



DUCATI energia

METALLIZED POLYPROPYLENE FILM CAPACITORS IN METALLIC CASE SERIES 4.16.27/.25/.33/.26

The dielectric is polypropylene film, the electrodes consist of an extremely thin metal coating obtained by vacuum evaporation.

The capacitor has no risks of leakage.

The cases are metallic, the covers are in self extinguishing plastic (class V2 to UL-94 standards).

The capacitor is sealed by an edging of the case on the cover, ensuring air-tight closure.

The use of an-insulating container between the capacitive element and the metal case, combined with the blocking of the capacitive element in resin, make the capacitor extremely safe both from the electric point of view (earthing insulation) and in terms of resistance to vibrations.

Series 16.25/.26/.27 capacitors are equipped with a safety device in accordance with VDE 0560-8/A1 and UL 810 standard. (Fig. 6)

For extra informations send mail to: commcon@ducatienergia.com

Standard ratings

4.16.27 Table

Series 4.16.27	250V ~ DB HPFNT 400V ~ AB 20% ED SD 4h HSFPD		250V ~ cont. - 25 + 85°C 400V ~ int. 120/20 - 25 + 70° C	
	2 ÷ 60 µF File E102953		2 ÷ 60 µF 60 Hz 240V ~ -25 + 70°C 10.000 AFC 4 ÷ 100 µF	
C (µF)	DxH (mm)	Part number 4.16.27.XX.KK	DxH (mm)	Part number 4.16.27.XX.KK
2	25 x 60	4.16.27.33.KK		
2,5	25 x 60	4.16.27.34.KK		
3	25 x 60	4.16.27.35.KK		
3,15	25 x 60	4.16.27.36.KK		
3,5	25 x 60	4.16.27.37.KK		
4	25 x 60	4.16.27.38.KK	35 x 60	4.16.27.01.KK
4,5	25 x 60	4.16.27.39.KK		
5	30 x 60	4.16.27.40.KK	35 x 60	4.16.27.02.KK
6	30 x 60	4.16.27.41.KK	35 x 60	4.16.27.03.KK
6,3	30 x 60	4.16.27.42.KK	35 x 60	4.16.27.04.KK
7	30 x 60	4.16.27.43.KK	35 x 60	4.16.27.05.KK
7,5	30 x 60	4.16.27.60.KK	35 x 60	4.16.27.06.KK
8	30 x 60	4.16.27.44.KK	35 x 60	4.16.27.07.KK
9	35 x 60	4.16.27.45.KK		
10	35 x 60	4.16.27.08.KK		
12	35 x 60	4.16.27.32.KK		
12,5	35 x 60	4.16.27.09.KK		
13	35 x 60	4.16.27.10.KK		
13,5	35 x 60	4.16.27.11.KK		

14	35 x 72	4.16.27.12.KK		
15	35 x 72	4.16.27.13.KK		
16	35 x 72	4.16.27.14.KK		
18	35 x 72	4.16.27.15.KK		
20	40 x 72	4.16.27.16.KK	35 x 77	4.16.27.56.KK
22	40 x 72	4.16.27.17.KK		
25	40 x 72	4.16.27.18.KK		
30	40 x 98	4.16.27.19.KK		
31,5	40 x 98	4.16.27.20.KK		
35	40 x 98	4.16.27.21.KK		
40	40 x 98	4.16.27.22.KK		
45	40 x 98	4.16.27.23.KK		
50	40 x 98	4.16.27.24.KK		
55	45 x 122	4.16.27.25.KK		
60	45 x 122	4.16.27.26.KK		
65	45 x 122	4.16.27.27.KK		
70	45 x 122	4.16.27.28.KK		
75	50 x 122	4.16.27.29.KK		
80	50 x 122	4.16.27.30.KK		
100	55 x 122	4.16.27.31.KK		
110	55 x 122	4.16.27.59.KK		

4.16.25 Table

Series 4.16.25	EN 60252										
	Voltage 400 V 450 V						10000h cl.B 3000h cl.C		25/85/21 25/85/21	1-60 µF 1-60 µF	
	Class of safety protection: P2										
	C (µF)	DxH (mm)	Part number 4.16.25.XX.KK	DxH (mm)	Part number 4.16.25.XX.KK	DxH	Part number 4.16.25.XX.KK				
1	25 x 60	4.16.25.01.KK									
1,5	25 x 60	4.16.25.02.KK	30 x 60	4.16.25.42.KK							
2	25 x 60	4.16.25.03.KK	30 x 60	4.16.25.41.KK							
2,5	25 x 60	4.16.25.04.KK	30 x 60	4.16.25.43.KK							
3	25 x 60	4.16.25.33.KK									
3,15	30 x 60	4.16.25.34.KK									
4	30 x 60	4.16.25.35.KK	25 x 72	4.16.25.62.KK	35 x 60	4.16.25.05.KK					
4,5	30 x 60	4.16.25.36.KK	25 x 72	4.16.25.63.KK							
5	30 x 60	4.16.25.37.KK	25 x 72	4.16.25.64.KK	35 x 60	4.16.25.06.KK					
6	30 x 60	4.16.25.38.KK			35 x 60	4.16.25.07.KK					
6,3	35 x 60	4.16.25.08.KK									
7	35 x 60	4.16.25.09.KK									
7,5	35 x 60	4.16.25.10.KK									
8	35 x 60	4.16.25.11.KK	30 x 72	4.16.25.40.KK							
9	35 x 60	4.16.25.39.KK									
10	35 x 72	4.16.25.12.KK									
12	35 x 72	4.16.25.72.KK									
12,5	35 x 72	4.16.25.13.KK									

13	35 x 72	4.16.25.14.KK				
13,5	35 x 77	4.16.25.81.KK	40 x 72	4.16.25.15.KK		
14	35 x 77	4.16.25.75.KK	40 x 72	4.16.25.16.KK		
15	40 x 72	4.16.25.17.KK				
16	40 x 72	4.16.25.18.KK				
17,5	40 x 72	4.16.25.83.KK				
18	40 x 72	4.16.25.19.KK				
20	40 x 98	4.16.25.20.KK				
22	40 x 98	4.16.25.21.KK				
22,5	40 x 98	4.16.25.82.KK				
25	40 x 98	4.16.25.22.KK				
30	40 x 98	4.16.25.23.KK				
31,5	45 x 98	4.16.25.24.KK				
35	45 x 98	4.16.25.25.KK				
40	45 x 122	4.16.25.26.KK	50 x 98	4.16.25.85.KK		
45	45 x 122	4.16.25.27.KK				
50	45 x 122	4.16.25.28.KK				
55	50 x 122	4.16.25.29.KK				
60	50 x 122	4.16.25.30.KK				
65	55 x 122	4.16.25.31.KK				
70	55 x 122	4.16.25.32.KK				

4.16.33 Table

Series 4.16.33		EN 60252 Voltage 425V~ 475V~ 500V~	 30,000 cl. A 10,000 cl. B 3,000 cl. C	 25/85/21 25/85/21 25/85/21	 ASE Approved range 0,8 ÷ 40 µF	 File 102953 Voltage 440V ~ 60Hz 0,8 ÷ 60°F -25 + 70°C 10.000 AFC -25 +70
Class of safety protection: P2						
C (µF)	DxH (mm)	Part number 4.16.33.XX.KK	DxH (mm)	Part number 4.16.33.XX.KK		
0,8	25 x 60	4.16.33.01.KK				
1	25 x 60	4.16.33.02.KK				
1,5	25 x 60	4.16.33.03.KK				
2	25 x 60	4.16.33.04.KK				
2,5	25 x 60	4.16.33.05.KK				
3	30 x 60	4.16.33.09.KK	25 x 72	4.16.33.06.KK		
3,15	30 x 60	4.16.33.10.KK	25 x 72	4.16.33.07.KK		
3,5	30 x 60	4.16.33.11.KK	25 x 72	4.16.33.08.KK		
4	30 x 60	4.16.33.12.KK				
4,5	30 x 60	4.16.33.13.KK				
5	30 x 72	4.16.33.15.KK	35 x 60	4.16.33.17.KK		
6	30 x 72	4.16.33.16.KK	35 x 60	4.16.33.18.KK		
6,3	35 x 60	4.16.33.19.KK				
7	35 x 60	4.16.33.20.KK				
7,5	35 x 72	4.16.33.21.KK				
8	35 x 72	4.16.33.22.KK				

9	35 x 72	4.16.33.23.KK		
10	35 x 77	4.16.33.27.KK	40 x 72	4.16.33.28.KK
12	40 x 72	4.16.33.29.KK		
12,5	40 x 72	4.16.33.30.KK		
13	40 x 72	4.16.33.31.KK		
13,5	40 x 98	4.16.33.38.KK		
14	40 x 98	4.16.33.39.KK		
15	40 x 98	4.16.33.40.KK		
16	40 x 98	4.16.33.41.KK		
17,5	40 x 98	4.16.33.42.KK		
18	40 x 98	4.16.33.43.KK		
20	40 x 98	4.16.33.44.KK		
22	45 x 98	4.16.33.45.KK		
25	45 x 98	4.16.33.46.KK		
30	45 x 122	4.16.33.50.KK	50 x 98	4.16.33.47.KK
31,5	45 x 122	4.16.33.51.KK	50 x 98	4.16.33.48.KK
35	45 x 122	4.16.33.52.KK	50 x 98	4.16.33.49.KK
40	50 x 122	4.16.33.53.KK		
45	50 x 122	4.16.33.55.KK		
50	55 x 122	4.16.33.56.KK		
55	55 x 122	4.16.33.57.KK		
60	55 x 122	4.16.33.58.KK		

4.16.26 Table

Series 4.16.26	 560 - 8  400V ~ DB HPFMS 450V ~ DB HPFNT 500V ~ DB HPFQV 500V ~ DB HPFPU 0,8 ÷ 40 µF 0,8 ÷ 70 µF 0,8 ÷ 40 µF 0,8 ÷ 40 µF* 0,8 ÷ 40 µF  CEI 33 - 3  1029  File E102953 450V ~ cont. 500V ~ cont. 120/50- 25 + 85° C 450V ~ Cont.-25 + 85°C 60 Hz 440V ~ 10.000 AFC -25 + 70°C 0,8 ÷ 40 µF 0,8 ÷ 40 µF 2 ÷ 60 µF					
	C (µF)	DxH (mm)	Part number 4.16.26.XX.KK	DxH (mm)	Part number 4.16.26.XX.KK	DxH
0,8	25 x 60	4.16.26.29.KK				
1	25 x 60	416.26.30.KK			35 x 60	4.16.26.71.KK
1,25	25 x 60	4.16.26.58.KK				
1,5	25 x 60	4.16.26.31.KK	30 x 60	4.16.26.72.KK	35 x 60	4.16.26.65.KK
1,8	25 x 60	4.16.26.62.KK				
2	25 x 60	4.16.26.32.KK	30 x 60	4.16.26.73.KK	35 x 60	4.16.26.01.KK
2,5	30 x 60	4.16.26.35.KK	25 x 72	4.16.26.33.KK	35 x 60	4.16.26.60.KK
3	30 x 60	4.16.26.36.KK	25 x 72	4.16.26.34.KK	35 x 60	4.16.26.02.KK
3,15	30 x 60	4.16.26.42.KK			35 x 60	4.16.26.70.KK
3,5	30 x 72	4.16.26.37.KK			35 x 60	4.16.26.03.KK
4	30 x 72	4.16.26.38.KK			35 x 60	4.16.26.04.KK
4,5	30 x 72	4.16.26.39.KK			35 x 60	4.16.26.40.KK
5	35 x 60	4.16.26.05.KK	30 x 77	4.16.26.61.KK		
6	35 x 72	4.16.26.06.KK				
6,3	35 x 72	4.16.26.66.KK				

7	35 x 72	4.16.26.07.KK				
7,5	35 x 72	4.16.26.08.KK				
8	40 x 72	4.16.26.09.KK	35 x 77	4.16.26.56.KK		
9	40 x 72	4.16.26.41.KK				
10	40 x 72	4.16.26.10.KK				
12	40 x 98	4.16.26.11.KK				
12,5	40 x 98	4.16.26.12.KK				
13	40 x 98	4.16.26.13.KK				
14	40 x 98	4.16.26.14.KK				
15	40 x 98	4.16.26.15.KK				
16	40 x 98	4.16.26.16.KK				
17,5	45 x 98	4.16.26.17.KK				
18	45 x 98	4.16.26.18.KK				
20	45 x 98	4.16.26.19.KK				
22	45 x 122	4.16.26.55.KK				
22,5	45 x 122	4.16.26.51.KK				
25	45 x 122	4.16.26.20.KK	50 x 98	4.16.26.52.KK		
30	50 x 122	4.16.26.50.KK	55 x 98	4.16.26.53.KK		
31,5	50 x 122	4.16.26.22.KK				
35	50 x 122	4.16.26.23.KK	55 x 98	4.16.26.54.KK		
40	55 x 122	4.16.26.24.KK				
45	55 x 132	4.16.26.25.KK				
50	55 x 132	4.16.26.26.KK				
55	60 x 132	4.16.26.27.KK				
60	60 x 132	4.16.26.28.KK				

** Approval pending

* Available in other dimensions (approved)

Mechanical configuration

(Figs repeated on back page)

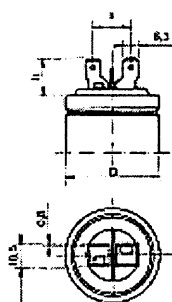


Fig. 1

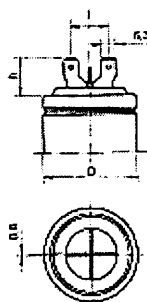


Fig. 2

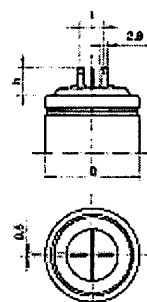


Fig. 3

D mm	Terminals style					
	fig. 1		fig. 2		fig. 3	
	h mm	l mm	h mm	l mm	h mm	l mm
25	-	-	-	-	9	9
30	-	-	9	12	9	9
35	11,7	11,3	9	12	9	10
40	12,2	12	10	16	9	10
45	12,2	12	9	12	9	10
50	12,2	12	9	12	9	10
55	12,2	12	9	12	9	10
60	12	20,5	8,9	15,5	-	-

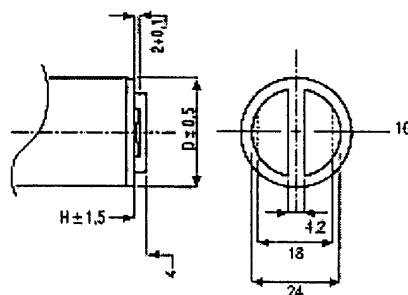


Fig. 5

Quick mounting slider for dia 35÷40 mm only

Accessories KK

Fig.	Description	Series	
		4.16.25/.26/.27	
		without stud	with stud
1	FASTON 6,3 mm double tag	60	64
2/4	FASTON 6,3 mm single tag	28	29
3	2.8 plug in	00	40
Ø 25-30-40-45-50 M8 Stud			
Ø 55-60 M12 stud			

TECHNICAL CHARACTERISTICS

Capacitance tolerance	: $\pm 5\%$
Working frequency	: 50/60 Hz
Individual test voltage	: Between terminals: 2,15 Vn for 2 sec.; between terminals and case: 3kV for 2 sec.
Dissipation factor $\tan \delta$	: $20 \cdot 10^{-4}$ @ 20°C V=Vn, 50 Hz
Protection	: Aluminium case with plastic self extinguishing sealing cover, according to UL 94 Standard, Grade V2 2
Terminals	: Faston terminals 6.3 mm single, double 2.8 mm plug-in. Twin cable
Protection degree	: With terminals: IP00
Cover	: Ball pressure test (IEC 309-1): 125°C Glow wire test (IEC 695-2-1): 960°C Tracking resistance (IEC 309-1): 250V
Threaded fixing bolt	: Max screwing torque: M8 = 5 N m; M12 = 12 N • m
Safety device	: overpressure (Fig. 6)

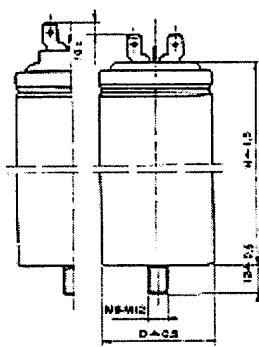


Fig. 6
Operation of the overpressure safety device

In order to ensure proper device operation, when the capacitor is installed, a clearance of at least 10 mm must be left above terminals.

This protection is provided by a special construction technology (patented) which breaks both the connections in case of breakdown, without affecting case insulation, preventing the capacitor from exploding or burning.

In case of permanent short-circuit, the current causes the dielectric to decompose, forming gas: the resulting pressure pushes up the part of the lid where the terminals are mounted, thus breaking the internal connections and stopping the current flow. (Fig. 6)

The device is designed in different sizes for each size of capacitor for the most effective, fastest intervention with both high and low short-circuit currents (up to 10.000 A).

In order to ensure proper operation of the device when the capacitor are installed, an empty space of at least 10 mm must be left above the terminals.

Because the new patented safety device is acting in the central part of the plastic deck only (see Fig. 5), it is possible to fix the capacitor with the system in use in the U.S.A. (Dog-house Clamps).

