

Motor Run Capacitor : – continuous operation



Typical Application :

Motor Run Capacitor – ideal for various motor applications in washing machine, air conditioner, electric water pump, power factor correction

By connecting the capacitor in series with the starting winding motor, allow motors with two or three windings to function on a single-phase supply.

Construction :

Self-healing, low dielectric loss metallized polypropylene

Cylindrical or Box Plastic Case : self-extinguishing (UL-94V0 grade) plastic

Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment

Epoxy Resin : self-extinguishing (UL-94V0 grade)

Size : Cylindrical : Diameter : 30-65mm / High : 65-118mm

Box : Width: 32-60mm High: 20-38mm Thickness: 14-26mm

Electrical Connecting :

Soldering terminal

Single or double quick terminal

Stiff wire

Flexible wire

Twin-core cable

Wire or cable with receptacle or terminal

Tin plated copper lead wire (Box type only)

Mounting system :

Cylindrical Plastic Case : with Stud - M8 / without Stud

Box Plastic Case : Screw mounting tab / without Screw mounting tab

Properties :

Low Dissipation Factor, high Insulation Resistance, Self-Healing, Non inductive, long operating time

Providing different connections and mounting options so as to increase your design flexibility.

Safety Class : P0 P1 P2

Reference standard :

EN60252-1994, VDE0560-8, IEC.252-1993, UL810, CSA C 22.2, JIS : 4908-1995

Safety Approval :

UL E147352

Electrical Characteristic :

Capacitance range : 2.5 - 100uF

Rated Voltage : 370Vac, 400Vac, 450Vac, 500Vac, 600Vac, 650Vac

Capacitance Tolerance : $\pm 5\%$; $\pm 10\%$

Dissipation factor (DF) < 0.002 at 23C 50/60Hz

I.R. : Terminal – Terminal >5000 ohm uF

Terminal – Case >1000M ohm uF

Min. / Max. Operate Temperature : -25~70C / -40~85C

Rated frequency : 50 ~ 60Hz

Testing Voltage : Terminal – Terminal : $2.15 \times U_n$ 10sec (can be customized design)

Terminal – Case : 3000AC 10sec

Maximum Permissible Overvoltage : 110% of rated voltage

Maximum Permissible Overcurrent : 130% of rated current

Maximum Permissible Reactive output (Voltage-Ampere) : 135% of rated Volt-Ampere

Pulse Voltage rise & fall time dV/dt : detail information available on request

Life Expectancy :

Class A	Class B	Class C	Class D
30,000hrs	10,000hrs	3,000hrs	1000hrs



The combination of Capacitance value and Voltage or should there be a dimensional constraint, please contact us for a design suited to your particular needs.

Cylindrical Capacitor Configuration - Electrical Connection and Mounting :

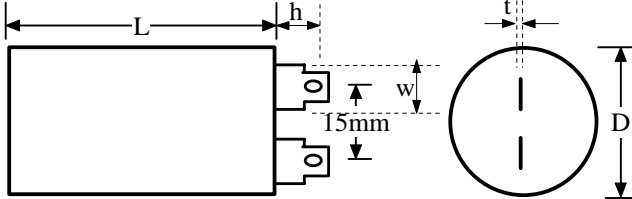
Quick Terminal : 187 : w4.75 x h10 x t0.5mm

250D / 250S : w6.35 x h10 x t0.8mm

Solder Terminal : T280 : w2 + 2.8 x h12 x t0.5mm - pulse grade capacitor only

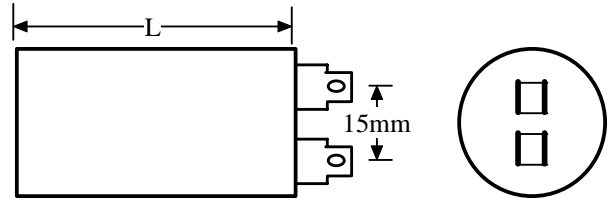
Electrical Wire length : 100mm, other length is available;
6.35mm female terminals (optional)

STR10s



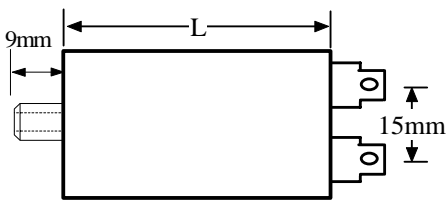
single quick terminal

STR10d



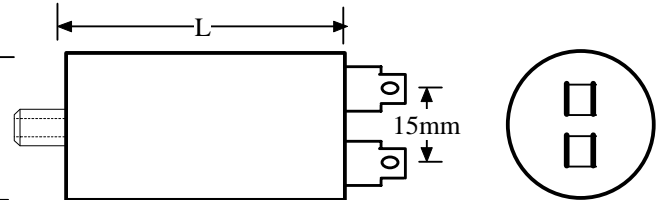
double quick terminal

STR14s



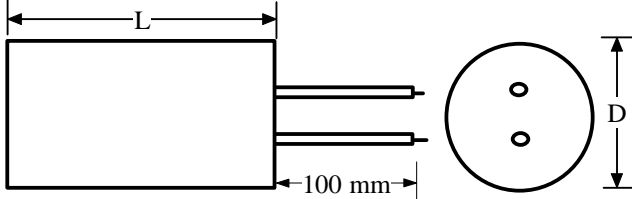
M8 stud with single quick terminal

STR14d



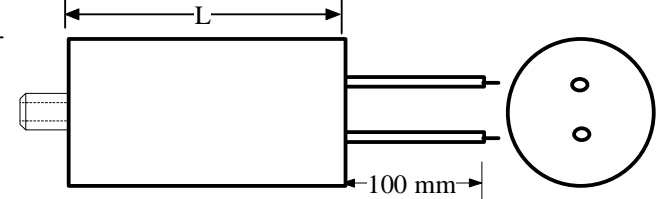
M8 stud with double quick terminal

STR20



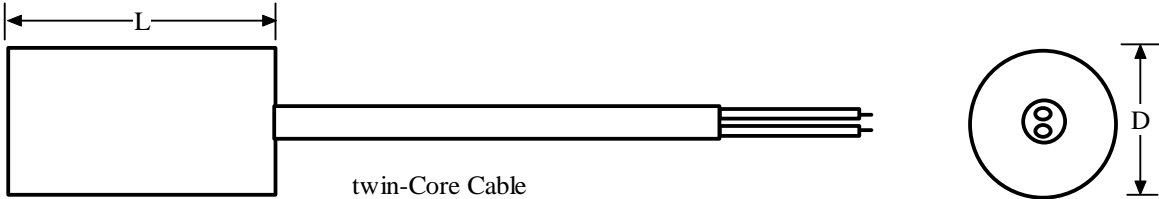
electrical wire

STR24



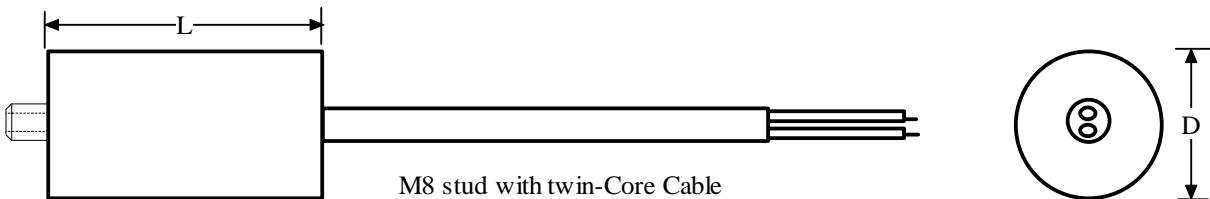
M8 stud with electrical wire

STR20t



twin-Core Cable

STR24t



M8 stud with twin-Core Cable



: Optional Faston Terminal 6.35mm for STR-20, STR-24, there are some other Terminals for your choice, please refer to page 30

Detail drawing for the Tab Terminal, please refer to page 29.

The above packaging configuration can be applied for all cylindrical type capacitors.

Cylindrical Motor Capacitor dimension :

Capacitance uF	Dimension : Diameter x Length in mm	
	250Vac	400Vac
4uF	30 x 55	30 x 55
5uF	30 x 55	30 x 55
6uF	30 x 55	30 x 55
7uF	30 x 55	30 x 55
8uF	30 x 55	30 x 55
9uF	30 x 55	35 x 55
10uF	30 x 55	35 x 55
12uF	30 x 55	35 x 55
15uF	35 x 55	35 x 73
20uF	35 x 73	40 x 73
25uF	35 x 73	40 x 73
30uF	35 x 73	45 x 73
35uF	40 x 73	45 x 73
40uF	40 x 73	45 x 93
45uF	45 x 93	45 x 93
50uF	45 x 93	45 x 128
55uF	45 x 93	45 x 128
60uF	45 x 93	45 x 128
70uF	45 x 128	
80uF	45 x 128	

Motor Run Capacitor : box type :



Typical Application :

This series of Motor Run Capacitor is specially designed for AC mini motors and electrical apparatus.
Applications like Electric Fan, Ceiling Fan, Bread Maker and Home Appliance.

Features :

high Insulated Resistance
loss dielectric loss : less electrical energy loss by the capacitor during operation
stable temperature characteristic : dissipation factor and capacitance remain stable and will not be changed by ambient temperature

Construction :

Self-healing low, loss metallized polypropylene
Box Plastic Case and Epoxy Resin : self-extinguishing (UL-94V0 grade) plastic
Optional : Thermoplastic Plastic Case – so that the capacitor can be operated at a higher temperature range and harsh working environment

Electrical Connecting :

Soldering terminal
Single or double quick terminal
Stiff electrical wire
Flexible electrical wire
Electrical wire with receptacle or terminal
Tin plated copper lead wire (Box type only)

Mounting system :

Screw mounting tab / without Screw mounting tab

Properties :

Low Dissipation Factor, high Insulation Resistance, Self-Healing, Non inductive, long operating time
Providing different connections and mounting options so as to increase your design flexibility.

Reference standard :

EN60252-1994, VDE0560-8, IEC.252-1993, UL810, CSA C 22.2, JIS : 4908-1995

Safety Class : P0 P1 P2

Safety Approval :

UL E147352 CSA 22.2 No.190 VDE 560-8

Electrical Characteristic :

Capacitance range : 1 ~ 35uF
Rated Voltage : 250Vac, 370Vac, 400Vac, 450Vac
Capacitance Tolerance : $\pm 5\%$
Dissipation factor (DF) < 0.002 at 23C 50/60Hz
I.R. : Terminal – Terminal >100M ohm uF at 100VDC 1min.20C
Terminal – Case >200M ohm uF at 500VDC 1min.20C
Min. / Max. Operate Temperature : -25~70C / -40~85C
Rated frequency : 50 ~ 60Hz
Testing Voltage : Terminal – Terminal : $2.15 \times U_n$ 10sec (can be customized design)
Terminal – Case : 3000AC 10sec



Box Type Capacitor Configuration - Electrical Connection and Mounting :

Box type : STA and STB series

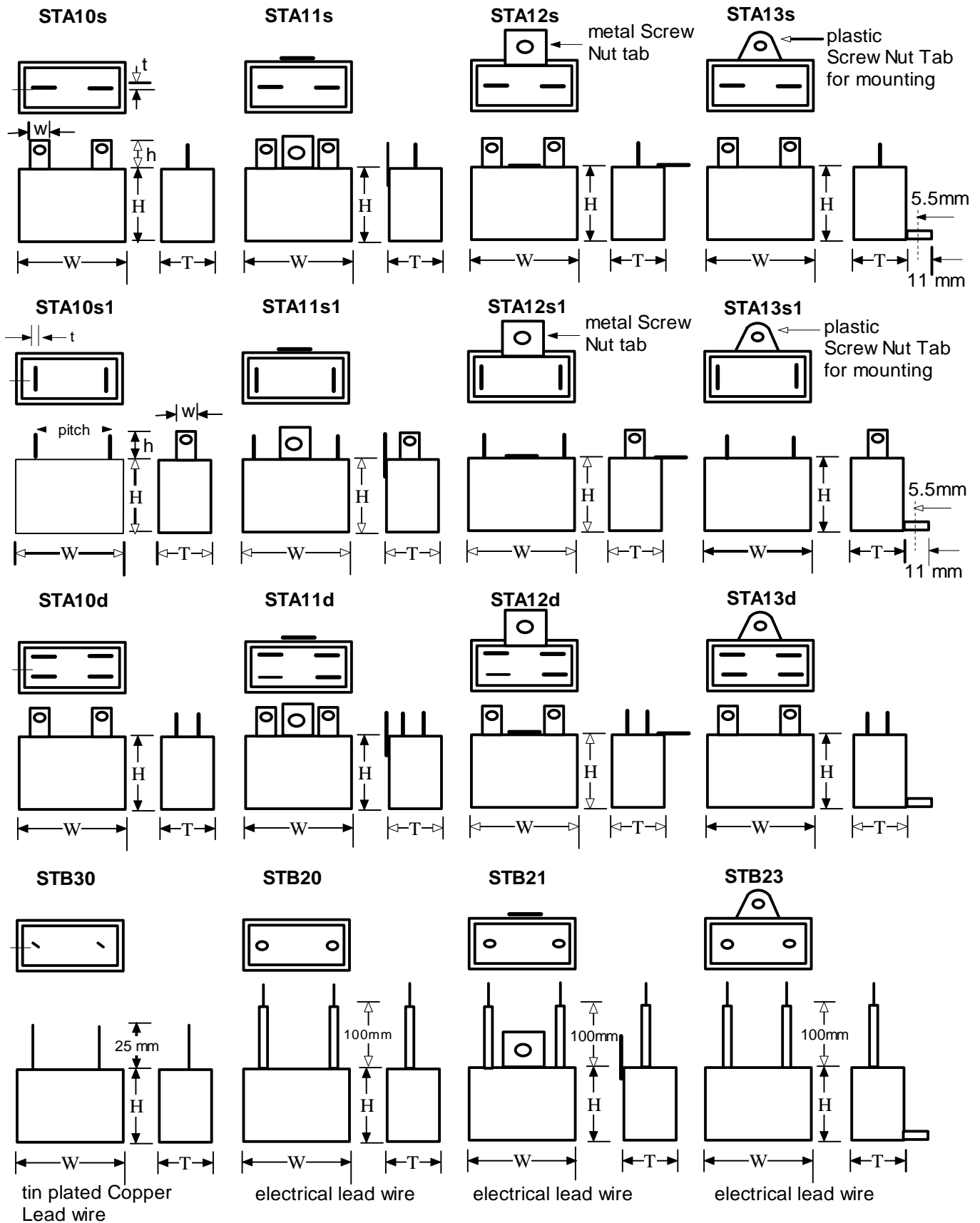
Quick Terminal : 187 type : w4.75 x h10 x t0.5mm

250 type : w6.35 x h10 x t0.8mm

Solder Terminal : T1 type : w4 x h8 x t0.5mm

Tin Plated Copper Lead

standard electrical lead wire length : 100mm, other length is available



The above packaging configuration can be applied for all plastic box type capacitor.

Motor Run Capacitor Box type : STA and STB series size :

Dimension in mm

Capacitance: uF	Rated Voltage														
	250Vac			300Vac			350Vac			400Vac			450Vac		
	W	T	H	W	T	H	W	T	H	W	T	H	W	T	H
1.0	32	11	21	37	13.5	25	37	13.5	25	37	13.5	25	37	14.5	25
1.5	32	11	21	37	13.5	25	37	13.5	25	38	18	29	38	18	29
2.0	32	11	21	37	13.5	25	38	18	29	38	18	29	50	20	30
2.5	32	11	21	37	14.5	26	38	18	29	50	20	30	50	20	30
3.0	32	13	23.5	38	18	29	37	19	29	50	20	30	51	22	32
3.5	32	13	23.5	38	18	29	50	20	30	50	20	30	58	23	35
4.0	37	14	25	37	19	29	50	20	30	51	22	32	58	23	35
4.5	37	13.5	25	50	20	30	50	20	30	58	23	35	58	23	35
5.0	37	13.5	25	50	20	30	51	22	32	58	23	35			
5.5	37	13.5	25	50	20	30	51	22	32	58	23	35			
6.0	37	14.5	26	51	22	32	58	23	35	58	23	35			
6.5	38	18	29	51	22	32	58	23	35	58	23	35			
7.0	38	18	29	51	22	32	58	23	35						
8.0	38	18	29	58	23	35	58	23	35						
9.0	37	19	29	58	23	35									
10.0	50	20	30	58	23	35									
11.0	50	20	30	58	23	35									
12.0	50	20	30												
13.0	50	20	30												
14.0	50	20	30												
15.0	50	22	32												
16.0	50	22	32												

Other combination of Capacitance value and Voltage or should there be a dimensional constraint, please contact us for a design suited to your particular needs.

Motor Run Capacitor – Part Number System :

ST_____ - _____
 1 2 3 4 a 5 5 6 6 7 8

- 1 : series designation
ST
- 2 : basic design
A: capacitors with Tab Terminal - Box
B: capacitors with Leads - Box
R: capacitors with cylindrical shaped enclosure
- 3 : electrical connection
1. tab terminals
2. standard copper leads
3. Tin-plated copper wire
- 4 : mounting means
0. with no mounting design
1. straight mounting tab – Box type
2. angled mounting tab – Box type
3. integral flat mounting bolt of enclosure – Box type
4. integral threaded mounting bolt of enclosure – cylindrical type
- a. : Terminals and Electrical Wires type – electrical connection
single terminal - s
double terminal - d
Twin-core cable (cylindrical type) - t
Stiff wire (cylindrical type) - w
Flexible wire (cylindrical type) - f
Wire or cable with receptacle or terminal : t, w, f + terminal code
- 5 : capacitance
105 : 1uF
106 : 10uF
107 : 100uF
108 : 1000uF
- 6 : voltage : AC voltage
220V 250V 370V 400V 450V 500V 600V 630V 800V
- 7 : tolerance
J : ±5% K : ±10%
- 8 : Safety Class :
nil: - P0
P1 : - P1
P2 : - P2

