



Making YASKAWA Inverter Products Conform with the EMC Directive

To assist you to comply with the EMC directives

This information is for guidance only, good working practices should be followed at all times.

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Yaskawa Electric Europe GmbH

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1. Introduction

This document has been compiled as auxiliary material for use by each manufacturer using YASKAWA Inverters and described mainly countermeasures for EMC. Therefore please refer to Instruction Manual also for installation and wiring. We believe the Inverter that is installed according to this document and Instruction manual will meet following standards.

Our inverter products have been tested by accredited laboratories with following norms:

Product norm: EN 61800-3:1996, EN61800-3, A11: 2001

Emission (radiated) : EN50081-2 (1993)
EN55011 (1991) Class A Group 1

Emission (conducted) : EN50082-2 (1995)
EN55011 (1991) Class A or class B (refer to attached tables)

2. Measures to make YASKAWA Inverters conform to EMC Directive

It is not necessary to mount YASKAWA inverters into a cabinet to keep the EMC limits. Therefore it is not possible to provide detailed installation guidelines. As a result we have to limit our instructions to a general guideline.

All electrical devices could have some different radiated emissions which could be transmitted to other cables close by.

Similar to an antenna these cables send this disturbance to their environment.

If an electrical device (i.e. an inverter) is used without a proper filter high or low frequency disturbance could be sent to the mains.

General countermeasures are :

- separate wiring of power and control units.
- proper earthings
- screening of power and control cables

To earth a high frequency disturbance with a low resistance a large area earthing is necessary. We recommend to use earthing strips instead of normal cables. Furthermore the screening of the cables must be earthed with proper earthing clamps.

3. Countermeasures for AC power supply and surrounding

3.1. Line Filter

With regard to noise that is conducted on mains power supply by Inverters, a line filter is used as a countermeasure.

In order to keep the EMC limits the recommended filters for YASKAWA Inverters. (Refer to APPENDIX 1) must be used.

3.2. Installation and wiring

The line filter and the Inverter must be mounted on a same metal plate. The filter should be mounted as close as practical to the inverter. Keep cable as short as possible. The metal plate should be securely earthed. The frame (earth) of line filter and Inverter must be bonded to the metal plate with as much area as possible.

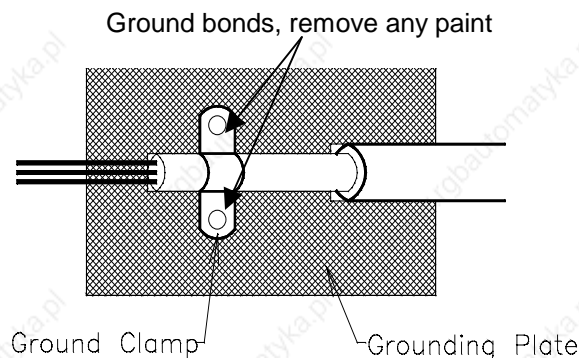
For the motor cable, screened cable must be used and the screen of the motor cable is connected to earth at both ends by a short connection using as large area as practicable.

4. Treatment of cables

4.1. Countermeasures against cable noise

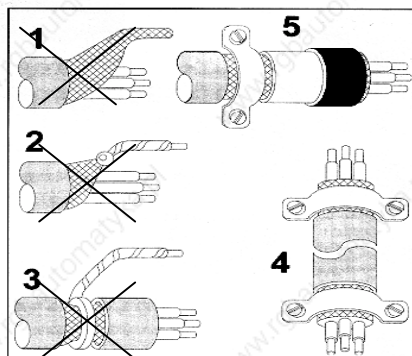
The treatment of cables is the most important countermeasure. The machinery manufacturers are requested to examine the current structure of the cable lead - in.

- Use cables with woven screen
- The screen of the cable should be earthed with a large area.
- It is desirable to earth the screen of the cable by clamping the cable to the earth plate.
- The screen must be earthed on both side of the cable (take care for good earthing system)



Examples :

Number 1,2,3 show not proper ways to earth a cable screen.



The following table shows recommended filters for YASKAWA Inverters

APPENDIX 1-1

Recommended Line Filters for Varispeed F7 and E7 made by Schaffner EMV AG

(400V, 3phase)

Inverter Model		Line Filter (Schaffner)				
Varispeed F7	Varispeed E7	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CIMR-F7C40P4	CIMR-E7C40P4	FS 5972-10-07	B*	10	1.1	141 x 46 x 330
CIMR-F7C40P7	CIMR-E7C40P7		B*			
CIMR-F7C41P5	CIMR-E7C41P5		B*			
CIMR-F7C42P2	CIMR-E7C42P2		B*			
CIMR-F7C43P7	CIMR-E7C43P7		B*			
CIMR-F7C44P0	CIMR-E7C44P0	FS 5972-18-07	B*	18	1.3	141 x 46 x 330
CIMR-F7C45P5	CIMR-E7C45P5		B*			
CIMR-F7C47P5	CIMR-E7C47P5	FS 5972-21-07	B*	21	1.8	206 x 50 x 355
CIMR-F7C4011	CIMR-E7C4011	FS 5972-35-07	B*	35	2.1	206 x 50 x 355
CIMR-F7C4015	CIMR-E7C4015	FS 5972-60-07	B*	60	4.0	236 x 65 x 408
CIMR-F7C4018	CIMR-E7C4018		B*			
CIMR-F7C4022	CIMR-E7C4022	FS 5972-70-52	B*	70	3.4	80 x 185 x 329
CIMR-F7C4030	CIMR-E7C4030		B*			
CIMR-F7C4037	CIMR-E7C4037	FS 5972-100-35	B*	100	4,5	90 x 150 x 326
CIMR-F7C4045	CIMR-E7C4045		B*			
CIMR-F7C4055	CIMR-E7C4055	FS 5972-130-35	B*	130	4.7	90 x 180 x 366
CIMR-F7C4075	CIMR-E7C4075	FS 5972-170-40	B*	170	6.0	120 x 170 x 451
CIMR-F7C4090	CIMR-E7C4090	FS 5972-250-37 or FN 3359-250-28	A	250	11.7	130 x 240 x 610
CIMR-F7C4110	CIMR-E7C4110		A			
CIMR-F7C4132	CIMR-E7C4132	FS 5972-400-99	A	400	18.5	300 x 160 x 564
CIMR-F7C4160	CIMR-E7C4160	or FS 5972-410-99	A			
CIMR-F7C4185	CIMR-E7C4185	FS 5972-410-99	A	410	10.5	260 x 115 x 386
CIMR-F7C4220	CIMR-E7C4220	FS 5972-600-99	A	600	11	260 x 135 x 386
CIMR-F7C4300	CIMR-E7C4300	FS 5972-800-99	A	800	31	300 x 160 x 716

Rated Voltage : AC 480V 3phase
Ambient Temperature : 45°C (max.)

* max screened motor cable length : 50m Class B,
Permissible emission of power drive systems for commercial and light industrial environment
(EN61800-3,A11) (general availability, 1st environment)

Recommended Line Filters for Varispeed F7 and E7 made by Schaffner EMV AG

(200V, 3 phase)

Inverter Model		Line Filter (Schaffner)				
Varispeed F7	Varispeed E7	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CIMR-F7C20P4	CIMR-E7C20P4	FS 5972-10-07	B*	7	1.1	141 x 46 x 330
CIMR-F7C20P7	CIMR-E7C20P7		B*			
CIMR-F7C21P5	CIMR-E7C21P5		B*			
CIMR-F7C22P2	CIMR-E7C22P2	FS 5972-18-07	B*	18	1.7	141 x 46 x 330
CIMR-F7C23P7	CIMR-E7C23P7	FS 5973-35-07	B*	35	1.4	141 x 46 x 330
CIMR-F7C25P5	CIMR-E7C25P5		B*			
CIMR-F7C27P5	CIMR-E7C27P5	FS 5973-60-07	B*	60	3	206 x 60 x 355
CIMR-F7C2011	CIMR-E7C2011		B*			
CIMR-F7C2015	CIMR-E7C2015	FS 5973-100-07	A	100	4.9	236 x 80 x 408
CIMR-F7C2018	CIMR-E7C2018		A			
CIMR-F7C2022	CIMR-E7C2022	FS 5973-130-35	A	130	4.3	90 x 180 x 366
CIMR-F7C2030	CIMR-E7C2030		A			
CIMR-F7C2037	CIMR-E7C2037	FS 5973-160-40	A	160	6	120 x 170 x 451
CIMR-F7C2045	CIMR-E7C2045	FS 5973-240-37	A	240	11	130 x 240 x 610
CIMR-F7C2055	CIMR-E7C2055		A			
CIMR-F7C2075	CIMR-E7C2075	FS 5973-500-37	A	500	19.5	300 x 160 x 564
CIMR-F7C2090	CIMR-E7C2090		A			
CIMR-F7C2110	CIMR-E7C2110		A			

Rated Voltage : AC 240V 3phase

Ambient Temperature : 45°C (max.)

* max motor cable length : 10m Class B, 50m Class A

Permissible emission of power drive systems for commercial and light industrial environment
(EN61800-3,A11) (general availability, 1st environment)

APPENDIX 1-2

Recommended Line Filters for VS 606 V7 made by Schaffner EMV AG

(230V single phase)

Inverter Model	Line Filter (Schaffner)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-V7CCB0P1	FS 5855-10-07	B	10	0.44	71 x 45 x 169
CMIR-V7CCB0P2					
CMIR-V7CCB0P4					
CMIR-V7CCB0P7	FS 5855-20-07	B	20	0.7	111 x 50 x 169
CMIR-V7CCB1P5					
CMIR-V7CCB2P2	FS 5855-30-07	B	30	1.0	144 x 50 x 174
CMIR-V7CCB4P0	FS 5855-40-07	B	40	1.1	175 x 50 x 174

Rated Voltage : AC 250V single phase
 Ambient Temperature : 40°C (max.)
 max motor cable length : 20m class B

Recommended Line Filters for VS 606 V7 made by Schaffner EMV AG

(200V 3 phase)

Inverter Model	Line Filter (Schaffner)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-V7CC20P1	FS 5856-10-07	B	10	0.7	82 x 50 x 194
CMIR-V7CC20P2					
CMIR-V7CC20P4					
CMIR-V7CC20P7					
CMIR-V7CC21P5	FS 5856-20-07	B	16	0.84	111 x 50 x 169
CMIR-V7CC22P2					
CMIR-V7CC24P0	FS 5856-30-07	B	26	0.98	144 x 50 x 174

Rated Voltage : AC 250V 3 phase
 Ambient Temperature : 40°C (max.)
 max motor cable length : 20m class B

Recommended Line Filters for VS 606 V7 made by Schaffner EMV AG

(400V 3 phase)

Inverter Model	Line Filter (Schaffner)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-V7CC40P2	FS 5857-5-07	B	5	0.5	111 x 45 x 169
CMIR-V7CC40P4					
CMIR-V7CC40P7	FS 5857-10-07	B	10	0.75	111 x 45 x 169
CMIR-V7CC41P5					
CMIR-V7CC42P2					
CMIR-V7CC43P0	FS 5857-20-07	B	20	1.0	144 x 50 x 174
CMIR-V7CC44P0					
CMIR-V7CC45P5	FS 5857-30-07	B	30	2.0	184 x 56 x 304
CMIR-V7CC47P5					

Rated Voltage : AC 480V 3 phase

Ambient Temperature : 40°C (max.)
max motor cable length : 20m class B

Recommended Line Filters for VS mini J7 made by Schaffner EMV AG

(230V single phase)

Inverter Model	Line Filter (Schaffner)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-J7ACB0P1	FS 5872-10-07	B	10	0.45	71 x 45 x 169
CMIR-J7ACB0P2					
CMIR-J7ACB0P4					
CMIR-J7ACB0P7	FS 5872-20-07	B	20	0.68	111 x 50 x 169
CMIR-J7ACB1P5					

Rated Voltage : AC 250V single phase
 Ambient Temperature : 40°C (max.)
 max motor cable length : 20m class B

Recommended Line Filters for VS mini J7 made by Schaffner EMV AG

(200V 3 phase)

Inverter Model	Line Filter (Schaffner)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-J7AC20P1	FS 5971-10-07	B	10	0.68	82 x 50 x 194
CMIR-J7AC20P2					
CMIR-J7AC20P4					
CMIR-J7AC20P7					
CMIR-J7AC21P5	FS 5971-20-07	B	16	0.84	111 x 50 x 169
CMIR-J7AC22P2					
CMIR-J7AC24P0	FS 5971-30-07	B	26	0.98	141 x 50 x 174

Rated Voltage : AC 250V 3 phase
 Ambient Temperature : 40°C (max.)
 max motor cable length : 20m class B

Recommended Line Filters for VS mini J7 made by Schaffner EMV AG

(400V 3 phase)

Inverter Model	Line Filter (Schaffner)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-J7AC40P2	FS 5871-5-07	B	5	0.57	111 x 50 x 169
CMIR-J7AC40P4					
CMIR-J7AC40P7	FS 5871-10-07	B	10	0.68	111 x 50 x 169
CMIR-J7AC41P5					
CMIR-J7AC42P2					
CMIR-J7AC43P0	FS 5871-20-07	B	20	1.0	141 x 50 x 174
CMIR-J7AC44P0					

Rated Voltage : AC V 480 3 phase
 Ambient Temperature : 40°C (max.)
 max motor cable length : 20 m class B

APPENDIX 1-3

Recommended Line Filters for VS 606 V7 made by Rasmi Electronics Co.,LTD

(230V single phase)

Inverter Model	Line Filter (RASMI)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-V7CCB0P1	RS 1010 – V7	B	10	0.6	71 x 45 x 169
CMIR-V7CCB0P2					
CMIR-V7CCB0P4					
CMIR-V7CCB0P7	RS 1020 – V7	B	20	1.0	111 x 50 x 169
CMIR-V7CCB1P5					
CMIR-V7CCB2P2	RS 1030 – V7	B	30	1.1	144 x 50 x 174
CMIR-V7CCB4P0	RS 1040 – V7	B	40	1.2	175 x 50 x 174

Rated Voltage : AC 250V single phase
 Ambient Temperature : 40°C (max.)
 max motor cable length : 20m class B

Recommended Line Filters for VS 606 V7 made by Rasmi Electronics Co.,LTD

(200V 3 phase)

Inverter Model	Line Filter (RASMI)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-V7CC20P1	RS 2010 – V7	B	10	0.8	82 x 50 x 194
CMIR-V7CC20P2					
CMIR-V7CC20P4					
CMIR-V7CC20P7					
CMIR-V7CC21P5	RS 2020 – V7	B	16	1.0	111 x 50 x 169
CMIR-V7CC22P2					
CMIR-V7CC24P0	RS 2030 – V7	B	26	1.1	144 x 50 x 174

Rated Voltage : AC 250V 3 phase
 Ambient Temperature : 40°C (max.)
 max motor cable length : 20m class B

Recommended Line Filters for VS 606 V7 made by Rasmi Electronics Co.,LTD

(400V 3 phase)

Inverter Model	Line Filter (RASMI)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-V7CC40P2	RS 3005 – V7	B	5	1.0	111 x 45 x 169
CMIR-V7CC40P4					
CMIR-V7CC40P7	RS 3010 – V7	B	10	1.0	111 x 45 x 169
CMIR-V7CC41P5					
CMIR-V7CC42P2					
CMIR-V7CC43P0	RS 3020 – V7	B	15	1.1	144 x 50 x 174
CMIR-V7CC24P0					

Rated Voltage : AC 480V 3 phase
 Ambient Temperature : 40°C (max.)
 max motor cable length : 20m class B

Recommended Line Filters for VS mini J7 made by Rasmi Electronics Co.,LTD

(230V single phase)

Inverter Model	Line Filter (RASMI)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-J7ACB0P1	RS 1010 J7	B	10	0.6	71 x 45 x 169
CMIR-J7ACB0P2					
CMIR-J7ACB0P4					
CMIR-J7ACB0P7	RS 1020 J7	B	20	1.0	111 x 50 x 169
CMIR-J7ACB1P5					

Rated Voltage : AC 250V single phase

Ambient Temperature : 50°C (max.)

max motor cable length : 20m class B

Recommended Line Filters for VS mini J7 made by Rasmi Electronics Co.,LTD

(200 V 3 phase)

Inverter Model	Line Filter (RASMI)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-J7AC20P1	RS 2010 J7	B	10	0.8	82 x 50 x 194
CMIR-J7AC20P2					
CMIR-J7AC20P4					
CMIR-J7AC20P7					
CMIR-J7AC21P5	RS 2020 J7	B	16	1.0	111 x 50 x 169
CMIR-J7AC22P2	RS 2030 J7	B	26	1.1	141 x 50 x 174
CMIR-J7AC24P0					

Rated Voltage : AC 250V 3 phase

Ambient Temperature : 40°C (max.)

max motor cable length : 20m class B

Recommended Line Filters for VS mini J7 made by Rasmi Electronics Co., LTD

(400 V 3 phase)

Inverter Model	Line Filter (RASMI)				
	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-J7AC40P2	RS 3005-J7	B	5	1.0	111 x 50 x 169
CMIR-J7AC40P4					
CMIR-J7AC40P7					
CMIR-J7AC41P5	RS 3010-J7	B	10	1.0	111 x 50 x 169
CMIR-J7AC42P2					
CMIR-J7AC43P0					
CMIR-J7AC44P0	RS 3020-J7	B	15	1.1	141 x 50 x 174

Rated Voltage : AC 480V 3 phase

Ambient Temperature : 40°C (max.)

max motor cable length : 20m class B

APPENDIX 1-4

Recommended Line Filters for VS-616G5/PC5/P5 made by Schaffner Elektronik AG

(400V Class 3 Phase)

Inverter Model		Line Filter (Schaffner)				
VS-616G5	VS-616PC5/P5	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CIMR-G5C40P4	CIMR-P5C40P4	FS4874-7/07	A	7	1.1	50x126x255
CIMR-G5C40P7	CIMR-P5C40P7		A			
CIMR-G5C41P5	CIMR-P5C41P5		A			
CIMR-G5C42P2	CIMR-P5C42P2	FS4874-18/07	A	18	1.7	55x142x305
CIMR-G5C43P7	CIMR-P5C43P7		A			
CIMR-G5C44P0	CIMR-P5C44P0		A			
CIMR-G5C45P5	CIMR-P5C45P5	FS4874-30/07	A	30	2.0	60x150x335
CIMR-G5C47P5	CIMR-P5C47P5		A			
CIMR-G5C4011	CIMR-P5C4011	FS4874-42/07	A	42	3.0	70x185x329
CIMR-G5C4015	CIMR-P5C4015		A			
CIMR-G5C4018	CIMR-P5C4018	FS4874-55/07	A	55	3.3	80x185x329
CIMR-G5C4022	CIMR-P5C4022	FS4874-75/34	A	75	4.3	80x220x329
CIMR-G5C4030	CIMR-P5C4030		A			
CIMR-G5C4037	CIMR-P5C4037	FS4874-100/35	A	100	5.7	90x220x379
CIMR-G5C4045	CIMR-P5C4045	FS4874-130/35	A	130	8.0	110x240x439
CIMR-G5C4055	CIMR-P5C4055	FS4874-180/07	A	180	11	110x240x438
CIMR-G5C4075	CIMR-P5C4075	FS4874-300/99	A	300	15	300x160x564
CIMR-G5C4110	CIMR-P5C4110		A			
CIMR-G5C4160	CIMR-P5C4160	FS4874-400/99	A	400	20	300x160x564
CIMR-G5C4185	CIMR-P5C4185	FS4874-500/99	A	500	20	300x160x564
CIMR-G5C4220	CIMR-P5C4220	FS4874-600/99	A	600	21	300x160x564
CIMR-G5C4300	CIMR-P5C4300	FS4874-900/99	A	900	34	300x160x564

400V Class 3 Phase **Foot mount**

Inverter Model		Line Filter (Schaffner)				
VS-616G5	VS-616PC5/P5	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CIMR-G5C40P4	CIMR-P5C40P4	FS4874-7/07 A	B	7	1.1	140x55x310 (Foot mount)
CIMR-G5C40P7	CIMR-P5C40P7		B			
CIMR-G5C41P5	CIMR-P5C41P5		B			
CIMR-G5C42P2	CIMR-P5C42P2	FS4874-16/07 A	B	16	2.4	140x55x310 (Foot mount)
CIMR-G5C44P0	CIMR-P5C43P7		B			
CIMR-G5C44P0	CIMR-P5C44P0		B			
CIMR-G5C45P5	CIMR-P5C45P5	FS4874-30/07 A	B	30	3.3	200x55x330 (Foot mount)
CIMR-G5C47P5	CIMR-P5C47P5		B			
CIMR-G5C4011	CIMR-P5C4011	FS4874-42/07 A	B	42	3.3	250x70x410 (Foot mount)
CIMR-G5C4015	CIMR-P5C4015		B			

Rated Voltage : AC 480V 3phase
 Ambient Temperature : 50°C (max.)

(600V Class 3 Phase)

Inverter Model		Line Filter (Schaffner)			
VS-616G5C	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CIMR-G5C51P5					
CIMR-G5C52P2					
CIMR-G5C53P7	FS5492-18-07	A	18	2.4	70 x 329 x 185
CIMR-G5C55P5					
CIMR-G5C57P5					
CIMR-G5C5011	FS5492-42-07	A	42	4.2	100 x 389 x 185
CIMR-G5C5015					

Rated Voltage : AC 600V 3 phase
Ambient Temperature : 50°C (max.)

APPENDIX 1-5

Recommended Line Filters for VS-616G5/PC5/P5 made by Rasmi Electronics LTD.

(400V 3 phase)

Inverter Model		Line Filter (Rasmi)				
VS-616G5	VS-616PC5/P5	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CIMR-G5C40P4	CIMR-P5C40P4	RS-3008 G5	B	8	1.4	143x46x320 (Foot Mount)
CIMR-G5C40P7	CIMR-P5C40P7		B			
CIMR-G5C41P5	CIMR-P5C41P5	RS-3020 G5	B	20	1.8	143x46x320 (Foot Mount)
CIMR-G5C42P2	CIMR-P5C42P2		B			
CIMR-G5C44P0	CIMR-P5C44P0		B			
CIMR-G5C45P5	CIMR-P5C45P5	RS-3030 G5	B	30	3	213x51x350 (Foot Mount)
CIMR-G5C47P5	CIMR-P5C47P5		B			
CIMR-G5C4011	CIMR-P5C4011	RS-3060 G5	B	60	5.3	268x56x435 (Foot Mount)
CIMR-G5C4015	CIMR-P5C4015		B			
CIMR-G5C4018	CIMR-P5C4018	RS-3080 G5	A	80	7.5	180x90x350
CIMR-G5C4022	CIMR-P5C4022		A			
CIMR-G5C4030	CIMR-P5C4030	RS-3100 G5	A	100	13.8	200x130x420
CIMR-G5C4037	CIMR-P5C4037	RS-3120 G5	A	120	13.8	200x130x420
CIMR-G5C4045	CIMR-P5C4045	RS-3160 G5	A	160	23	200x160x480
CIMR-G5C4055	CIMR-P5C4055	RS-3180 G5	A	180	25	200x160x480
CIMR-G5C4075	CIMR-P5C4075	RS-3300 G5	A	300	25	200x160x480
CIMR-G5C4110	CIMR-P5C4110		A			
CIMR-G5C4160	CIMR-P5C4160	RS-3400 G5	A	400	45	250x200x588

Rated Voltage : AC 550V 3 phase

Ambient Temperature : 50°C (max.)

Recommended Line Filters for VS-616 PC5 made by Schaffner Elektronik GmbH

(230V single phase)

VS-616 PC5	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CIMR-P5CB0P4	FS 4971-10/07	B	10	0.7	14.5x58x156
CIMR-P5CB0P7	FS 4971-20/07	B	20	1.0	57.6x85.5x119
CIMR-P5CB1P5		B			
CIMR-P5CB2P2	FS 4971-40/07	B	40	3	90x65x246
CIMR-P5CB3P7		B			

Rated Voltage : AC 250V single phase

Ambient Temperature : 50°C (max.)

Recommended Line Filters for VS-616 PC5 made by Rasmi Electronic LTD

(230V single phase)

VS-616 PC5	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CIMR-P5CB0P4	RS 1010 P5	A	10	1.2	143x46x320 (Foot Mount)
CIMR-P5CB0P7	RS 1020 P5	A	20	1.5	143x46x320 (Foot Mount)
CIMR-P5CB1P5		A			
CIMR-P5CB2P2	RS 1040 P5	A	40	2.9	213x51x350 (Foot Mount)
CIMR-P5CB3P7		A			

Rated Voltage : AC 250V single phase

Ambient Temperature : 50°C (max.)

APPENDIX 1-6

Recommended Line Filters for VS mini C made by Rasmi Electronics Co.,LTD

(230V single phase)

Inverter Model		Line Filter (RASMI)				
VS mini C Standard type	VS mini C Advanced type	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-XCACB0P1	CIMR-XCBCB0P1	RS1003-VSM	B	3	0.55	72x41x162 (Foot Mount)
CMIR-XCACB0P2	CMIR-XCBCB0P2		B			
CMIR-XCACB0P4	CMIR-XCBCB0P4	RS1010-VSM	B	10	0.6	111x41x162 (Foot Mount)
CMIR-XCACB0P7	CMIR-XCBCB0P7		B			
CMIR-XCACB1P5	CMIR-XCBCB1P5	RS1020-VSM	B	20	1.0	134x42x162 (Foot Mount)

Rated Voltage : AC 250V single phase

Ambient Temperature : 50°C (max.)

(400V 3 phase)

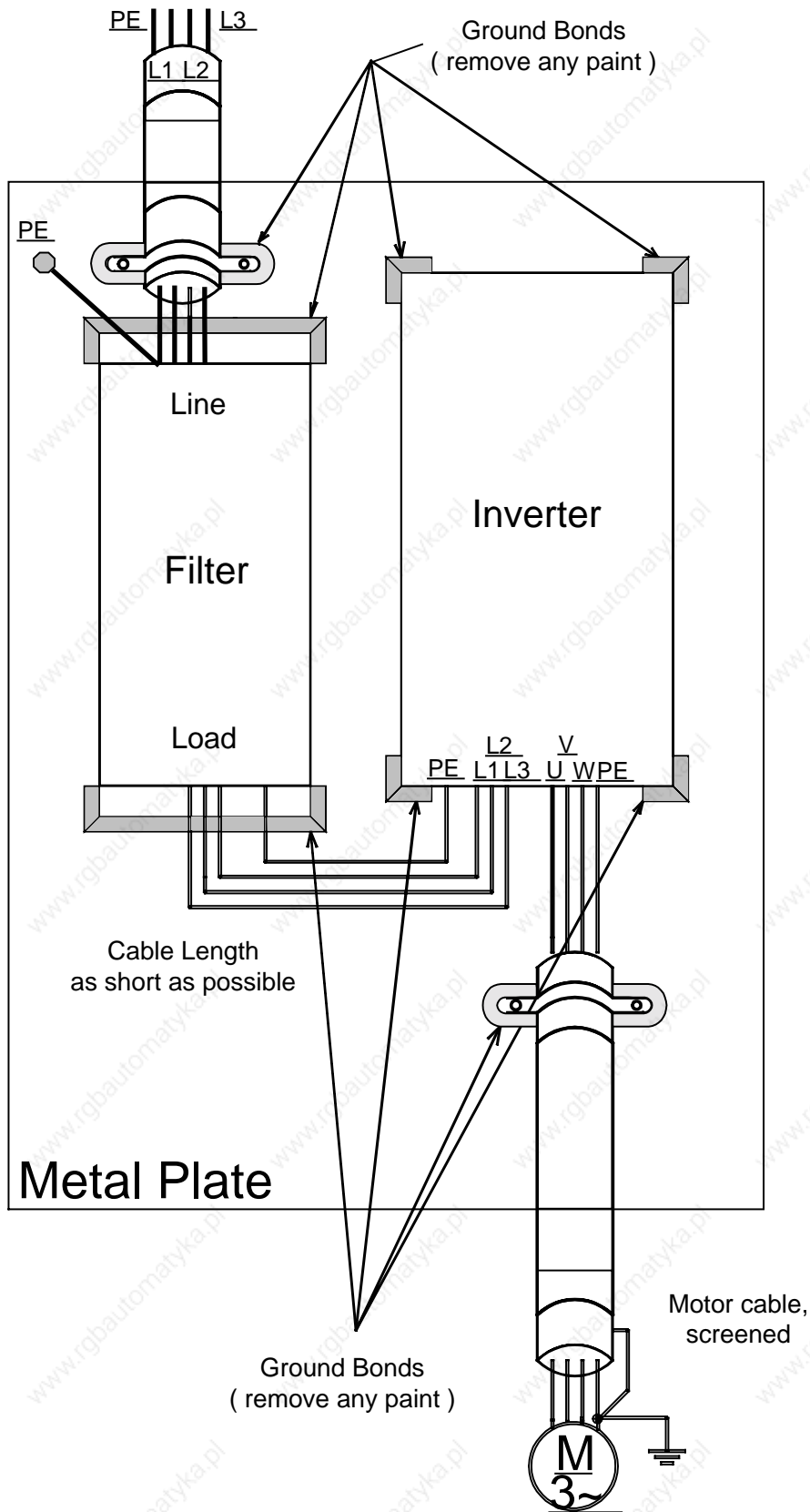
Inverter Model		Line Filter (RASMI)				
VS mini C Standard type	VS mini C Advanced type	Model	EN 55011 class	Current (A)	Weight (kg)	Dimension WxDxH
CMIR-XCAC40P2	CMIR-XCBC40P2	RS3006-VSM	B	6	0.6	112x42x162 (Foot Mount)
CMIR-XCAC40P4	CMIR-XCBC40P4		B			
CMIR-XCAC40P7	CMIR-XCBC40P7		B			
CMIR-XCAC41P5	CMIR-XCBC41P5	RS3008-VSM	B	8	0.8	134x42x162 (Foot Mount)

Rated Voltage : AC 460V 3 phase

Ambient Temperature : 50°C (max.)

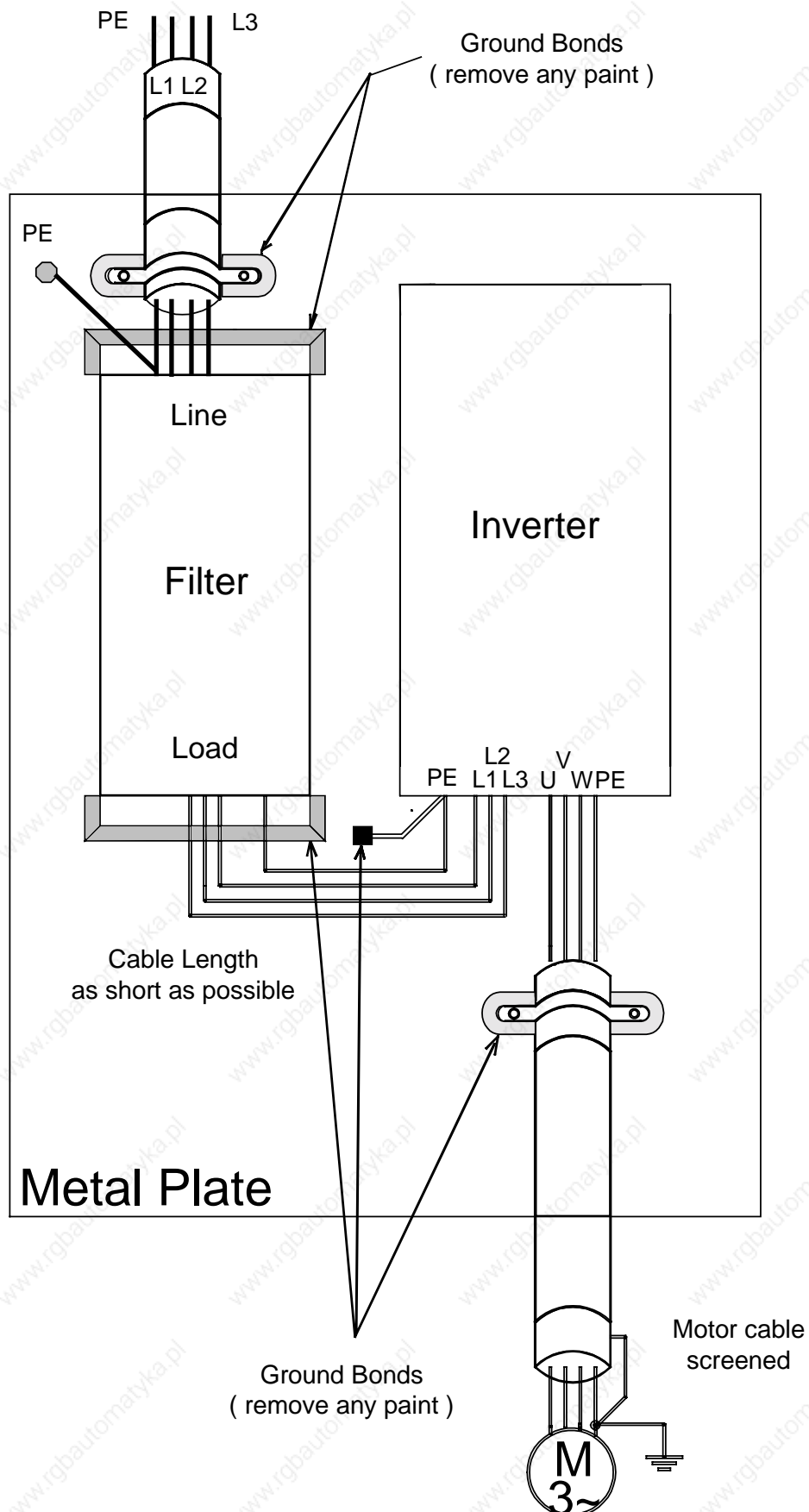
Appendix 2-1

Installation of Line Filter and CIMR - G5C40P4 to 4015 CIMR - P5C40P4 to 4015



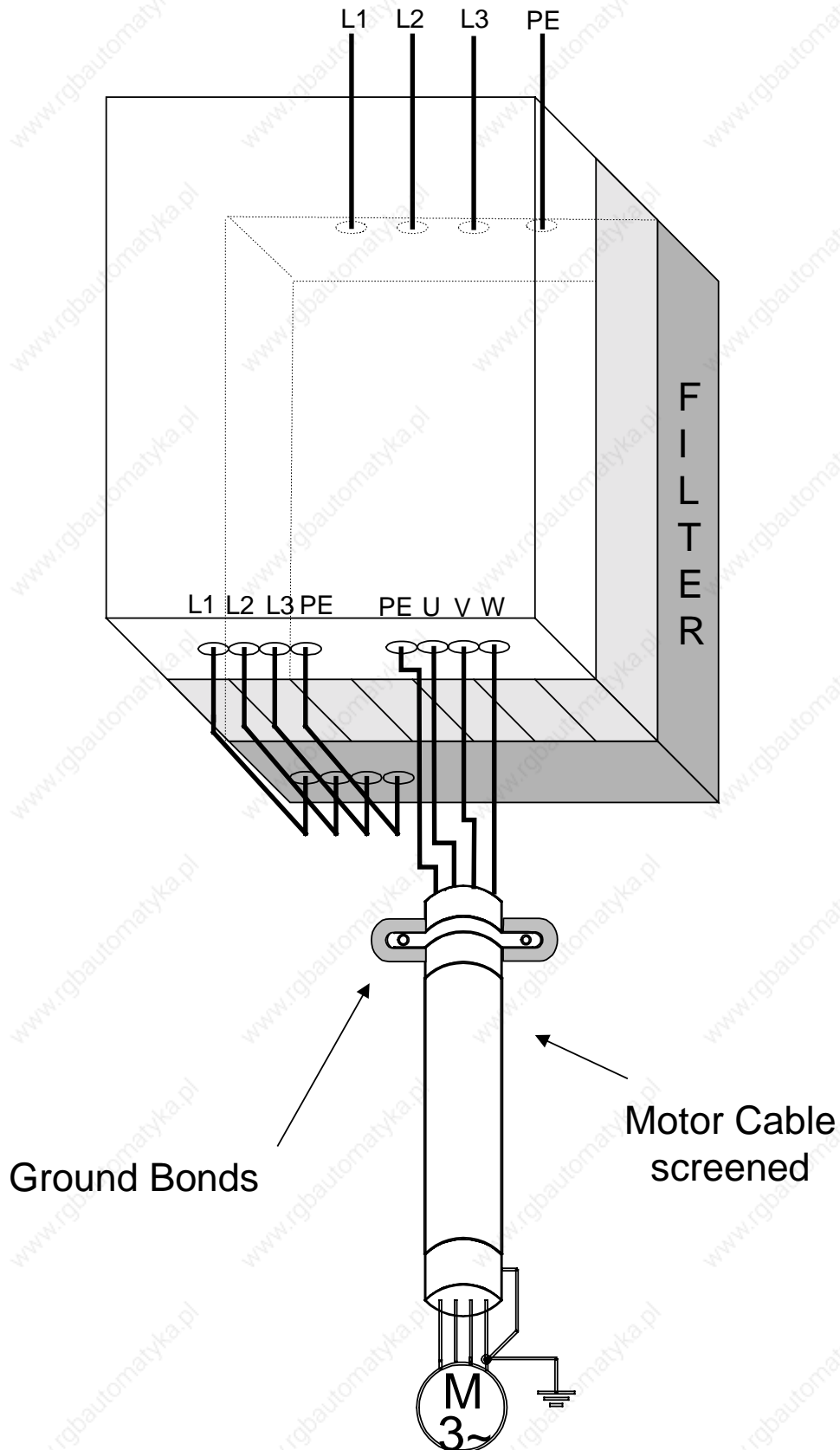
Appendix 2-2

Installation of Line Filter and CIMR - G5C4018 to 4300 CIMR - P5C4018 to 4300



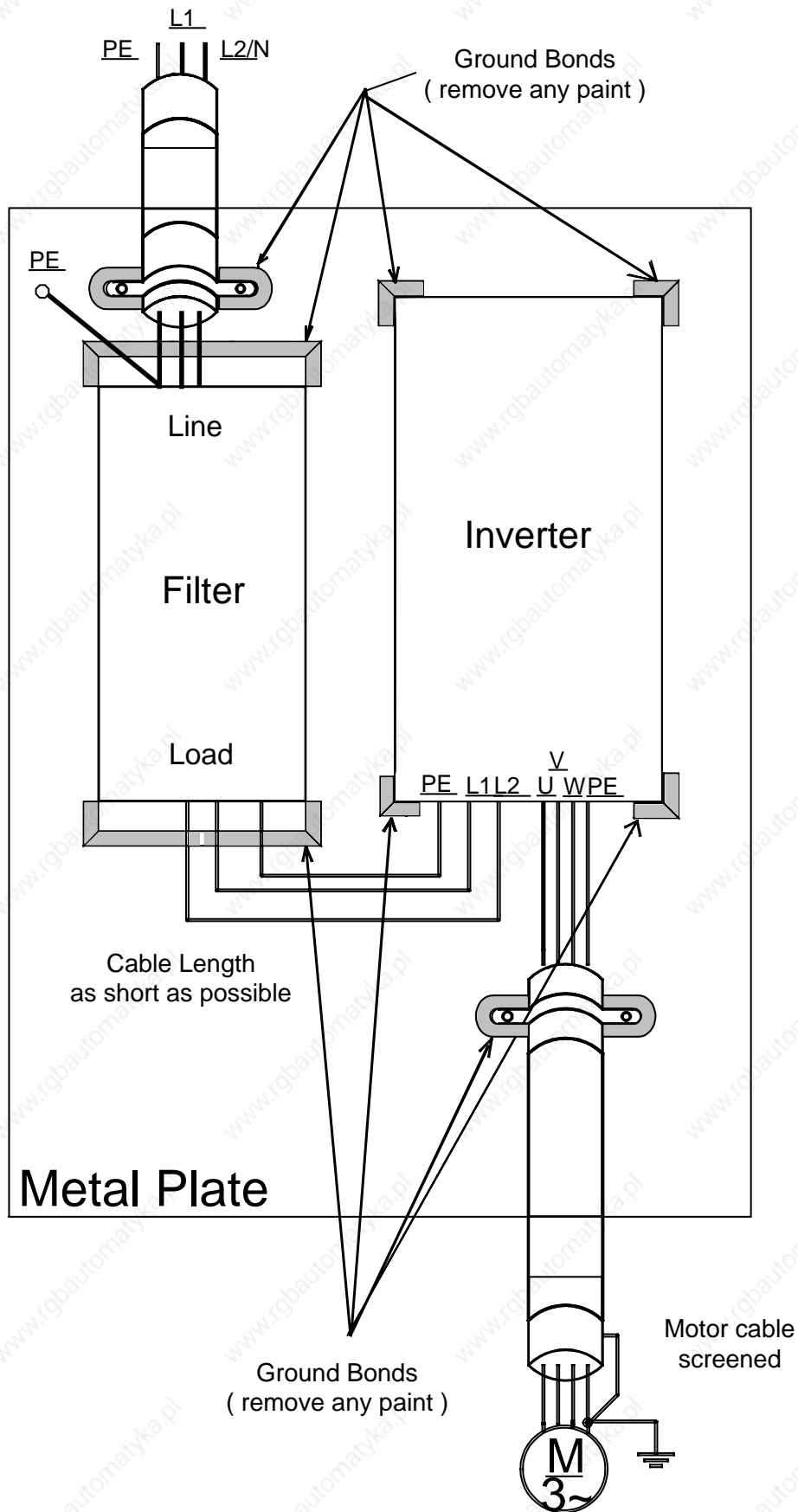
Appendix 2-3

Installation of Foot - Print Typ - Filter CIMR-G5C40P4 to 4015 CIMR-P5C40P4 to 4015



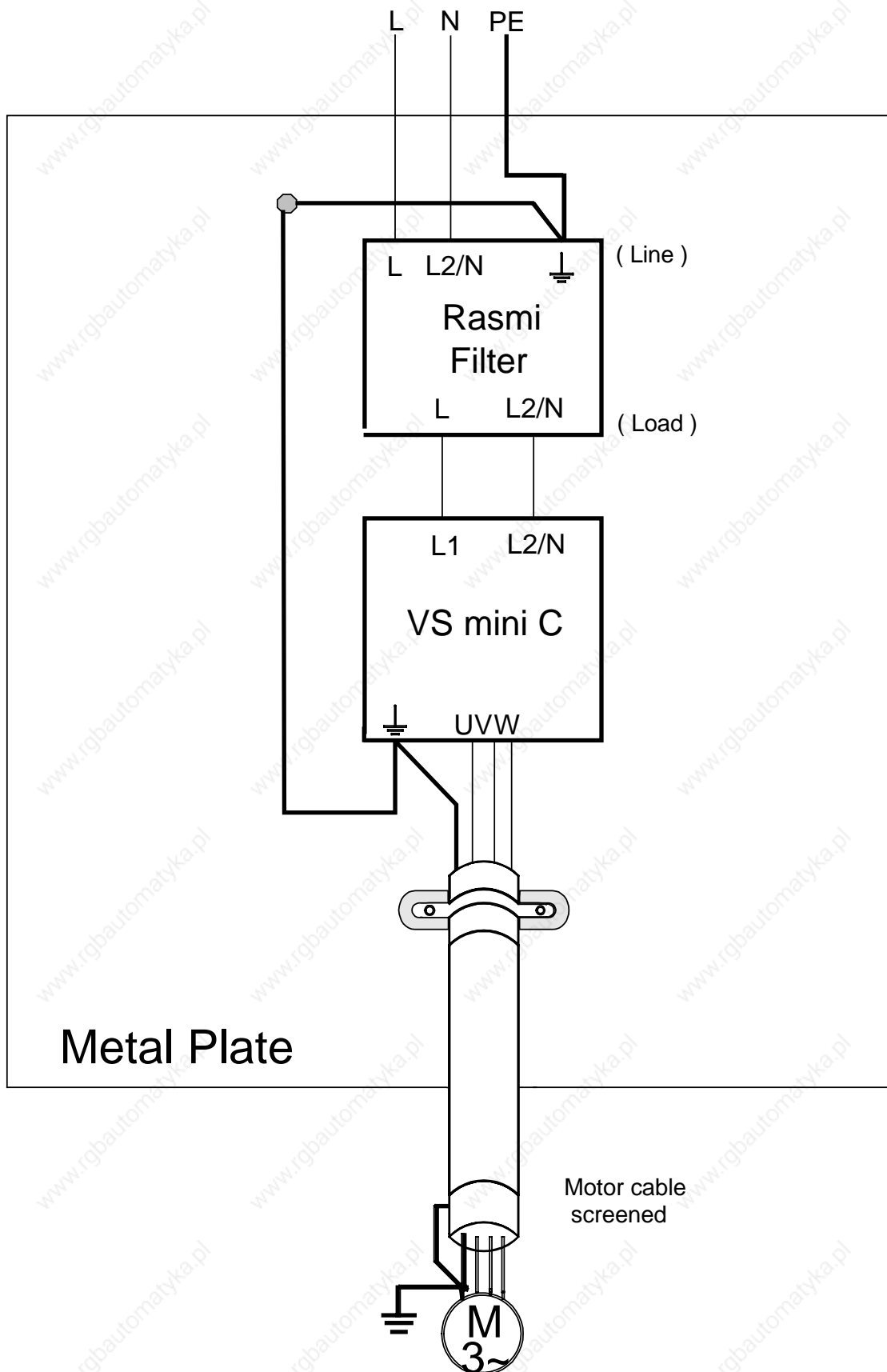
Appendix 2-4

Installation of Line Filter and CIMR - P5CB0P4 to 3P7



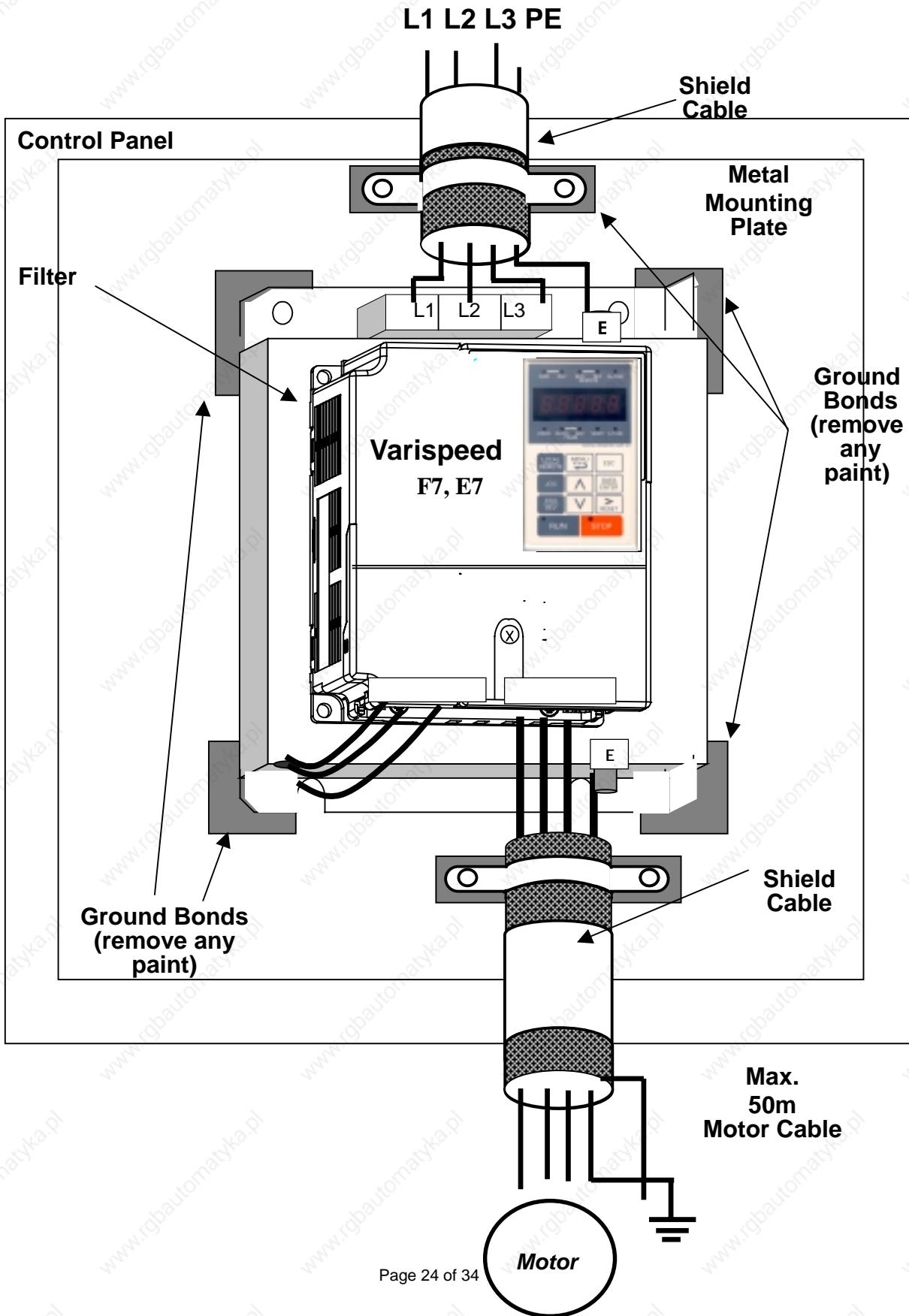
Appendix 2-5

Installation of Line Filter and VS - Mini



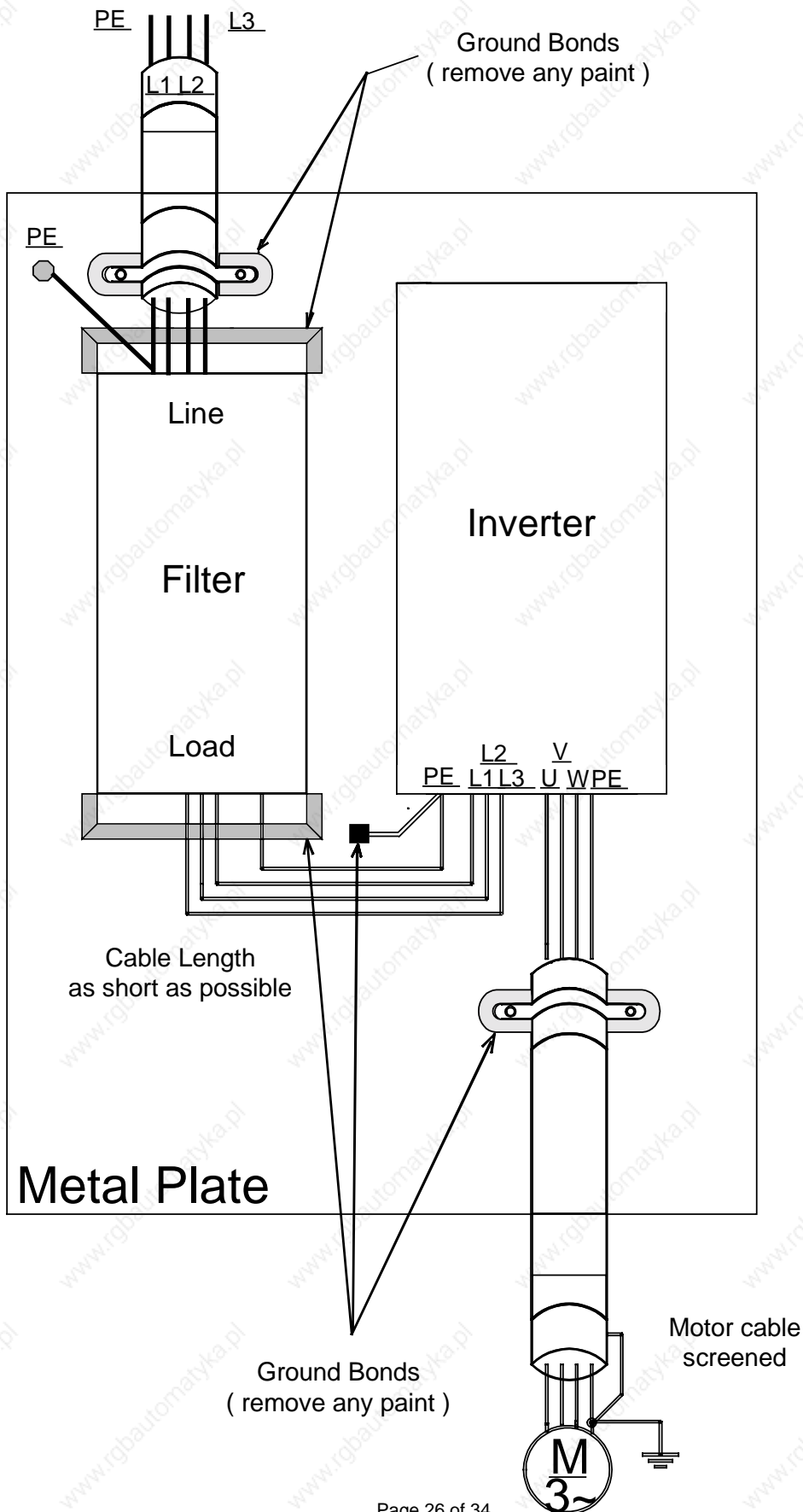
APPENDIX 2-6

Installation of line filters and CIMR-F7, E7C40P4 to 4018 CIMR-F7, E7C20P4 to 2018



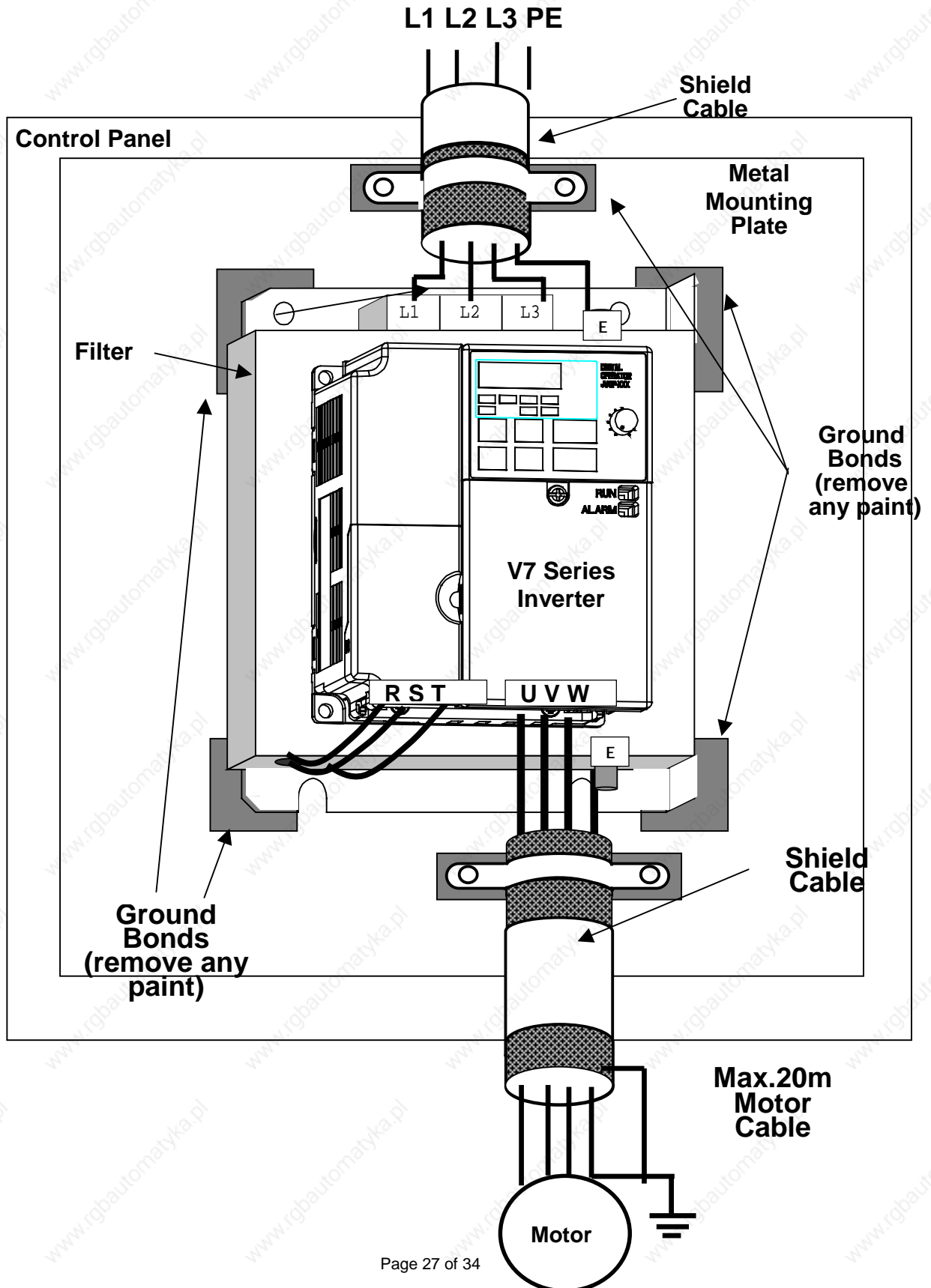
Appendix 2-7

Installation of Line Filter and CIMR - F7, E7C4018 to 4300 CIMR - F7, E72018 to 2110



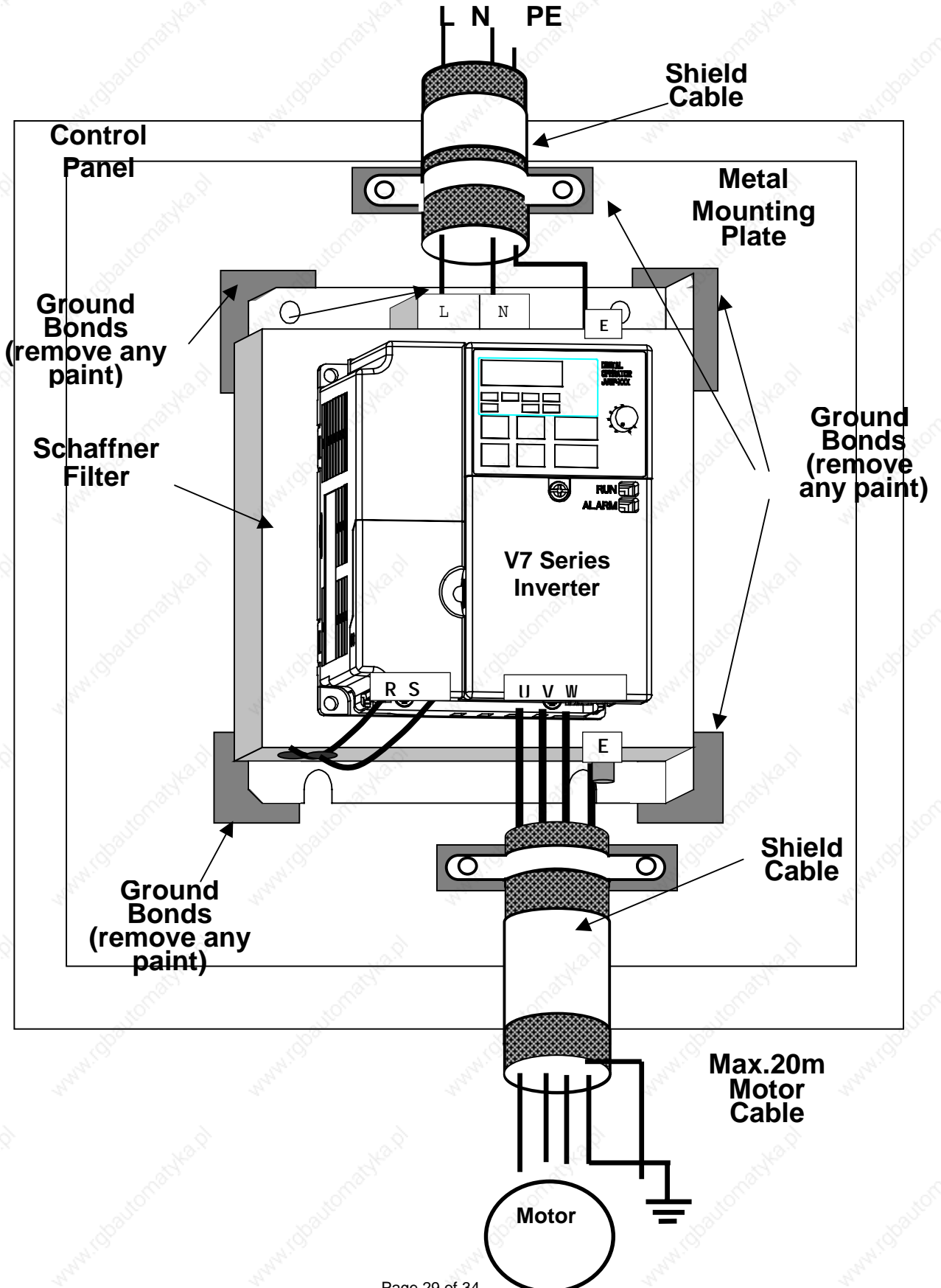
APPENDIX 2-8

Installation of line filters and CIMR-V7□C40P2 to 47P5 CIMR-V7□C20P1 to 24P0



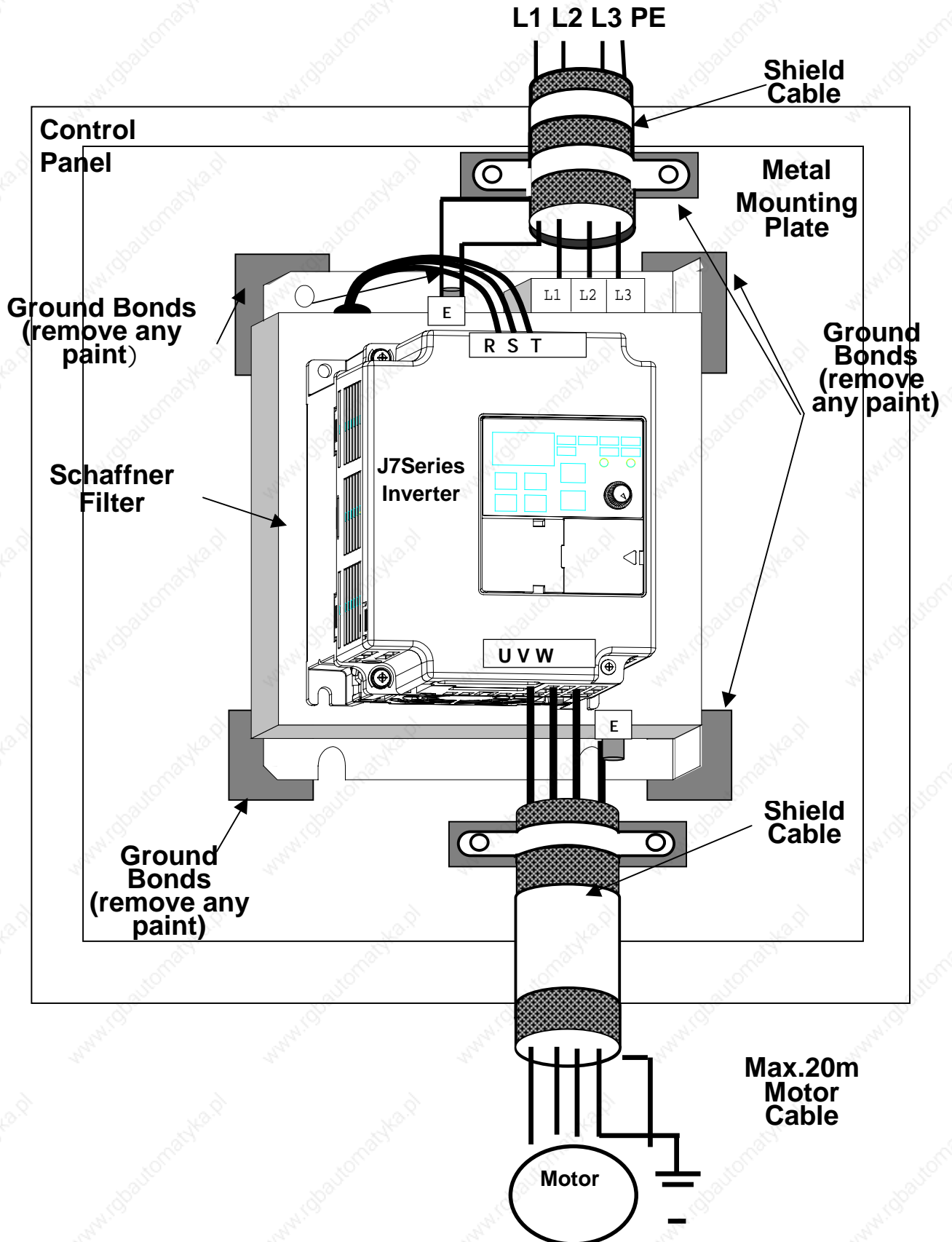
APPENDIX 2-9

Installation of line filters and CIMR-V7□CB0P1 to B4P0



APPENDIX 2-10

Installation of line filters and CIMR-J7□C40P2 to 44P0 CIMR-J7□C20P1 to 24P0



APPENDIX 2-11

Installation of line filters and CIMR-J7□CB0P1 to B1P5

