Power Capacitors
User Manual



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PROPER USE AND SAFETY REQUIREMENTS



Cut all the power when connecting and disconnecting the device to a panel.



Do not clean the device with a solvent or similar material. Only use a dry cloth.



Please do not intervene to the device when a technical problem is encountered and get in contact with a technical service within the shortest time.



If the warnings are not taken into account, our company or the authorized dealer shall not be held responsible for the negative consequences.



Do not dispose in the trash, the device must be delivered to the collection centers (electronic device recycling centers). It should be recycled or disposed of without harming human health and environment.



The installation, assembly, activation and operation of the device hould be done and used by only expert professionals and in accordance with safety regulations and instructions.

1. INTRODUCTION

1.1. General Features

Power capacitors are used to meet the reactive power requirement in inductive enterprises with electric motors, transformers, etc. devices. Power factor controllers meet the reactive needs of the enterprise by activating and deactivating the capacitors by means of contactors or semiconductor switching elements and ensure that the reactive rates remain below the desired rates.

2. TECHNICAL FEATURES

Standards	:	IEC 60831-1/2 , IS 13340-1/2
Nominal Voltage	:	230, 400, 440, 525 Volt
Nominal Frequency	:	50 - 60 Hz
Over Voltage	:	Un + 10%, 8 hours in every 24 hours Un + 15%, 30 min in every 24 hours Un + 20%, 5 min in every 24 hours Un + 30%, 1 min in every 24 hours
Over Current	:	1,5 x In
Dielectric Losses	:	< 0,20 W / kVAr
Total Losses	:	< 0,45 W / kVAr
Casing	:	Cylindrical Aluminum Can
Enclosure	:	IP20 (IP54 for outdoor use on request)
Capacity Tolerance	:	-%5 / +%10
Terminal Test Voltage	:	2,15 x Un, AC 2s
Case Terminal Test Voltage	:	3 kV, AC 10s
Inrush Current Maximum	:	300 x In
Protection	:	Overpressure Sensitive 3 Phase Disconnector
Life Expectancy	:	D Class (>130.000 Hour) C Class (>150.000 Hour)
Ambient Temperature	:	-40 / +55 , D Class
Dielectric System	:	MPP Film, Self Healing Property
Impregnation	:	Non PCB, Biodegradable Natural Jel
Relative Humidity	:	Maximum %95
Discharge Time	:	1 min, 50 V
Cooling	:	The case temperature should not exceed 60 °C.
Altitude	:	Maximum 2000 meter above sea level
Mounting Position	:	Vertical
Mounting & Earthing	:	M 12 x 16 mm threaded stud at bottom of the case with nut & spring washer

2.1. Monophase Power Capacitors (230V)

Product Code	Product Name	Power (kVAr)		Current (A)	Capacitance Value (µF)	Dimensions DxH (mm)	Weight (kg)
		230 V	400 V	(230 V for)			
GA7101	KND M0.25	0,25	0,75	1,09	1 x 15,04	50 x 110	0,60
GA7102	KND M0.5	0,50	1,50	2,17	1 x 30,09	50 x 120	0,60
GA7103	KND M1.0	1,00	3,00	4,35	1 x 60,17	65 x 140	0,70
GA7104	KND M1.5	1,50	4,50	6,52	1 x 90,26	65 x 170	0,70
GA7105	KND M2.5	2,50	7,50	10,87	1 x 150,43	75 x 235	1,15
GA7106	KND M5.0	5,00	15,00	21,74	1 x 300,86	90 x 240	1,65
GA7107	KND M7.5	7,50	22,50	32,60	1 x 451,29	100 x 280	2,90
GA7108	KND M10.0	10,00	30,00	43,48	1 x 601,72	117 x 280	2,90

2.2. Threephase Power Capacitors (400V / 440V)

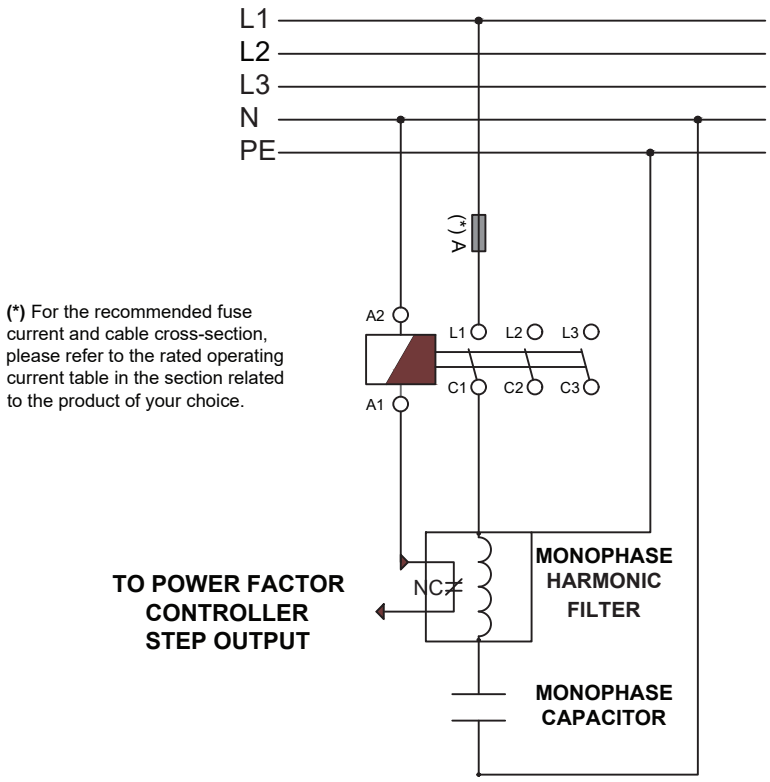
Product Code	Product Name	Power (kVAr)		Current (A)	Capacitance Value (µF)	Dimensions DxH (mm)	Weight (kg)
		400 V	440 V	(400 V for)			
GA7201	KND T0.5	0,50	0,61	0,72	3 x 3,32	50 x 145	0,60
GA7202	KND T1.0	1,00	1,21	1,44	3 x 6,63	50 x 145	0,60
GA7203	KND T1.5	1,50	1,82	2,17	3 x 9,95	50 x 145	0,60
GA7204	KND T2.5	2,50	3,03	3,61	3 x 16,58	50 x 170	0,70
GA7205	KND T5.0	5,00	6,05	7,22	3 x 33,16	75 x 175	1,10
GA7206	KND T7.5	7,50	9,08	10,83	3 x 49,74	75 x 230	1,10
GA7207	KND T10.0	10,00	12,10	14,43	3 x 66,31	90 x 240	1,70
GA7208	KND T12.5	12,50	15,13	18,04	3 x 82,89	90 x 240	1,70
GA7209	KND T15.0	15,00	18,15	21,65	3 x 99,47	90 x 280	1,85
GA7210	KND T18.6	18,60	22,51	26,85	3 x 123,35	100 x 280	2,45
GA7211	KND T20.0	20,00	24,20	28,87	3 x 132,63	100 x 280	2,90
GA7212	KND T23.2	23,20	28,07	33,49	3 x 153,85	117 x 280	3,15
GA7213	KND T25.0	25,00	30,25	36,08	3 x 165,79	117 x 280	3,30
GA7214	KND T30.0	30,00	36,30	43,30	3 x 198,94	117 x 280	3,45

2.3. Threephase Power Capacitors (525V)

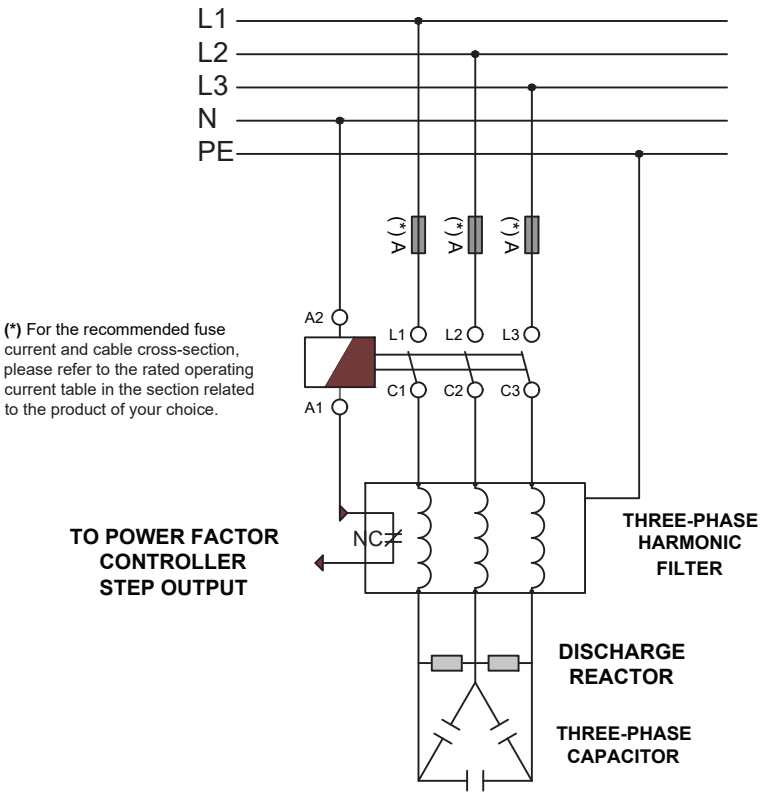
Product Code	Product Name	Power (kVAr)		Current (A)	Capacitance Value (µF)	Dimensions DxH (mm)	Weight (kg)
		480 V	525 V	(525 V for)			
GA7301	KND B5.0	4,18	5,00	5,50	3 x 19,25	75 x 175	1,25
GA7302	KND B7.5	6,27	7,50	8,25	3 x 28,87	75 x 230	1,25
GA7303	KND B10.0	8,36	10,00	11,00	3 x 38,50	85 x 240	1,75
GA7304	KND B12.5	10,45	12,50	13,75	3 x 48,12	90 x 240	1,75
GA7305	KND B15.0	12,54	15,00	16,50	3 x 57,74	90 x 280	1,90
GA7306	KND B20.0	16,72	20,00	21,99	3 x 76,99	100 x 280	2,85
GA7307	KND B25.0	20,90	25,00	27,49	3 x 96,24	117 x 280	2,95
GA7308	KND B30.0	25,08	30,00	32,99	3 x 115,49	117 x 280	2,95
GA7309	KND B40.0	33,44	40,00	43,99	3 x 153,98	136 x 280	3,85

3. CONNECTION DIAGRAMS

3.1. Monophase Power Capacitors (230V)

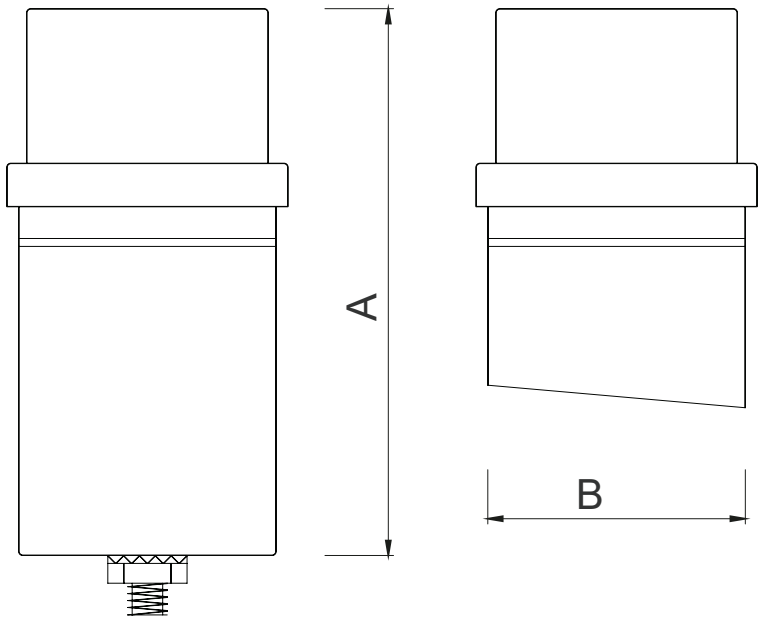


3.2. Threephase Power Capacitors (400V / 440V / 525V)



4. TECHNICAL DRAWINGS

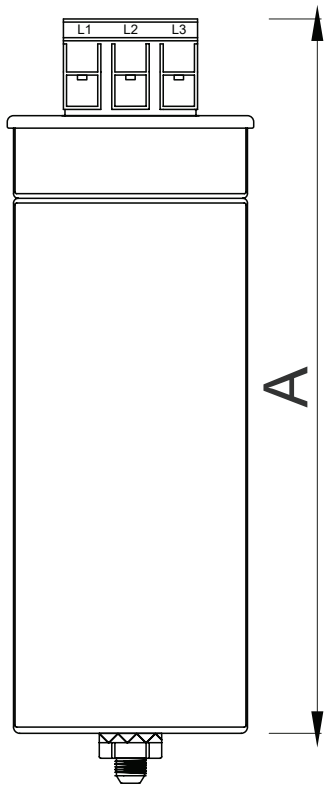
4.1. Monophase Power Capacitors (230V)



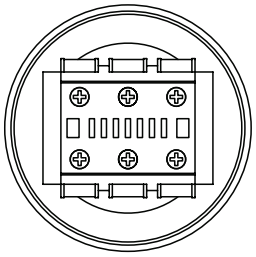
Front View

Product Code	Product Name	A (mm)	B (mm)
GA7101	KND M0.25	110	50
GA7102	KND M0.5	120	50
GA7103	KND M1.0	140	65
GA7104	KND M1.5	170	65
GA7105	KND M2.5	235	75
GA7106	KND M5.0	240	90
GA7107	KND M7.5	280	100
GA7108	KND M10.0	280	117

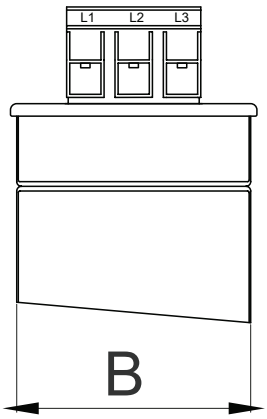
4.2. Threephase Power Capacitors (400V / 440V / 525V)



Front View



Top View



For 400V / 440V ;

Product Code	Product Name	A (mm)	B (mm)
GA7201	KND T0.5	145	50
GA7202	KND T1.0	145	50
GA7203	KND T1.5	145	50
GA7204	KND T2.5	170	50
GA7205	KND T5.0	175	75
GA7206	KND T7.5	230	75
GA7207	KND T10.0	240	90
GA7208	KND T12.5	240	90
GA7209	KND T15.0	280	90
GA7210	KND T18.6	280	100
GA7211	KND T20.0	280	100
GA7212	KND T23.2	280	117
GA7213	KND T25.0	280	117
GA7214	KND T30.0	280	117

For 525V ;

Product Code	Product Name	A (mm)	B (mm)
GA7301	KND B5.0	175	75
GA7302	KND B7.5	230	75
GA7303	KND B10.0	240	85
GA7304	KND B12.5	240	90
GA7305	KND B15.0	280	90
GA7306	KND B20.0	280	100
GA7307	KND B25.0	280	117
GA7308	KND B30.0	280	117
GA7309	KND B40.0	280	136