



LV Capacitors QCap-L series

Capacitors for power factor correction

Power and productivity
for a better world™



ABB and power quality

ABB is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 145,000 people.

ABB delivers the full value chain in low, medium and high voltage technologies for electrical power transmission, distribution and usage. ABB has been driving development in the field of Power Quality for over 70 years and is responsible for several important developments in reactive power and filtering technologies.

Today, ABB is recognized as a leader in Power Quality, partnering with its customers to define optimal solutions for their system.

Quality capacitors for power factor correction

Applications such as motors, transformers, induction furnaces, welding and lighting installations consume both reactive and active power, resulting in reduced availability and lower quality of power. This translates into lower capacity utilization and eventually additional capital and running costs.

ABB with its cutting-edge technologies and extensive experience has developed a wide range of advanced Low Voltage (LV) capacitors, which offer simple and cost effective solution to improve power quality and reduce costs.



LV capacitors QCap-L series

Product design

ABB's low voltage QCap-L series capacitors consist of a number of wound elements and a dielectric made of metallized polypropylene film. These dry windings are provided with over pressure disconnecter for safety. The capacitor elements are treated in vacuum to ensure optimal electrical characteristics. Each winding is encapsulated in thermo-setting resin to obtain a perfectly sealed element.

The QCap-L series LV Capacitors are available in cylindrical & box type models.

Product key benefits

- Dry type design - The QCap-L series capacitor has a dry type dielectric which minimizes risk of leakage and environmental pollution
- Very low losses - Dielectric losses within the QCap-L series capacitors are very low and total losses including discharge resistors are less than 0.5 W/ kvar
- High reliability - The use of robust terminals minimize the risk of damage during installation and reduce maintenance requirements
- Accredited with International standards- The QCap-L series low voltage capacitors are IS: 13340/41 and IEC 60831-1&2 compliant

Product features

Type	Box type	Cylindrical type
		
Construction	– Dielectric: Polypropylene film – Dry PU resin; non-PCB (1 to 4 kvar) in normal duty – Soft PU resin; non-PCB (5 kvar up to 25 kvar in normal duty) – Container type: MS sheet metal – Elements placed inside a metal box, delta connected internally – Provided with discharge resistor	– Dielectric: Polypropylene film – Non-PCB, soft PU resin – Extruded cylindrical aluminum can with stud – Overpressure disconnecter – Elements inside an extruded cylindrical aluminum can, delta connected internally – Provided with discharge resistor
Features	– Three phase – Self-healing technology – Naturally air cooled or forced cooling	– Three phase – Self-healing technology – Naturally air cooled or forced cooling
Typical applications	– For power factor correction in indoor applications	– For power factor correction in indoor applications

Range/ Connection type

Cylindrical type - normal duty

1 kvar to 4 kvar (415 V & 440 V): Fast-on terminal

6.3 kvar to 25 kvar (415 V & 440 V): Screw terminal



Cylindrical type - heavy duty

1 kvar (415 V): Fast-on terminal

2 kvar and above (415 V): Sigut terminal

1 kvar and 2 kvar (440 V): Fast-on terminal

3 kvar to 25 kvar (440 V): Sigut terminal



Box type - normal duty

1 to 4 kvar (415 V & 440 V): Wire type terminal

6.3 to 25 kvar (415 V & 440 V): Stud type terminal



Box type - heavy duty

1 kvar to 25 kvar (415 V & 440 V): Stud terminal



Technical data

Range	Cylindrical type - normal duty	Cylindrical type - heavy duty	Box type - normal duty	Box type - heavy duty
Voltage (V)	415 / 440 / 480 /525			
Power (kvar)	1 – 25			
Frequency (Hz)	50			
Connection	3 phase as standard construction / Delta			
Maximum permissible temperature category	-40º C to 55º C	-40º C to 60º C	-40º C to 60º C	-40º C to 60º C
Losses (with discharge resistors)	≤ 0.5 W/kVAr			
Maximum permissible voltage	Maximum VR +10% (upto 8h daily)**			
Maximum permissible current	200 x IR*	250 x IR*	200 x IR*	250 x IR*
Safety	Self healing, overpressure disconnecter			
Impregnation	Non- PCB, semi dry biodegradable resin			
Cooling	Natural or forced			
Case shape / finish	Extruded round aluminium can with stud			
Terminal	Screw terminal	Optimized capacitor safety terminals	Screw terminal	Optimized capacitor safety terminals
Mounting parts	Threaded stud at bottom of can (max. torque = 4Nm for M8 & 10 NM for M12)		Mounting bracket at rear plate	
Earth	Extruded stud		Earth connection on the enclosure fixation	
Enclosure	IP 20, indoor mounting (optionally with terminal cap for IP54)			
Discharge resistor	In-built as part of the capacitor			
Execution	Indoor			
Dielectric	Polypropylene film (metallised)			
Mean life expectancy	1,00,000 hours (max. 5000 switching per year)	1,15,000 hours (max. 6000 switching per year)	1,00,000 hours (max. 5000 switching per year)	1,25,000 hours (max. 6000 switching per year)
Mean life expectancy	100,000 hours (max. 5000 switching per year)	115,000 hours (max. 6000 switching per year)	100,000 hours (max. 5000 switching per year)	125,000 hours (max. 6000 switching per year)
Standards	In compliance to IS 13340 / 41 & IEC 60831 – 1 & 2			

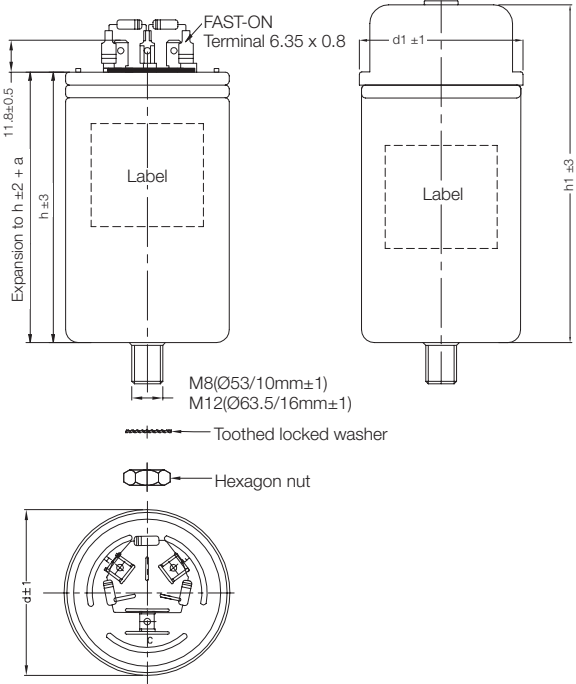
*IR = Inrush current

Note: Capacitors to be used under normal conditions, not suitable for harmonic environment

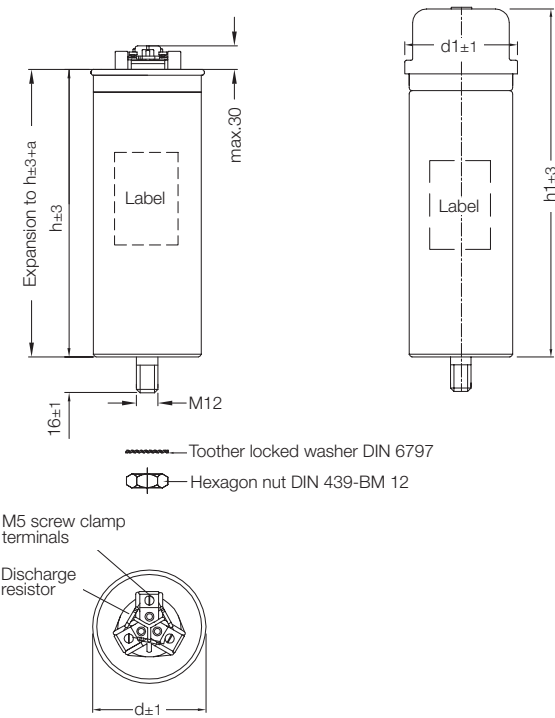
Dimensions

Cylindrical type - normal duty

Voltage (V)	Power (Q) kvar	Capacitance (µf)	Rated current (A)	Dimensions (mm) without cap
			50 Hz	D x H
415	1.0	6.5	1.4	53 x 117
	2.0	12.5	2.8	53 x 117
	3.0	18.5	4.2	63.5 x 129
	4.0	25.0	5.6	63.5 x 152
	5.0	31.0	7.0	63.5 x 152
	6.3	39	8.8	78.4 x 195
	7.5	46.5	10.4	78.4 x 195
	10.0	62.0	13.9	88.4 x 195
	12.5	77.0	17.4	88.4 x 270
	15.0	92.5	20.9	88.4 x 270
	20.0	123.5	27.8	88.4 x 345
	25.0	154	34.8	88.4 x 345
440	1.0	5.5	1.3	53 x 117
	2.1	11.5	2.8	53 x 117
	3.0	16.5	3.9	63.5 x 129
	4.2	23.0	5.5	63.5 x 129
	5.0	27.5	6.6	63.5 x 152
	6.0	33	7.9	78.4 x 195
	7.5	41.0	9.8	78.4 x 195
	10.0	55.0	13.1	88.4 x 195
	12.5	68.5	16.4	88.4 x 270
	15.0	82.5	19.7	88.4 x 270
	20.0	110.0	26.2	88.4 x 345
	25.0	137.5	32.8	93.5 x 345



Fast-on terminal

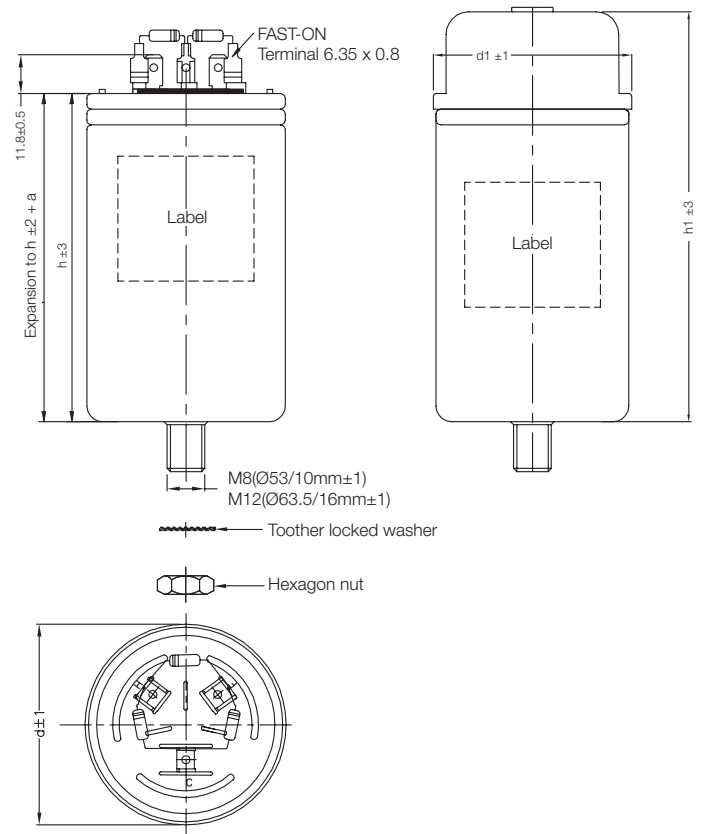


Screw terminal

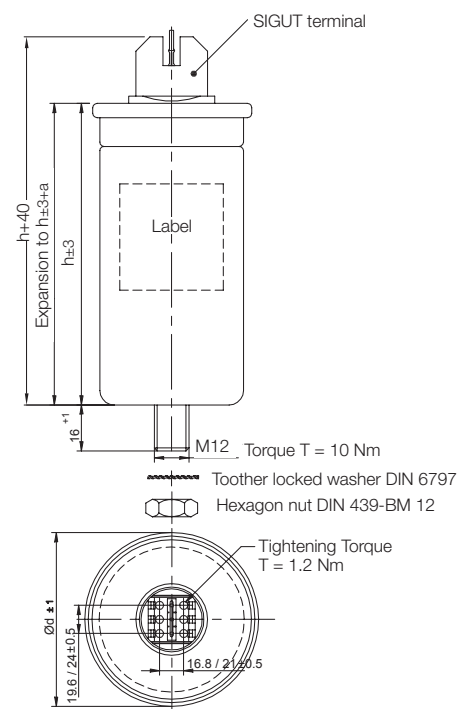
Dimensions

Cylindrical type - heavy duty

Voltage (V)	Power (Q) kvar	Capacitance (μ f)	Rated current (A)	Dimensions (mm)
	50 Hz		50 Hz	D x H
415	1	6.5	1.4	53 x 129
	2	12.5	2.8	78.4 x 195
	3	19	4.2	78.4 x 195
	4	25	5.6	78.4 x 195
	5	31	7.0	88.4 x 195
	8	49.5	11.1	88.4 x 270
	9	55.5	12.5	88.4 x 270
	10	62	13.9	88.4 x 345
	12.5	77	17.4	88.4 x 345
	15	93.5	20.9	93.5 X 348
	20	123.3	27.8	121.5 x 325
	25	154.1	34.8	142 x 325
440	1	5.5	1.3	53 x 117
	2	11	2.6	63.5 x 129
	3	16.5	3.9	78.4 x 195
	4	22	5.2	78.4 x 195
	5	27.5	6.6	78.4 x 195
	6	33	7.8	88.4 x 195
	7.5	41.5	9.8	88.4 x 270
	10	55	13.1	88.4 x 270
	12.5	68.5	16.4	93.5 X 270
	15	82.5	19.7	105.5 X 280
	20	109.6	26.3	121.5 x 280
	25	137	32.8	121.5 x 325



Fast-on terminal

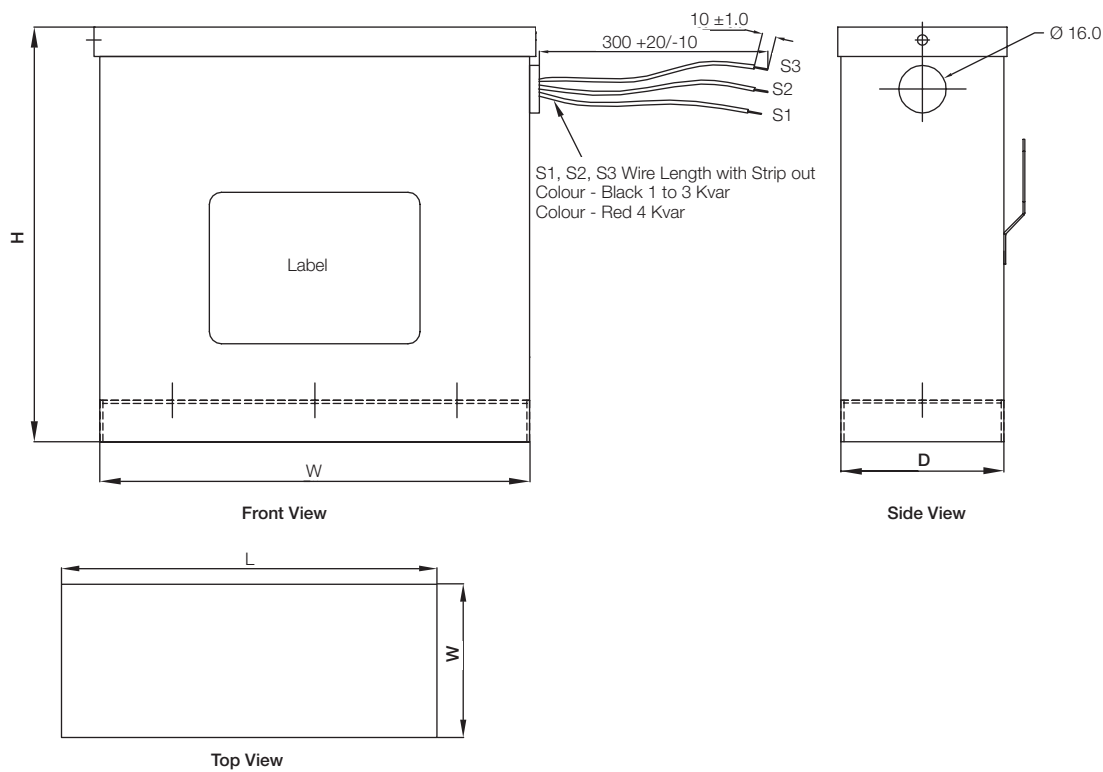


Sigut terminal

Dimensions

Box type - normal duty (1-4 kvar)

Volts V	Range (kvar)	Capacitance µf	Rated current (A)	Dimensions (mm) ±5mm		
				H	W	D
415	1.0	6.2	1.4	95	125	45
415	2.0	12.3	2.8	120	125	45
415	3.0	18.5	4.2	120	145	55
415	4.0	24.7	5.6	140	145	55
440	1.0	5.5	1.3	95	125	45
440	2.0	11.0	2.6	120	125	45
440	3.0	16.4	3.9	120	145	55
440	4.0	21.9	5.3	140	145	55

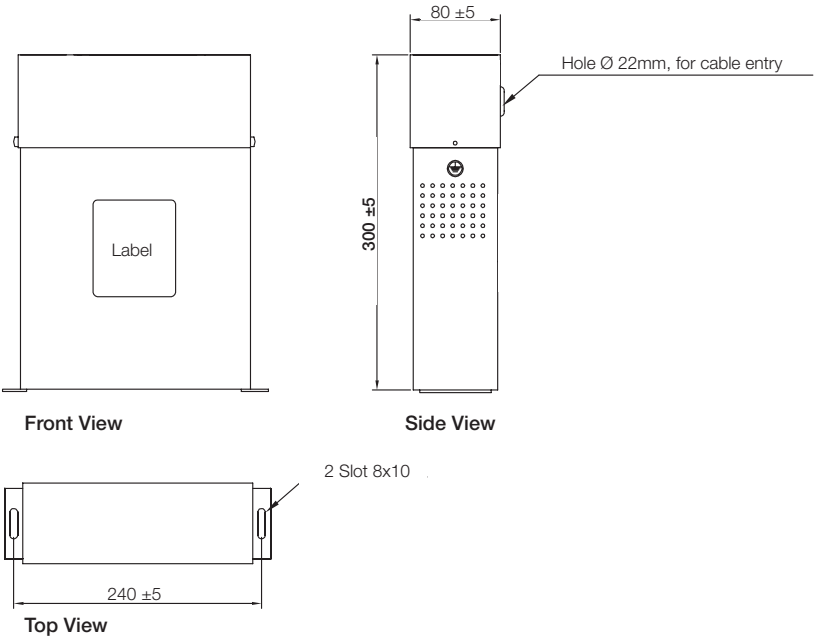


Wire type terminal

Dimensions

Box type - normal duty (5-25 kvar)

Volts V	(Range) kvar	Capacitance µf	Rated Current (A)	Dimensions (mm) ±5mm		
				H	W	D
415	5	31	7.0	240	185	60
	6	37.5	8.3	300	240	80
	7.5	46.5	10.4	300	240	80
	10	62	13.9	300	240	80
	12.5	77	17.4	300	240	80
	15	92.5	20.9	300	240	80
	17.5	107.9	24.3	300	240	160
	20	124	27.8	300	240	160
	22.5	138.7	31.3	300	240	160
	25	154	34.8	300	240	160
440	5	27.5	6.6	240	185	60
	6	33	7.9	300	240	80
	7.5	41.5	9.8	300	240	80
	10	55	13.1	300	240	80
	12.5	68.5	16.4	300	240	80
	15	82.5	19.7	300	240	80
	17.5	96	23	300	240	160
	20	110	26.2	300	240	160
	22.5	123.4	29.5	300	240	160
	25	138	32.8	300	240	160

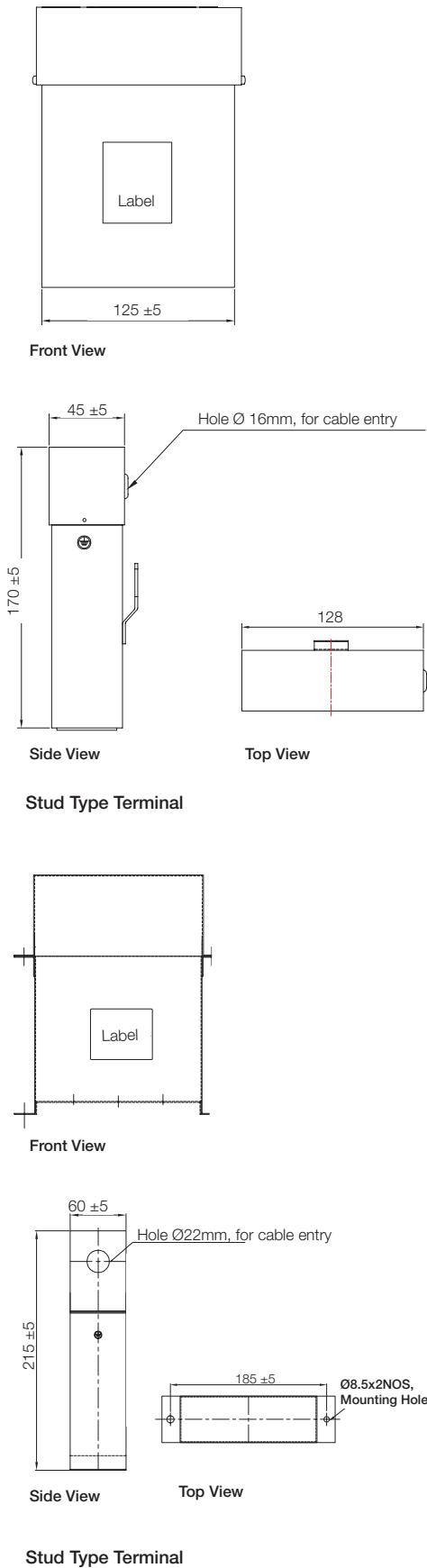


Stud Type Terminal

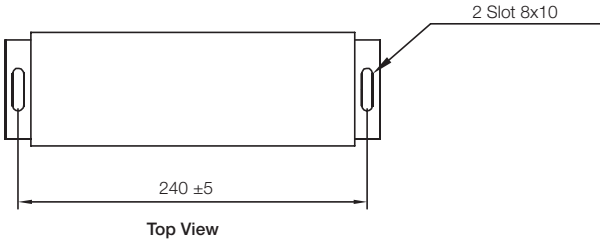
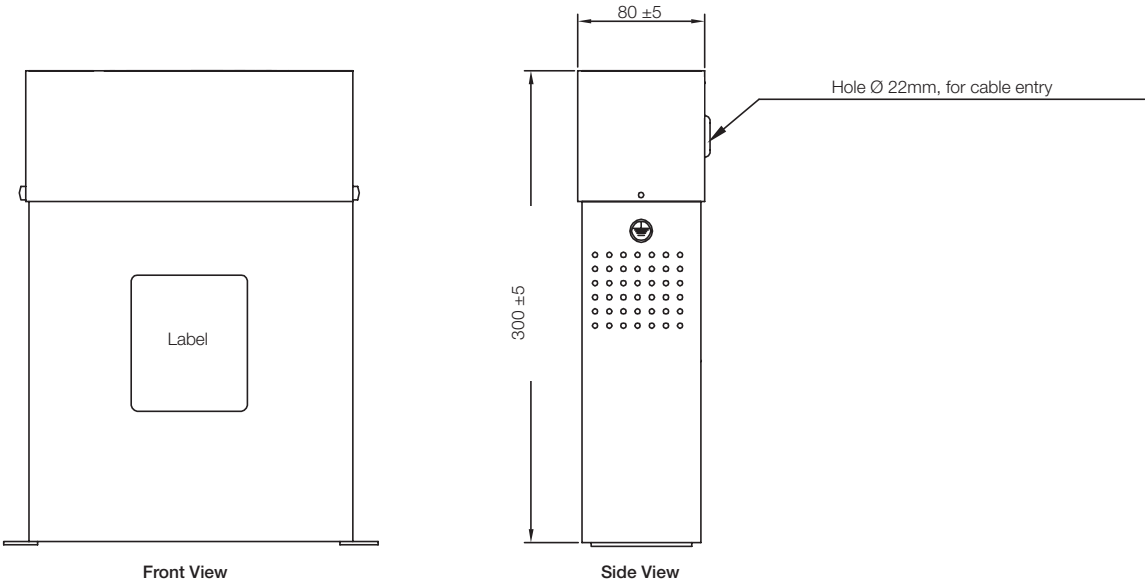
Dimensions

Box type - heavy duty

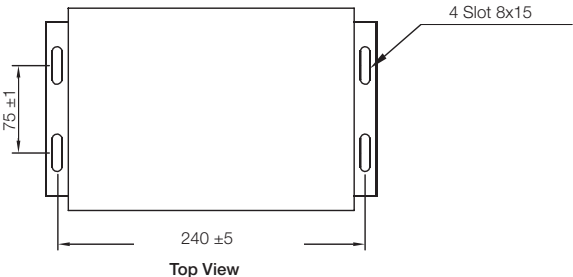
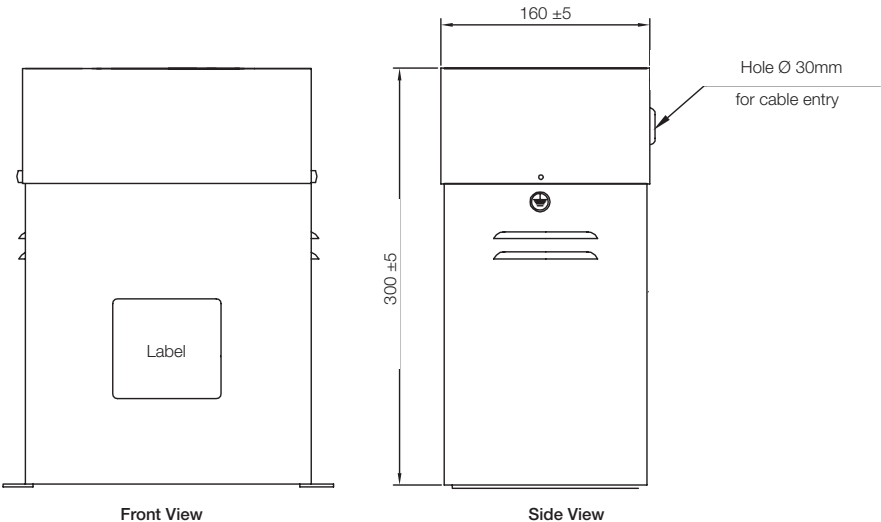
Volts (V)	Range (kvar)	Capacitance μf	Rated current (A)	Dimensions (mm) $\pm 5\text{mm}$		
				H	W	D
415	1	6.3	1.4	170	125	45
	2	12.5	2.8	170	125	45
	3	19	4.2	215	185	60
	4	25	5.6	215	185	60
	5	31	7	215	185	60
	6	37.5	8.3	300	240	80
	7.5	49.5	10.4	300	240	80
	10	62	13.9	300	240	80
	12.5	77	17.4	300	240	80
	15	92	20.9	300	240	80
	17.5	107.9	24.3	300	240	160
	20	124	27.8	300	240	160
	22.5	138.7	31.3	300	240	160
	25	154	34.8	300	240	160
440	1	5.5	1.3	170	125	45
	2	11	2.6	170	125	45
	3	16.5	3.9	215	185	60
	4	22	5.2	215	185	60
	5	27.5	6.6	215	185	60
	6	33	7.9	300	240	80
	7.5	41.5	9.8	300	240	80
	10	55	13.1	300	240	80
	12.5	69	16.4	300	240	80
	15	82.5	19.7	300	240	80
	17.5	96	23	300	240	160
	20	110	26.2	300	240	160
	22.5	123.4	29.5	300	240	160
	25	138	32.8	300	240	160



Dimensions



Stud Type Terminal



Stud Type Terminal

Contact us

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