

grup ARGE

Shunt Reactor User Manual



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Version 19-2

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PROPER USE AND SAFETY REGULATIONS



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 should be done and used by only expert professionals and in accordance with safety regulations and instructions.



The device operates with current transformers. Do not strictly leave current transformer tips unattached. Dangerous high voltage can occur.

1. General Features

MV cables, UPSs, Electronic balanced lighting elements are capacitive. In enterprises with such loads, Shunt reactors are needed to meet the reactive power requirement and to keep the reactive ratios within the desired limits.

The load profile of the enterprises is changing day by day. In the past, only Compensation by connecting a capacitor was sufficient. But now The number of devices with capacitive characteristics in enterprises is constantly increasing. Therefore, it is necessary to use shunt reactors with capacitors for the correct compensation. Depending on the size of businesses and the load profile, the shunt reactor size is changing. Once the business has been correctly analyzed, the most appropriate shunt reactor must be selected, taking into account the cost.

2. Technical Features

Standards	TS EN 60076-6 / TS EN 61558-2-20
Rated Voltage (V)	230 / 400
Rated Power (kVAr)	0.5- 100
Rated Frequency (Hz)	50
Number of Phases	1 Phase / 3 Phase
Inductivity Tolerance	%5
Protection Class	IP00
Thermal protection	120 °C, 1 NC Kontak
Insulation Class	F (155 °C)
Cooling	Natural T40
Moisture	<%95
Core	Low loss silica sheet, Air gap
Wrapping Material	Copper, Aluminum
Connection	terminal, lug or copper busbar.

2.1 Single phase Shunt Reactors

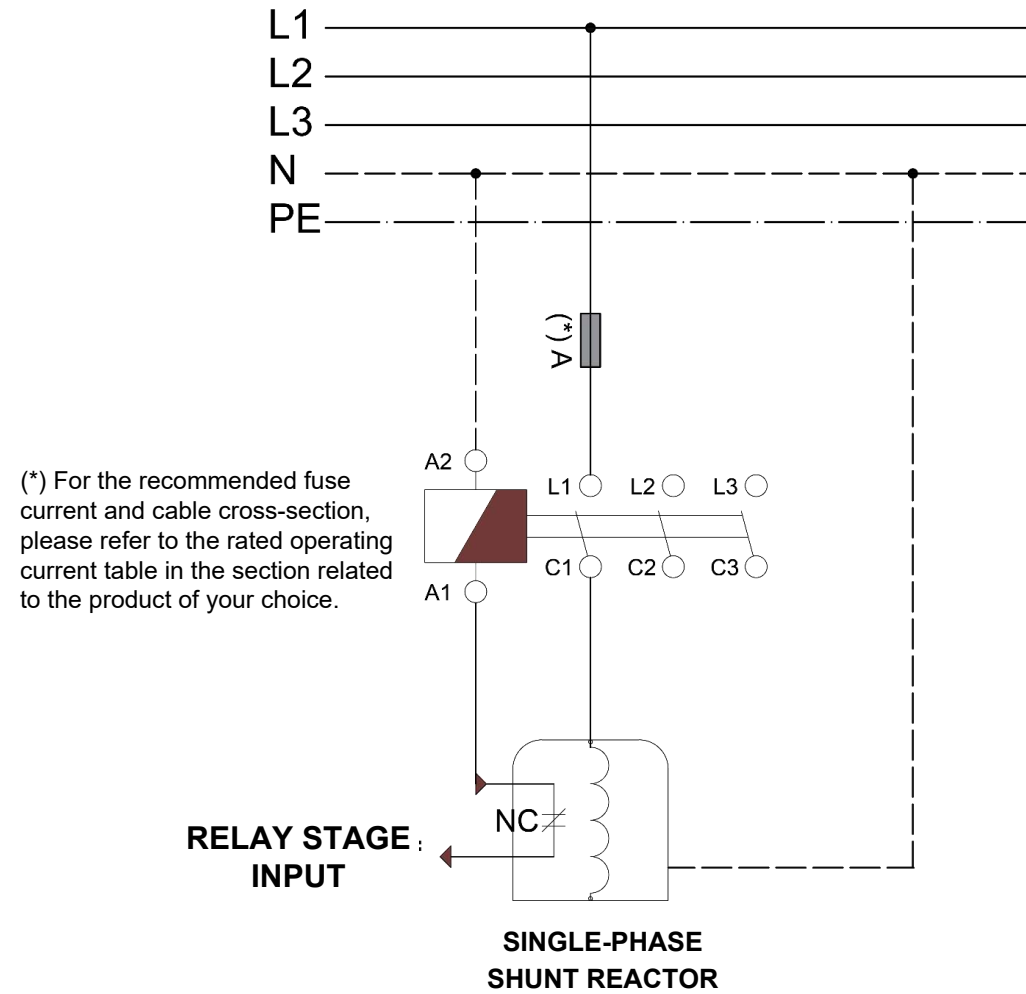
Product code	Product name	Voltage 230 (V)	current (A)	Power (kVAr)	Thermal protection	Dimensions (mm) (width x height x depth)	Weight (Kg)
GA5101	SRM 1.0	√	4,34	1.0	√	150 x 125 x 105	6.0
GA5102	SRM 1.5	√	6,52	1.5	√	150 x 125 x 125	9.0
GA5103	SRM 3.0	√	13,04	3.0	√	190 x 162 x 150	17.5
GA5104	SRM 5.0	√	21,73	5.0	√	215 x 235 x 125	20.0
GA5105	SRM 7.5	√	32,60	7.5	√	255 x 322 x 127	27.5
GA5106	SRM 10.0	√	43,40	10.0	√	255 x 325 x 145	36.0

2.2 Three-Phase Shunt Reactors

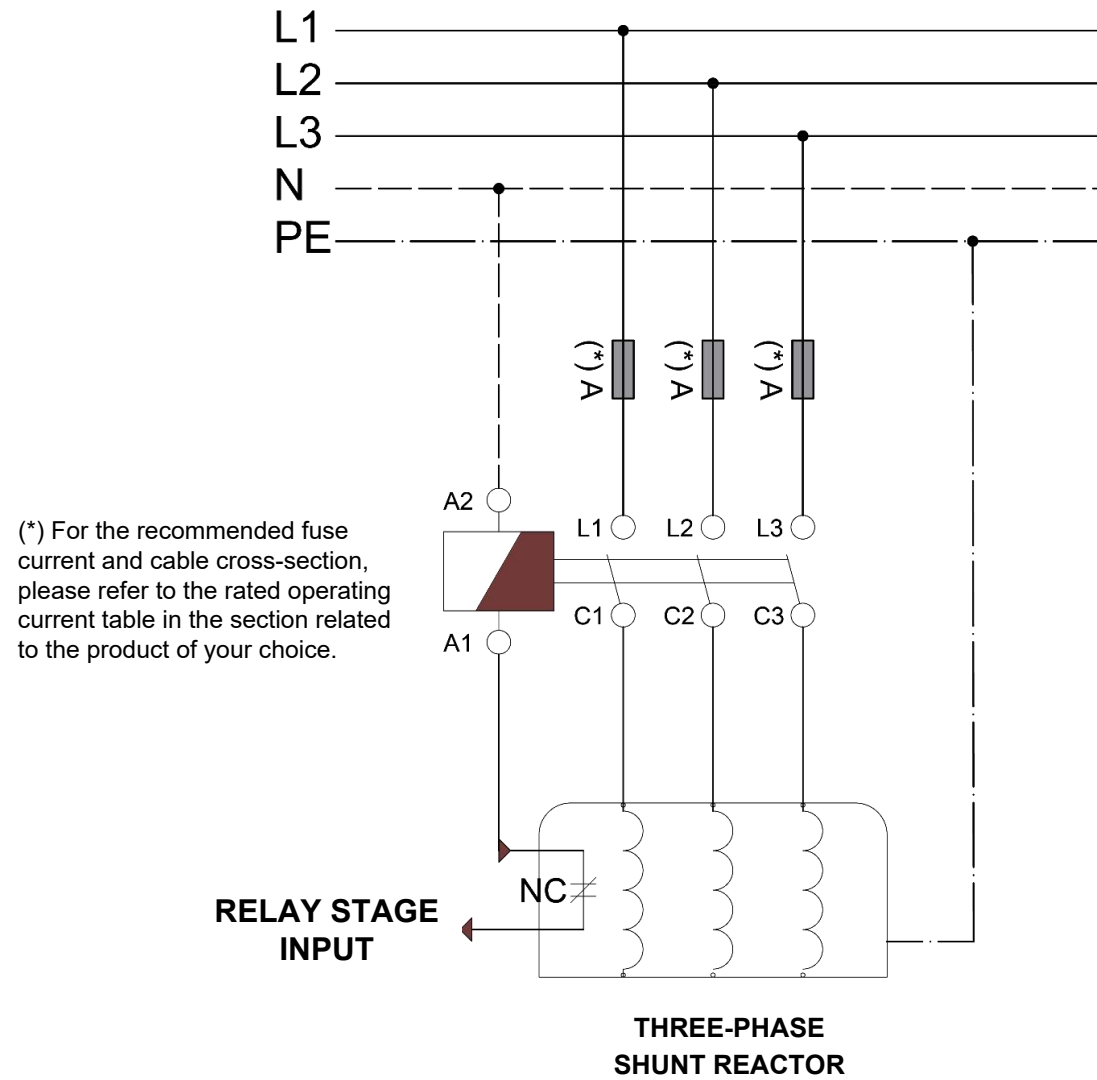
Product code	Product name	Voltage 400 (V)	current (A)	Power (kVAr)	Thermal protection	Dimensions (mm) (width x height x depth)	Weight (Kg)
GA5201	SRT 0.5	√	0.72	0.5	√	180 x 155 x 110	8.0
GA5202	SRT 1.0	√	1.44	1.0	√	240 x 210 x 110	11.5
GA5203	SRT 1.5	√	2,16	1,5	√	240 x 210 x 120	14.5
GA5204	SRT 2.5	√	3,60	2,5	√	240 x 210 x 130	17.0
GA5205	SRT 5.0	√	7,21	5.0	√	300 x 255 x 140	27.0
GA5206	SRT 7.5	√	10,82	7,5	√	360 x 315 x 150	39.0
GA5207	SRT 10.0	√	14,43	10	√	390 x 315 x 135	48.0
GA5208	SRT 12.5	√	18,04	12,5	√	390 x 325 x 145	57.0
GA5209	SRT 15.0	√	21,65	15.0	√	390 x 312 x 155	64.0
GA5210	SRT 20.0	√	28,86	20.0	√	460 x 367 x 150	80.0
GA5211	SRT 25.0	√	36,08	25.0	√	460 x 367 x 175	96.5
GA5212	SRT 50.0	√	72,17	50	√	560 x 490 x 270	200.0

3. CONNECTION DIAGRAMS

3.1 Single phase Shunt Reactor-Contactor Connection Diagram

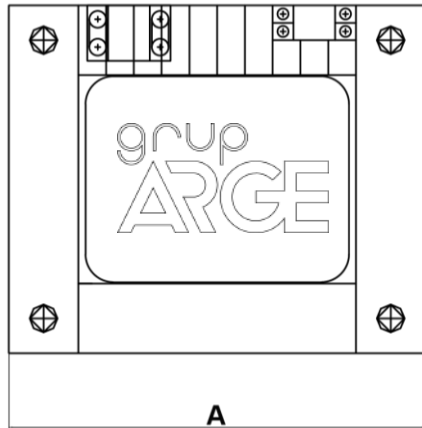


3.2 Three Phase Shunt Reactor-Contactor Connection Diagram

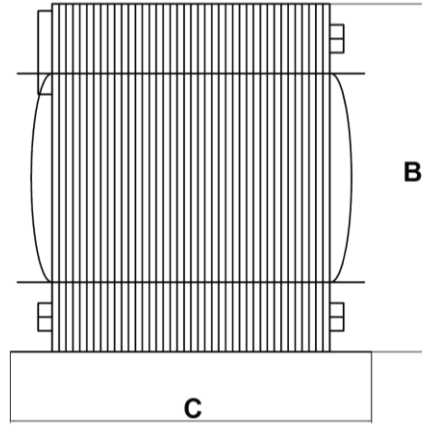


4. PRODUCT DIMENSIONS

4.1 Product Dimensions of Single phase Shunt Reactors

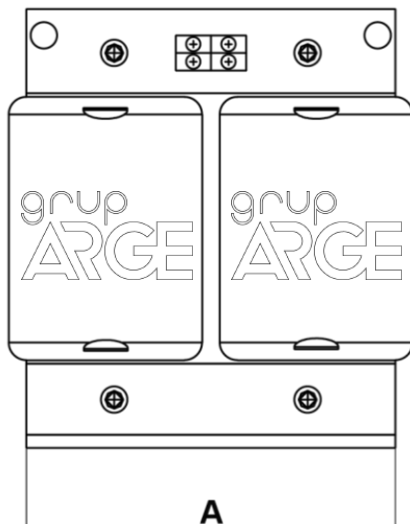


FRONT VIEW

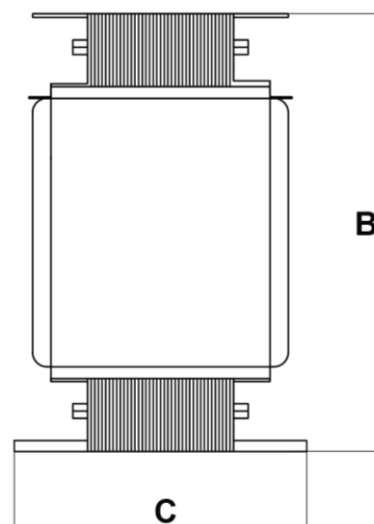


SIDE VIEW

Dimensions (mm)				
Product Code	Product Name	A	B	C
GA5101	SRM 1.0	150	125	105
GA5102	SRM 1.5	150	125	125
GA5103	SRM 3.0	190	162	150
GA5104	SRM 5.0	215	235	125



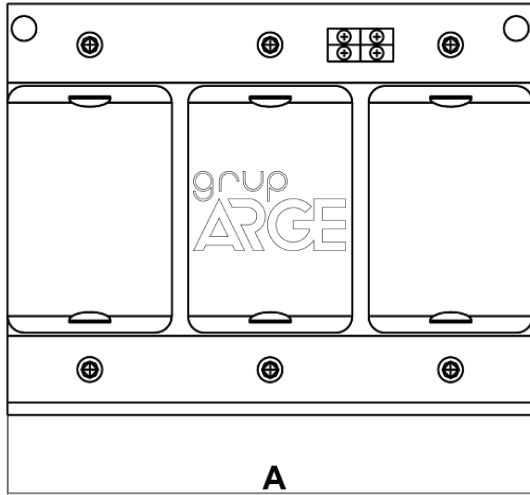
FRONT VIEW



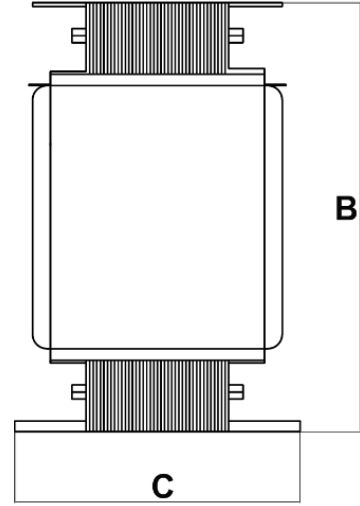
SIDE VIEW

Dimensions (mm)				
Product Code	Product Name	A	B	C
GA5105	SRM 7.5	255	322	127
GA5106	SRM 10.0	255	325	145

4.2 Product Dimensions of Three-Phase Shunt Reactors



FRONT VIEW



SIDE VIEW

Dimensions (mm)				
Product Code	Product Name	A	B	C
GA5201	SRT 0.5	180	155	110
GA5202	SRT 1.0	240	210	110
GA5203	SRT 1.5	240	210	120
GA5204	SRT 2.5	240	210	130
GA5205	SRT 5.0	300	255	140
GA5206	SRT 7.5	360	315	150
GA5207	SRT 10.0	390	325	135
GA5208	SRT 12.5	390	325	145
GA5209	SRT 15.0	390	325	155
GA5210	SRT 20.0	460	375	150
GA5211	SRT 25.0	460	375	175
GA5212	SRT 50.0	560	500	270