

Ref. Standard	IEC 60289, IS 5553
Rated Voltage	<b>440 V</b>
Rated Frequency	<b>50Hz</b>
Max. Permissible Operating Voltage	1.05 Un Continuously, 1.1 Un for 8 hours
Max. Permissible Operating current ( Linearity )	1.4 In Continously
Duty cycle	1
Class Of Protection	IP 00
Ambient Temperature	50°C
Winding Material	Aluminium
Class of insulation	Class H
Thermal protection	Thermal switch ( NC type, 165°C )
De-Tuning	5.67% , 7% , 14 %
Harmonics Limit	U3 = 0.5 % Ur ( Duty cycle 100%)
	U5 = 6.0 % Ur ( Duty cycle 100%)
	U7 = 5.0 % Ur ( Duty cycle 100%)
	U11 = 3.5 % Ur ( Duty cycle 100%)
	U13 = 3.0 % Ur ( Duty cycle 100%)
	U17 = 2.0 % Ur ( Duty cycle 100%)
	U19 = 1.5 % Ur ( Duty cycle 100%)
Fundamental Current	I1 = 1.06 Ir



Picture only for ref.

**(A) Electrical Data (7% Impedance)**

S.No	Salzer Part No.	KVAR	Un (V)	F1 (Hz)	%p	In or I1[A]	Irms or Ieff [A]	Isat [A]	Isat [A]/I1	Inductance [mH]	F eq. (Hz)
1	TM32-0002-00	5	440	50	7	6.60	7.40	11.88	1.80	9.280	85
2	TM32-0003-00	10	440	50	7	13.10	14.90	23.58	1.80	4.640	85
3	TM32-0004-00	12.5	440	50	7	16.40	18.60	29.52	1.80	3.710	85
4	TM32-0005-00	15	440	50	7	19.70	22.30	35.46	1.80	3.090	85
5	TM32-0006-00	20	440	50	7	26.20	29.80	47.16	1.80	2.320	85
6	TM32-0007-00	25	440	50	7	32.80	37.20	59.04	1.80	1.860	85
7	TM32-0008-00	50	440	50	7	65.60	74.40	118.08	1.80	0.928	85
8	TM32-0009-00	75	440	50	7	98.40	111.60	177.12	1.80	0.619	85
9	TM32-0010-00	100	440	50	7	131.20	148.80	236.16	1.80	0.464	85

**(B) Electrical Data (14% Impedance)**

S.No	Salzer Part No.	KVAR	Un (V)	F1 (Hz)	%p	In or I1[A]	Irms or Ieff [A]	Isat [A]	Isat [A]/I1	Inductance [mH]	F eq. (Hz)
1	TM32-0012-00	5	440	50	14	6.60	7.00	9.90	1.50	20.060	52
2	TM32-0013-00	10	440	50	14	13.10	14.10	19.65	1.50	10.030	52
3	TM32-0014-00	12.5	440	50	14	16.40	17.50	24.60	1.50	8.030	52
4	TM32-0015-00	15	440	50	14	19.70	22.10	29.55	1.50	6.690	52
5	TM32-0016-00	20	440	50	14	26.20	28.00	39.30	1.50	5.020	52
6	TM32-0017-00	25	440	50	14	32.80	35.00	49.20	1.50	4.010	52
7	TM32-0018-00	50	440	50	14	65.60	70.00	98.40	1.50	2.000	52
8	TM32-0019-00	75	440	50	14	98.40	105.10	147.60	1.50	1.340	52
9	TM32-0020-00	100	440	50	14	131.20	140.10	196.80	1.50	1.000	52

**(C) Electrical Data (5.67% Impedance)**

S.No	Salzer Part No.	KVAR	Un (V)	F1 (Hz)	%p	In or I1[A]	Irms or Ieff [A]	Isat [A]	Isat [A]/I1	Inductance [mH]	F eq. (Hz)
1	TM32-0021-00	5	440	50	5.67	6.6	8.8	15.2	2.3	7.41	115
2	TM32-0022-00	10	440	50	5.67	13.1	17.6	30.1	2.3	3.7	115
3	TM32-0023-00	12.5	440	50	5.67	16.4	20.9	37.7	2.3	2.96	115
4	TM32-0024-00	15	440	50	5.67	19.7	25.1	45.3	2.3	2.47	115
5	TM32-0025-00	20	440	50	5.67	26.2	33.5	60.3	2.3	1.85	115
6	TM32-0026-00	25	440	50	5.67	32.8	41.8	75.4	2.3	1.48	115
7	TM32-0027-00	50	440	50	5.67	65.6	83.63	150.9	2.3	0.741	115
8	TM32-0028-00	75	440	50	5.67	98.4	125.4	226.3	2.3	0.494	115
9	TM32-0029-00	100	440	50	5.67	131.2	167.3	301.8	2.3	0.37	115

**Mechanical Dimension Data - Detuned Reactor - 7%,14%,5.67% Imp. Aluminium Wound AN Cooling**

**(A) Mechanical Data (7% Impedance)**

S.No	Salzer Part No.	KVAR	L (mm)	B(mm)	H(mm)	n1 (mm )	n2 (mm )	Slot (mm)	b (mm)	d (mm)	Part Weight (Kg)	Enclosure (Optional)
1	TM32-0002-00	5	225	140	165	203	72	8 X 12	225	94	6	E1
2	TM32-0003-00	10	225	145	170	203	92	8 X 12	225	115	9	E1
3	TM32-0004-00	12.5	225	150	180	203	92	8 X 12	225	115	11	E1
4	TM32-0005-00	15	225	160	180	203	105	8 X 12	225	125	13	E1
5	TM32-0006-00	20	250	150	210	150	110	12 X 20	250	140	16	E2
6	TM32-0007-00	25	270	160	250	150	110	12 X 20	270	140	19	E2
7	TM32-0008-00	50	270	160	310	150	110	12 X 20	270	140	29	E2
8	TM32-0009-00	75	290	210	310	180	145	12 X 20	290	185	38	E3
9	TM32-0010-00	100	360	205	340	180	145	12 X 20	360	185	51	E3

**(B) Mechanical Data (14% Impedance)**

S.No	Salzer Part No.	KVAR	L (mm)	B(mm)	H(mm)	n1 (mm )	n2 (mm )	Slot (mm)	b (mm)	d (mm)	Part Weight (Kg)	*Enclosure (Optional)
1	TM32-0012-00	5	200	140	170	160	90	8 X 12	200	110	8	E1
2	TM32-0013-00	10	225	145	170	180	100	8 X 12	225	120	12	E1
3	TM32-0014-00	12.5	245	150	190	200	105	8 X 12	245	125	16	E1
4	TM32-0015-00	15	290	165	195	230	115	8 X 12	290	145	19	E1
5	TM32-0016-00	20	290	170	215	230	125	12 X 20	290	155	23	E1
6	TM32-0017-00	25	300	175	240	250	130	12 X 20	300	160	28	E2
7	TM32-0018-00	50	310	190	300	250	140	12 X 20	310	170	40	E2
8	TM32-0019-00	75	350	210	320	280	150	12 X 20	350	180	56	E2
9	TM32-0020-00	100	420	230	340	350	185	12 X 20	420	215	80	E4

**(C) Mechanical Data (5.67% Impedance)**

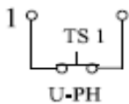
S.No	Salzer Part No.	KVAR	L (mm)	B(mm)	H(mm)	n1 (mm )	n2 (mm )	Slot (mm)	b (mm)	d (mm)	Part Weight (Kg)	*Enclosure (Optional)
1	TM32-0021-00	5	190	130	160	150	80	8 X 12	190	104	8	E1
2	TM32-0022-00	10	200	145	165	150	100	8 X 12	200	124	11	E1
3	TM32-0023-00	12.5	240	145	175	200	95	8 X 12	240	119	15	E1
4	TM32-0024-00	15	240	155	175	200	105	8 X 12	240	129	17	E1
5	TM32-0025-00	20	260	155	200	210	110	12 X 20	260	134	21	E1
6	TM32-0026-00	25	270	165	230	220	125	12 X 20	270	155	24	E1
7	TM32-0027-00	50	270	185	290	220	140	12 X 20	270	170	35	E1
8	TM32-0028-00	75	300	210	310	250	155	12 X 20	300	185	52	E2
9	TM32-0029-00	100	360	230	330	300	175	12 X 20	360	205	70	E3

\*Enclosure can be Supplied with additional Cost.  
Metal enclosure with Powder Coating and IP 31 with  
2 No. SS Gland plate, 2No.Lifting

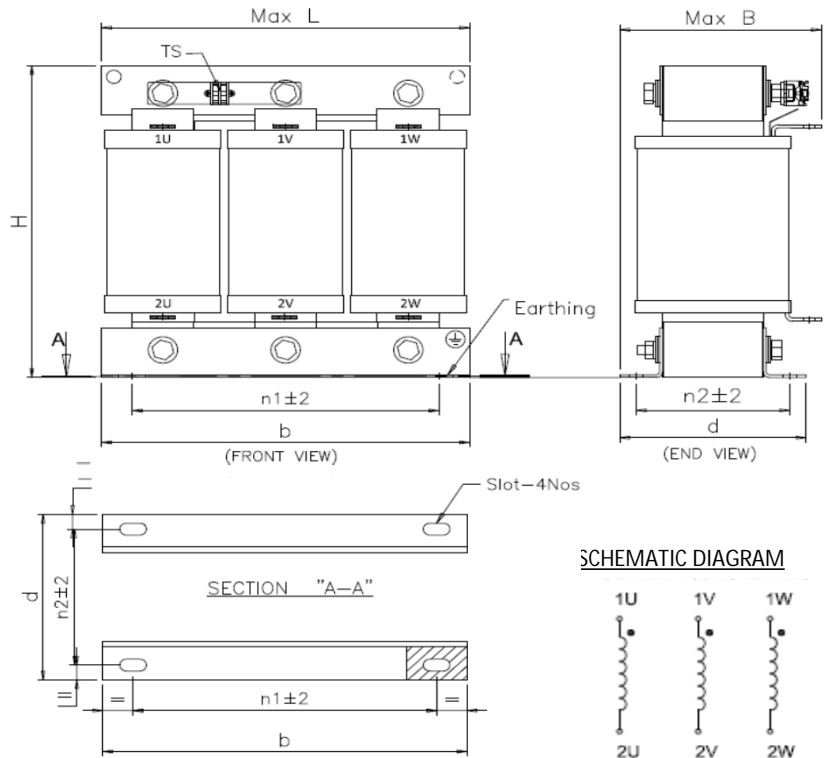
S.No	Enclosure	L1 (mm)	B1 (mm)	H1 (mm)	Wt.(Kg)
1	E1	350	325	435	16
2	E2	400	325	570	19
3	E3	480	375	600	25
4	E4	540	375	600	25

Enclosure dimensions are tentative  
Customised dimensions will be shared during OA

**THERMAL SWITCH (TS) FOR OVER TEMP. TRIP**



NC TYPE THERMAL SWITCH



Ref. Standard	IEC 60289, IS 5553
Rated Voltage	<b>440 V</b>
Rated Frequency	<b>50Hz</b>
Max. Permissible Operating Voltage	1.05 Un Continuously, 1.1 Un for 8 hours
Max. Permissible Operating current ( Linearity )	1.4 In Continously
Duty cycle	1
Class Of Protection	IP 00
Ambient Temperature	50°C
Winding Material	Copper
Class of insulation	Class H
Thermal protection	Thermal switch ( NC type, 165°C )
De-Tuning	5.67% , 7% , 14 %
Harmonics Limit	U3 = 0.5 % Ur ( Duty cycle 100%)
	U5 = 6.0 % Ur ( Duty cycle 100%)
	U7 = 5.0 % Ur ( Duty cycle 100%)
	U11 = 3.5 % Ur ( Duty cycle 100%)
	U13 = 3.0 % Ur ( Duty cycle 100%)
	U17 = 2.0 % Ur ( Duty cycle 100%)
	U19 = 1.5 % Ur ( Duty cycle 100%)
Fundamental Current	I1 = 1.06 Ir



Picture only for ref.

**(A) Electrical Data (7% Impedance)**

S.No	Salzer Part No.	KVAR	Un (V)	F1 (Hz)	%p	In or I1[A]	Irms or Ieff [A]	Isat [A]	Isat [A]/I1	Inductance [mH]	F eq. (Hz)
1	TM32-0030-00	5	440	50	7	6.60	7.40	11.88	1.80	9.280	85
2	TM32-0031-00	10	440	50	7	13.10	14.90	23.58	1.80	4.640	85
3	TM32-0032-00	12.5	440	50	7	16.40	18.60	29.52	1.80	3.710	85
4	TM32-0033-00	15	440	50	7	19.70	22.30	35.46	1.80	3.090	85
5	TM32-0034-00	20	440	50	7	26.20	29.80	47.16	1.80	2.320	85
6	TM32-0035-00	25	440	50	7	32.80	37.20	59.04	1.80	1.860	85
7	TM32-0036-00	50	440	50	7	65.60	74.40	118.08	1.80	0.928	85
8	TM32-0037-00	75	440	50	7	98.40	111.60	177.12	1.80	0.619	85
9	TM32-0038-00	100	440	50	7	131.20	148.80	236.16	1.80	0.464	85

**(B) Electrical Data (14% Impedance)**

S.No	Salzer Part No.	KVAR	Un (V)	F1 (Hz)	%p	In or I1[A]	Irms or Ieff [A]	Isat [A]	Isat [A]/I1	Inductance [mH]	F eq. (Hz)
1	TM32-0039-00	5	440	50	14	6.60	7.00	9.90	1.50	20.060	52
2	TM32-0040-00	10	440	50	14	13.10	14.10	19.65	1.50	10.030	52
3	TM32-0041-00	12.5	440	50	14	16.40	17.50	24.60	1.50	8.030	52
4	TM32-0042-00	15	440	50	14	19.70	22.10	29.55	1.50	6.690	52
5	TM32-0043-00	20	440	50	14	26.20	28.00	39.30	1.50	5.020	52
6	TM32-0044-00	25	440	50	14	32.80	35.00	49.20	1.50	4.010	52
7	TM32-0045-00	50	440	50	14	65.60	70.00	98.40	1.50	2.000	52
8	TM32-0046-00	75	440	50	14	98.40	105.10	147.60	1.50	1.340	52
9	TM32-0047-00	100	440	50	14	131.20	140.10	196.80	1.50	1.000	52

**(C) Electrical Data (5.67% Impedance)**

S.No	Salzer Part No.	KVAR	Un (V)	F1 (Hz)	%p	In or I1[A]	Irms or Ieff [A]	Isat [A]	Isat [A]/I1	Inductance [mH]	F eq. (Hz)
1	TM32-0048-00	5	440	50	5.67	6.6	8.8	15.2	2.3	7.41	115
2	TM32-0049-00	10	440	50	5.67	13.1	17.6	30.1	2.3	3.7	115
3	TM32-0050-00	12.5	440	50	5.67	16.4	20.9	37.7	2.3	2.96	115
4	TM32-0051-00	15	440	50	5.67	19.7	25.1	45.3	2.3	2.47	115
5	TM32-0052-00	20	440	50	5.67	26.2	33.5	60.3	2.3	1.85	115
6	TM32-0053-00	25	440	50	5.67	32.8	41.8	75.4	2.3	1.48	115
7	TM32-0054-00	50	440	50	5.67	65.6	83.63	150.9	2.3	0.741	115
8	TM32-0055-00	75	440	50	5.67	98.4	125.4	226.3	2.3	0.494	115
9	TM32-0056-00	100	440	50	5.67	131.2	167.3	301.8	2.3	0.37	115

**Mechanical Dimension Data - Detuned Reactor - 7%,14%,5.67% Imp. Copper Wound AN Cooling**

**(A) Mechanical Data (7% Impedance)**

S.No	Salzer Part No.	KVAR	L (mm)	B(mm)	H(mm)	n1 (mm )	n2 (mm )	Slot (mm)	b (mm)	d (mm)	Part Weight (Kg)	Enclosure (Optional)
1	TM32-0030-00	5	215	140	165	203	72	8 X 12	215	94	8	E1
2	TM32-0031-00	10	215	145	170	203	92	8 X 12	215	115	12	E1
3	TM32-0032-00	12.5	215	150	180	203	92	8 X 12	215	115	15	E1
4	TM32-0033-00	15	215	160	180	203	105	8 X 12	215	125	17	E1
5	TM32-0034-00	20	230	150	210	150	110	12 X 20	230	140	21	E1
6	TM32-0035-00	25	250	160	250	150	110	12 X 20	250	140	25	E1
7	TM32-0036-00	50	250	160	310	150	110	12 X 20	250	140	38	E1
8	TM32-0037-00	75	270	210	310	180	145	12 X 20	270	185	50	E1
9	TM32-0038-00	100	340	205	340	180	145	12 X 20	340	185	67	E2

**(B) Mechanical Data (14% Impedance)**

S.No	Salzer Part No.	KVAR	L (mm)	B(mm)	H(mm)	n1 (mm )	n2 (mm )	Slot (mm)	b (mm)	d (mm)	Part Weight (Kg)	*Enclosure (Optional)
1	TM32-0039-00	5	200	140	170	160	90	8 X 12	200	110	11	E1
2	TM32-0040-00	10	225	145	170	180	100	8 X 12	225	120	16	E1
3	TM32-0041-00	12.5	245	150	190	200	105	8 X 12	245	125	21	E1
4	TM32-0042-00	15	290	165	195	230	115	8 X 12	290	145	25	E2
5	TM32-0043-00	20	290	170	215	230	125	12 X 20	290	155	30	E2
6	TM32-0044-00	25	300	175	240	250	130	12 X 20	300	160	37	E2
7	TM32-0045-00	50	310	190	300	250	140	12 X 20	310	170	52	E2
8	TM32-0046-00	75	350	210	320	280	150	12 X 20	350	180	73	E3
9	TM32-0047-00	100	420	230	340	350	185	12 X 20	420	215	104	E4

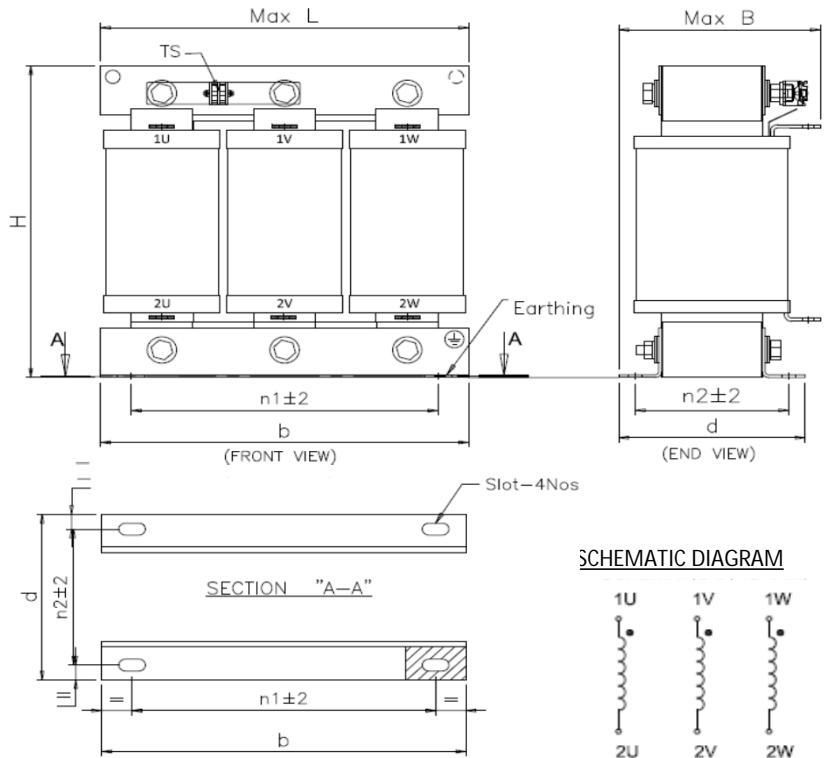
**(C) Mechanical Data (5.67% Impedance)**

S.No	Salzer Part No.	KVAR	L (mm)	B(mm)	H(mm)	n1 (mm )	n2 (mm )	Slot (mm)	b (mm)	d (mm)	Part Weight (Kg)	*Enclosure (Optional)
1	TM32-0048-00	5	190	130	160	150	80	8 X 12	190	104	10	E1
2	TM32-0049-00	10	200	145	165	150	100	8 X 12	200	124	15	E1
3	TM32-0050-00	12.5	240	145	175	200	95	8 X 12	240	119	20	E1
4	TM32-0051-00	15	240	155	175	200	105	8 X 12	240	129	23	E1
5	TM32-0052-00	20	260	155	200	210	110	12 X 20	260	134	27	E1
6	TM32-0053-00	25	270	165	230	220	125	12 X 20	270	155	32	E1
7	TM32-0054-00	50	270	185	290	220	140	12 X 20	270	170	46	E1
8	TM32-0055-00	75	300	210	310	250	155	12 X 20	300	185	68	E2
9	TM32-0056-00	100	360	230	330	300	175	12 X 20	360	205	91	E3

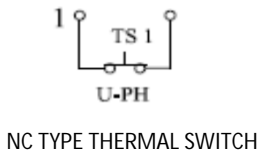
\*Enclosure can be Supplied with additional Cost.  
Metal enclosure with Powder Coating and IP 31 with  
2 No. SS Gland plate, 2No.Lifting

S.No	Enclosure	L1 (mm)	B1 (mm)	H1 (mm)	Wt.(Kg)
1	E1	350	325	435	16
2	E2	400	325	570	19
3	E3	460	375	600	25
4	E4	540	375	600	25

Enclosure dimensions are tentative  
Customised dimensions will be shared during OA



**THERMAL SWITCH (TS) FOR OVER TEMP. TRIP**



**salzer****30**  
YEARS**trafo** **modern****70**  
YEARS**SALZER Electronics Limited,**  
Technical JV with Trafomodern-  
Austria to manufacture 3Phase Dry  
type(VPI) Transformers and Inductors**Technical Data Sheet**  
**RL-Line/Load Reactor****Aluminium wound and Air Natural (AN)**  
**Cooling**

S.No	PARAMETERS	SPEC
1	Type of Inductor	Dry type, Iron Core, Impregnated with High Bond Strength and Temperature 220°C Varnish
2	Current rating	150% of rating - Up to 750A
		125% of rating - Above 750A
		200% of rated for 30 minutes
		300% of rated for 1 minute
3	Inductance curve	0.95 Ln at 150% rated Current
		0.5 Ln at 350% rated Current
4	Tolerance for rated inductance	±5%
5	No. of Phase	3
6	Nominal frequency ( Hz)	50/ 60
7	Max. Nominal System Voltage	690V
8	IP Class	00 and 20
9	Insulation class	4 KV
10	Insulation temp. Class	R ( 220°C)
11	Max. Ambient temp. (° c )	(-30) to 40
12	Winding Temp. rise on ambient (° c ).	135
13	Type of cooling	AN
14	Maximum switching frequency	20 KHz
15	Altitude	Up to 2000M
16	dV/dt	Meets NEMA MG-1, part 31
17	Conductor	Aluminium

**Electrical and Mechanical Details**

S.N	SALZER REFF.	I ( Amps)	Ln (mH)	Weight (Kg)	IP 00 - Size ( L X B X H mm)	Mounting pitch and Solt details		
						n1	n2	Slot size
1	RL -1500-0025-AL	1500	0.025	175	500 X 370 X 620	430	210	14 X 28
2	RL -1500-0015-AL	1500	0.015	125	500 X 320 X 620	430	155	14 X 28
3	RL -1500-0008-AL	1500	0.008	80	385 X 310 X 500	300	150	11 X 22
4	RL -1200-0019-AL	1200	0.019	110	430 X 330 X 500	360	165	11 X 22
5	RL -1200-0009-AL	1200	0.009	70	385 X 280 X 500	300	140	11 X 22
6	RL -1200-0003-AL	1200	0.003	50	360 X 240 X 420	300	130	11 X 22
7	RL -1000-0038-AL	1000	0.038	105	460 X360 X430	360	205	14 X 28
8	RL -1000-0022-AL	1000	0.022	80	430 X300 X430	360	170	11 X 22
9	RL -1000-0011-AL	1000	0.011	50	360 X 280 X 370	300	150	11 X 22
10	RL -0750-0048-AL	750	0.048	95	440 x 340 x 430	330	220	14 X 28
11	RL -0750-0029-AL	750	0.029	68	390 X 300 X 380	330	190	11 X 22
12	RL -0750-0015-AL	750	0.015	49	360 X 260 X 370	300	140	11 X 22
13	RL -0500-0085-AL	500	0.085	68	430 X325 X 330	330	200	11 X 22
14	RL -0500-0050-AL	500	0.050	52	400 X270 X320	330	150	11 X 22
15	RL -0500-0025-AL	500	0.025	38	350 X240 X300	300	125	11 X 22

**salzer****30**  
YEARS**trafo** **modern****70**  
YEARS**SALZER Electronics Limited,**  
Technical JV with Trafomodern-Austria  
to manufacture 3Phase Dry type(VPI)  
Transformers and Inductors**Technical Data Sheet**  
**RL-Line/Load Reactor****Copper wound and Air Natural (AN) Cooling**

S.No	PARAMETERS	SPEC
1	Type of Inductor	Dry type, Iron Core, Impregnated with High Bond Strength and Temperature 220°C Varnish
2	Current rating	150% of rating - Up to 750A
		125% of rating - Above 750A
		200% of rated for 30 minutes
		300% of rated for 1 minute
3	Inductance curve	0.95 Ln at 150% rated Current
		0.5 Ln at 350% rated Current
4	Tolerance for rated inductance	±5%
5	No. of Phase	3
6	Nominal frequency ( Hz)	50/ 60
7	Max. Nominal System Voltage	690V
8	IP Class	00 and 20
9	Insulation class	4 KV
10	Insulation temp. Class	R ( 220°C)
11	Max. Ambient temp. (° c )	(-30) to 40
12	Winding Temp. rise on ambient (° c ).	135
13	Type of cooling	AN
14	Maximum switching frequency	20 KHz
15	Altitude	Up to 2000M
16	dV/dt	Meets NEMA MG-1, part 31
17	Conductor	Electrolytic copper

**Electrical and Mechanical Details**

S.N	SALZER REFF.	I ( Amps)	Ln (mH)	Weight (Kg)	IP 00 - Size ( L X B X H mm)	Mounting pitch and Solt details		
						n1	n2	Slot size
1	SE -1500-0025-C	1500	0.025	190	520 X 400 X 490	450	225	14 X 28
2	SE -1500-0015-C	1500	0.015	150	500 X 360 X 490	450	190	14 X 28
3	SE -1500-0008-C	1500	0.008	110	360 X 360 X 440	300	190	14 X 28
4	SE -1200-0019-C	1200	0.019	110	450 X 360 X 395	390	180	14 X 28
5	SE -1200-0009-C	1200	0.009	92	360 X 340 X 395	300	175	14 X 28
6	SE -1200-0003-C	1200	0.003	70	350 X 300 X 395	300	130	14 X 28
7	SE -1000-0038-C	1000	0.038	130	430 X400 X400	360	220	14 X 28
8	SE -1000-0022-C	1000	0.022	110	410 X350 X400	360	185	14 X 28
9	SE -1000-0011-C	1000	0.011	65	360 X 300 X 370	300	135	11 X 22
10	SE -0750-0048-C	750	0.048	110	380 x 350 x 380	330	200	11 X 22
11	SE -0750-0029-C	750	0.029	80	370 X 320 X 295	330	200	11 X 22
12	SE -0750-0015-C	750	0.015	55	360 X 270 X 295	300	135	11 X 22
13	SE -0500-0085-C	500	0.085	85	365 X335 X 297	300	205	11 X 22
14	SE -0500-0050-C	500	0.050	63	350 X290 X295	300	190	11 X 22
15	SE -0500-0025-C	500	0.025	53	350 X250 X295	300	160	11 X 22