REACTORS

SHUNT – INDUCTIVE LOAD REACTORS

REACTOR

Shunt reactor is basically a kind of an inductive load device, and provides a linear response of impedance versus current which is essential for numerous applications. It compensates for the capacitive currents of long transmission lines or cables and allows more active energy to pass through the system.

The main problems caused by capacitive reactive energy;

1. Penalties in electricity bills,
2. Increasing in line voltage,
3. Breakdown in sensitive equipment,
4. Active energy passing through the system is decreased by capacitive effect.

These problems increase maintenance and repair costs. Shunt reactors provide inductive load and eliminate the harmful capacitive effect. Beside these they can be used as inductive load in laboratories also.

ROUTINE TESTS

Following 1... 5 tests are the routine tests that are performed for each shunt reactor during the manufacturing process and the other tests (6,7 and 8) are performed upon request.

1. Inductance test
2. Current test
3. Resistance Test
4. Impulse voltage withstand test
5. One minute Insulation voltage withstand test (AC)
6. Short circuit withstand test
7. Temperature rise Test
8. Sound level test

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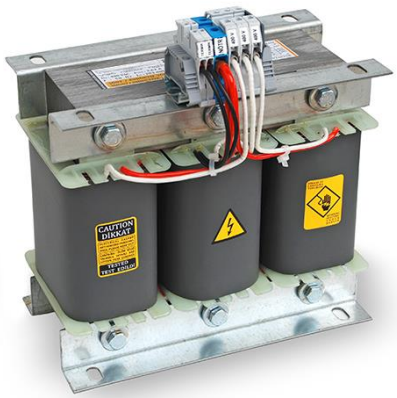

TECHNICAL SPECIFICATIONS

STANDARDS	EN 61558-1, EN 61558 2-20, EN 60289 AND EN60076-6 CE CONFORMITY
DESIGN	Air gapped design
NOMINAL POWER	Single phase 0,10 - 10 kVAr, Three phase 0,5 - 100 kVAr
NOMINAL INPUT VOLTAGE	230 VAC ..... 1000 VAC
NOMINAL FREQUENCY	50 Hz (60 Hz is optional)
REACTOR FACTOR	p= % 100
TOLERANCE OF INDUCTANCE	± % 5
MAGNETIC CIRCUIT	0,35 mm- high grade lamination
WINDINGS	Electrolytic copper or aluminum wire – foil
CONNECTIONS	Transformer terminal blocks, rail terminals, copper cable lugs, copper bar
PROTECTION (electricity)	Thermistor 90 °C 1 NK contact (for all phases)
INSULATION TEST VOLTAGE	3000 VAC (Windings-metal core)
PROTECTION CLASS	IP 00 (metal enclosure according to desired IP class upon request)
INSULATION CLASS	1. class, upon request; F 155 °C or H 180 °C
THERMAL CLASS	Ta 55 °C / F or Ta 60 °C / H
IMPREGNATION	Upon request F or H class varnish vacuum impregnation
COOLING	Air forced ventilation is recommended. (Natural T40)
HUMIDITY	%95 non-condensing (DIN 40040)
OPERATING ALTITUDE	0 - 2000 m
AMBIENT TEMPERATURE	- 10 °C ..... + 40 °C
STORING TEMPERATURE	- 10 °C ..... + 70 °C
SPECIAL DESIGN	Special design is possible according to voltage and power values.

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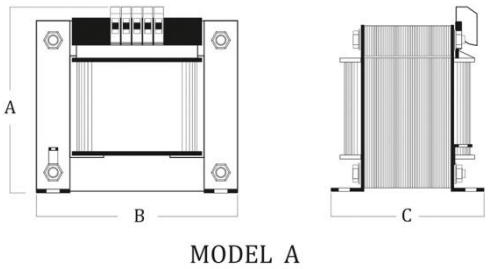
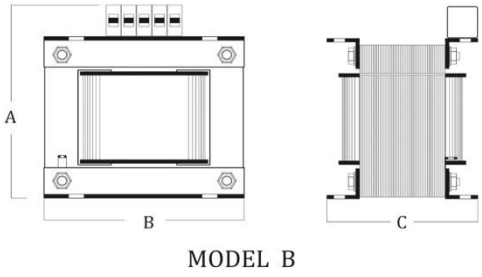
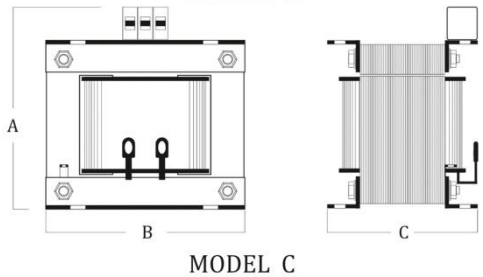


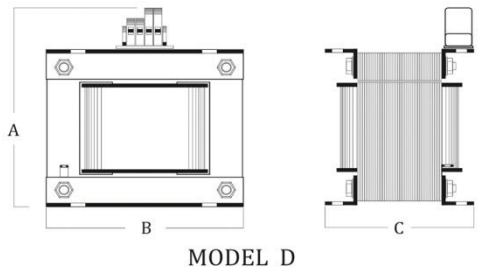
MODEL A



MODEL B



MODEL C



MODEL D

SINGLE PHASE SHUNT REACTORS (Un : 230 VAC, Fn : 50 Hz)

PRODUCT CODE	Q (kVAr)	Ln (mH)	In (Amper)	A (mm)	B (mm)	C (mm)	Weight (kg)
GVN EYR M 0,5	0,50	338	2,17	136	133	106	6,10
GVN EYR M 0,6	0,60	281	2,61	136	133	113	6,80
GVN EYR M 0,7	0,70	241	3,04	136	133	113	7,00
GVN EYR M 0,8	0,80	211	3,48	148	150	117	8,20
GVN EYR M 0,9	0,90	188	3,91	148	150	117	8,50
GVN EYR M 1	1,00	169	4,35	148	150	117	8,70
GVN EYR M 1,1	1,10	154	4,78	148	150	120	9,10
GVN EYR M 1,2	1,20	141	5,22	148	150	130	10,30
GVN EYR M 1,3	1,30	130	5,65	168	171	122	10,50
GVN EYR M 1,4	1,40	121	6,10	168	171	122	10,70
GVN EYR M 1,5	1,50	113	6,52	168	171	122	11,10
GVN EYR M 1,75	1,75	96,50	7,61	168	171	142	12,10
GVN EYR M 2	2,00	84,40	8,70	168	171	142	12,50
GVN EYR M 2,5	2,50	67,50	10,90	185	192	144	17,20
GVN EYR M 3	3,00	56,30	13,10	185	192	149	18,30
GVN EYR M 3,5	3,50	48,20	15,20	185	192	149	18,60
GVN EYR M 4	4,00	42,20	17,40	185	192	169	22,60
GVN EYR M 4,5	4,50	37,50	19,60	185	192	169	22,90
GVN EYR M 5	5,00	33,80	21,80	185	192	189	26,80
GVN EYR M 6	6,00	28,10	26,10	234	250	182	29,80
GVN EYR M 7	7,00	24,10	30,40	234	250	202	37,30
GVN EYR M 8	8,00	21,10	34,80	234	250	202	38,40
GVN EYR M 9	9,00	18,80	39,10	234	250	222	44,70
GVN EYR M 10	10,00	16,90	43,50	234	250	242	52,20

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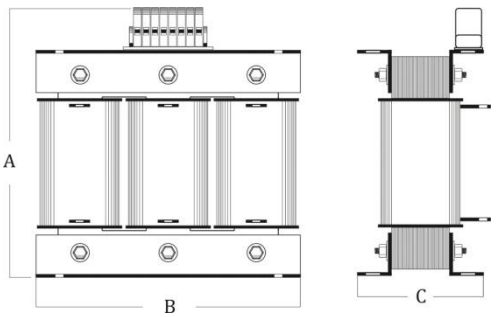

THREE PHASE SHUNT REACTORS (Un : 400 VAC, Fn : 50 Hz)

PRODUCT CODE	Q (kVAr)	Ln (mH)	In (Amper)	A (mm)	B (mm)	C (mm)	Weight (kg)
GVN EYR T 1	1,00	505	1,45	240	180	94	8,10
GVN EYR T 1,5	1,50	337	2,17	305	240	100	11,80
GVN EYR T 2	2,00	253	2,90	305	240	105	13,30
GVN EYR T 2,5	2,50	203	3,61	305	240	110	14,80
GVN EYR T 3	3,00	168	4,33	305	240	135	22,30
GVN EYR T 3,5	3,50	144	5,05	365	300	126	23,50
GVN EYR T 4	4,00	126	5,77	365	300	126	24,10
GVN EYR T 4,5	4,50	112	6,50	365	300	136	27,50
GVN EYR T 5	5,00	101	7,22	365	300	136	28,60
GVN EYR T 6	6,00	84,2	8,66	365	300	136	29,10
GVN EYR T 7,5	7,50	67,3	10,90	425	360	146	33,50
GVN EYR T 10	10,00	50,50	14,40	425	360	166	49,50
GVN EYR T 12,5	12,50	40,40	18,00	425	360	176	56,60
GVN EYR T 15	15,00	33,70	21,70	425	360	186	63,70
GVN EYR T 20	20,00	25,30	28,90	355	420	186	78,50
GVN EYR T 25	25,00	20,20	36,10	355	420	206	98,20
GVN EYR T 30	30,00	16,80	43,30	405	480	218	120,00
GVN EYR T 40	40,00	12,60	57,70	405	480	238	146,70
GVN EYR T 50	50,00	10,10	72,20	405	480	258	173,40
GVN EYR T 75	75,00	6,73	108,00	505	620	270	203,50
GVN EYR T 100	100,00	5,05	144,00	505	620	310	285,00

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