

突波吸收電容器 Surge Absorbing Capacitors

用途 / Application:

突波吸收用電容器:

用於連接線路與大地間，緩和、降低傳導至線路上的突波及斷路器等開關時產生的暫態突波，以保護變壓器、轉動機械、敏感性電子設備等。與被保護的設備並聯使用，不需隔離開關保護。

接地用電容器:

用於連接變壓器的二次側線路與大地之間，補償線路與大地之間的靜電電容，即使在負載側發生接地事故，仍供應充分電流，使接地繼電器或漏電斷路器動作。



Surge absorbing capacitors:

It is developed to connect between line and ground, and to absorb and reduce surge voltages which may be generated from breaker turns on or off and lighting surge which may be delivered by connecting transmission line and ground. To protect transformers, rotating machines, and sensitive electronic equipment, etc. They are intended to be applied directly in parallel with the protected apparatus, with no separate protection.

Grounding capacitors:

It is developed to connect between the secondary side power lines of transformer and ground to compensate the capacitance between line and ground. It can supply required current to active ground relay or leakage breaker even if a fault occurred on load side.



製品規範及性能 / Specification and Performance:

依據標準 Standards	JEM 1362, IEC 60871	
工廠認證 Factory approval	ISO 9001(2008 年版) 認證 (ISO 9001:2008 certificated)	
適用高度及安裝場所 Usable altitude and place	海拔 1000 公尺以下, 屋內外兼用型 Maximum above sea level 1000M, available for indoor / outdoor.	
頻率 Frequency	50/60Hz 共用	
容量誤差 Tolerance	-5%~+10% (三相相間容量最大值與最小值比<1.08) -5%~+10% (In three-phase units, the ratio of maximum to minimum value of capacitance measured between any two terminals <1.08)	
周圍溫度 Ambient temperature	-20°C~+50°C (24 小時平均溫度小於 45°C) [其他溫度種類可訂製] -20°C~+50°C (24hours average below 45°C) [Other ambient temperature categories on request]	
最大容許過電壓 Maximum permissible voltage	額定電壓 110% (24 小時平均值下) 額定電壓 115% (24 小時中 30 分鐘以內) 額定電壓 120% (5 分鐘以內) 額定電壓 130% (1 分鐘以內) 額定電壓 182% (2 秒鐘以內) (大於 115%額定電壓, 在電容器壽命 中不得超過 200 次)	110% of rated voltage (average voltage in every 24 hrs) 115% of rated voltage (30 min in every 24 hrs) 120% of rated voltage (within 5 min) 130% of rated voltage (within 1 min) 182% of rated voltage (within 2 sec) The having value higher than 115% of rated voltage do not occur more than 200 times in the capacitor's life.
最大容許過電流 Maximum permissible current	額定電流 135% 135% of rated current	
損失率 Dissipation factor	小於 0.5% Less than 0.5%	
溫升 Temperature rise	周溫低於 35°C時, 溫升 25°C以下 below 25°C at ambient temperature 35°C.	
密閉性 Sealing	80°C恆溫槽中 4 小時加熱, 電容器外表無漏油痕跡 No oil leaking after heating at 80°C for 4hrs.	
絕緣電阻(T-C) Insulation resistance	1000MΩ 以上 Above 1000MΩ	
內部等效電感值 Residual Inductance (T-C)	2uH 以下 Less than 2uH	
串聯電阻 Series resistor	內裝或外裝串聯電阻, 規格依製造者。 Internal series resistor or external series resistor, the specification is according manufacturer.	
耐電壓 (端子與外殼間) Test voltage between terminals and case	交流電壓試驗 1 分鐘 / AC voltage test for 1 minute.	
	線路電壓 / Line Voltage (kVac)	試驗電壓 / Test Voltage (kVac)
	3.3, 3.45	16
	4.16	18
	6.0, 6.6, 6.9	22
	11, 11.95	28
	13.8	33.5
	15	35
	22	50
24	54	

結構 / Construction:

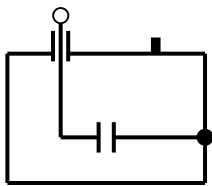
電介質 / Dielectric	聚丙烯塑膠膜 / Polypropylene film
絕緣油 / Insulation fluid	非 PCB 絕緣油 / Non-PCB fluid
套管及顏色 Bushing & Color	硬質瓷濕製法製成，顏色：淺天藍色, Munsell 5B 8/4 Wet process porcelain, Color: Baby blue, Munsell 5B 8/4
外殼材質 Case material	鋼板 (可指定採用不銹鋼) Steel (Stainless steel available upon request)
塗裝 / 顏色 Paint / Color	防銹、耐酸鹼及耐候樹脂塗裝，顏色：沙色, Munsell 7.5Y 7/2 Epoxy / Urethane system with corrosion, acid and alkali, and weather resistant; Color: Sand, Munsell 7.5Y 7/2
接地方式 Earth connection	一邊掛耳附接地端子 (可依要求掛耳底不塗裝接地用) One side bracket has ground terminal (On request for unpainted area under the brackets for earthing)

型式說明 / Type Formation:

$\frac{Y}{1}$ $\frac{H}{2}$ $\frac{E}{3}$ $\frac{\square}{4}$ - $\frac{\square}{5}$ $\frac{K}{6}$ $\frac{\square}{7}$ $\frac{\square}{8}$

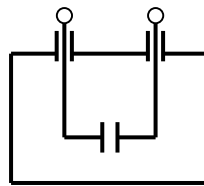
1	裕昌牌	Yuhchang brand
2	高壓電容器	High voltage power capacitors
3	介質為聚丙烯膜	Dielectric is polypropylene film
4	頻率：A為60Hz, B為50Hz	Frequency: A is 60Hz, B is 50Hz
5	額定電壓/100	Rated voltage /100
6	額定容量以Kvar為單位	Unit of capacity in Kvar
7	額定容量Kvar值	Value of Kvar capacity
8	相數：S為單相, T為三相	Phase: S is single phase, T is three phases

內部結線 / Internal Connection:



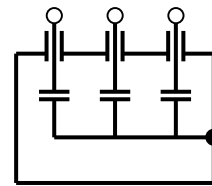
單絕緣套管

1-Phase & 1 bushing



兩絕緣套管

1-Phase & 2 bushings



三絕緣套管

3-Phases & 3 bushings

一般選用電容值(線對地) / Typical Capacitance Values (Line to ground):

額定系統電壓 (kV) Rated system Voltage	電容值 (uF) Capacitance
2.4 - 6.9	0.5
13.8	0.25
24.0	0.125
34.5	0.0833 ^a

a. 以 1 台 13.8kV 0.25uF 及 1 台 24kV 0.125uF 串聯使用，其中有 1 台要對地絕緣)

One 13.8kV 0.25uF in series with one 24kV 0.125uF (one capacitor unit must be insulated from ground).

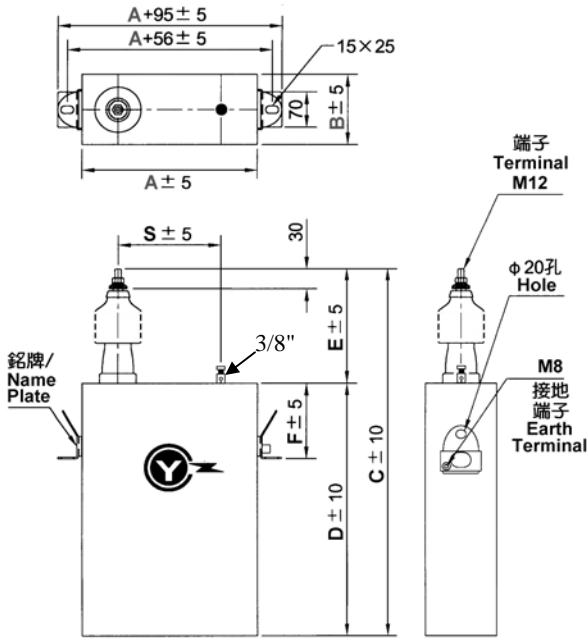


Fig. 1

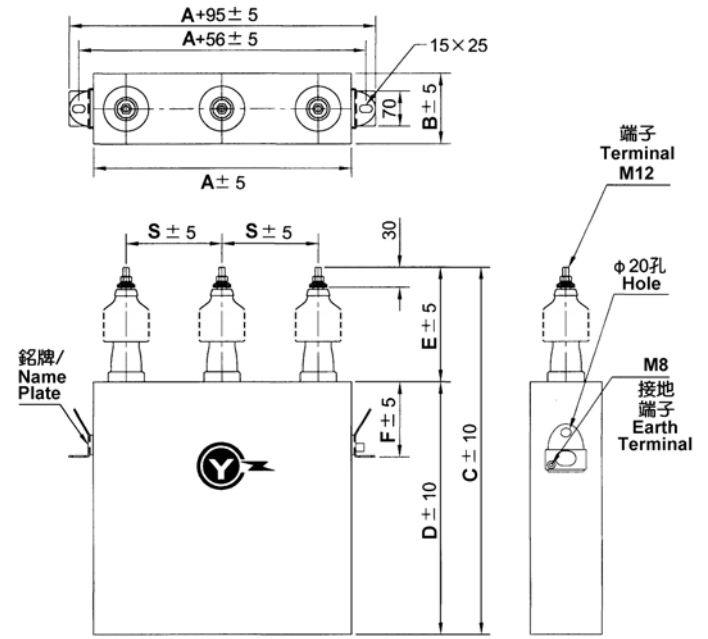


Fig. 2

1 φ / 3 φ, 50 / 60Hz

線路電壓 Line Voltage kV	容量 Capacitance (uF) x Phase	尺寸 Size(mm)							參考圖 Fig.	概略 重量 kgs
		A	B	C	D	E	F	S		
3.45	0.5X3	510	110	400	240	160	120	190	Fig.2	21.4
3.45	0.4X3	510	110	360	200	160	120	190	Fig.2	18.7
3.45	0.3X3	510	110	360	200	160	120	190	Fig.2	18.7
3.45	0.1X3	510	110	360	200	160	120	190	Fig.2	18.7
4.16	0.5X3	510	110	460	300	160	150	190	Fig.2	25.8
4.16	0.3X3	510	110	360	200	160	120	190	Fig.2	18.0
4.16	0.1X3	510	110	360	200	160	120	190	Fig.2	18.0
6.9	0.5X3	510	110	620	400	220	150	190	Fig.2	34.6
6.9	0.3X3	510	110	500	280	220	150	190	Fig.2	25.7
6.9	0.2X3	510	110	420	200	220	120	190	Fig.2	20.2
6.9	0.5X1	340	110	450	230	220	120	200	Fig.1	13.5
11.95	0.3X3	510	110	660	440	220	150	190	Fig.2	39.2
11.95	0.2X3	510	110	500	280	220	150	190	Fig.2	26.0
11.95	0.1X3	510	110	500	280	220	150	190	Fig.2	25.7
11.95	0.5X1	340	135	620	400	220	150	200	Fig.1	28.0
11.95	0.3X1	340	110	540	320	220	150	200	Fig.1	17.3
13.8	0.3X3	510	110	950	680	267	150	190	Fig.2	59.9
13.8	0.25X3	510	110	870	600	267	150	190	Fig.2	53.0
13.8	0.1X3	510	110	550	280	267	150	190	Fig.2	28.0
13.8	0.25X1	340	135	550	280	267	150	200	Fig.1	20.0
15	0.1X3	510	110	570	300	267	150	190	Fig.2	29.9
15	0.5X1	340	140	750	480	267	150	200	Fig.1	33.6
15	0.3X1	340	135	610	340	267	150	200	Fig.1	19.1
15	0.125X1	340	110	490	220	267	120	200	Fig.1	12.3
22	0.1X3	510	110	870	600	267	150	190	Fig.2	54.0
22	0.1X1	340	110	590	320	267	150	200	Fig.1	17.9
24	0.125X3	630	140	730	460	267	150	190	Fig.2	60.3
24	0.1X3	510	110	870	600	267	150	190	Fig.2	53.6
24	0.125X1	340	135	600	330	267	150	200	Fig.1	23.6
24	0.1X1	340	110	590	320	267	150	200	Fig.1	17.9