ACCESSORIES

B.1 Non-fuse Circuit Breaker Chart

Per UL 508C, paragraph 44.8.6, part a,

1. For 1-phase drives, the current rating of the breaker shall be four times maximum of input current rating.
2. For 3-phase drives, the current rating of the breaker shall be four times maximum of output current rating.

(Note: Please select enough current capacity of NFB.)

1-phase		**3-phase**	
Model	Input Current (A)	Model	Output Current (A)
VFD002S11A/B	6.0	VFD002S23A/B	1.6
VFD002S21A/B/E	4.9	VFD004S23A/B	2.5
VFD004S11A/B	9.0	VFD004S43A/B/E	1.5
VFD004S21A/B/E	6.5	VFD007S23A/B	4.2
VFD007S11A/B	18.0	VFD007S43A/B/E	2.5
VFD007S21A/B/E	9.7	VFD015S23A/B/D	7.5
VFD015S21A/B/D/E	15.7	VFD015S43A/B/E	4.2
VFD022S21A/B/D/E	24	VFD022S23A/B/D	11.0
		VFD022S43A/B/E	5.5

Fuse Specification Chart

Smaller fuses than those shown in the table are permitted.

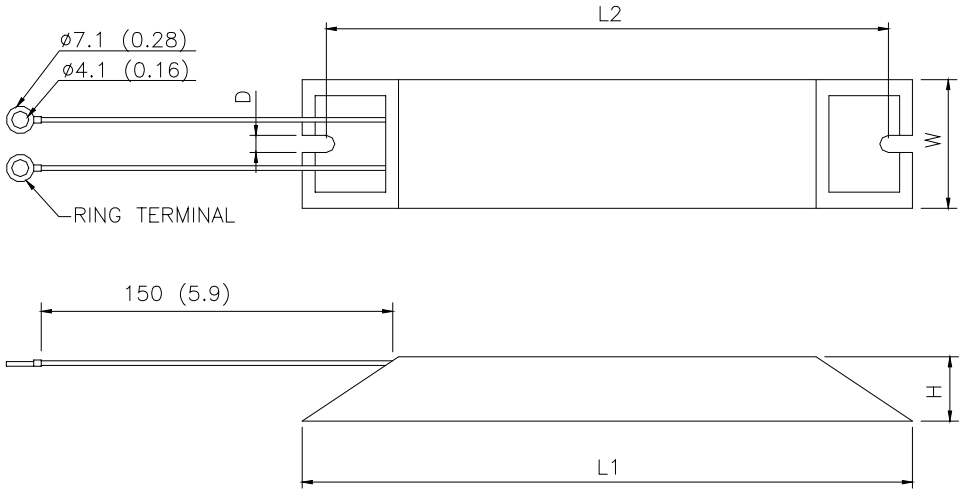
Model	I (input)(A)	I (output)(A)	Line Fuse	
			I (A)	Bussmann P/N
VFD002S11A/B	6.0	1.6	15	JJN-15
VFD002S21A/B/E	4.9	1.6	15	JJN-15
VFD002S23A/B	1.9	1.6	6	JJN-6
VFD004S11A/B	9.0	2.5	30	JJN-30
VFD004S21A/B/E	6.5	2.5	20	JJN-20
VFD004S23A/B	2.7	2.5	10	JJN-10
VFD004S43A/B/E	1.7	1.5	6	JJS-6
VFD007S11A/B	18.0	4.2	50	JJN-50
VFD007S21A/B/E	9.7	4.2	30	JJN-30
VFD007S23A/B	5.1	4.2	15	JJN-15
VFD007S43A/B/E	2.9	2.5	10	JJS-10
VFD015S21A/B/D/E	15.7	7.5	50	JJN-50
VFD015S23A/B/D	9.0	7.5	30	JJN-30
VFD015S43A/B/E	5.1	4.2	15	JJS-15
VFD022S21A/B/D/E	24	11	50	JJN-50
VFD022S23A/B/D	15.0	11.0	40	JJN-40
VFD022S43A/B/E	6.9	5.5	20	JJS-20

B.2 Braking Resistor and Unit chart for use with all Delta AC Drives

Voltage	Applicable Motor		Full Load Torque Kgf-M	Resistors Specification	Braking Resistors Model No of Units Used		Braking Torque 10%ED	Minimum Resistance rates
	HP	kW						
115V / 230V Series	1/4	0.2	0.110	80W 200Ω	BR080W200	1	400	---
	1/2	0.4	0.216	80W 200Ω	BR080W200	1	220	---
	1	0.75	0.427	80W 200Ω	BR080W200	1	125	80Ω
	2	1.5	0.849	300W 100Ω	BR300W100	1	125	55Ω
	3	2.2	1.262	300W 70Ω	BR300W070	1	125	35Ω
460V Series	1/2	0.4	0.216	80W 750Ω	BR080W750	1	230	---
	1	0.75	0.427	80W 750Ω	BR080W750	1	125	260Ω
	2	1.5	0.849	300W 400Ω	BR300W400	1	125	190Ω
	3	2.2	1.262	300W 250Ω	BR300W250	1	125	145Ω

Braking Resistor Dimensions

Unit: mm (inch)



TYPE	L1	L2	H	D	W	MAX. WEIGHT (g)
MVR200W120	165	150	20	5.3	40	240
MVR400W120	165	150	20	5.3	40	240
BR080W200	140	125	20	5.3	60	160
BR080W750	140	125	20	5.3	60	160
BR300W070	215	200	30	5.3	60	750
BR300W100	215	200	30	5.3	60	750
BR300W250	215	200	30	5.3	60	750
BR300W400	215	200	30	5.3	60	750

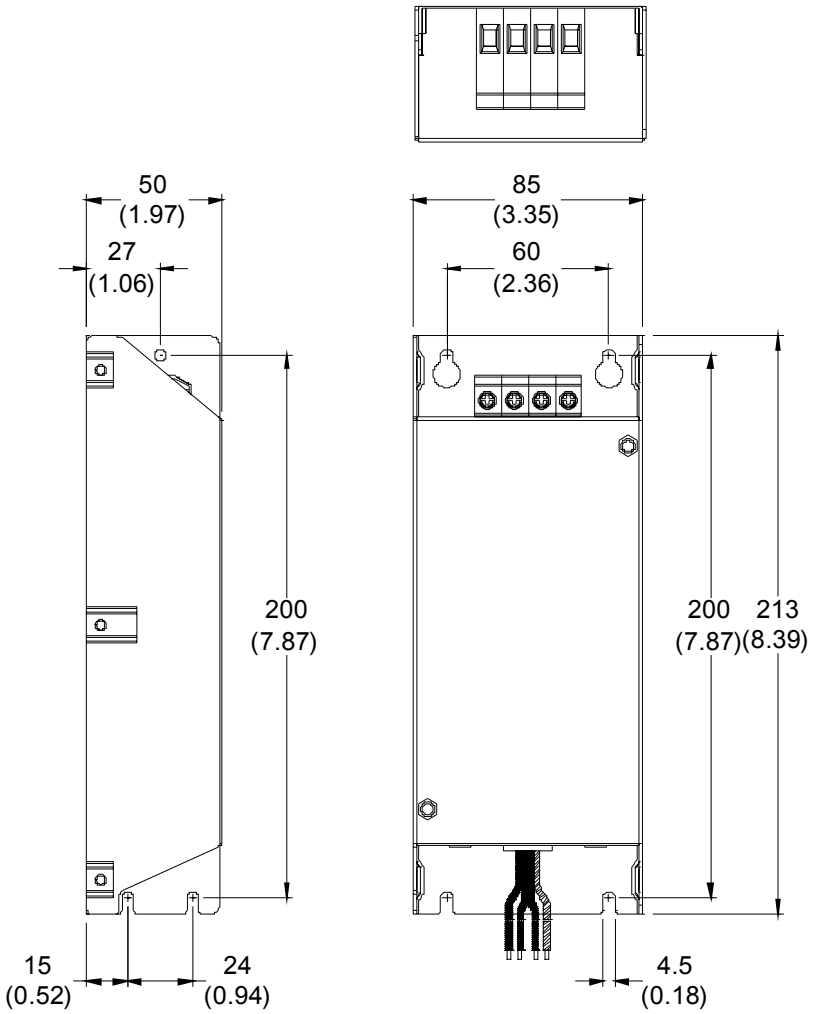
B

B.3 EMI Filters

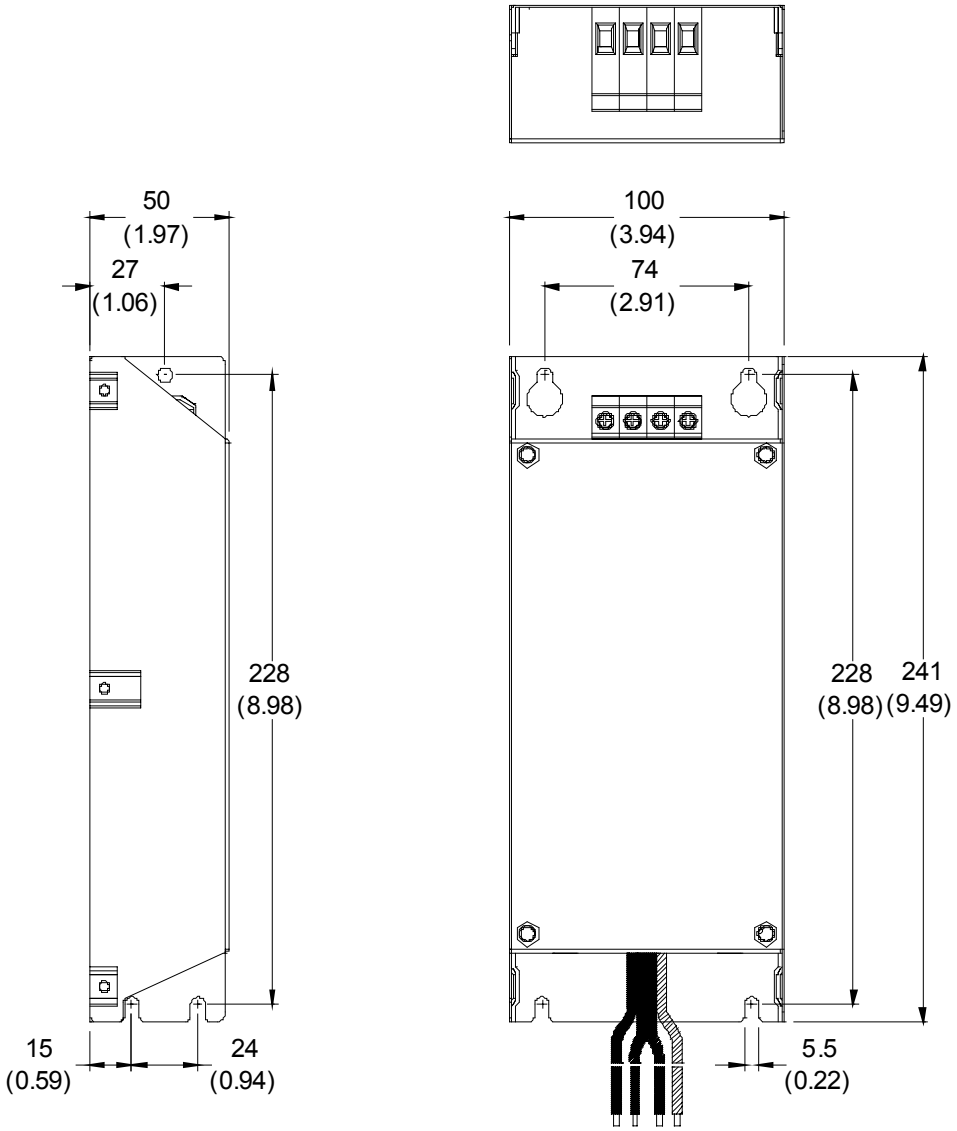
The DELTA VFD-S Series 0.25-3HP, 115V, 230V, 460V AC drive uses DELTA EMI Filter. Use the table below to find the appropriate filter for your DELTA VFD-S drive.

Model of AC Motor Drive	EMI Filter
VFD002S21A/E, VFD004S21A/E, VFD007S21A/E	RF007S21AA
VFD015S21D/E, VFD022S21/D/E	RF022S21BA
VFD004S43A, VFD007S43A	RF007S43AA
VFD015S43A, VFD022S43A	RF022S43BA
VFD002S11A, VFD004S11A	12DKT1W3S
VFD002S23A, VFD004S23A, VFD007S23A	08TDT1W4S
VFD007S11A, VFD015S21A	22DRT1W3S
VFD015S23A, VFD022S23A	20TDT1W4S
VFD022S21A	35DRT1W3C

EMI Filter (RF007S21AA/ RF007S43AA)



EMI Filter (RF022S21BA / RF022S43BA)



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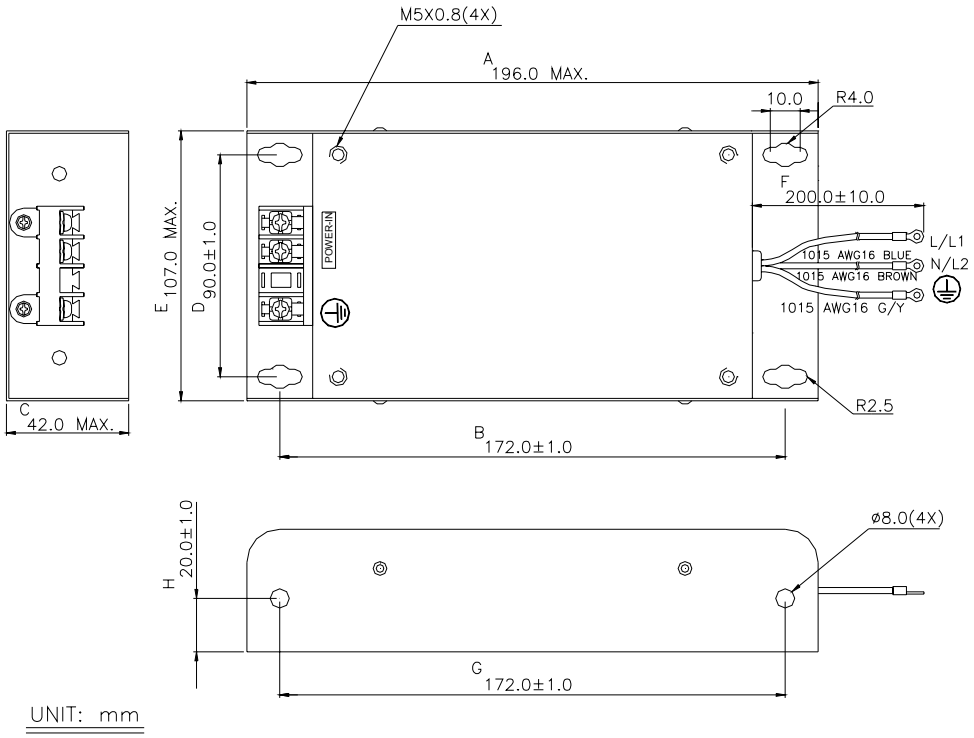
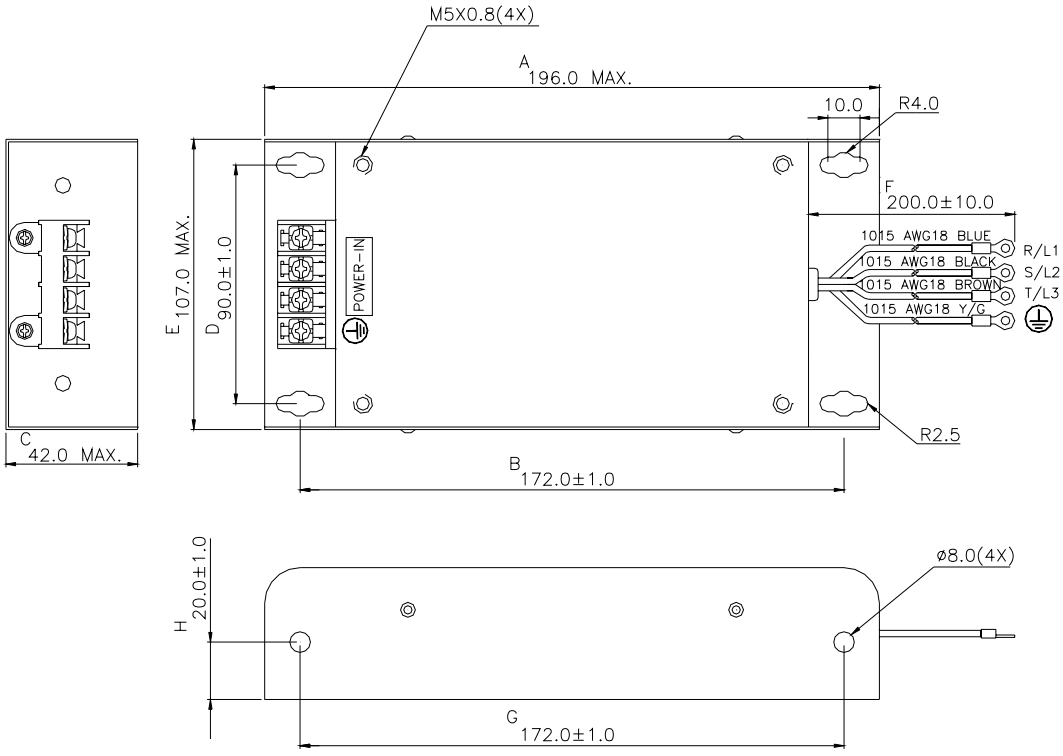
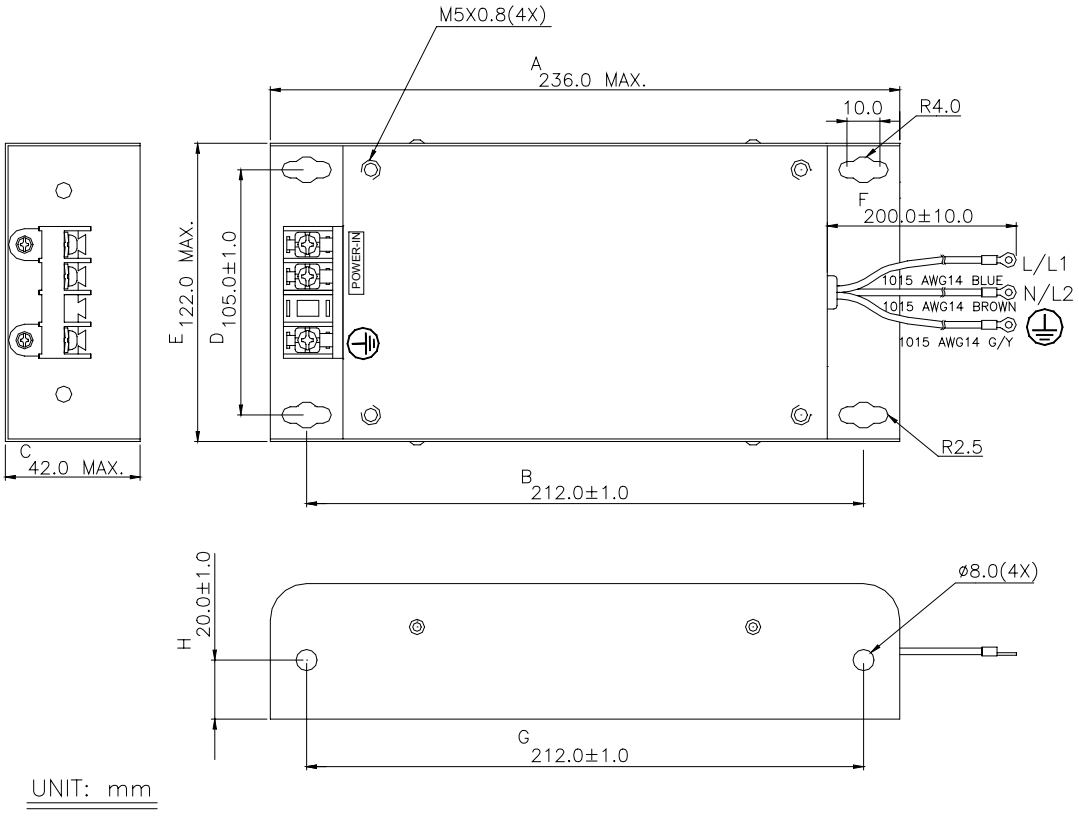
EMI Filter (12DKT1W3S)



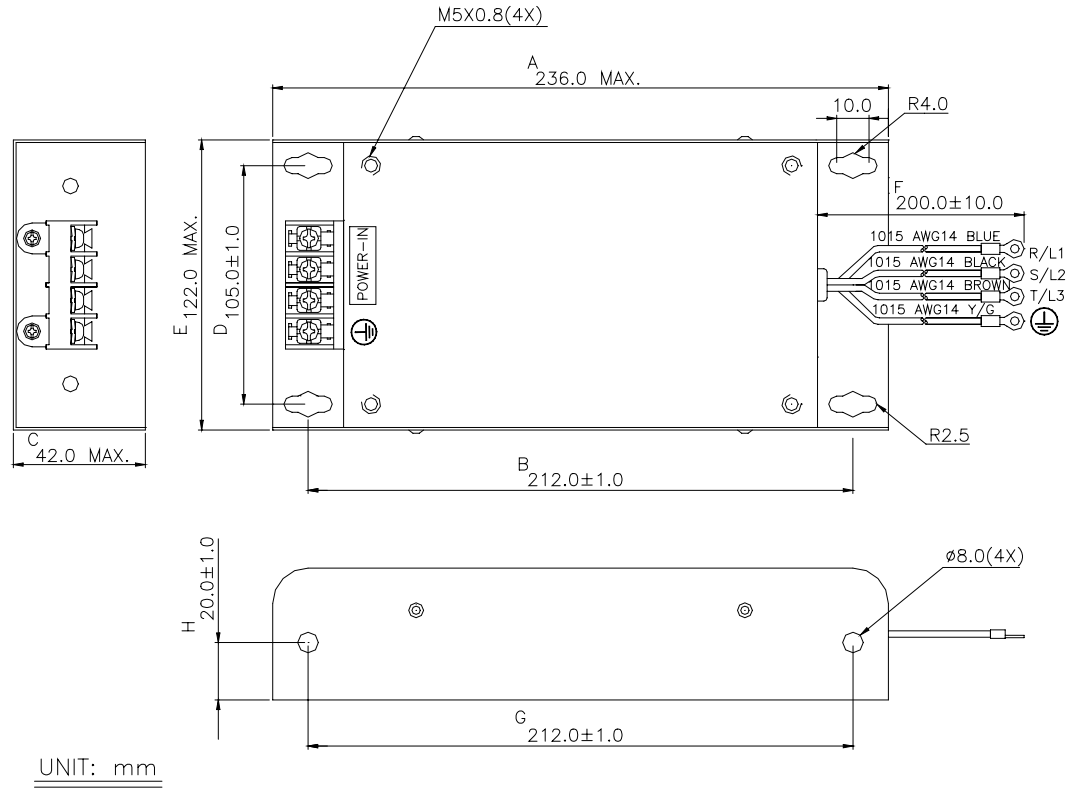
EMI Filter (08TDT1W4S)



EMI Filter (22DRT1W3S)

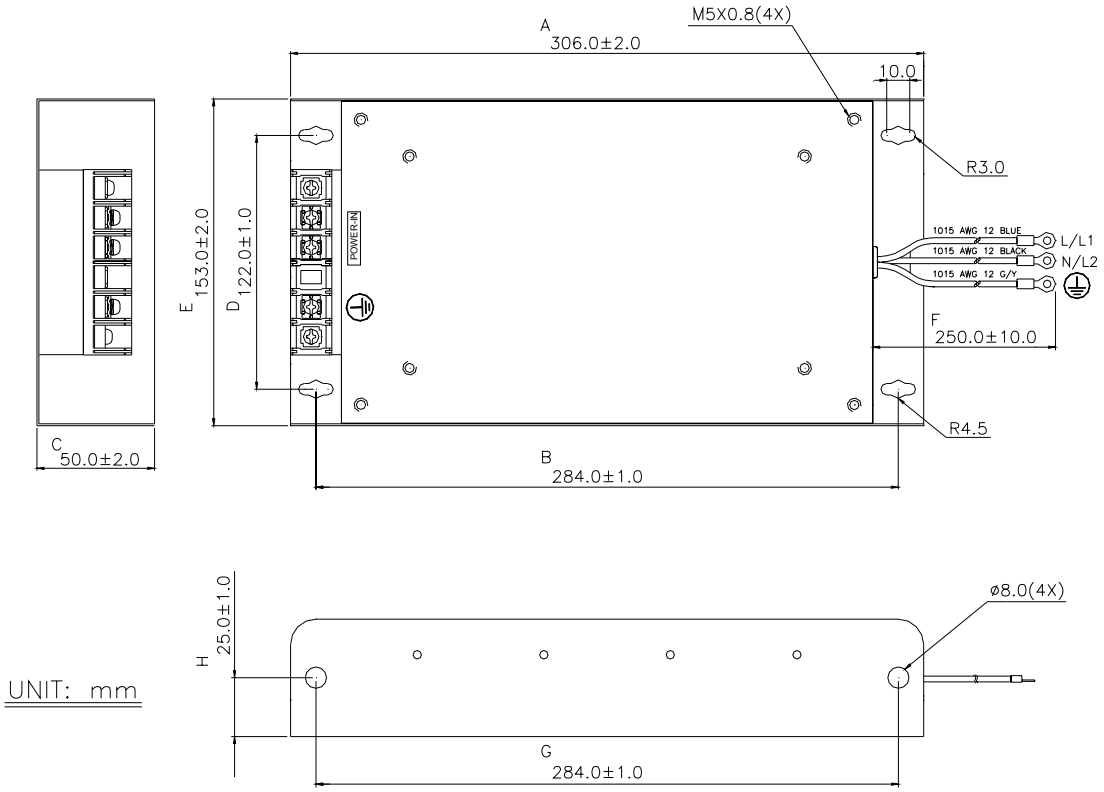


EMI Filter (20TDT1W4S)



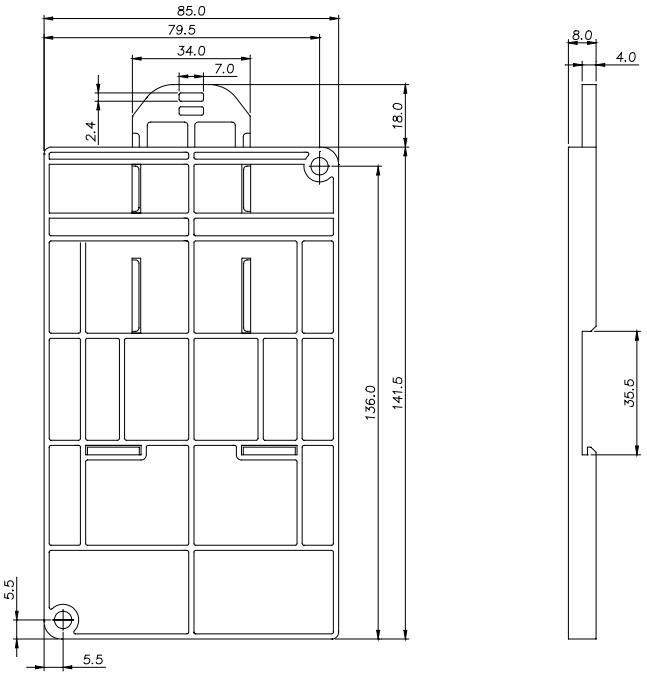
B

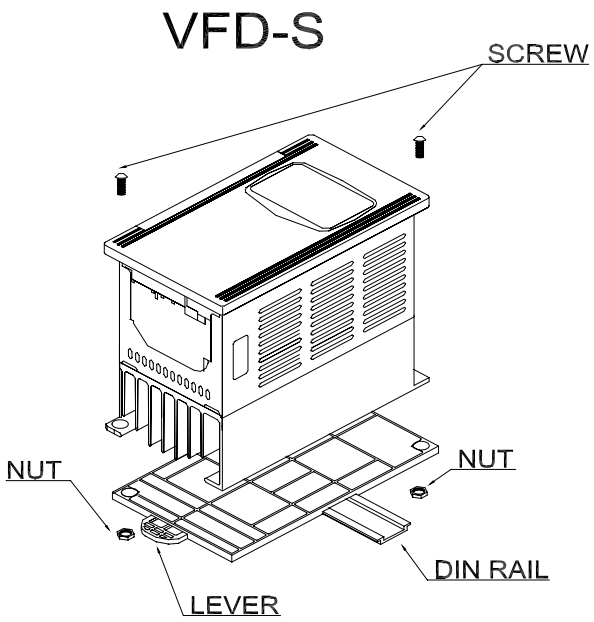
EMI Filter (35DRT1W3C)



B.4 Din Rail-DR01

Units: mm





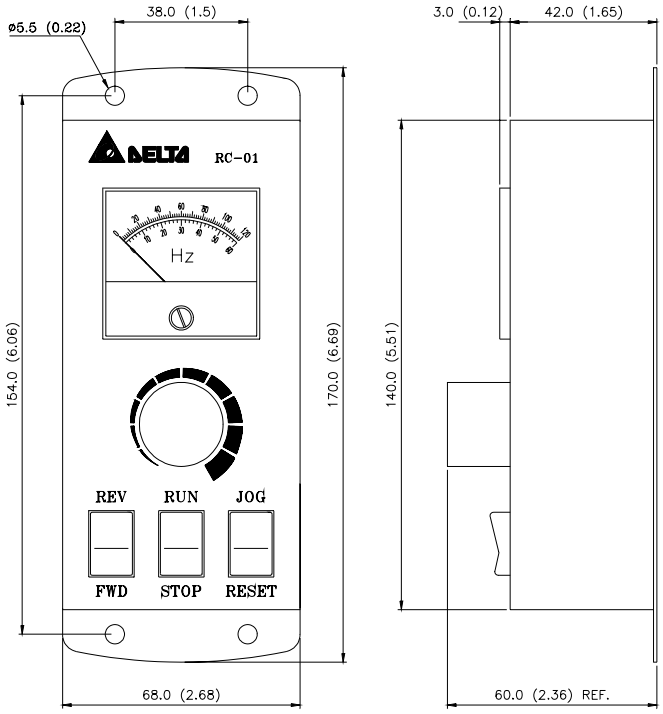
Models	Screw Size
VFD002S11A/B	M4*22
VFD002S21A/B/E	M4*22
VFD002S23A/B	M4*22
VFD004S11A/B	M4*12
VFD004S21A/B/E	M4*12
VFD004S23A/B	M4*12
VFD004S43A/B/E	M4*12
VFD007S21A/B/E	M4*12
VFD007S23A/B	M4*12
VFD007S43A/B/E	M4*12
VFD015S23D	M4*12

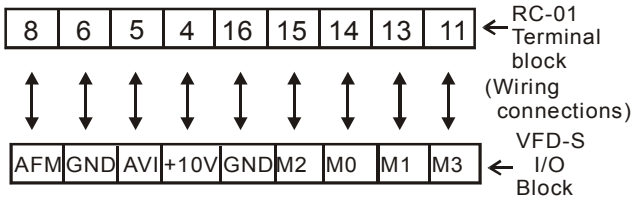
- To install the Din Rail Adapter use the specified screws for different models. Refer to the above chart.
- To mount the drive on a Din Rail, place the drive on the rail and push the lever toward the rail.

B

B.5 Remote Controller RC-01

Unit: mm (inch)





VFD-S Programming

Pr. 2-00 and Pr. 2-01 set to d01

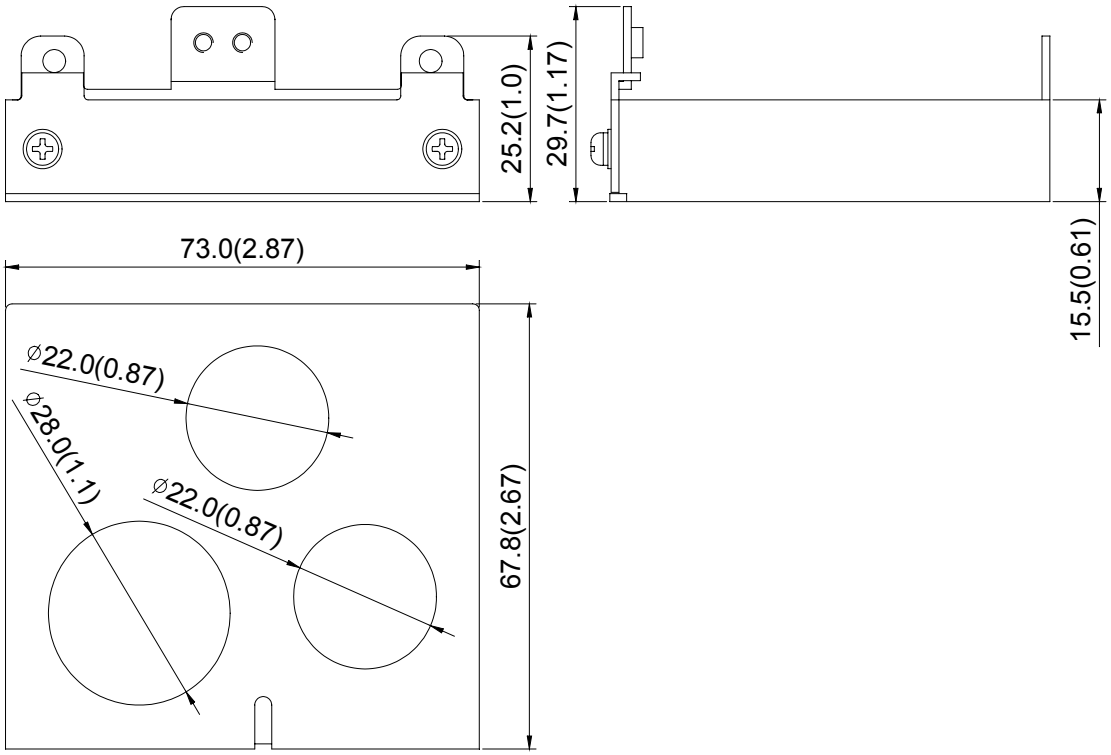
Pr. 4-04 set to d02 (M0, M1 set at RUN/STOP and FWD/REV)

Pr. 4-05 set to d06 (M2 set for reset)

Pr. 4-06 set to d10 (M3 set for jog operation)

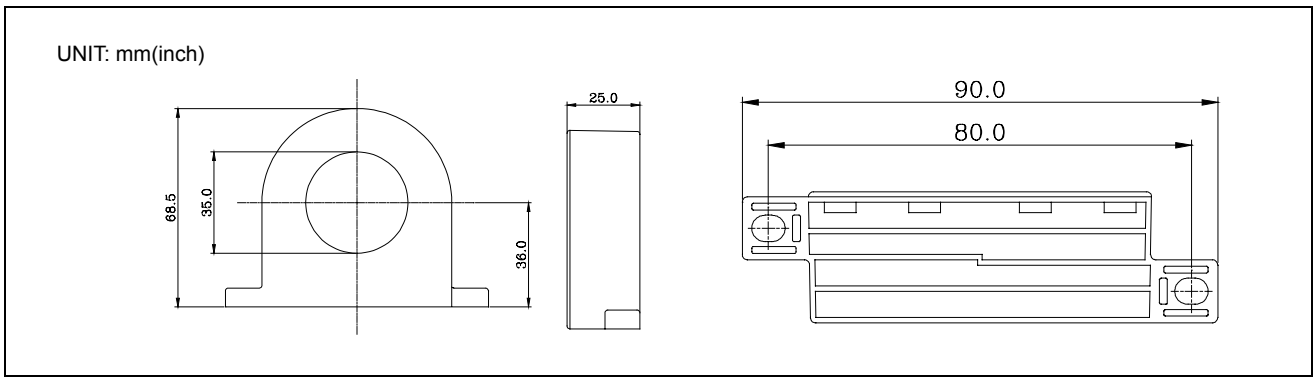
B.6 Conduit Bracket (BK-S)

Unit: mm (inch)



B

B.7 Zero Phase Reactor (RF220X00A)



Cable type (**Note**)	Recommended Wire Size			Qty.	Wiring Method
	AWG	mm^2	Nominal (mm2)		
Single-core	≦10	≦5.3	≦5.5	1	Diagram A
	≦2	≦33.6	≦38	4	Diagram B
Three-core	≦12	≦3.3	≦3.5	1	Diagram A
	≦1	≦42.4	≦50	4	Diagram B

Note: 600V Insulated Unshielded Cable.

Diagram A

Please wind each wire **4 times** around the core. The reactor must be put at inverter side as close as possible.

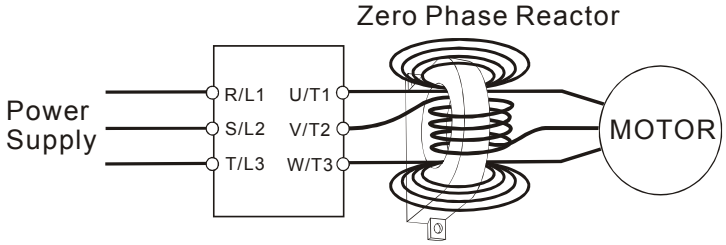
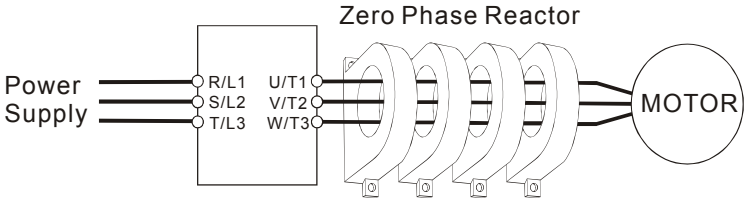


Diagram B

Please put all wires through **4 cores** in series without winding.



Note1: The table above gives approximate wire size for the zero phase reactors but the selection is ultimately governed by the type and diameter of cable fitted i.e. the cable must fit through the center hole of zero phase reactors.

Note2: Only the phase conductors should pass through, not the earth core or screen.

Note3: When long motor output cables are used an output zero phase reactor may be required to reduce radiated emissions from the cable.