5**



A 314



Dimensions (mm)

$V_N = 230 V_{rms}$		
Type	b	s
A 502	$19,5 \pm 0,5$	$2,5 \pm 0,2$
A 501	$19,5 \pm 0,5$	$2,5 \pm 0,2$
A 550	$16,0 \pm 0,5$	$2,5 \pm 0,2$
A 524	$19,5 \pm 0,5$	$2,5 \pm 0,2$
A 549	$16,0 \pm 0,5$	$2,5 \pm 0,2$
A 544	$17,5 \pm 0,5$	$2,5 \pm 0,2$
A 192	$19,5 \pm 0,5$	$2,5 \pm 0,2$

$V_N = 230 V_{rms}$		
Type	b	s
A 196	$19,5 \pm 0,5$	$3,2 \pm 0,2$
A 197	$19,5 \pm 0,5$	$3,2 \pm 0,2$
A 314	$20,0 \pm 0,2/-0,8$	$5,0 \pm 0,25$
$V_N = 120 V_{rms}$		
Type	b	s
A 508	$17,5 \pm 0,5$	$2,5 \pm 0,2$
A 506	$17,5 \pm 0,5$	$2,5 \pm 0,2$

Motor Starting
B59***
Metallized Disks
A 19*, A 314, A 5**
General technical data

Switching cycles	N	> 100000	
Operating temperature range ($V = 0$)	T_{op}	+ 5/+ 80	°C
($V = V_{max}$)	T_{op}	+ 5/+ 80	°C

Electrical specifications and ordering codes

Type	I_{max}	V_{max}	T_{Ref}	T_{surf}	$t_S^{1)}$	V_{BD}	$R_N \pm \Delta R_N$ ($V_{PTC} \leq 2,5 \text{ V}$)	$I_r^{2)}$	Ordering code
	A	V	°C	°C	s	V	Ω	mA	
$V_N = 230 \text{ V}_{rms}$									
A 502	4	400	120	180	0,55	> 750	$47 \pm 30 \%$	8	B59502A0120A020
A 501	6	355	135	190	0,45	> 700	$33 \pm 20 \%$	8	B59501A0135A020
A 550	6	355	135	190	0,30	> 700	$33 \pm 20 \%$	7	B59550A0135A020
A 524	7	300	135	190	0,55	> 600	$22 \pm 20 \%$	10	B59524A0135A020
A 549	7	300	135	190	0,35	> 650	$22 \pm 20 \%$	8	B59549A0135A020
A 544	8	320	120	180	0,35	> 650	$20 \pm 20 \%$	12	B59544A0120A020
A 192	8	325	120	180	0,35	> 650	$25 + 15/- 20 \%$	10	B59192A0120A020
A 196	8	350	120	180	0,50	> 700	$15 \pm 30 \%$	10	B59196A0120A020
A 197	9	350	120	180	0,30	> 700	$33 \pm 30 \%$	8	B59197A0120B020
A 314	9	400	120	190	0,35	> 800	$38 \pm 30 \%$	10	B59314A0120B010 ³⁾
$V_N = 120 \text{ V}_{rms}$									
A 508	10	180	135	190	0,55	> 360	$4,7 \pm 20 \%$	17	B59508A0135A020
A 506	12	180	120	180	0,45	> 360	$4,7 \pm 20 \%$	16	B59506A0120A020

1) Measured at $V = V_{max}$ and $I = 0,8 \cdot I_{max}$

2) Measured with PTC thermistor mounted in standard EPCOS motor start housing

3) Type A 314 suitable for airconditioning systems applications

Motor Starting	B59***
Metallized Disks	A 19*, A 314, A 5**

Reliability data

Test ¹⁾	Standard	Test conditions	$ \Delta R_{25}/R_{25} $
Switching test at room temperature	IEC 60738-1	$V_{\max}$; R_S Room temperature Number of cycles: 10000	< 25 %
Life test at $V_{\max}/T_{\text{op}}$	IEC 60738-1	Storage at $V_{\max}/T_{\text{op}}$ for t : 1000 h	< 25 %
Damp heat	IEC 60068-2-3	Storage at 40 °C Relative humidity: 93 % Duration: 56 days	< 20 %
Rapid change of temperature in air	IEC 60068-2-14, Test N_a	– 25 °C, 125 °C Number of cycles: 5 t : 30 min	< 20 %
Vibration	IEC 60068-2-6, Test F_C	$f = 10\text{--}55\text{--}10$ Hz $h = 0,75$ mm (respectively 10 g) t : 3 · 2 h	< 20 %
Bump	IEC 60068-2-27	Pulse shape: half-sine a : = 40 g Pulse duration: 6 ms; 6 · 4000 pulses	< 20 %
Climatic sequence	IEC 60068-2-30	Dry heat: $T = 125$ °C, t : 16 h Damp heat first cycle Cold: $T = -25$ °C, t : 2 h Damp heat 5 cycles	< 25 %

1) All tests with PTC disk mounted in EPCOS housing

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