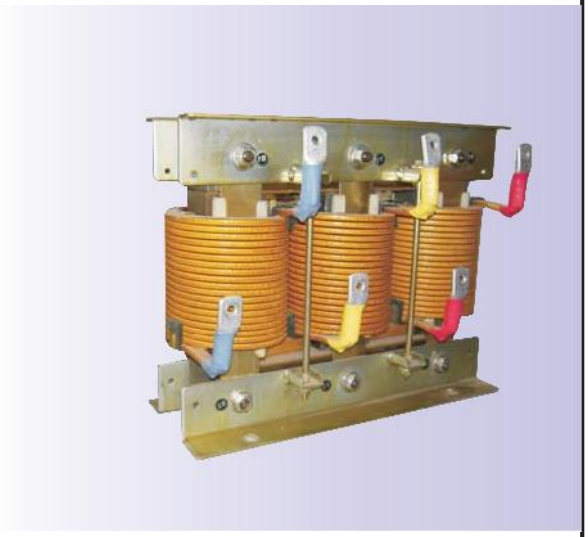
HARMONIC BLOCK REACTORS

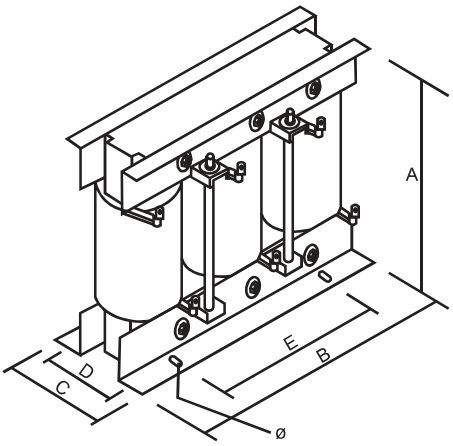
Technical Specifications

Standard Voltage (Un)	: 440V to 690V
Rated Voltage	: 3 x 415V
Rated (KVAr)	: 12.5, 25, 50 & 100
Frequency	: 50 Hz
Constructional Max. Voltage	: 1000 V
Test Voltage	: 3000 V
Filtering factors / Tuning Freq.	: 5.67%, 210Hz, 7%, 189 Hz 14%, 134 Hz
Tolerance of inductance	: ±3%
Linearity (L> 0.95 x Ln)	: 200%
Ambient temperature	: + 55°C
Insulation class	: H
Cooling method	: Natural cooling (AN)
Installation	: Indoor
Protection degree	: IP 00
Operating altitude	: 1000m above sea level at rated operation
Temp. sensor (normally closed)	: 155°C
Reference standard	: IEC 61558-2-20



	KVAR Rating	A	B	C	D	E	ø
7%	12.5	225	260	115	86	180	10x15
	25	260	290	120	100	215	10x13
	50	300	360	136	102	272	10x16
	100	345	400	150	118	272	13x18

	KVAR Rating	A	B	C	D	E	ø
14%	12.5	275	340	130	96	272	10x16
	25	300	360	142	106	272	9x14
	50	345	400	167	123	272	9x14
	100	400	500	190	145	350	13x17



- Specifications are subject to change without notice.
- For exact mounting dimension contact our Sales Office.
- Other rating and filtering factors are available on request.

Design Features

Neptune filter circuit are designed as three-phase reactors with an iron core and air gap. Harmonic Filter Reactors are made out of highest quality material and very stringent quality control. It has been designed with properties like low temperature rise and lower flux density so that it can operate in worst conditions of ambient and harmonic overloads. They offer very good degree of linearity. Cheaper and non-linear reactors may trigger undesirable chain phenomena during periods of operation with high harmonic values, such as reducing in the inductance with consequent increase in the resonance frequency of the LC group, which would drain off more harmonic current, further reducing its inductance and overload the reactor more and more. Reactors are available with filtering factor of 7% and 14% in 12.5, 25, 50 and 100 KVAR rating. Any other filtering factor and rating can be made on request.

Network Analysis by:

NECPL

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Sales & Marketing Office :

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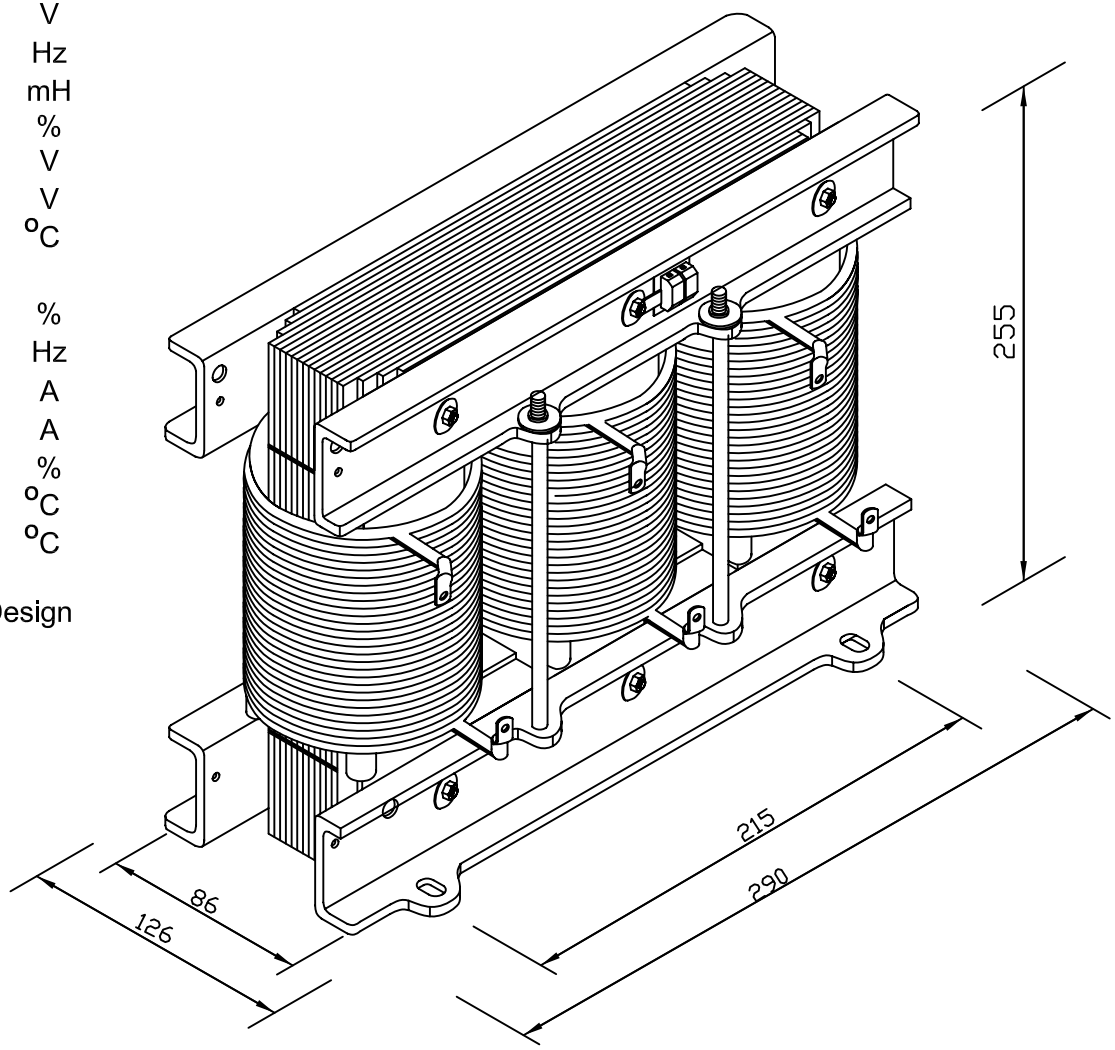
NEPTUNE DUCATI	7% HARMONIC BLOCK REACTOR	Qn= 25 KVAR, 415V, 50Hz

Specifications

Filter Type	Detuned	
Used for Rated Capacitors	25	KVAr
Rated Voltage	415	V
Frequency	50	Hz
Inductance (L)	1.65	mH
Inductance Tolerance	(+)-3%	%
Constructional Max Voltage (Reactor)	1000	V
Test Voltage	5000	V
Ambient Temperature	60	°C
Protection Degree	IP 00	
Filtering Factor	7.00	%
Detuning Frequency	189	Hz
Inominal	35	A
Irms	42	A
Linearity of Reactor (L>0.95XLn)	200%	%
Insulation Class (Reactor)	H/180	°C
Temperature Sensor (normally closed)	1pc. 155	°C
Flux Density	≤ 0.65 Tesla	
Construction	Single Layer Design	
Reference Standard	EN60289	
Installation	Indoor	

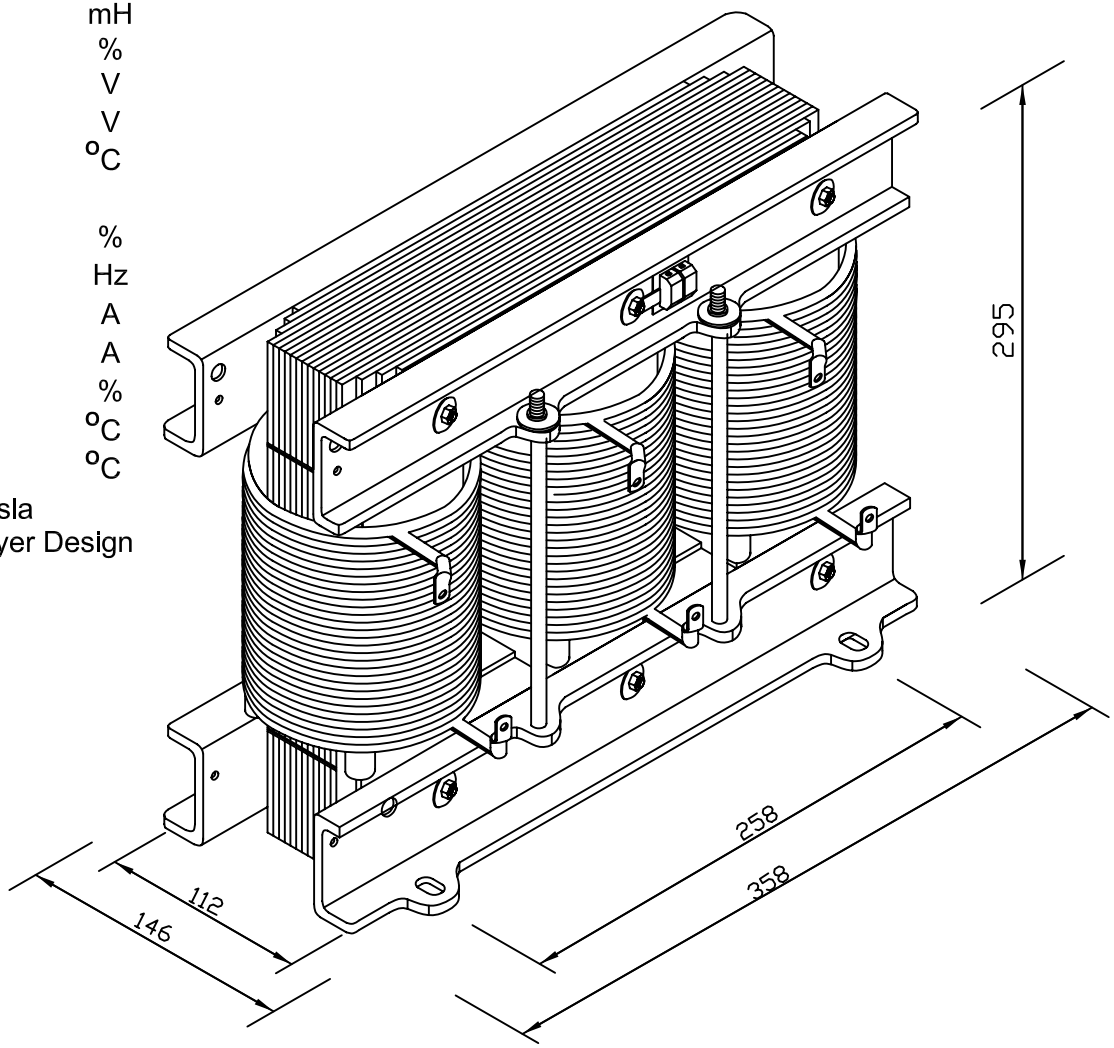


ALL DIMENSION ARE IN MM

NEPTUNE DUCATI	7% HARMONIC BLOCK REACTOR	Qn= 50 KVAR, 415V, 50Hz

Specifications

Filter Type	Detuned	
Used for Rated Capacitors	50	KVAr
Rated Voltage	415	V
Frequency	50	Hz
Inductance (L)	0.828	mH
Inductance Tolerance	(+)-3%	%
Constructional Max Voltage (Reactor)	1000	V
Test Voltage	5000	V
Ambient Temperature	60	°C
Protection Degree	IP 00	
Filtering Factor	7.00	%
Detuning Frequency	189	Hz
Inominal	70	A
Irms	83.9	A
Linearity of Reactor (L>0.95XLn)	200%	%
Insulation Class (Reactor)	H/180	°C
Temperature Sensor (normally closed)	1pc. 155	°C
Flux Density	≤ 0.65 Tesla	
Construction	Single Layer Design	
Reference Standard	EN60289	
Installation	Indoor	

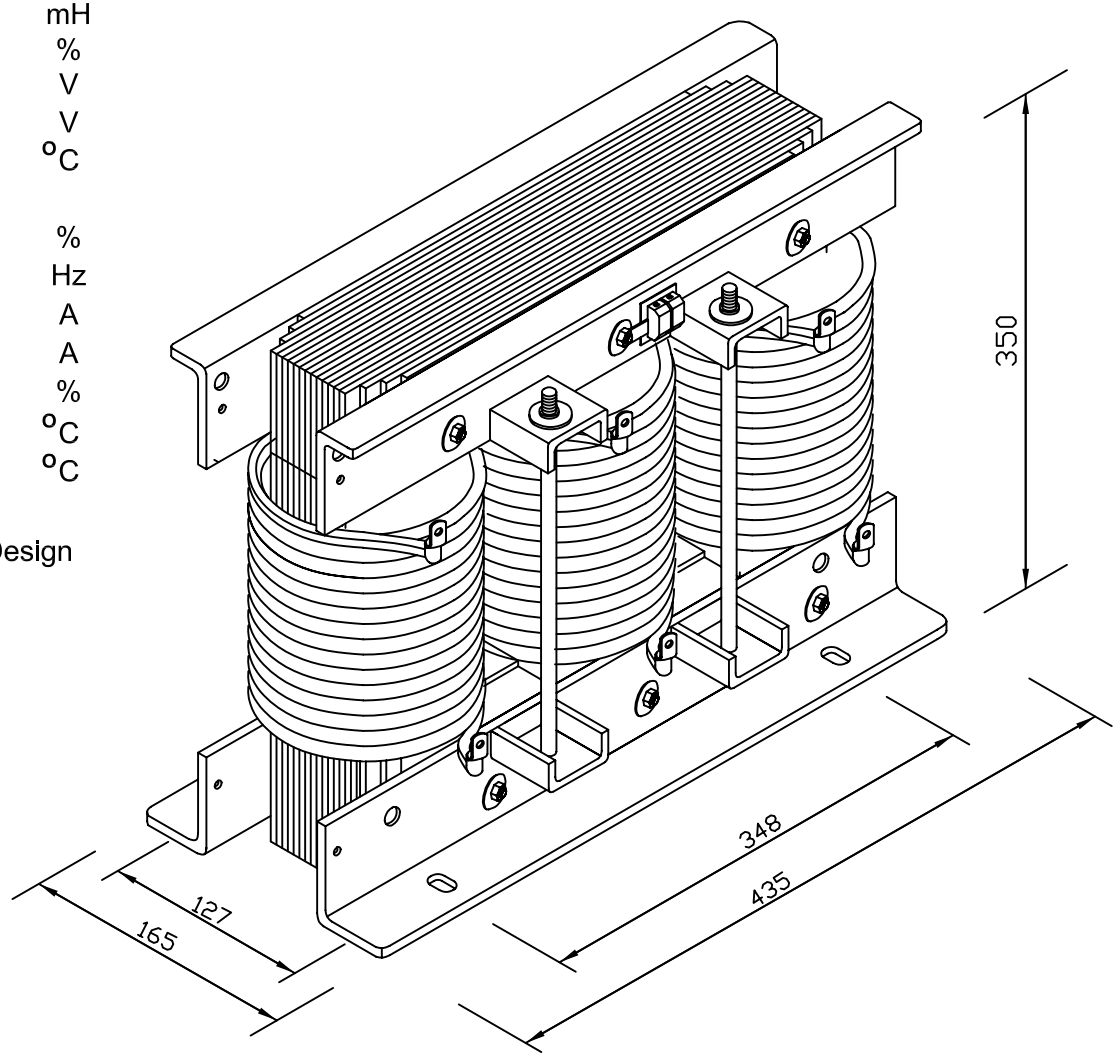


ALL DIMENSION ARE IN MM

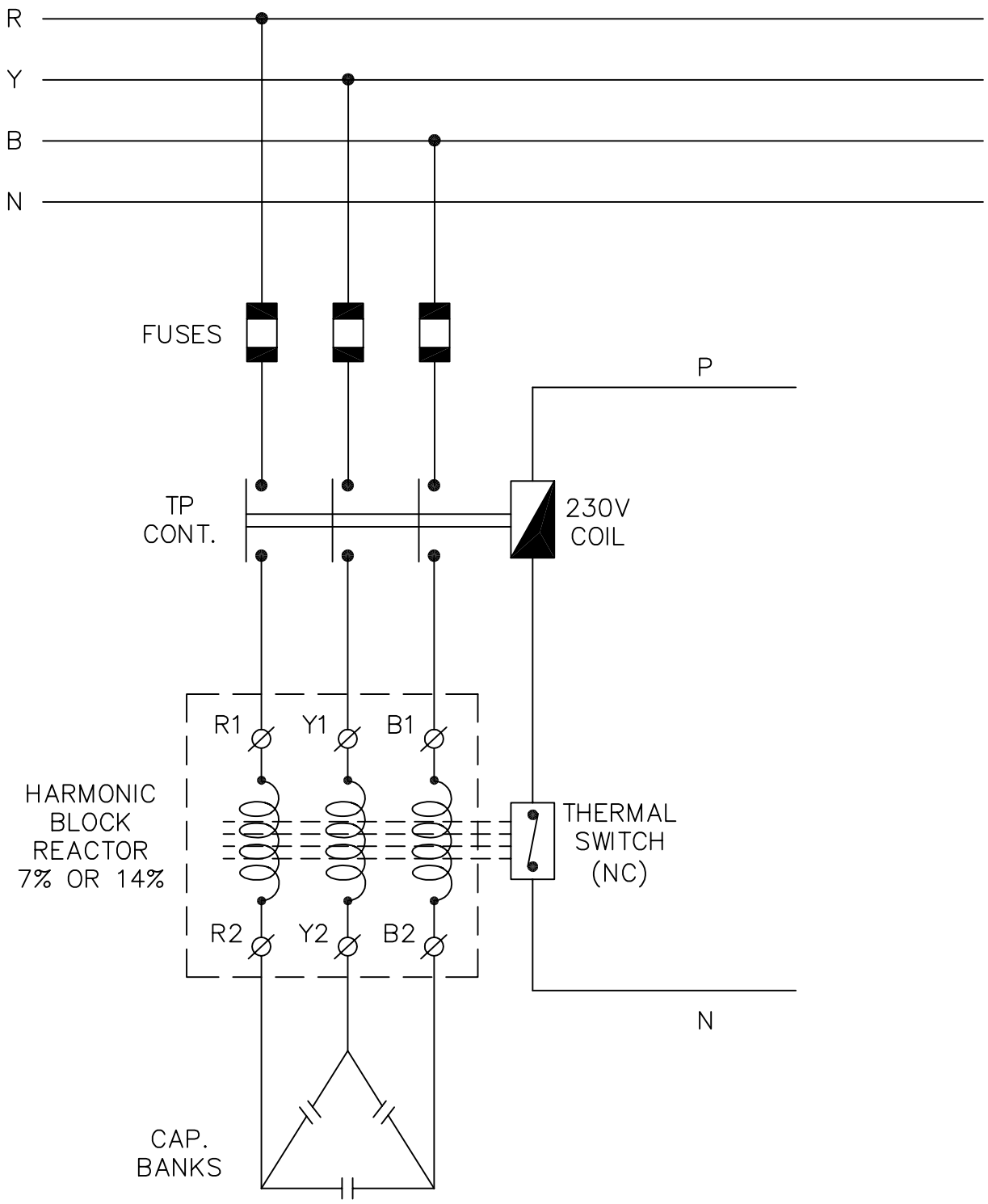
NEPTUNE DUCATI	7% HARMONIC BLOCK REACTOR	Qn= 100 KVAR, 415V, 50Hz

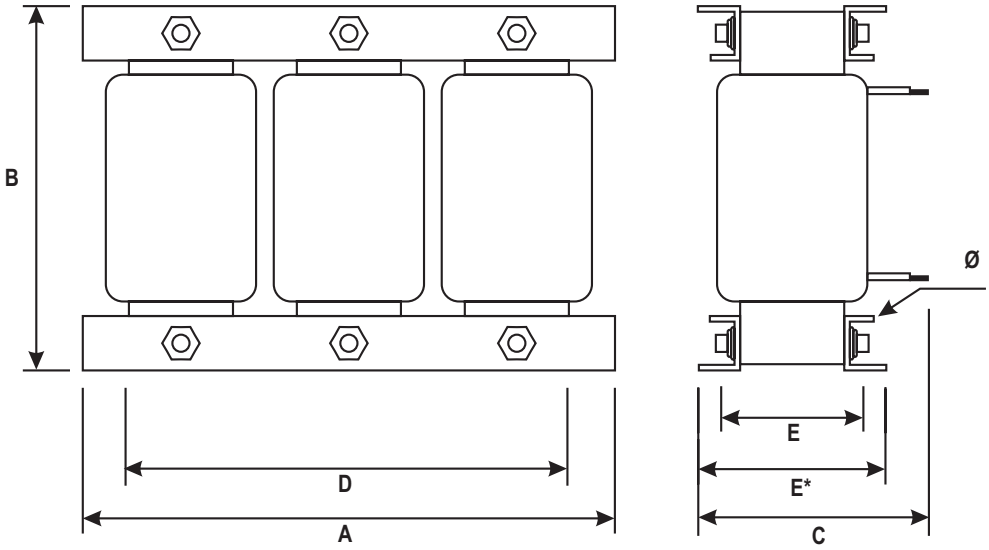
Specifications

Filter Type	Detuned	
Used for Rated Capacitors	100	KVAr
Rated Voltage	415	V
Frequency	50	Hz
Inductance (L)	0.413	mH
Inductance Tolerance	(+)-3%	%
Constructional Max Voltage (Reactor)	1000	V
Test Voltage	5000	V
Ambient Temperature	60	°C
Protection Degree	IP 00	
Filtering Factor	7.00	%
Detuning Frequency	189	Hz
Inominal	140	A
Irms	168	A
Linearity of Reactor (L>0.95XLn)	200%	%
Insulation Class (Reactor)	H/180	°C
Temperature Sensor (normally closed)	1pc. 155	°C
Flux Density	≤ 0.65 Tesla	
Construction	Single Layer Design	
Reference Standard	EN60289	
Installation	Indoor	



ALL DIMENSION ARE IN MM


R
Y
B
N
FUSES
P
TP
CONT.
230V
COIL
R1
Y1
B1
HARMONIC
BLOCK
REACTOR
7% OR 14%
THERMAL
SWITCH
(NC)
R2
Y2
B2
N
CAP.
BANKS



	Type	A	B	C	D	E*	E	ø
7%	5	225	195	135	133	108	82	8
	7.5	225	195	140	133	112	88	8
	10	225	195	145	133	116	92	8
	12.5	225	195	160	133	135	110	8
	15	225	195	160	133	135	110	8
	20	250	223	155	195	125	98	10
	25	250	223	160	195	130	101	10
	50	305	280	260	213	160	124	9x14L
	75	400	371	280	270	170	132	13x19L
	100	400	371	295	270	178	138	13x19L
14%	5	225	195	145	133	116	92	8
	7.5	225	195	160	133	135	110	8
	10	250	223	155	195	125	98	10
	12.5	250	223	175	195	135	106	10
	15	250	223	175	195	135	106	10
	20	305	370	250	213	150	118	9x14L
	25	305	370	260	213	160	124	9x14L
	50	400	371	295	270	178	138	13x19L
	75	450	390	350	310	200	160	13x19L
	100	450	390	350	310	200	160	13x19L