

Footprint and Block RFI filters for

YASKAWA

V1000, J1000, A1000, L1000A,
J7, V7, F7, E7, G5, P5 motor inverters,
Sigma-II, XtraDrive and Sigma-5 servo drives





Footprint and Block RFI filters for **YASKAWA** motor inverters and servo drives

Requirements

Recent European legislation on EMC imposes limits on RF emissions from electrical equipment. These power line filters have been specifically developed for use with Yaskawa motor drives, enabling systems incorporating them to meet the European RFI emissions standards for domestic or industrial use.

Ranges Covered

Inverters	200V Single Phase	200V Three Phase	400V Three Phase
V1000	0.1 to 4.0kW - footprint type	0.1 to 15kW - footprint type	0.2 to 15kW - footprint type
J1000	0.1 to 1.5kW - footprint type	0.1 to 4.0kW - footprint type	0.2 to 4.0kW - footprint type
A1000		0.55 to 22kW - footprint type 22 to 110kW - block type	0.4 to 22kW - footprint type 22 to 355kW - block type
L1000A		4.0 to 18.5kW - footprint type 22 to 45kW - block type	0.4 to 15.0kW - footprint type 18.5 to 300kW - block type
J7	0.1 to 1.5kW - footprint type	0.1 to 4.0kW - footprint type	0.2 to 4.0kW - footprint type
V7	0.1 to 4.0kW - footprint type	0.1 to 7.5kW - footprint type	0.2 to 7.5kW - footprint type
F7, E7		0.4 to 18.5kW - footprint type 22 to 110kW - block type	0.4 to 18.5kW - footprint type 22 to 300kW - block type
G5, P5			0.4 to 15.0kW - footprint type 18.5 to 300kW - block type

Servo Drives	200V Single Phase	200V Three Phase	400V Three Phase
Sigma II	0.03 to 1.5kW - footprint type		0.5 to 7.5kW - footprint type
XtraDrive	0.03 to 0.75kW - footprint type		
Sigma-5	0.05 to 1.5kW - footprint type		0.5 to 15kW - footprint type

Design and Test Criteria

Generally with motor drive systems, the emission levels are greatly affected by the length of the cable between the drive itself and the motor - longer cables will cause considerably higher emissions.

The inverter / filter combinations here have been designed and tested to achieve compliance to:-

EN 55022:1994, Class B for use in domestic / light industrial environments (Equivalent to the RF emissions tests of Power Drive Standard EN 61800-3:1996 for drives with <25A input current) when fitted with up to 25m motor output cable and to

EN 55011:1991 Group 1, Class A for use in industrial environments (Equivalent to the RF emissions tests of Power Drive Standard EN 61800-3:1996 for drives with >25A input current) when fitted with up to 50m motor output cable.

Earth Leakage Measurements

In single phase applications the earth leakage current is present all of the time.

For three phase applications under normal conditions with the three phases balanced, earth leakage currents are extremely small - the max values stated are worst possible values such as would occur momentarily during switch on or failure of one or two phases.

Use of Filters with 200V Three Phase Inverters

These filter ranges may also be used with 200V three phase inverters, but care should be taken in the filter selection. The equivalent 200V model of an inverter will require approximately twice the current of the 400V model. For example, the RS 3020-G5 filter is suitable for the CIMR-G5U1P5 drive, but not the CIMR-G5U2P2, even though the latter will fit. Running a filter on under-voltage is perfectly acceptable, but running at over-current for any extended period is not advisable.

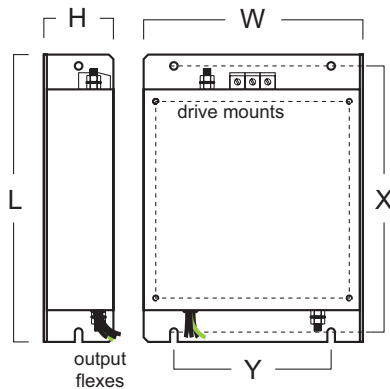
Technical Information

For more technical data, a separate data sheet is available for each filter model. This gives detailed dimensions, circuit diagram and electrical ratings.

V1000 J1000



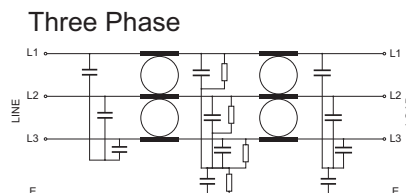
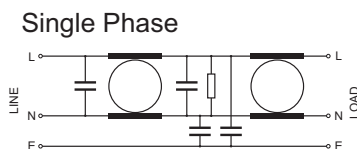
Dimensions



- The **V1K** range, especially for Yaskawa V1000 and J1000 Series inverters.
- Help to ensure EMC compliance of machinery and installations using V1000 or J1000 drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.
- Filters are designed and manufactured to UL requirements.

Applied Inverter CIMR-VC	Applied Inverter CIMR-JA	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
BA0001B BA0002B BA0003B	BA0001B BA0002B BA0003B	RF 1010-V1K	10A	1ph, 250V	7.0mA	169 x 71 x 45	156 x 51	M4	0.6
BA0006B BA0010B	BA0006B BA0010B	RF 1020-V1K	20A	1ph, 250V	7.0mA	169 x 111 x 50	156 x 91	M4	1.0
BA0012B	-	RF 1030-V1K	30A	1ph, 250V	3.5mA	174 x 144 x 50	161 x 120	M4	1.1
BA0018B	-	RF 1040-V1K	40A	1ph, 250V	3.5mA	174 x 174 x 50	161 x 150	M4	1.2
2A0001B 2A0002B 2A0004B 2A0006B	2A0001B 2A0002B 2A0004B 2A0006B	RF 2010-V1K	10A	3ph, 250V	0.3 / 26mA	194 x 82 x 50	181 x 62	M4	0.8
2A0010B 2A0012B	2A0008B 2A0010B 2A0012B	RF 2020-V1K	16A	3ph, 250V	0.3 / 26mA	169 x 111 x 50	156 x 91	M4	1.0
2A0020B	2A0018B 2A0020B	RF2030-V1K	26A	3ph, 250V	1.0 / 45mA	174 x 144 x 50	161 x 120	M4	1.3
2A0030B 2A0040B	-	RF 2058-V1K	58A	3ph, 250V	1.0 / 45mA	320 x 150 x 52	290 x 122	M5	2.4
2A0056B	-	RF 2078-V1K	78A	3ph, 250V	1.0 / 45mA	362 x 188 x 62	330 x 160	M5	4.2
2A0069B	-	RF 2096-V1K	96A	3ph, 250V	1.0 / 45mA	415 x 220 x 62	380 x 192	M6	4.4
4A0001B 4A0002B 4A0004B	4A0001B 4A0002B 4A0004B	RF 3005-V1K	5A	3ph, 480V	0.5 / 29mA	169 x 111 x 45	156 x 91	M4	1.0
4A0005B 4A0007B 4A0009B	4A0005B 4A0007B 4A0009B	RF 3010-V1K	10A	3ph, 480V	0.5 / 29mA	169 x 111 x 45	156 x 91	M4	1.0
4A0011B	4A0011B	RF 3020-V1K	15A	3ph, 480V	1.0 / 70mA	174 x 144 x 50	161 x 120	M4	1.1
4A0018B 4A0023B	-	RF 3029-V1K	29A	3ph, 480V	1.0 / 70mA	306 x 150 x 52	290 x 122	M5	2.0
4A0031B 4A0038B	-	RF 3048-V1K	48A	3ph, 480V	0.5 / 32mA	357 x 182 x 62	330 x 160	M5	2.8

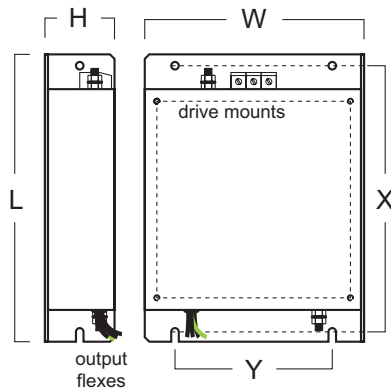
Typical Circuit Schematics



V1000 (LL) J1000



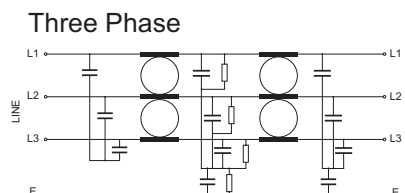
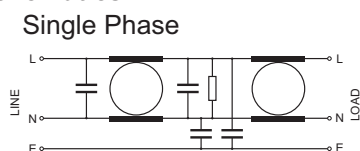
Dimensions



- The **V1K(LL)** range, especially for Yaskawa V1000 and J1000 Series inverters.
- Low leakage current version.
- Help to ensure EMC compliance of machinery and installations using V1000 or J1000 drives on short motor cables, if low leakage current is required.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.
- Filters are designed and manufactured to UL requirements.

Applied Inverter CIMR-VC	Applied Inverter CIMR-JA	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
BA0001B BA0002B BA0003B	BA0001B BA0002B BA0003B	RF 1010-V1K(LL)	10A	1ph, 250V	3.5mA	169 x 71 x 45	156 x 51	M4	0.6
BA0006B BA0010B	BA0006B BA0010B	RF 1020-V1K(LL)	20A	1ph, 250V	3.5mA	169 x 111 x 50	156 x 91	M4	1.0
BA0012B	-	RF 1030-V1K(LL)	30A	1ph, 250V	1.8mA	174 x 144 x 50	161 x 120	M4	1.1
BA0018B	-	RF 1040-V1K(LL)	40A	1ph, 250V	1.8mA	174 x 174 x 50	161 x 150	M4	1.2
2A0001B 2A0002B 2A0004B 2A0006B	2A0001B 2A0002B 2A0004B 2A0006B	RF 2010-V1K(LL)	10A	3ph, 250V	0.2 / 13mA	194 x 82 x 50	181 x 62	M4	0.8
2A0010B 2A0012B	2A0008B 2A0010B 2A0012B	RF 2020-V1K(LL)	16A	3ph, 250V	0.2 / 13mA	169 x 111 x 50	156 x 91	M4	1.0
2A0020B	2A0018B 2A0020B	RF2030-V1K(LL)	26A	3ph, 250V	0.3 / 23mA	174 x 144 x 50	161 x 120	M4	1.3
2A0030B 2A0040B	-	RF 2058-V1K(LL)	58A	3ph, 250V	0.3 / 23mA	320 x 150 x 52	290 x 122	M5	2.4
2A0056B	-	RF 2078-V1K(LL)	78A	3ph, 250V	0.3 / 23mA	362 x 188 x 62	330 x 160	M5	4.2
2A0069B	-	RF 2096-V1K(LL)	96A	3ph, 250V	0.3 / 23mA	415 x 220 x 62	380 x 192	M6	4.4
4A0001B 4A0002B 4A0004B	4A0001B 4A0002B 4A0004B	RF 3005-V1K(LL)	5A	3ph, 480V	0.3 / 15mA	169 x 111 x 45	156 x 91	M4	1.0
4A0005B 4A0007B 4A0009B	4A0005B 4A0007B 4A0009B	RF 3010-V1K(LL)	10A	3ph, 480V	0.3 / 15mA	169 x 111 x 45	156 x 91	M4	1.0
4A0011B	4A0011B	RF 3020-V1K(LL)	15A	3ph, 480V	0.5 / 35mA	174 x 144 x 50	161 x 120	M4	1.1
4A0018B 4A0023B	-	RF 3029-V1K(LL)	29A	3ph, 480V	0.5 / 35mA	306 x 150 x 52	290 x 122	M5	2.0
4A0031B 4A0038B	-	RF 3048-V1K(LL)	48A	3ph, 480V	0.3 / 16mA	357 x 182 x 62	330 x 160	M5	2.8

Typical Circuit Schematics

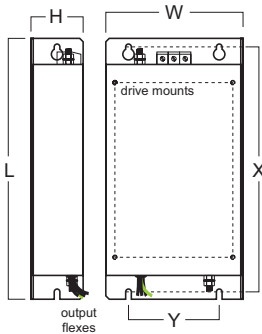


A1000

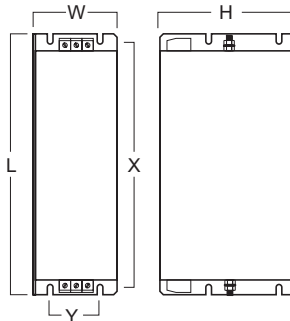
- The **A1K** range, especially for Yaskawa A1000 Series inverters.
- Help to ensure EMC compliance of machinery and installations using A1000 drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.
- Book-style filters mount beside the inverter.



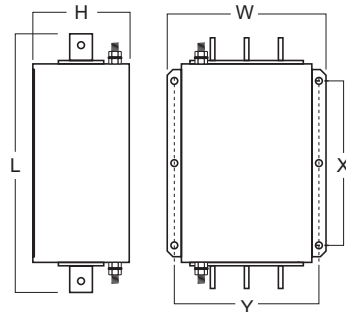
Footprint Dimensions



Book Type Dimensions

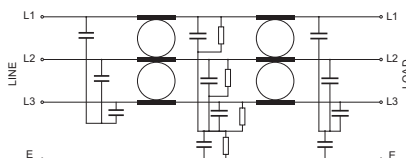


Block Type Dimensions



Inverter CIMR-AC Normal Duty	Inverter CIMR-AC Heavy Duty	Motor kW	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
4A0002	4A0002	0.4	RF 3024-A1K	24A	3ph, 480V	1.0 / 70mA	306 x 150 x 52	290 x 122	M5	2.0
4A0004	4A0004	0.75								
4A0005	4A0005	1.5								
4A0007	4A0007	2.2								
4A0009	4A0009	3.0								
4A0011	4A0011	4.0								
4A0018	4A0018	5.5								
4A0023	4A0023	7.5								
4A0023	4A0023	11								
4A0031	4A0031	11	RF 3044-A1K	44A	3ph, 480V	0.5 / 32mA	357 x 182 x 62	M5	2.8	
4A0038	4A0038	15								
4A0044	4A0044	18.5	RF 3052-A1K	52A	3ph, 480V	2.0 / 150mA	415 x 220 x 62	M6	3.9	
4A0044	4A0044	22								
4A0058	4A0058	22	RF 3071-A1K	71A	3ph, 480V	0.7 / 70mA	329 x 80 x 220	M6	5.3	
4A0072	4A0072	30								
4A0088	4A0088	37	RF 3105-A1K	105A	3ph, 480V	0.7 / 70mA	379 x 90 x 220	M6	6.5	
4A0103	4A0103	45								
4A0139	4A0139	55	RF 3170-A1K	170A	3ph, 480V	1.3 / 130mA	429 x 110 x 240	M6	9	
4A0165	4A0165	75								
4A0165	4A0208	90	RF 3300-A1K	300A	3ph, 480V	10 / 500mA	300 x 260 x 135	M10	13.2	
4A0208	4A0250	110								
4A0250	4A0296	132								
4A0296	4A0362	160								
4A0362	4A0414	185	RF 3480-A1K	480A	3ph, 480V	10 / 500mA	300 x 260 x 135	M10	13.6	
4A0414	4A0515	220								
4A0515	4A0515	250	RF 3660-A1K	660A	3ph, 480V	10 / 500mA	350 x 280 x 170	M10	23.7	
4A0675	4A0675	355								

Typical Circuit Schematic

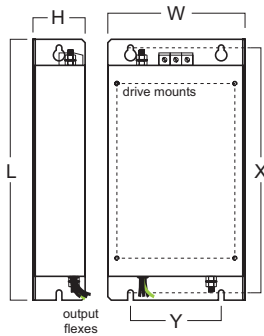


A1000 200V

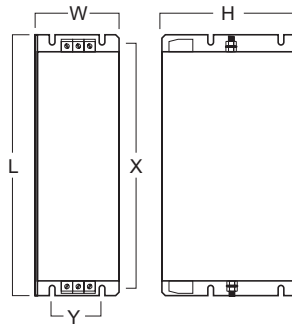
- The **A1K** range, especially for Yaskawa A1000 Series inverters.
- Help to ensure EMC compliance of machinery and installations using A1000 drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.
- Book-style filters mount beside the inverter.



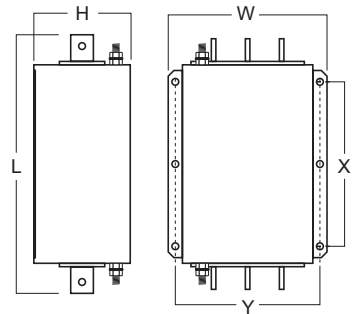
Footprint Dimensions



Book Type Dimensions

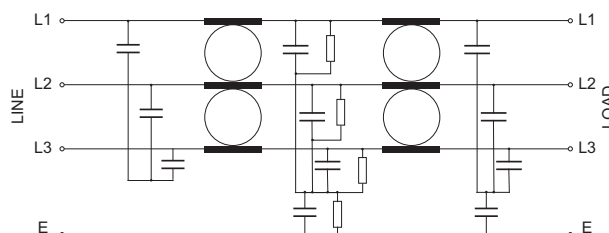


Block Type Dimensions



Inverter CIMR-AC Normal Duty	Inverter CIMR-AC Heavy Duty	Motor kW	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
2A0004 2A0006	2A0004 2A0006 2A0010	0.55 1.1 1.5	RF 3024-A1K	24A	3ph, 480V	1.0 / 40mA	306 x 150 x 52	290 x 122	M5	2.0
2A0010 2A0012	2A0012	2.2 3.0								
2A0021	2A0021	4.0 5.5								
2A0030 2A0040	2A0030 2A0040	5.5 7.5 11								
2A0056	2A0056	11 15								
2A0069 2A0081	2A0069 2A0081	15 18.5 22	RF 2096-A1K	96A	3ph, 250V	1.0 / 45mA	415 x 220 x 62	380 x 192	M6	4.4
2A0110 2A0138 2A0169	2A0110 2A0138 2A0169 2A0211	22 30 37 45	RF 3170-A1K	170A	3ph, 480V	1.0 / 80mA	429 x 110 x 240	414 x 80	M6	9.0
2A0211 2A0250	2A0250 2A0312	55 75	RF 3300-A1K	300A	3ph, 480V	6 / 300mA	300 x 260 x 135	120 x 235	M10	13.2
2A0312 2A0360 2A0415	2A0360 2A0415	90 110	RF 3480-A1K	480A	3ph, 480V	6 / 300mA	300 x 260 x 135	120 x 235	M10	13.6

Typical Circuit Schematic

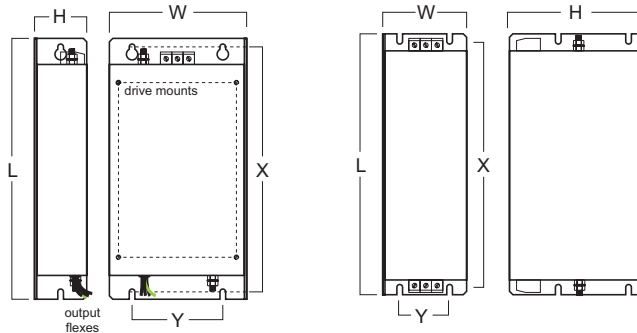


L1000A

- The **A1K** range, for Yaskawa L1000A Series inverters.
- Help to ensure EMC compliance of lift installations using L1000A drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.
- Book-style filters mount beside the inverter.

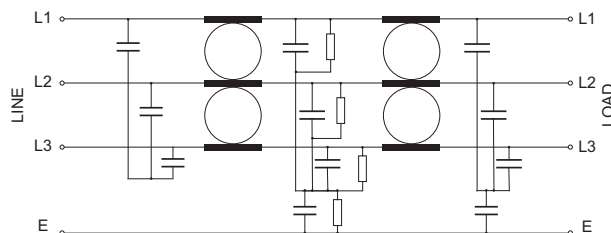


Dimensions



Inverter CIMR-LC	Motor kW	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
4A0009 4A0015 4A0018	4.0 5.5 7.5	RF 3024-A1K	24A	3ph, 480V	1.0 / 70mA	306 x 150 x 52	290 x 122	M5	2.0
4A0024 4A0031	11 15	RF 3044-A1K	44A	3ph, 480V	0.5 / 32mA	357 x 182 x 62	330 x 160	M5	2.8
4A0039	18.5	RF 3052-A1K	52A	3ph, 480V	2.0 / 150mA	415 x 220 x 62	380 x 192	M6	3.9
4A0045 4A0060 4A0075	22 30 37	RF 3071-A1K	71A	3ph, 480V	0.7 / 70mA	329 x 80 x 220	314 x 55	M6	5.3
4A0091 4A0112	45 55	RF 3105-A1K	105A	3ph, 480V	0.7 / 70mA	379 x 90 x 220	364 x 65	M6	6.5
4A0150	75	RF 3170-A1K	170A	3ph, 480V	1.3 / 130mA	429 x 110 x 240	414 x 80	M6	9

Typical Circuit Schematic

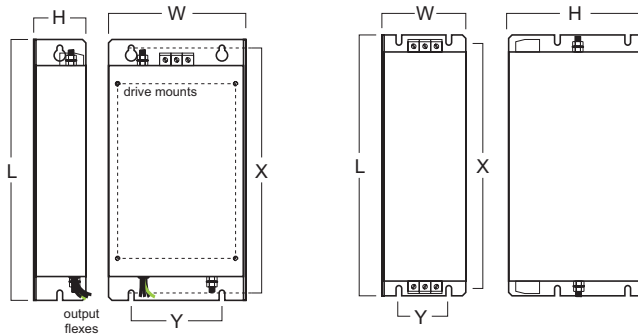


L1000A 200V

- The **A1K** range, for Yaskawa L1000A Series inverters.
- Help to ensure EMC compliance of lift installations using L1000A drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.
- Book-style filters mount beside the inverter.

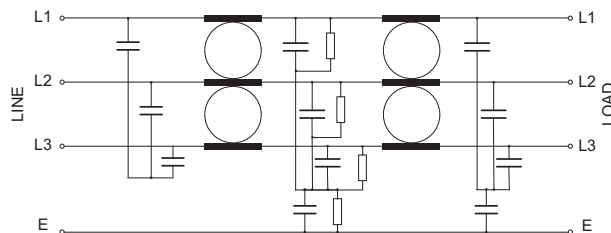


Dimensions



Inverter CIMR-LC	Motor kW	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
2A0018	4.0	RF 3024-A1K	24A	3ph, 480V	1.0 / 40mA	306 x 150 x 52	290 x 122	M5	2.0
2A0025 2A0033	5.5 7.5	RF 2052-A1K	52A	3ph, 250V	1.0 / 45mA	320 x 150 x 52	290 x 122	M5	2.4
2A0047	11	RF 2068-A1K	68A	3ph, 250V	1.0 / 45mA	362 x 188 x 62	330 x 160	M5	4.2
2A0060 2A0075	15 18.5	RF 2096-A1K	96A	3ph, 250V	1.0 / 45mA	415 x 220 x 62	380 x 192	M6	4.4
2A0085	22	RF 3105-A1K	105A	3ph, 480V	0.5 / 40mA	379 x 90 x 220	364 x 65	M6	6.5
2A0115 2A0145 2A0180	30 37 45	RF 3170-A1K	170A	3ph, 480V	1.0 / 80mA	429 x 110 x 240	414 x 80	M6	9

Typical Circuit Schematic

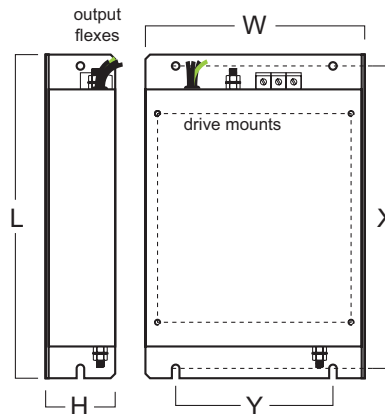


J7



- The **RS-J7** range, especially for Yaskawa J7 Series inverters.
- Help to ensure EMC compliance of machinery and installations using J7 drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.
- All filters are designed and manufactured to UL requirements.

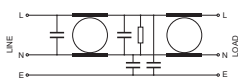
Dimensions



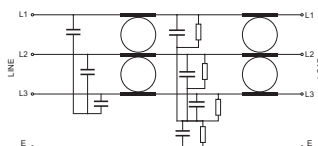
Applied Inverter CIMR-	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
J7AAB0P1 J7AAB0P2 J7AAB0P4	RS 1010-J7	10A	1ph, 250V	7.0mA	169 x 71 x 45	156 x 51	M4	0.6
J7AAB0P7 J7AAB1P5	RS 1020-J7	20A	1ph, 250V	7.0mA	169 x 111 x 50	156 x 91	M4	1.0
J7AA20P1 J7AA20P2 J7AA20P4 J7AA20P7	RS 2010-J7	10A	3ph, 250V	0.3 / 16mA	194 x 82 x 50	181 x 62	M4	0.8
J7AA21P5 J7AA22P2	RS 2020-J7	16A	3ph, 250V	0.3 / 16mA	169 x 111 x 50	156 x 91	M4	1.0
J7AA23P7	RS 2030-J7	26A	3ph, 250V	0.4 / 30mA	174 x 144 x 50	161 x 120	M4	1.3
J7AA40P2 J7AA40P4	RS 3005-J7	5A	3ph, 440V	0.5 / 29mA	169 x 111 x 50	156 x 91	M4	1.0
J7AA40P7 J7AA41P5 J7AA42P2	RS 3010-J7	10A	3ph, 440V	0.5 / 29mA	169 x 111 x 50	156 x 91	M4	1.0
J7AA43P0 J7AA43P7	RS 3020-J7	15A	3ph, 440V	0.5 / 29mA	174 x 144 x 50	161 x 120	M4	1.1

Typical Circuit Schematics

Single Phase



Three Phase

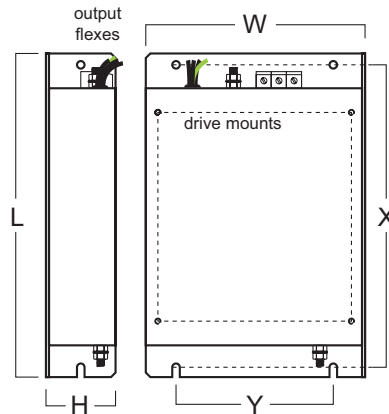


J7(LL)



- The **RS-J7(LL)** range, especially for Yaskawa J7 Series inverters.
- Low leakage current version.
- Help to ensure EMC compliance of machinery and installations using J7 drives on short motor cables, if low leakage current is required.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.

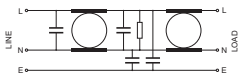
Dimensions



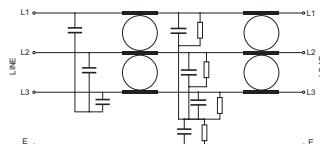
Applied Inverter CIMR-	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
J7AAB0P1 J7AAB0P2 J7AAB0P4	RS 1010-J7(LL)	10A	1ph, 250V	3.5mA	169 x 71 x 45	156 x 51	M4	0.6
J7AAB0P7 J7AAB1P5	RS 1020-J7(LL)	20A	1ph, 250V	3.5mA	169 x 111 x 50	156 x 91	M4	1.0
J7AA20P1 J7AA20P2 J7AA20P4 J7AA20P7	RS 2010-J7(LL)	10A	3ph, 250V	0.2 / 9mA	194 x 82 x 50	181 x 62	M4	0.8
J7AA21P5 J7AA22P2	RS 2020-J7(LL)	16A	3ph, 250V	0.2 / 9mA	169 x 111 x 50	156 x 91	M4	1.0
J7AA23P7	RS 2030-J7(LL)	26A	3ph, 250V	0.2 / 14mA	174 x 144 x 50	161 x 120	M4	1.3
J7AA40P2 J7AA40P4	RS 3005-J7(LL)	5A	3ph, 440V	0.3 / 14mA	169 x 111 x 50	156 x 91	M4	1.0
J7AA40P7 J7AA41P5 J7AA42P2	RS 3010-J7(LL)	10A	3ph, 440V	0.3 / 14mA	169 x 111 x 50	156 x 91	M4	1.0
J7AA43P0 J7AA43P7	RS 3020-J7(LL)	15A	3ph, 440V	0.3 / 14mA	174 x 144 x 50	161 x 120	M4	1.1

Typical Circuit Schematics

Single Phase



Three Phase

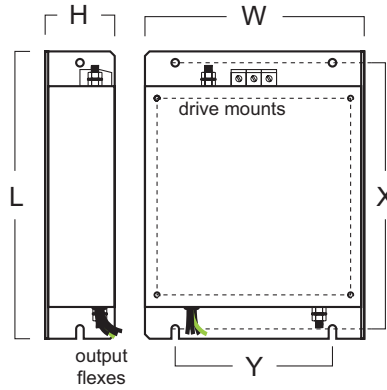


V7

- The **RS-V7** range, especially for Yaskawa V7 Series inverters.
- Help to ensure EMC compliance of machinery and installations using V7 drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.
- All filters are designed and manufactured to UL requirements.

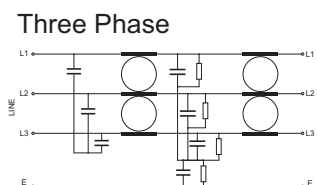
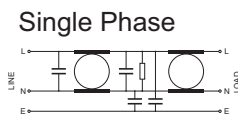


Dimensions



Applied Inverter CIMR-V7AA	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
B0P1 B0P2 B0P4	RS 1010-V7	10A	1ph, 250V	7.0mA	169 x 71 x 45	156 x 51	M4	0.6
B0P7 B1P5	RS 1020-V7	20A	1ph, 250V	7.0mA	169 x 111 x 50	156 x 91	M4	1.0
B2P2	RS 1030-V7	30A	1ph, 250V	3.5mA	174 x 144 x 50	161 x 120	M4	1.1
B4P0	RS 1040-V7	40A	1ph, 250V	3.5mA	174 x 174 x 50	161 x 150	M4	1.2
20P1 20P2 20P4 20P7	RS 2010-V7	10A	3ph, 250V	0.3 / 26mA	194 x 82 x 50	181 x 62	M4	0.8
21P5 22P2	RS 2020-V7	16A	3ph, 250V	0.3 / 16mA	169 x 111 x 50	156 x 91	M4	1.0
23P7	RS 2030-V7	26A	3ph, 250V	0.3 / 17mA	174 x 144 x 50	161 x 120	M4	1.3
25P5 27P5	RS 2050-V7	50A	3ph, 250V	0.6 / 57mA	304 x 184 x 56	288 x 150	M5	2.2
40P2 40P4 40P7	RS 3005-V7	5A	3ph, 480V	0.5 / 29mA	169 x 111 x 45	156 x 91	M4	1.0
41P5 42P2	RS 3010-V7	10A	3ph, 480V	0.5 / 29mA	169 x 111 x 45	156 x 91	M4	1.0
43P0 43P7	RS 3020-V7	15A	3ph, 480V	0.5 / 29mA	174 x 144 x 50	161 x 120	M4	1.1
45P5 47P5	RS 3030-V7	30A	3ph, 480V	0.7 / 60mA	304 x 184 x 56	288 x 150	M5	1.8

Typical Circuit Schematics

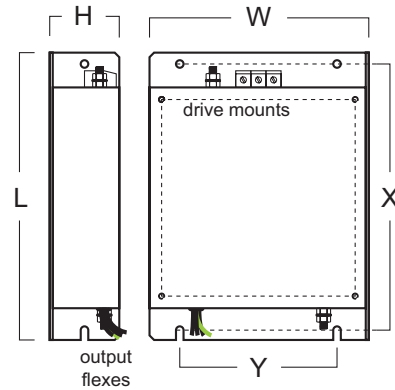


V7(LL)

- The **RS-V7(LL)** range, especially for Yaskawa V7 Series inverters.
- Low leakage current version.
- Help to ensure EMC compliance of machinery and installations using V7 drives on short motor cables, if low leakage current is required.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets.



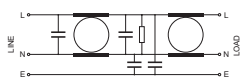
Dimensions



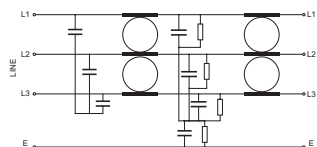
Applied Inverter CIMR-V7AA	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Inverter Fixing	wt (kg)
B0P1 B0P2 B0P4	RS 1010-V7(LL)	10A	1ph, 250V	3.5mA	169 x 71 x 45	156 x 51	M4	0.6
B0P7 B1P5	RS 1020-V7(LL)	20A	1ph, 250V	3.5mA	169 x 111 x 50	156 x 91	M4	1.0
B2P2	RS 1030-V7(LL)	30A	1ph, 250V	1.8mA	174 x 144 x 50	161 x 120	M4	1.1
B4P0	RS 1040-V7(LL)	40A	1ph, 250V	1.8mA	174 x 174 x 50	161 x 150	M4	1.2
20P1 20P2 20P4 20P7	RS 2010-V7(LL)	10A	3ph, 250V	0.2 / 14mA	194 x 82 x 50	181 x 62	M4	0.8
21P5 22P2	RS 2020-V7(LL)	16A	3ph, 250V	0.2 / 9mA	169 x 111 x 50	156 x 91	M4	1.0
23P7	RS 2030-V7(LL)	26A	3ph, 250V	0.2 / 9mA	174 x 144 x 50	161 x 120	M4	1.3
25P5 27P5	RS 2050-V7(LL)	50A	3ph, 250V	0.4 / 29mA	304 x 184 x 56	288 x 150	M5	2.2
40P2 40P4 40P7	RS 3005-V7(LL)	5A	3ph, 480V	0.3 / 14mA	169 x 111 x 45	156 x 91	M4	1.0
41P5 42P2	RS 3010-V7(LL)	10A	3ph, 480V	0.3 / 14mA	169 x 111 x 45	156 x 91	M4	1.0
43P0 43P7	RS 3020-V7(LL)	15A	3ph, 480V	0.3 / 14mA	174 x 144 x 50	161 x 120	M4	1.1
45P5 47P5	RS 3030-V7(LL)	30A	3ph, 480V	0.5 / 29mA	304 x 184 x 56	288 x 150	M5	1.8

Typical Circuit Schematics

Single Phase



Three Phase

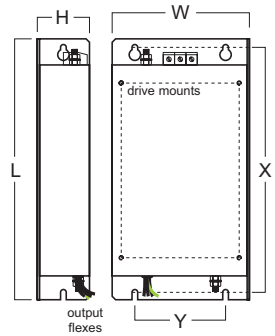


F7 E7 200V

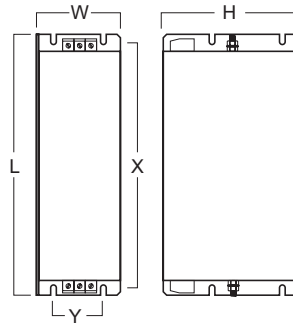
- The **F7 200V** range, especially for Yaskawa F7 and E7 200V Series inverters.
- Help to ensure EMC compliance of machinery and installations using F7 and E7 drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets. Block type filters mount beside the inverter.
- Filters are designed and manufactured to UL requirements.



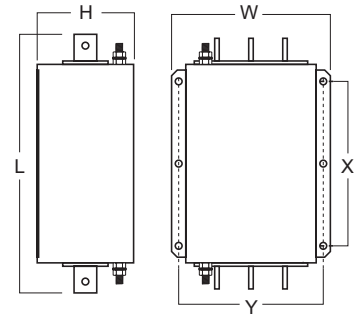
Footprint Dimensions



Book Type Dimensions



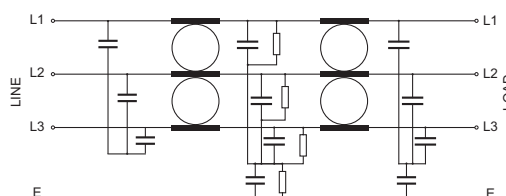
Block Type



Three Phase 250Vac

Applied F7 Inverter CIMR-F7C	Applied E7 Inverter CIMR-E7C	Filter Part No	Rated Current	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Filter Fixing	
20P4 20P7 21P5	20P4 20P7 21P5	RS 3010-F7	10A	0.2mA / 22mA	330 x 143 x 46	313 x 115	M4	
22P2	22P2	RS 3018-F7	18A	0.2mA / 22mA	330 x 143 x 46	313 x 115	M4	
23P7 25P5	23P7 25P5	RS 2035-F7	35A	0.4mA / 45mA	330 x 143 x 46	313 x 115	M4	
27P5 2011	27P5 2011	RS 2060-F7	60A	0.7mA / 80mA	355 x 213 x 60	336 x 175	M6	
2015 2018	2015 2018	RS 2100-F7	100A	0.7mA / 80mA	408 x 238 x 80	390 x 205	M6	
2022 2030	2022 2030	RS 2130-F7	130A	0.7mA / 80mA	310 x 90 x 180	295 x 65	M6	
2037	2037	RS 2160-F7	160A	1.3mA / 140mA	380 x 120 x 170	365 x 102	M6	
2045	2045	RS 2200-F7	200A	1.3mA / 140mA	518 x 130 x 240	498 x 90	M8	
2055	2055	RS 2250-F7	250A	1.3mA / 140mA	518 x 130 x 240	498 x 90	M8	
2075	2075	RS 3320-F7	320A	5mA / 250mA	518 x 130 x 240	498 x 90	M8	
2090	2090	RS 3400-F7	400A	5mA / 250mA	518 x 130 x 240	498 x 90	M8	
2110	2110	RS 3600-F7	600A	5mA / 250mA	518 x 130 x 240	498 x 90	M8	

Typical Circuit Schematic

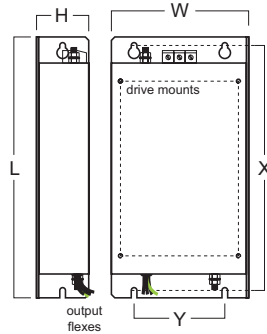


F7 E7 400V

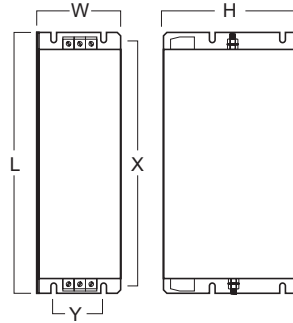
- The **F7 400V** range, especially for Yaskawa F7 and E7 400V Series inverters.
- 200V range also available for Yaskawa F7 and E7 200V Series inverters.
- Help to ensure EMC compliance of machinery and installations using F7 and E7 drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets. Block type filters mount beside the inverter.
- Filters are designed and manufactured to UL requirements.



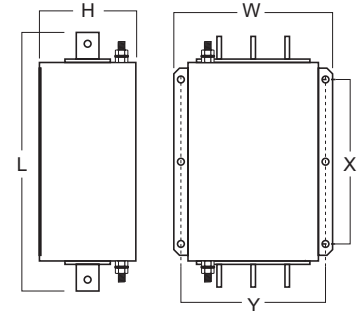
Footprint Dimensions



Book Type Dimensions



Block Type



Three Phase 480Vac

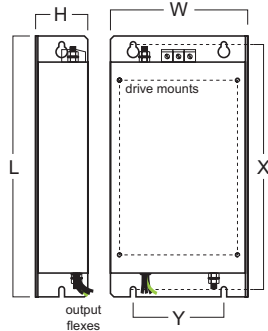
Applied F7 Inverter CIMR-F7C	Applied E7 Inverter CIMR-E7C	Filter Part No	Rated Current	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Filter Fixing	
40P4 40P7 41P5 42P2	40P4 40P7 41P5 42P2	RS 3010-F7	10A	0.3mA / 40mA	330 x 143 x 46	313 x 115	M5	
43P7 45P5	43P7 45P5	RS 3018-F7	18A	0.3mA / 40mA	330 x 143 x 46	313 x 115	M5	
47P5 4011	47P5 4011	RS 3035-F7	35A	0.3mA / 40mA	355 x 213 x 51	336 x 175	M6	
4015 4018	4015 4018	RS 3060-F7	60A	0.3mA / 40mA	408 x 238 x 60	390 x 205	M6	
4022 4030	4022 4030	RS 3070-FP7	70A	0.3mA / 40mA	508 x 275 x 65	490 x 220	M6	
4037 4045	4037 4045	RS 3100-FP7	100A	0.3mA / 40mA	631 x 330 x 65	609 x 260	M6	
4055	4055	RS 3130-FP7	130A	3mA / 250mA	661 x 330 x 110	631 x 260	M6	
4022 4030	4022 4030	RS 3070-F7	70A	0.6mA / 72mA	329 x 80 x 220	314 x 55	M6	
4037 4045	4037 4045	RS 3100-F7	100A	1.3mA / 150mA	310 x 90 x 180	295 x 65	M6	
4055	4055	RS 3130-F7	130A	1.3mA / 150mA	310 x 90 x 180	295 x 65	M6	
4075	4075	RS 3170-F7	170A	2.5mA / 270mA	380 x 120 x 180	365 x 102	M6	
4090	4090	RS 3200-F7	200A	2.5mA / 270mA	518 x 130 x 240	498 x 90	M8	
4110	4110	RS 3250-F7	250A	2.5mA / 270mA	518 x 130 x 240	498 x 90	M8	
4132	4132	RS 3320-F7	320A	10mA / 500mA	386 x 260 x 135	240 x 235	M10	
4160	4160	RS 3400-F7	400A	10mA / 500mA	386 x 260 x 135	240 x 235	M10	
4220	4220	RS 3600-F7	600A	10mA / 500mA	386 x 260 x 135	240 x 235	M10	
4300	4300	RS 3800-F7	800A	10mA / 500mA	456 x 280 x 150	290 x 255	M10	

F7 400V (LL)

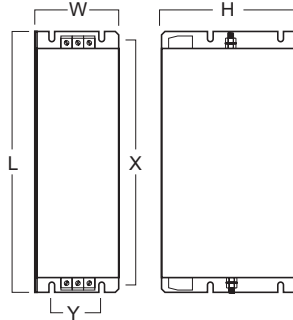


- The **F7 400V (LL)** range, especially for Yaskawa F7 and E7 400V Series inverters.
- 200V range also available for Yaskawa F7 and E7 200V Series inverters.
- Low leakage current version.
- Help to ensure EMC compliance of machinery and installations using F7 and E7 drives on short motor cables, if low leakage current is required.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets. Block type filters mount beside the inverter.

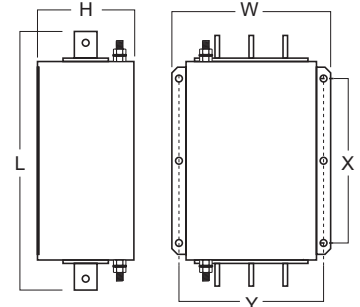
Footprint Dimensions



Book Type Dimensions



Block Type



Three Phase 480Vac

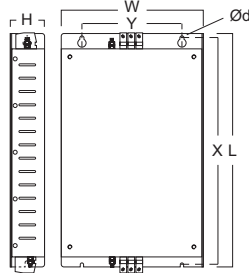
Applied F7 Inverter CIMR-F7C	Applied E7 Inverter CIMR-E7C	Filter Part No	Rated Current	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Filter Fixing	
40P4 40P7 41P5 42P2	40P4 40P7 41P5 42P2	RS 3010-F7(LL)	10A	0.2mA / 20mA	330 x 143 x 46	313 x 115	M5	
43P7 45P5	43P7 45P5	RS 3018-F7(LL)	18A	0.2mA / 20mA	330 x 143 x 46	313 x 115	M5	
47P5 4011	47P5 4011	RS 3035-F7(LL)	35A	0.2mA / 20mA	355 x 213 x 51	336 x 175	M6	
4015 4018	4015 4018	RS 3060-F7(LL)	60A	0.2mA / 20mA	408 x 238 x 60	390 x 205	M6	
4022 4030	4022 4030	RS 3070-FP7(LL)	70A	0.2mA / 20mA	508 x 275 x 65	490 x 220	M6	
4037 4045	4037 4045	RS 3100-FP7(LL)	100A	0.2mA / 20mA	631 x 330 x 65	609 x 260	M6	
4055	4055	RS 3130-FP7(LL)	130A	2mA / 125mA	661 x 330 x 110	631 x 260	M6	
4022 4030	4022 4030	RS 3070-F7(LL)	70A	0.3mA / 40mA	329 x 80 x 220	314 x 55	M6	
4037 4045	4037 4045	RS 3100-F7(LL)	100A	0.8mA / 75mA	310 x 90 x 180	295 x 65	M6	
4055	4055	RS 3130-F7(LL)	130A	0.8mA / 75mA	310 x 90 x 180	295 x 65	M6	
4075	4075	RS 3170-F7(LL)	170A	1.3mA / 130mA	380 x 120 x 180	365 x 102	M6	
4090	4090	RS 3200-F7(LL)	200A	1.3mA / 130mA	518 x 130 x 240	498 x 90	M8	
4110	4110	RS 3250-F7(LL)	250A	1.3mA / 130mA	518 x 130 x 240	498 x 90	M8	
4132	4132	RS 3320-F7(LL)	320A	5mA / 250mA	386 x 260 x 135	240 x 235	M10	
4160	4160	RS 3400-F7(LL)	400A	5mA / 250mA	386 x 260 x 135	240 x 235	M10	
4220	4220	RS 3600-F7(LL)	600A	5mA / 250mA	386 x 260 x 135	240 x 235	M10	
4300	4300	RS 3800-F7(LL)	800A	5mA / 250mA	456 x 280 x 150	290 x 255	M10	

G5

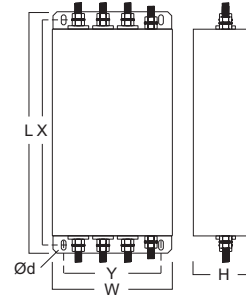


- The **RS-G5** range, especially for Yaskawa G5 and P5 Series inverters.
- Help to ensure EMC compliance of machinery and installations using G5 and P5 drives.
- Footprint filters mount between the inverter and the panel, saving valuable space inside wiring cabinets. Block type filters mount beside the inverter.

Footprint Dimensions



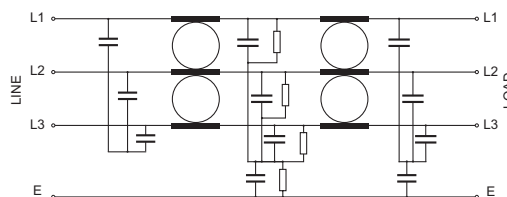
Block Type Dimensions



Three Phase 480Vac

Applied G5 Inverter	Applied P5 Inverter	Filter Part No	Rated Current	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Filter Fixing	
CIMR-G5E40P4 CIMR-G5E40P7 CIMR-G5E41P5		RS 3008-G5	8A	0.5 / 40mA	320 x 143 x 46	309 x 90	M4	
CIMR-G5E42P2 CIMR-G5E43P7	CIMR-P5E43P7	RS 3020-G5	20A	0.5 / 40mA	320 x 143 x 46	309 x 90	M4	
CIMR-G5E45P5 CIMR-G5E47P5	CIMR-P5E45P5 CIMR-P5E47P5	RS 3030-G5	30A	0.5 / 40mA	350 x 213 x 51	332 x 150	M6	
CIMR-G5E4011 CIMR-G5E4015	CIMR-P5E4011 CIMR-P5E4015	RS 3060-G5	60A	0.5 / 40mA	435 x 268 x 56	415 x 200	M6	
CIMR-G5E4018 CIMR-G5E4022	CIMR-P5E4018 CIMR-P5E4022	RS 3080-G5	80A	0.5 / 40mA	365 x 180 x 90	338 x 146	M6	
CIMR-G5E4030	CIMR-P5E4030	RS 3100-G5	100A	1.3 / 150mA	435 x 200 x 130	408 x 166	M6	
CIMR-G5E4037	CIMR-P5E4037	RS 3150-G5	150A	1.3 / 150mA	495 x 200 x 160	338 x 146	M6	
CIMR-G5E4045	CIMR-P5E4045	RS 3160-G5	160A	1.3 / 150mA	495 x 200 x 160	408 x 166	M6	
CIMR-G5E4055	CIMR-P5E4055	RS 3180-G5	180A	1.3 / 150mA	495 x 200 x 160	408 x 166	M6	
CIMR-G5E4075 CIMR-G5E4110	CIMR-P5E4075 CIMR-P5E4110	RS 3300-G5	300A	1.3 / 150mA	587 x 250 x 205	468 x 166	M6	
CIMR-G5E4160	CIMR-P5E4160	RS 3400-G5	400A	1.3 / 150mA	587 x 250 x 205	468 x 166	M6	
CIMR-G5E4185 CIMR-G5E4220	CIMR-P5E4185 CIMR-P5E4220	RS 3600-G5	600A	3.0 / 250mA	688 x 364 x 180	560 x 170	M6	
CIMR-G5E4300	CIMR-P5E4300	RS 3900-G5	900A	3.0 / 250mA	688 x 364 x 180	648 x 300	M8	

Typical Circuit Schematic

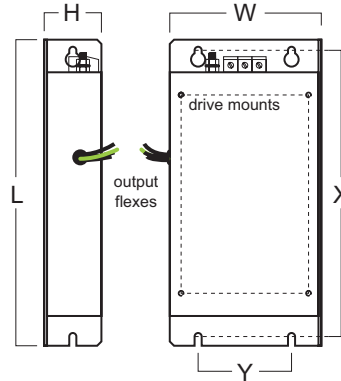


Sigma-II



- The **RS-SG** range, especially for Yaskawa Σ -II Series AC servo drives.
- Help to ensure EMC compliance of machinery and installations using Σ -II drives.
- Footprint filters mount between the servo drive and the panel, saving valuable space inside wiring cabinets.
- All filters are designed and manufactured to UL requirements.

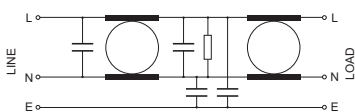
Footprint Dimensions



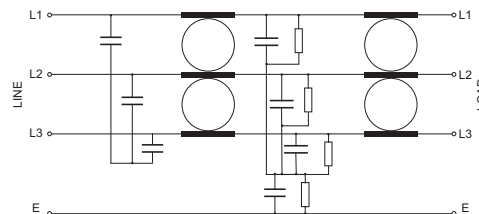
Servo Drive SGDH-	motor kW	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Filter Fixing
A3E A5E 01E 02E	0.03 0.05 0.1 0.2	RS 1004-SG	4A	1ph, 250V	3.5mA	202 x 55 x 32	192 x 33	M4
04E	0.4	RS 1007-SG	7A	1ph, 250V	3.5mA	202 x 75 x 32	192 x 50	M4
08E-S	0.8	RS 1015-SG	15A	1ph, 250V	3.5mA	202 x 90 x 32	192 x 60	M4
15E-S	1.5	RS 1025-SG	25A	1ph, 250V	3.5mA	291 x 118 x 35	281 x 80	M4
05DE 10DE 15DE	0.5 1.0 1.5	RS 3006-SG	6A	3ph, 480V	0.3mA / 33mA	202 x 118 x 32	192 x 80	M4
20DE 30DE	2.0 3.0	RS 3010-SG	10A	3ph, 480V	0.3mA / 33mA	291 x 118 x 35	281 x 80	M4
50DE	5.0	RS 3018-SG	18A	3ph, 480V	0.3mA / 40mA	291 x 143 x 45	281 x 105	M4
60DE 75DE	6.0 7.5	RS 3024-SG	24A	3ph, 480V	0.3mA / 40mA	400 x 230 x 52	390 x 160	M6

Typical Circuit Schematics

Single Phase



Three Phase

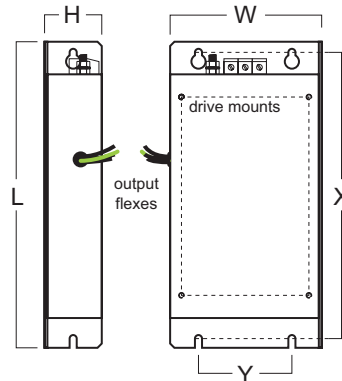


XD

- The **RS-XD** range, especially for Yaskawa XtraDrive Series AC servo drives.
- Help to ensure EMC compliance of machinery and installations using XD drives.
- Footprint filters mount between the servo drive and the panel, saving valuable space inside wiring cabinets.

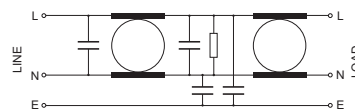


Footprint Dimensions



Servo Drive XD-	motor kW	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Filter Fixing
P3-M P5-M 01-M 02-M 04-M	0.03 0.05 0.1 0.2 0.4	RS 1007-SG	7A	1ph, 250V	3.5mA	202 x 75 x 32	192 x 50	M4
08-M	0.75	RS 1015-XD	15A	1ph, 250V	3.5mA	202 x 90 x 32	192 x 60	M4

Typical Circuit Schematics

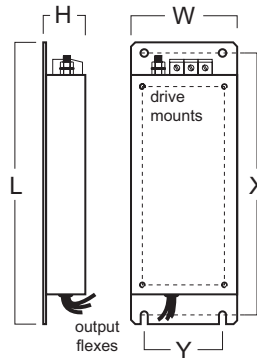


Sigma-5

- The **RF-SG5** range, especially for Yaskawa Sigma-5 Series AC servo drives.
- Help to ensure EMC compliance of machinery and installations using Sigma-5 servo drives.
- Footprint filters mount between the servo drive and the panel, saving valuable space inside wiring cabinets.



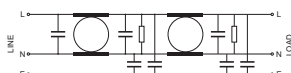
Footprint Dimensions



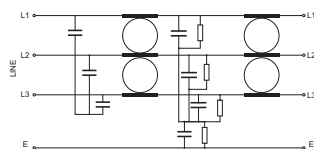
Servo Drive SGDV-	motor kW	Filter Part No	Rated Current	Max Rated Voltage	Leakage current Nom / Max	External L x W x H (mm)	Mount Dims X x Y (mm)	Filter Fixing	
R70A R90A 1R6A 2R8A	0.05 0.1 0.2 0.4	RF 1005-SG5	5A	1ph, 250V	3.5mA	200 x 44 x 30	190 x 20	M4	
5R5A	0.75	RF 1009-SG5	9A	1ph, 250V	3.5mA	200 x 72 x 30	190 x 50	M4	
120A	1.5	RF 1016-SG5	16A	1ph, 250V	3.5mA	220 x 104 x 40	210 x 80	M4	
1R9D 3R5D 5R4D	0.5 1.0 1.5	RF 3004-SG5	4.3A	3ph, 480V	0.3mA / 29mA	200 x 114 x 40	190 x 90	M4	
8R4D 120D	2.0 3.0	RF 3008-SG5	8.6A	3ph, 480V	0.3mA / 28mA	290 x 116 x 40	279 x 90	M5	
170D	5.0	RF 3012-SG5	14.5A	3ph, 480V	0.3mA / 28mA	290 x 141 x 45	279 x 115	M5	
210D 260D	6.0 7.5	RF 3022-SG5	22A	3ph, 480V	0.3mA / 40mA	400 x 230 x 50	385 x 180	M6	
280D 370D	11 15	RF 3044-SG5	44A	3ph, 480V	0.3mA / 40mA	456 x 230 x 52	441 x 180	M6	

Typical Circuit Schematics

Single Phase



Three Phase

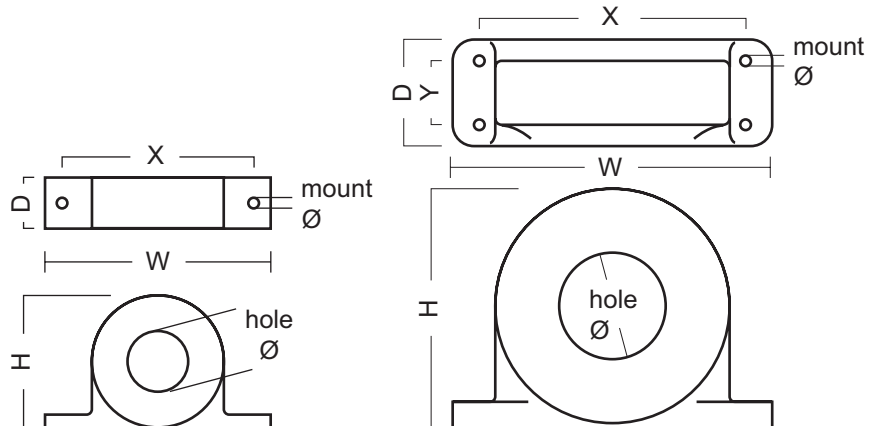


Output Chokes

- A range of ferrite chokes with many uses in wiring panels.
- Recommended for use on long motor cables, to reduce radiated emissions.
- Also useful on other cables, where RF interference needs to be reduced.
- Insulated case with mounting feet, for tidy installation on panels.

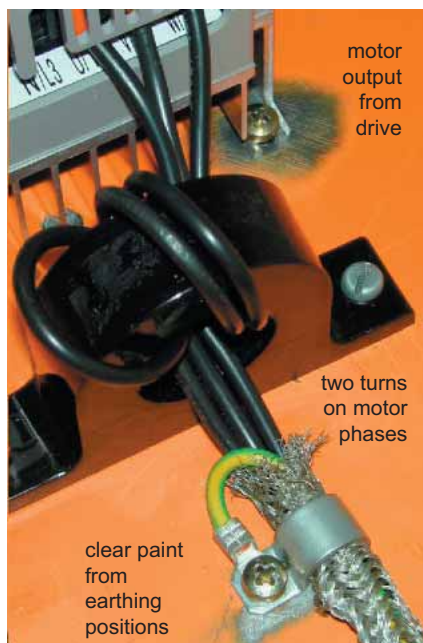


Dimensions



Part Number	max Motor rating (kW)	cable hole Ø (mm)	A_L (μH)	External W x H x D (mm)	Mount Dims X x Y (mm)	Fixing Ø (mm)	wt (kg)
RS-OC/1	2.2	21	9	85 x 46 x 22	90	5.0	0.1
RS-OC/2	15	28.5	12	106 x 62 x 24	70	5.0	0.2
RS-OC/3	45	50	14	150 x 112 x 50	125 x 30	5.0	0.7
RS-OC/4	>45	60	14	200 x 170 x 65	180 x 45	6.0	1.7

Typical Installation



The picture shows typical installation of an OC/2 choke.

The phase wires only of the drive output cable are passed through the choke twice.

The cable screen/armour is not passed through the choke as it is earthed at both panel and motor ends.

The screen can be passed through the choke on control cables **ONLY IF** it is not earthed at one end.

