



Single-phase Capacitors
單相電容器



Three-phase Capacitors
三相電容器



Single-phase with two outputs - Twin Capacitors
單相雙輸出 - 雙電容器

General 特色

Advanced technology of KLV capacitors is based on construction of all-film capacitor sections, folding foil edge design, improved electrical and mechanical connections between sections and impregnation with environmentally compatible insulating oil. KLV capacitors have very low dielectric losses and are designed for long service life.
先進的高壓電容器的研發與全薄膜電容器部分的建構、改善的電子以及機械連結、以及與環境相容的絕緣油。KLV系列之高壓電容器有很低的電力損耗以及很長的产品壽命。

- **KLV 3xxx** - Internally fused capacitors. Each capacitor element has a separate internal fuse.
(內接保險絲電容器)每個電容器元件都有一個單獨的內部保險絲
- **KLV1xxx** - Capacitors without internal fuses 沒有內部保險絲的電容器
- **KLVxxx4** - Single phase capacitors with two outputs (twin). Capacitors are supplied in sets of three to provide an economical unbalance detection scheme. This is particularly advantageous in low output capacitor banks.
此電容器是以三組來供電,提供電流失衡的偵測系統,特別適用於低輸出的電容器組。

TECHNICAL DATA 技術數據

Rated power 額定功率 (max.): 600 kVar, 50 Hz ; 720 kVar, 60 Hz

Rated voltage 額定電壓: 1.0 - 20 kV

Rated frequency 額定頻率: 50 or 60 Hz

Losses Total 總損失: 損失低於0.15W/kVar ; 介電質損耗0.07 W/kVar

Dielectric 介電質: All-film (hazy polypropylene)

Impregnating fluid 絕緣油: Environmentally compatible impregnating oil based on M/DBT (NON - PCB) 環境相容之絕緣油(基於M/DBT (NON-PCB))

Discharge resistor 放電電阻: Built in discharge resistor reduces the voltage on a de-energised capacitor from the crest of rated voltage to 75 V in 10 minutes or less (discharge to 50 V in 5 minutes on demand).

內建放電電阻,減低被切斷電源的電容器的電壓,使其在十分鐘內的額定電壓波峰降至75V或更少(在設定要求下在五分鐘內放電至50V)

Permissible overloads: Maximum permissible current $1,3 \times I_n$ continuously 最大允許電流 $1,3 \times I_n$ 持續

允許過載 Maximum permissible voltage $1,1 \times U_n$ continuously, 12 h per day 最大允許電壓 $1,1 \times U_n$ 持續, 一天12小時

Quality品質: Iskra is certified according to ISO 9001(quality) and ISO 14001 (environment) Iskra 之產品是受到 ISO 9001(品質)和 ISO 14001 (環境) 所認證的
Standards標準: IEC 60871-1, ANSI / IEEE 18, NEMA CP 1

Routine tests 常規測試

Sealing test 密封試驗: minimum of 16 hours at 75°C 在75°C狀況下持續最少16小時

Voltage test between terminals: 2.15 x rated voltage AC, 10 s or 4.3 x rated voltage DC, 10 s

AC voltage test between terminals and container 端子及電容器間之AC電壓測試: According to IEC 60871-1, Table 3, 10 s

Discharge resistor test 電阻測試

Measurement of losses (tan δ) 損耗測量

Service conditions 服務條件

Temperature categories up to -40 / D

溫度類別上至 -40 / D

Upper temperature category limit	C	D
Maximum	50	55
Highest mean over 24 h	40	45
Highest mean over 1 year	30	35
Low temperature limit during operation	-25 °C or -40 °C	

溫度類別上限	C	D
最大值	50	55
24小時內最高平均	40	45
一年內最高平均	30	35
操作時低溫限制	-25 °C or -40 °C	

Installation 安裝: Outdoor or indoor 室外或室內

Installation altitude (above sea level): 1000 m standard, up to 4000 m on demand

裝置高度(海拔) 標準1000公尺,經要求後可達4000公尺

Case material 外殼材料: Stainless steel plate 1.5 mm thick 1.5mm 厚之不鏽鋼板

Finish / Colour 成品/顏色: Two-component durable painting RAL 7032 (light grey) on treated surfaces.

兩個零件以耐用顏料RAL 7032(淺灰色)在處理後表面上色

Fixing 設備: Depending on the height of capacitor, container is equipped with one or two mounting brackets on the narrower sides. Brackets have mounting slots 11 x 20 mm

取決於電容器的高度,容器的較窄側上會裝置一或兩個安裝支架。支架上的安裝槽為11x 20 mm

Terminals and connections 端子及連結

Bushings 襯套: Brown or gray porcelain bushings, welded to the container. 咖啡色或灰色瓷製襯套,焊接於容器上

Thread of terminal stud 接線端頭螺紋: M14

Current 電流: 10 A max.

Connections 連結: Terminal clamps with provision to accommodate any combination of 2 conductors from 4mm² solid to 50 mm² stranded wire are available on demand. The capacitor unit grounding is provided by unpainted surface of mounting brackets.

接頭能適用於任何兩個導體(從4 mm² 剛性導體至50 mm²標準電纜在要求後皆可使用。
電容器之接地裝置通過未上漆的安裝支架表面提供。

Pressure switch 壓力開關: with terminal cap Supplied on demand 屬訂製品

Name plate 銘版: Durable plastic label with permanent printing 耐久之塑膠標誌以及永久打印

Typical dimensions 典型尺寸

Q _n at 50 Hz (kVar)	U _n KLV 1xxx (without internally fused)			U _n KLV 3xxx (internally fused)			Dimensions (mm)						Weight (kg)	Weight* (kg)
	(kV)			(kV)			A	B	B*	C	D			
											BIL 75-95 kV	BIL 125 kV		
100	2.00	-	16.5 (20)	2.00	-	2.4	145	310	340	120 ^{2R}	240	315	26	28
150	2.00	-	16.5 (20)	2.00	-	4.8	145	400	430	200 ^{2R}	240	315	32	34
200	2.00	-	16.5 (20)	2.00	-	4.8	145	500	550	200 ^{2R}	240	315	39	42
250	2.27	-	16.5 (20)	2.27	-	7.2	145	600	670	200 ^{2R}	240	315	47	50
300	2.72	-	16.5 (20)	2.72	-	7.2	145	720	770	200 ^{2R}	240	315	53	56
350	3.18	-	16.5 (20)	3.18	-	9.6	145	840	870	200 ^{2R}	240	315	60	65
400	3.64	-	16.5 (20)	3.64	-	9.6	145	940	1000	200 ^{2R}	240	315	66	70
450	4.10	-	16.5 (20)	4.10	-	12	175	860	940	100 ^{2R}	240	315	75	78
500	4.56	-	16.5 (20)	4.56	-	14.4	175	920	1000	100 ^{2R}	240	315	82	89
550	5.00	-	16.5 (20)	5.00	-	14.4	190	920	970	100 ^{2R}	240	315	93	98
600	5.46	-	16.5 (20)	5.46	-	14.4	190	1000	1025	100 ^{2R}	240	315	93	98

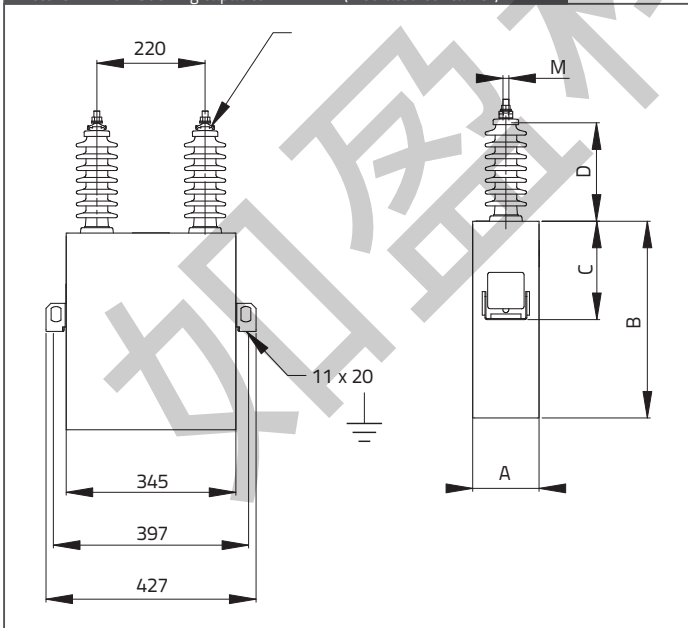
Notes:

- * Dimensions with an asterisk (*) refer to internally fused capacitors
- 1) Voltage in parenthesis () refer to one-bushing capacitors only
- 2) For output and voltage outside this range, please contact factory
- 3) Case sizes are typical and actual sizes will be confirmed at the time of order
- 4) Capacitor container could have 2 or 4 brackets (1 or 2 brackets on narrower side) Dimension C - 2R means 1 bracket from each side (capacitor type KLVxx1x); 4R means 2 brackets on each side, one on the top and one on the bottom, except where the height is 310 mm or below, where brackets are on the bottom only (type KLVxx2x).
- 5) Dim A may expand up to 115% due to thermal flexure
- 6) Power at 60 Hz = 1.2 x power at 50 Hz

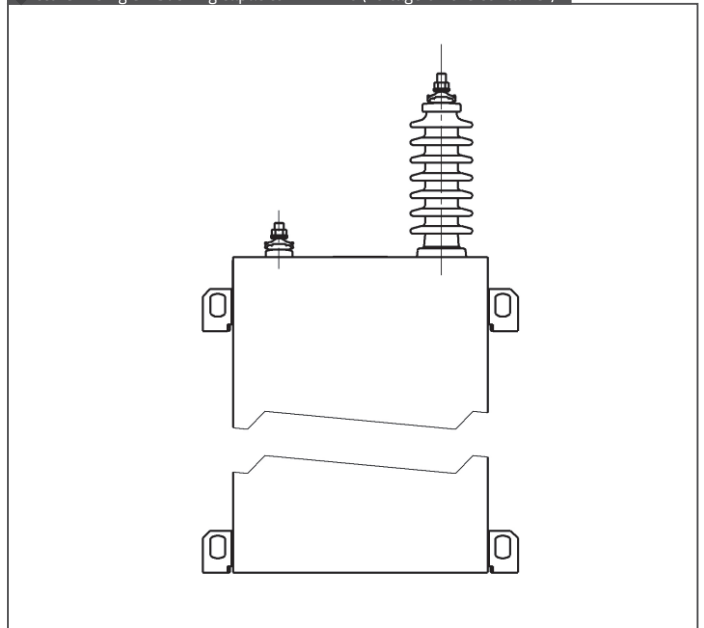
Notes:

- * 帶星號的尺寸(*)代表內建保險絲之電容器
- 1) 括號內之電壓()代表單襯套之電容器
- 2) 若是您需要的電壓及電流超越此範圍,請聯絡製造廠 3) 外殼尺寸是標準的而實際尺寸會在下訂單時再度確認 4) 電容器之容器可能有兩個或四個支架(於窄側有一或兩個支架) 除外,其支架都是在底部(類別KLVxx2x) 尺寸C- 2R代表一側各有一個支架(電容器類別KLVxx1x); 4R代表一側各有兩個支架,一個在底部,但高度310mm(或以下)的種類
- 5) Dim A 可能會擴張至115%,由於熱彎曲的因素
- 6) 60 Hz 時之功率 = 50 Hz 時功率的1.2倍

Picture 1: Two - bushing capacitor KLVxxx1 (insulated container)



Picture 2: Single - bushing capacitor KLVxxx0 (voltage on the container)



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本公司盡全力去確保本份文件上一切資訊的正確性,然而我們保留一切變動及調整修改的權利。上述技術規格僅適用於正常操作條件。對於一切不當的使用及操作,本公司概不負責。一切技術性資訊請於下訂單前向本公司詳細確認。

BIL 20/60 kV

Typical dimensions (picture 3) 標準詳圖

U _n (kV)	Q _n at 50 Hz (kVar)	Dimensions 尺寸 (mm)					Weight (kg)	Weight* (kg)
		A	B	B*	D	E		
3.3 - 7.2	50	145	200	200	250	240	16	20
	100	145	290	325	250	240	23	26
	150	145	415	430	250	240	30	33
	200	145	520	550	250	240	37	42
	250	145	620	670	250	240	44	49
	300	145	740	770	250	240	51	55
	350	145	825	900	250	240	60	63
	400	145	940	1000	250	240	66	71
450	175	870	960	250	240	73	78	

BIL 28/75 kV

Typical dimensions (picture 4) 標準詳圖

U _n (kV)	Q _n at 50 Hz (kVar)	Dimensions (mm)					Weight (kg)	Weight* (kg)
		A	B	B*	D	E		
up to 12	50	145	200	200	300	510	22	23
	100	145	290	310	300	510	28	29
	150	145	400	430	300	510	35	37
	200	145	500	550	300	510	42	44
	250	145	600	670	300	510	49	51
	300	145	720	770	300	510	55	60
	350	145	825	870	300	510	63	66
	400	145	940	1000	300	510	69	75
450	175	840	940	300	510	76	82	

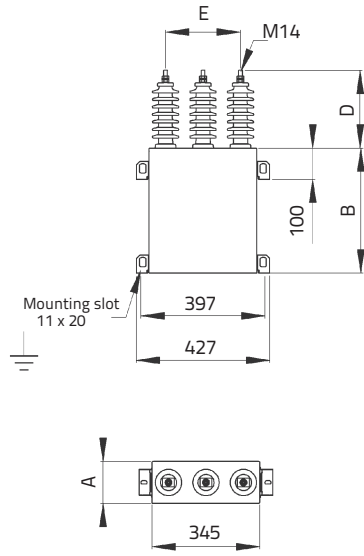
Notes:

- * Dimensions with an asterisk (*) refer to internally fused capacitors
- 1) For output and voltage outside this range, please contact factory
- 2) Case sizes are typical and actual sizes will be confirmed at the time of order
- 3) Pressure switch on demand
- 4) Either 2 or 4 fixing brackets are used, depending on the height of the unit. Special bracket positions can be provided if required. Please specify at the enquiry stage.
- 5) Dim A may expand up to 115 % due to thermal flexure
- 6) Power at 60 Hz = 1.2 x power at 50 Hz

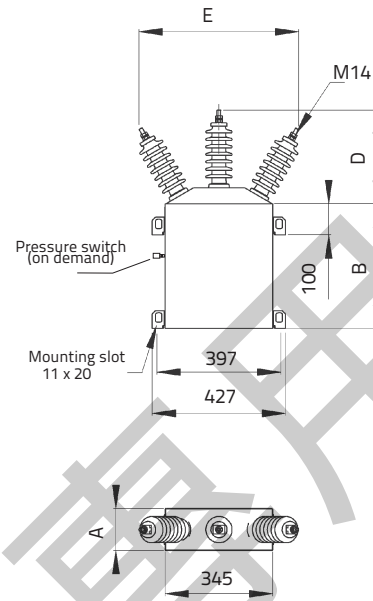
Notes:

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- 1) 若輸出及電壓超過此範圍,請聯絡工廠
- 2) 盒體尺寸為範例,實際尺寸將待下訂時確認
- 3) 壓力開關屬訂製品
- 4) 固定托架之數量(2或4)取決於產品高度,若需要的話會附上特殊支架,請於詢價時向我們確認。
- 5) DIM A 可能會擴張至115%,由於熱彎曲的緣故
- 6) 60HZ時之功率 = 50HZ 時功率的1.2倍

Picture 3



Picture 4



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BIL 20/60 kV

Typical dimensions (picture 5) 標準詳圖

U _n (kV)	Q _n at 50 Hz (kVar)	Dimensions (mm)					Weight (kg)	Weight* (kg)
		A	B	B*	D	E		
2.0 - 4.16	50 (2x25)	135	200	220	250	240	22	23
	100 (2x50)	145	290	310	250	240	28	29
	150 (2x75)	145	400	430	250	240	35	37
	200 (2x100)	145	500	550	250	240	42	44
	250 (2x125)	145	620	640	250	240	49	51
	300 (2x150)	145	720	770	250	240	51	55
	400 (2x200)	145	940	1000	250	240	66	71

BIL 28/75 kV

Typical dimensions (picture 6) 標準詳圖

U _n (kV)	Q _n at 50 Hz (kVar)	Dimensions (mm)					Weight (kg)	Weight* (kg)
		A	B	B*	D	E		
up to 6.93	50 (2x25)	145	180	200	300	510	22	23
	100 (2x50)	145	290	330	300	510	28	29
	150 (2x75)	145	400	440	300	510	35	37
	200 (2x100)	145	500	550	300	510	42	44
	250 (2x125)	145	590	670	300	510	49	51
	300 (2x150)	145	690	770	300	510	55	60
	400 (2x200)	145	900	1000	300	510	69	75

Notes:

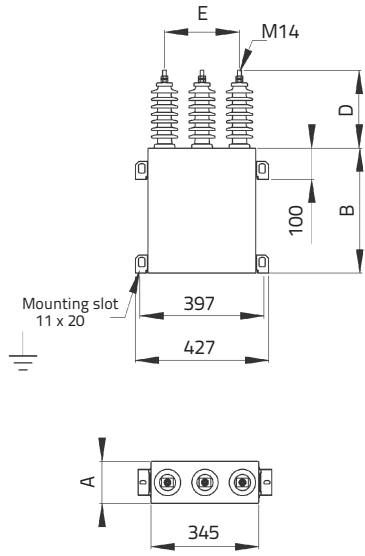
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- 2) Case sizes are typical and actual sizes will be confirmed at the time of order
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- 4) Dim A may expand up to 115% due to thermal flexure
- 5) Power at 60 Hz = 1.2 x power at 50 Hz

Notes:

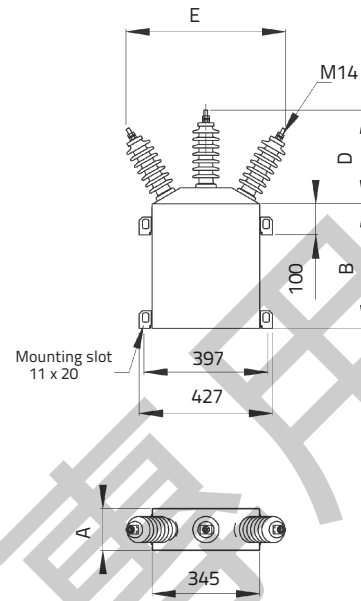
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- 6) 60HZ時之功率 = 50HZ 時功率的1.2倍

Picture 5



Picture 6



Connection

