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Produced by: - Product Marketing
Travellers Lane, Hatfield, Herts, AL10 8XB, UK
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Databank - **Technical Bulletin**

Chokes and Reactors for Mitsubishi Inverters

Introduction

AC and DC wound components are used to improve the performance of the inverters.

- AC reactors protect the inverter from voltage spikes and also reduce mains harmonics.
- DC reactors offer greatly reduced mains harmonics, standard on inverters over 65kW.
- Output reactors smooth the inverter output to reduce motor winding stress. Should be used on long cable run and/or where the motor insulation is weak or not to modern class F standards.

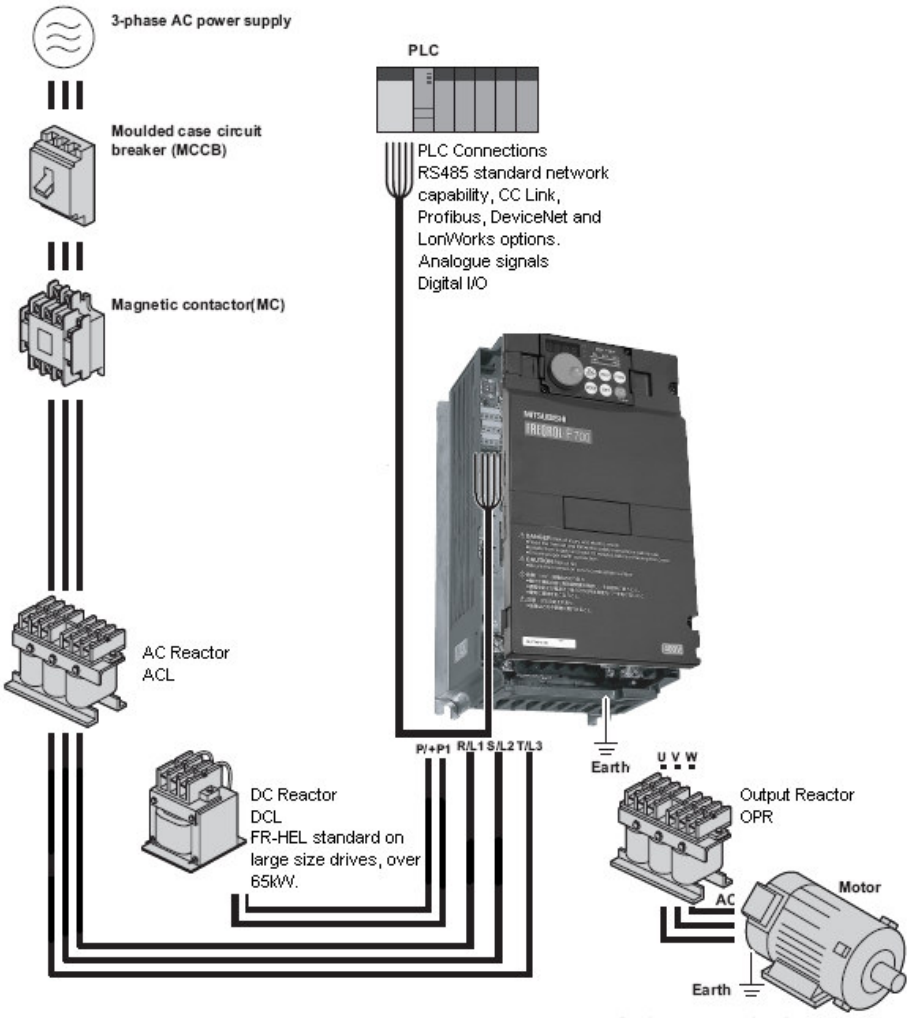


Fig .1 Installation of Reactors

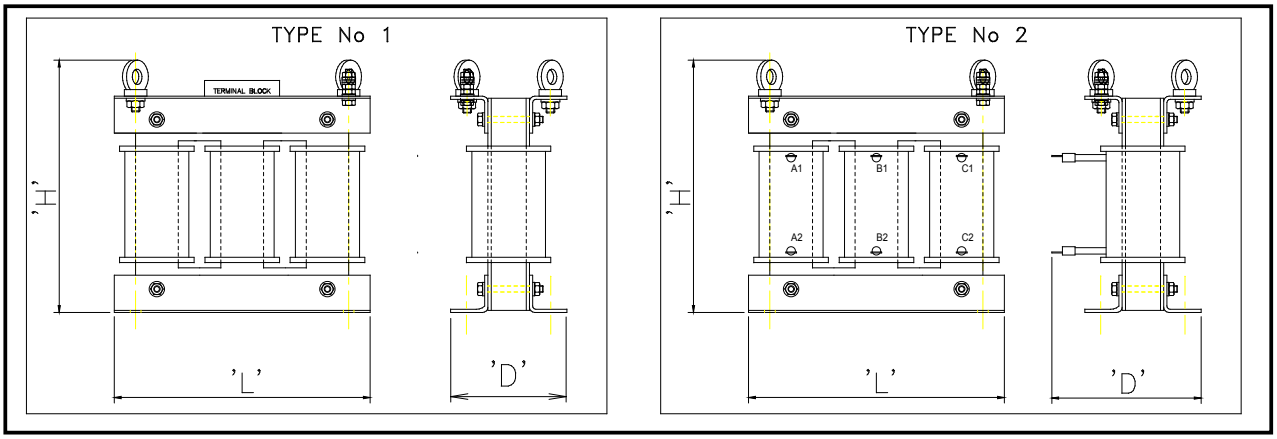
Keywords: Output Reactor
Inverter
DC Link Chokes
Input Reactor

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Three Phase AC 400 Volt OUTPUT Line Reactors

Inverter kW rating	Output Reactor	Rating		Dimensions (mm)				Weight kg
		mH	A	L	D	W	Type	
2.2	**OPR 022**	9	9	180	150	210	1	10
3.7	**OPR 037**	9	9	180	150	210	1	10
5.5	**OPR 055**	6.5	12	180	150	210	1	12
7.5	**OPR 075**	4.5	17	180	150	210	1	14
11	**OPR 110**	3.2	23	240	190	260	1	19
15	**OPR 150**	2.3	31	240	190	260	1	21
18.5	**OPR 220**	1.8	43	240	200	260	1	30
22	**OPR 220**	1.8	43	240	200	260	1	30
30	**OPR 300**	1.3	57	300	230	320	2	35
37	**OPR 370**	1.1	71	300	240	320	2	40
45	**OPR 450**	0.83	86	300	240	320	2	45
55	**OPR 550**	0.61	110	300	260	320	2	52
65	**OPR 600**	0.5	122	300	260	320	2	45
75	**OPR 800**	0.36	170	360	280	370	2	75
90	**OPR 900**	0.31	198	360	310	370	2	90
110	**OPR 1100**	0.27	220	360	310	370	2	95
132	**OPR 1320**	0.22	275	420	310	420	2	105
160	**OPR 1600**	0.18	329	420	330	420	2	115
220	**OPR 2200**	0.15	417	420	370	420	2	140
280	**OPR 2800**	0.11	550	480	400	470	2	150
375	**OPR 3750**	0.08	722	600	400	570	2	210

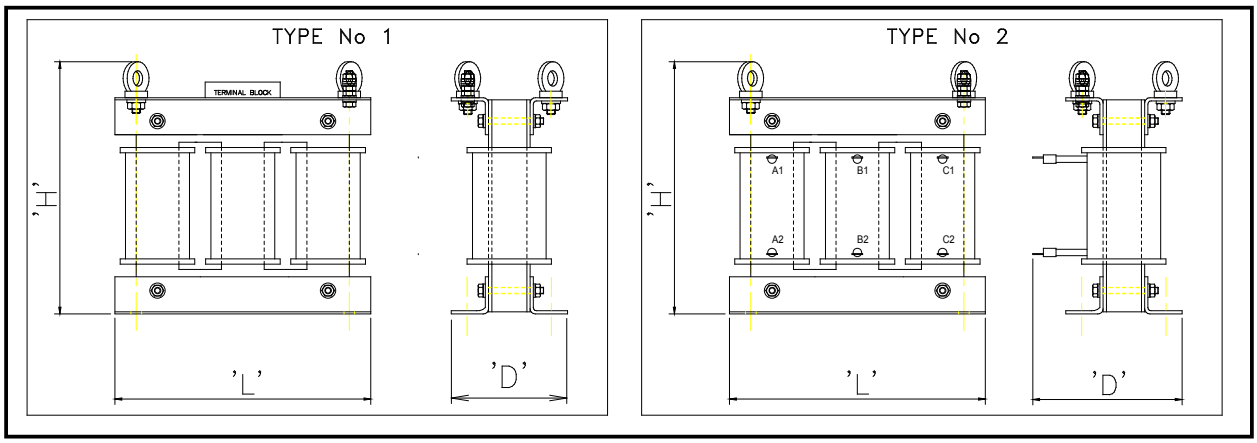


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Three Phase AC 400V INPUT Line Reactors

Inverter kW rating	Input Reactor	Rating		Dimensions (mm)				Weight kg
		mH	A	L	D	W	Type	
1.5	ACL015	14.0mH	6.0A	150	80	160	1	3
2.2	ACL022	11.4mH	7.5A	150	80	160	1	3
3.7	ACL037	7.4mH	12A	150	90	160	1	3.5
5.5	ACL055	5.6mH	16A	150	90	160	1	4.5
7.5	ACL075	4.0mH	23A	150	100	160	1	5
11	ACL110	3.0mH	31A	180	130	210	1	8
15	ACL150	2.3mH	42A	180	150	210	1	10
18.5	ACL185	1.7mH	58A	180	150	210	1	12
22	ACL220	1.7mH	58A	180	150	210	1	12
30	ACL300	1.3mH	76A	180	160	210	2	13
37	ACL370	1.0mH	95A	240	170	260	2	16
45	ACL450	0.84mH	115A	240	180	260	2	18
55	ACL500	0.66mH	147A	240	190	260	2	20
75	ACL075.2	0.127mH	131A	240	200	260	2	17
110	ACL110.2	0.085mH	191A	240	210	260	2	20
132	ACL132.2	0.085mH	235A	300	230	320	2	35
150	ACL150.2	0.064mH	261A	300	230	320	2	30
220	ACL220.2	0.043mH	383A	300	240	320	2	40
280	ACL280.2	0.032mH	487A	300	240	320	2	45
375	ACL375.2	0.021mH	653A	360	260	370	2	65

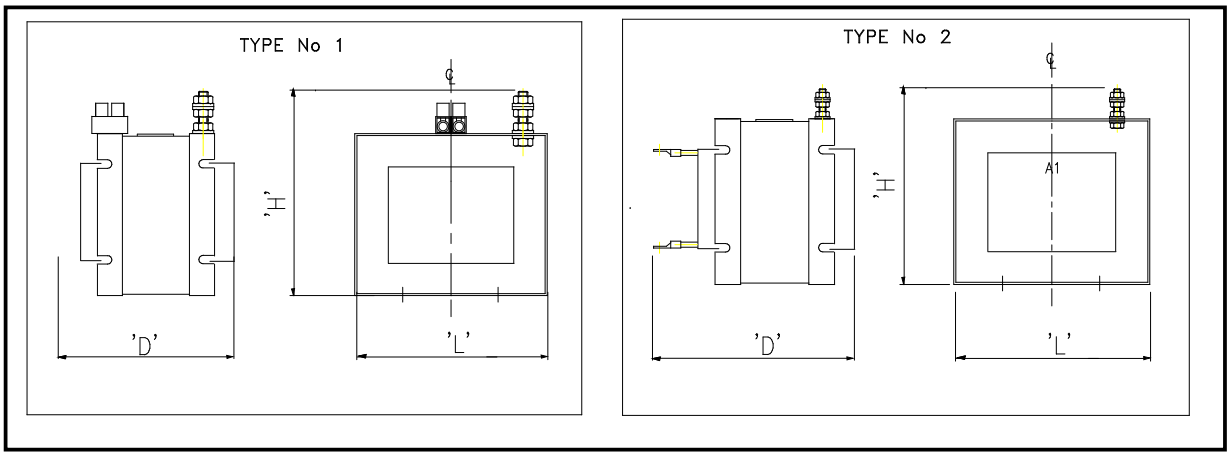


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400 Volt Inverter DC Link Chokes

Inverter kW rating	DC Link Choke	Rating		Dimensions (mm)				Weight
		mH	A	L	D	W	Type	kg
3.7	DCL037	9.40mH	8A	101	75	120	1	2
5.5	DCL055	6.20mH	11A	101	95	120	1	2.8
7.5	DCL075	4.80mH	14A	120	90	135	1	3.7
11	DCL110	3.30mH	21A	120	95	135	1	4
15	DCL150	2.40mH	28A	120	110	135	1	4.5
18.5	DCL186	2.00mH	34A	140	110	150	1	7
22	DCL220	1.60mH	41A	140	130	150	2	7.5
30	DCL300	1.20mH	55A	170	140	180	2	10
37	DCL370	0.98mH	68A	170	160	180	2	13
45	DCL450	0.81mH	82A	170	180	180	2	15
55	DCL550	0.67mH	99A	220	180	250	2	18



Note regarding the EMC Directive
Special Chokes and Reactors to meet EMC Standards for Small Inverters and Servo Drives (may be needed for units smaller than 1 kW to allow the Harmonics requirements of the EMC Directive 89/336 to be met).

Inverter kW rating	ACL/DCL Reactor	Rating		Dimensions (mm)			Weight
		MH	A	L	D	W	kg
1ph. 0.2kW	ACL002	1.4 mH	4.0A	90	50	70	0.6
1ph. 0.4kW	ACL004	4.3 mH	6.6A	80	60	95	1.1
1ph. 0.75kW	ACL0075	14 mH	11.2A	140	120	140	6.8
3 ph 0.4kW	DCL 004	4.5mH	2.6A	90	50	70	0.6
3 ph 0.75kW	DCL 0075	9.4mH	4.1 A	80	60	95	1.1

Single-phase 200V units shown are input reactors; three phase 400V units are DC Link Chokes