

EMI/EMC Filter Selection Guide by Type

Refer to EMI/EMC filter selection flow chart for options.

Series	Features		Rated Voltage (voltage range max)	Rated Current																						
				1	3	4	6	10	16	20	25	30	36	40	50	60	64	80	100	120	125	150	160	200	250	300
Single-phase EMI/EMC filter	 EA Series 1-stage filter	Small size	Screw type	EAC: Attenuation for low frequency band (150kHz to 1MHz) EAM: Low leakage current EAP: Outside impulse attenuation	250VAC	3A 6A 10A 16A 20A 30A																				
	 ES Series 1-stage filter			Screwless type		ESC: Attenuation for low frequency band (150kHz to 1MHz) ESM: Low leakage current ESP: Outside impulse attenuation	250VAC	3A 6A 10A 16A																		
	 NA Series 1-stage filter	General purpose	Screw type		NAC: High-attenuation for low frequency band (150kHz to 1MHz) NAM: Low leakage current NAH: Ultra high-attenuation for ultra low frequency band (9kHz to 1MHz) NAP: Outside impulse high-attenuation	250VAC	4A 6A 10A 16A 20A 30A * NAH only, 6A to 30A																			
				NBC: High-attenuation for low frequency band (150kHz to 1MHz) NBM: Low leakage current, Withstand voltage 4,000VAC NBH: Ultra high-attenuation and broadband (9kHz to 10MHz)	277VAC (305VAC) 300VDC (400VDC)	40A 50A 60A																				
 NB Series 2-stage filter	High-attenuation			250VAC	6A 10A 16A 20A 30A																					
Three-phase EMI/EMC filter	 JAC Series 1-stage filter	Compact and low profile	General purpose	High-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	6A 10A 20A 30A 40A 50A 60A																				
	 TAC Series 1-stage filter			High-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	4A 6A 10A 20A 30A 50A 60A 80A 100A 150A 200A 250A 300A																				
	 TAH Series 1-stage filter	Low profile	High-attenuation	Ultra high-attenuation for ultra low frequency band (9kHz to 10MHz)	500VAC (528VAC)	4A 6A 10A 20A 30A 50A 60A 80A 100A 150A																				
	 TBC Series 2-stage filter			High-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	50A 60A 80A 100A 150A 200A 250A 300A																				
	 FTA Series 1-stage filter	Book type (Space-saving type)	General purpose	High-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	40A 50A 60A 80A 100A 125A 150A																				
	 FTB Series 2-stage filter			Ultra high-attenuation for low frequency band (150kHz to 1MHz)	500VAC (528VAC)	80A 100A 150A																				
	 FSB Series 2-stage filter	Low profile	Saturation resistance type	EMI/EMC Filter for motor drive system (AC servo) Improve saturation resistance	500VAC (528VAC)	10A 20A 30A 40A 50A 60A 80A 100A 150A																				
	 TSC Series multi-stage filter			Ultra high-attenuation from 150kHz to 1MHz	500VAC (528VAC)	400A 600A																				
	 TSD Series multi-stage filter	General purpose	Saturation resistance type	Ultra high-attenuation from 150kHz to 1MHz	500VAC (528VAC)	400A 600A 800A 1000A																				
	 YAC Series 1-stage filter			High-attenuation for low frequency band (150kHz to 1MHz) 1-stage filter: 25A to 80A 2-stage filter: 120A to 300A	500/289VAC (528/305VAC)	25A 36A 64A 80A 120A 160A 200A 300A																				
DC EMI/EMC filter	 SNA Series 1-stage filter	Ripple noise attenuation for switch mode power supplies	For ±V output power supply	DC±50V	1A 3A 6A																					
	 SNR Series 1-stage filter		For +V output power supply (Peak load)	DC50V	10A																					

EMI/EMC Filter Selection Guide by Function

Refer to EMI/EMC filter selection flow chart for options.

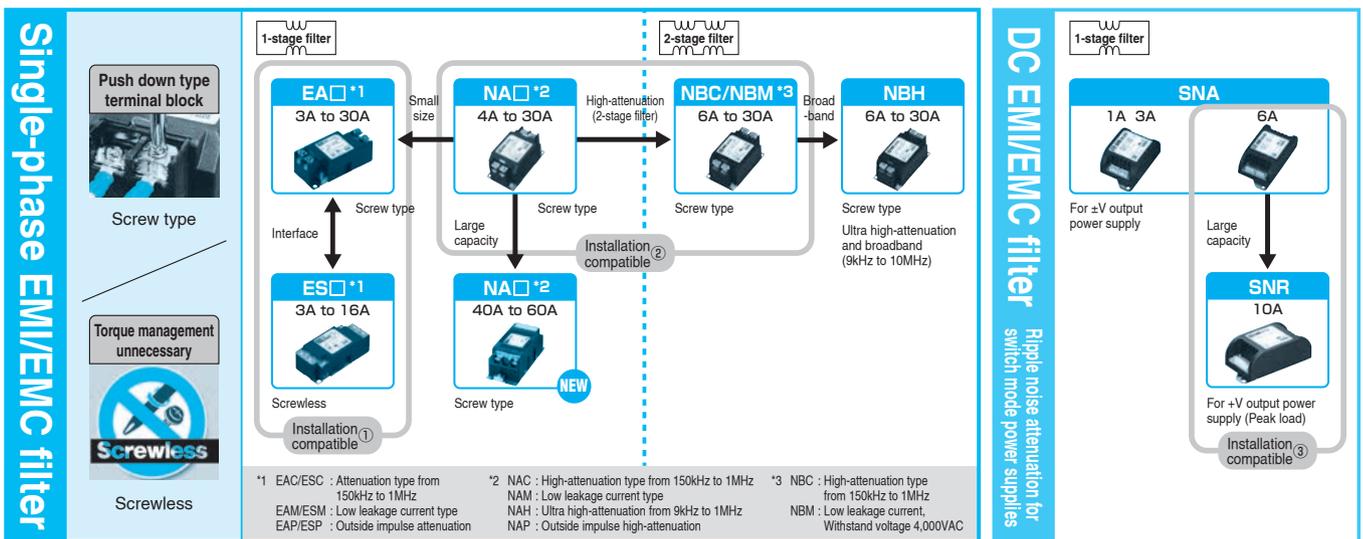
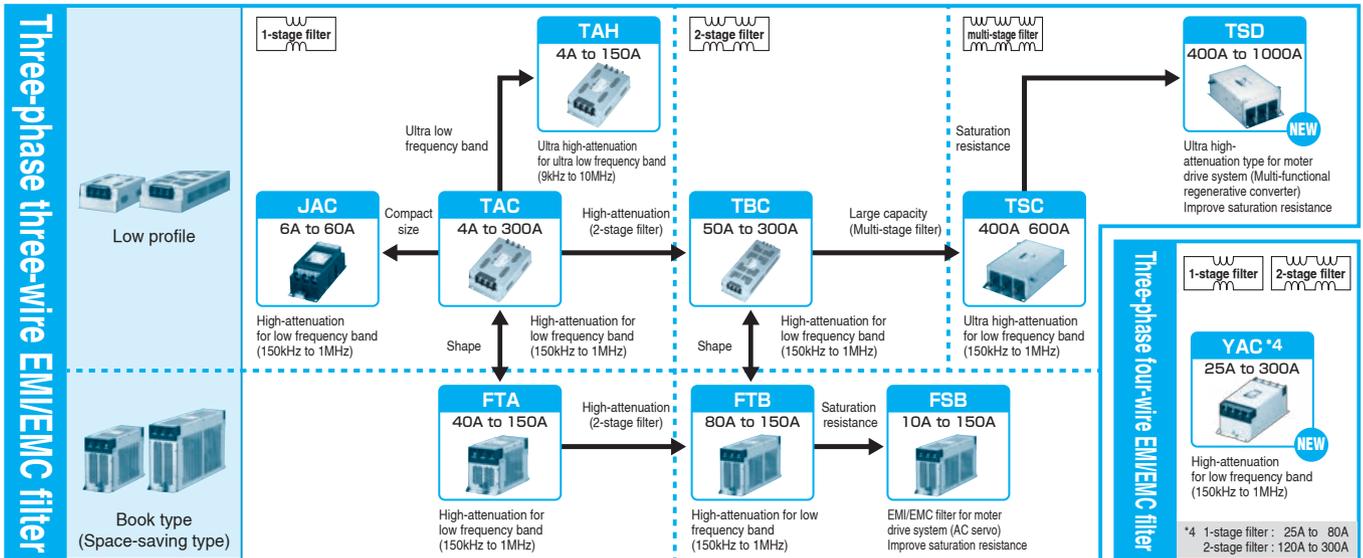
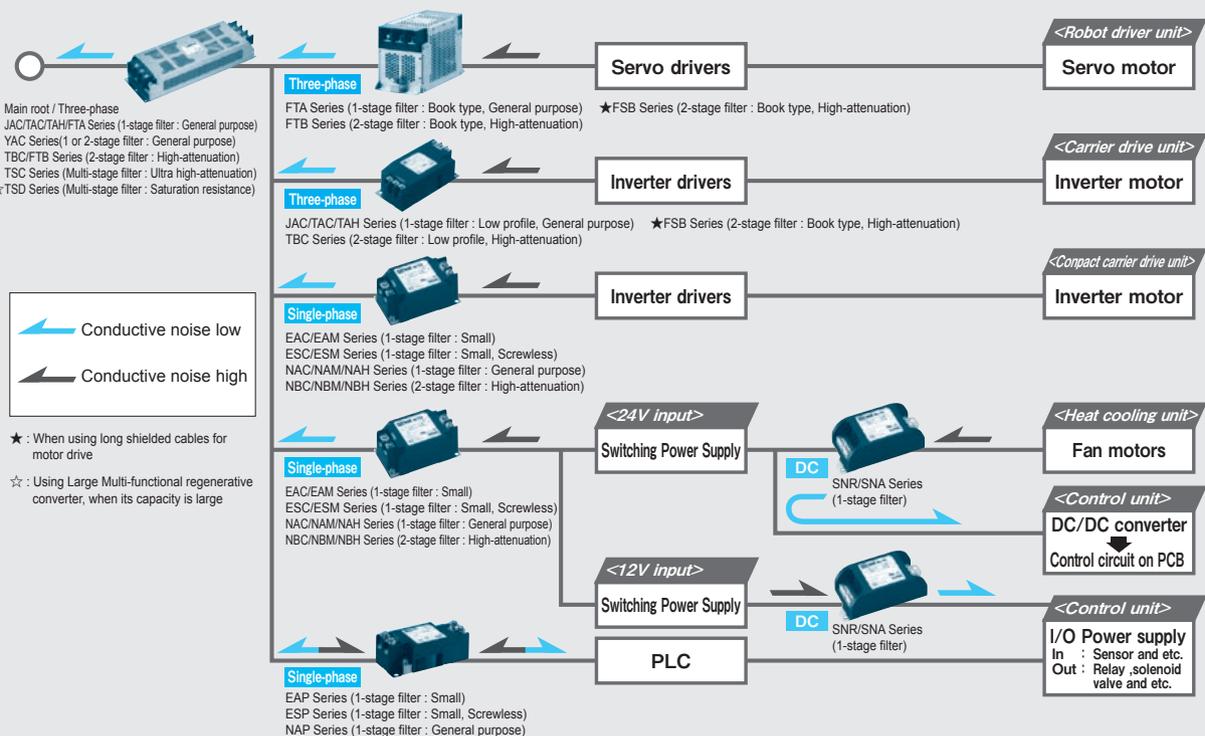


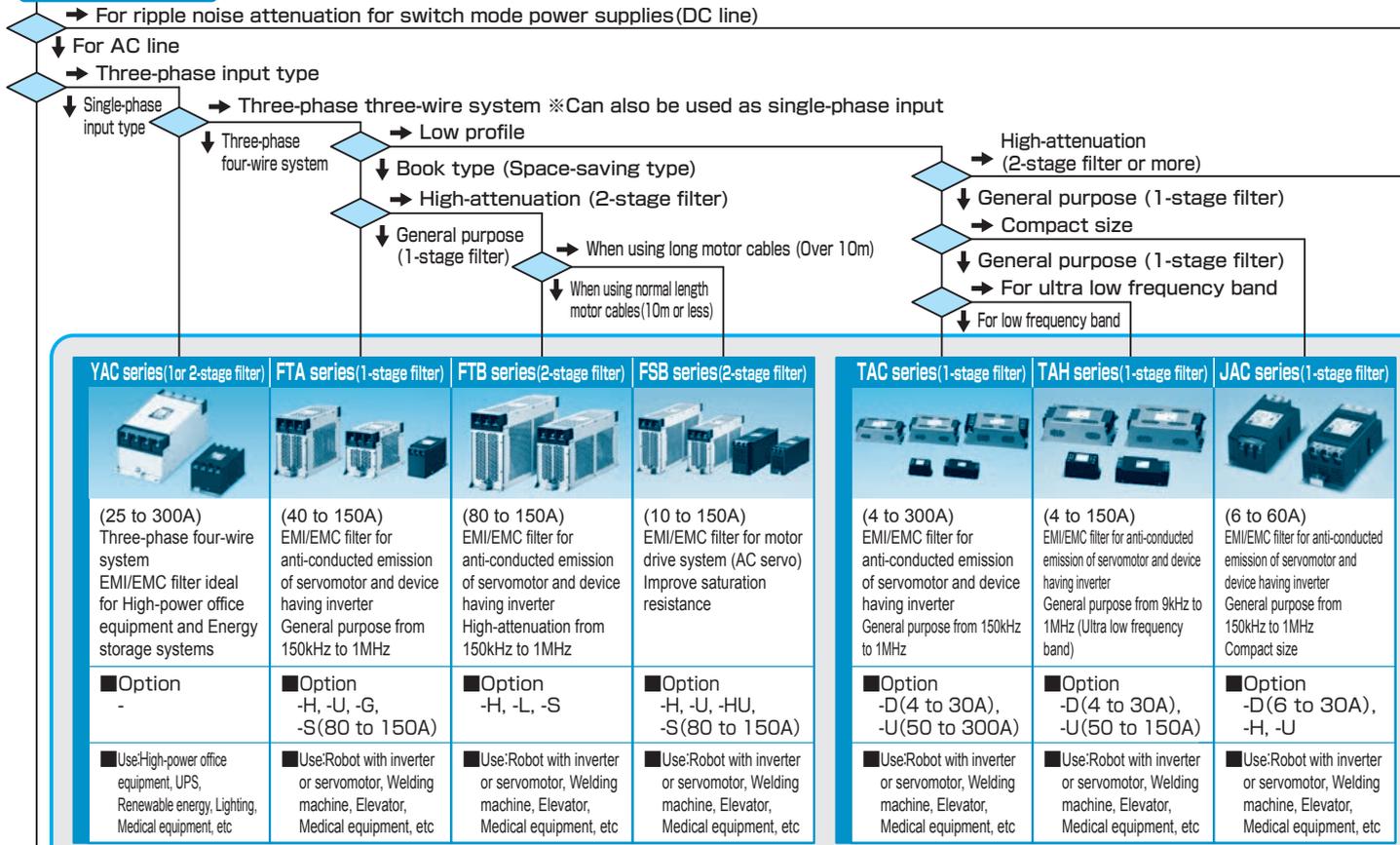
Diagram of Sample application



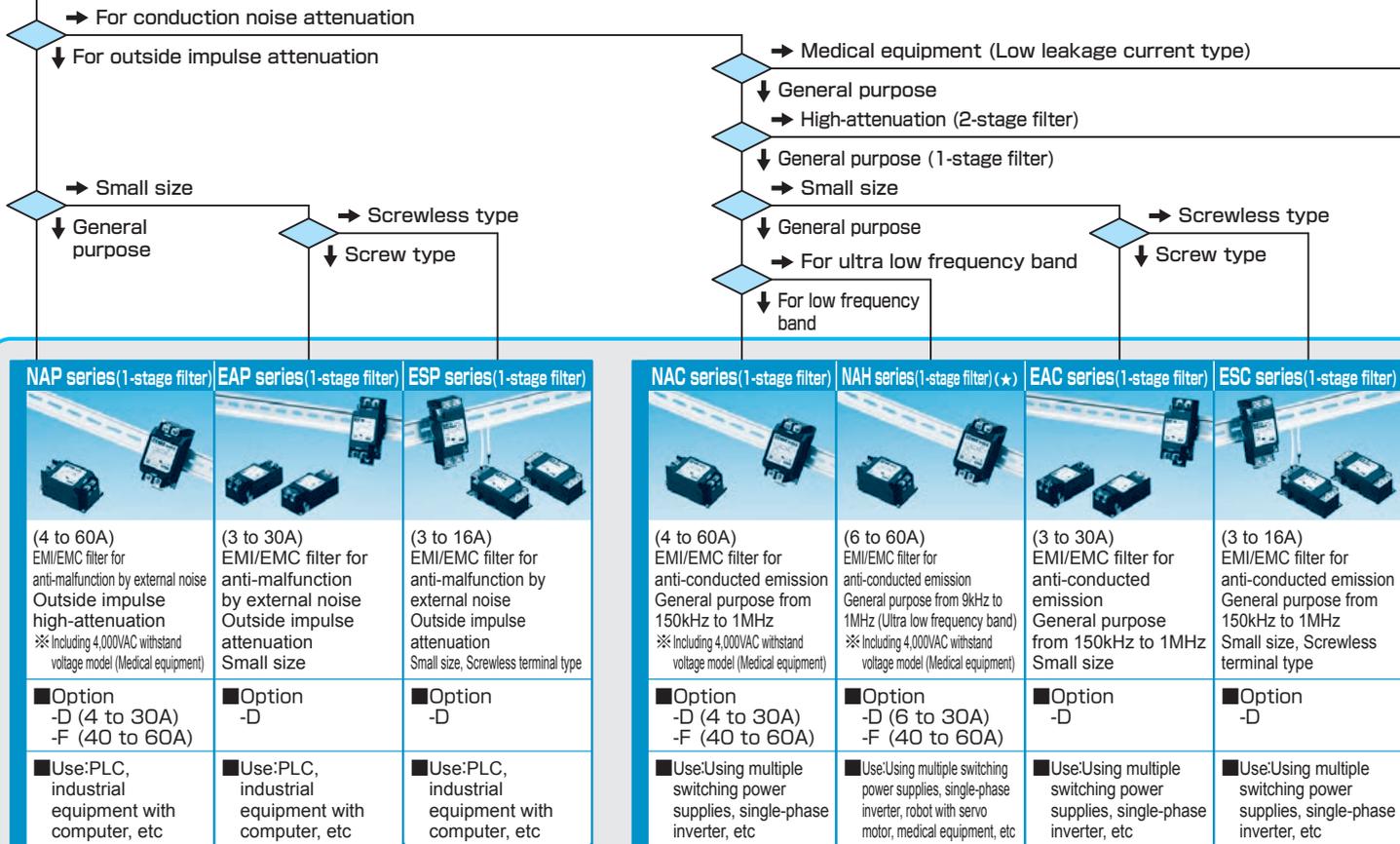
EMI/EMC Filter Selection flow chart

By using the flow chart below, you can easily select the model you need.

START



Three-phase EMI/EMC filter

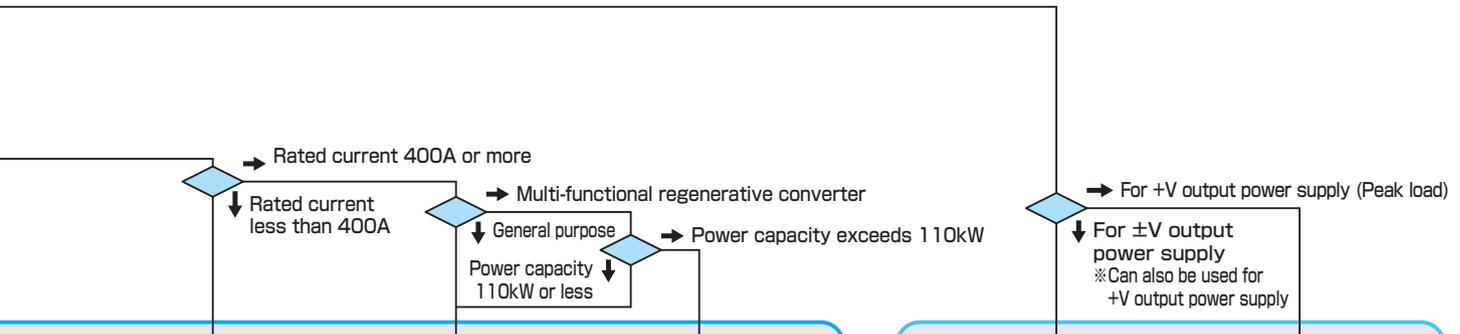


Single-phase EMI/EMC filter

■Option

- D : DIN rail installation type
- G : With switch of line to ground capacitor
- L : Ultra high-attenuation type for EU
- T : Terminal block type

- F : High input voltage (Rated voltage 500VAC/600VDC)
- H : Ultra high-attenuation type
- S : Hexagon socket head cap screw (Standard type is Hexagon head screw)
- U : Improve differential mode attenuation (Rated voltage 250V)

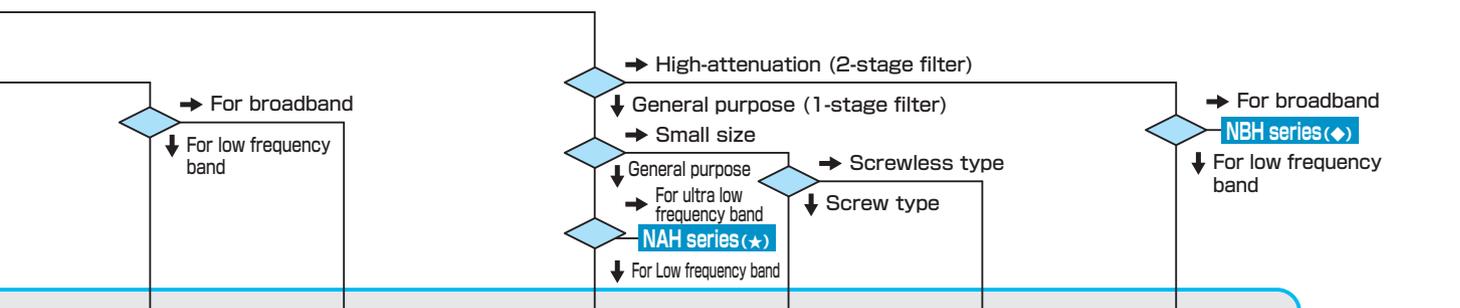


TBC series(2-stage filter)	TSC series(multi-stage filter)	TSD series(multi-stage filter)
(50 to 300A) EMI/EMC filter for anti-conducted emission of servomotor and device having inverter High-attenuation from 150kHz to 1MHz	(400, 600A) EMI/EMC filter for anti-conducted emission of servomotor and device having inverter Ultra high-attenuation from 150kHz to 1MHz	(400 to 1000A) Ultra high-attenuation for motor drive system (Multi-functional regenerative converter) Improve saturation resistance
■Option —	■Option ※1 -H	■Option ※1 —
■Use:Robot with inverter or servomotor, Welding machine, Elevator, Medical equipment, etc	■Use:Robot with inverter or servomotor, Welding machine, Elevator, Medical equipment, etc	■Use:Large equipment with Multi-functional regenerative converter (Transferred equipment, air conditioning equipment), etc

※1 Please contact us about low leakage current type (Change to low grounding capacitor)

SNA series(1-stage filter)	SNR series(1-stage filter)
(1, 3, 6A) Ripple noise attenuation for switch mode power supplies (DC±50V)	(10A) Ripple noise attenuation for switch mode power supplies (DC+50V)
■Option -D, -T(6A), -DT(6A)	■Option -D, -T, -DT
■Use:DC EMI/EMC filter for ±V output power supply of analog circuit (Operational amplifier etc.)	■Use:DC EMI/EMC filter for +V output power supply of analog circuit

DC EMI/EMC filter



NBC series(2-stage filter)	NBH series(2-stage filter) (◆)	NAM series(1-stage filter)	EAM series(1-stage filter)	ESM series(1-stage filter)	NBM series(2-stage filter)
(6 to 30A) EMI/EMC filter for anti-conducted emission High-attenuation from 150kHz to 1MHz	(6 to 30A) EMI/EMC filter for anti-conducted emission Ultra high-attenuation and broadband from 9kHz to 10MHz ※Including 4,000VAC withstand voltage model (Medical equipment)	(4 to 60A) EMI/EMC filter for medical applications Low leakage current type General purpose from 150kHz to 1MHz ※Including 4,000VAC withstand voltage model	(3 to 30A) EMI/EMC filter for medical applications Low leakage current type General purpose from 150kHz to 1MHz Small size	(3 to 16A) EMI/EMC filter for medical applications Low leakage current type General purpose from 150kHz to 1MHz Small size, Screwless terminal type	(6 to 30A) EMI/EMC filter for medical applications Low leakage current type General purpose from 150kHz to 1MHz with stand voltage 4,000VAC
■Option -D	■Option -D	■Option -D (4 to 30A)	■Option -D	■Option -D	■Option -D
■Use:Using multiple switching power supplies, single-phase inverter, etc	■Use:Using multiple switching power supplies, single-phase inverter, robot with servo motor, medical equipment, etc	■Use:A case when using multiple switching power supplies, or for medical applications like endoscope, etc	■Use:A case when using multiple switching power supplies, or for medical applications like endoscope, etc	■Use:A case when using multiple switching power supplies, or for medical applications like endoscope, etc	■Use:A case when using multiple switching power supplies, or for medical applications like endoscope, etc