

Datasheet | EC01

EP-42 Series



General Purpose AC EMI Filter

El.italia EC-EC01 [EP-42] serie



Technical specifications

Operating voltage	120/250 VAC
Current rating	1A-20A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC P -> N 1414VDC (applicable for excluding surge suppressor filter)
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°C / -25°C +85°C

*Image shown is for illustrative purpose only

Features and benefit:

- | All filters provide high attenuation performance.
- | High reliable
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards
- | Easy and fast chassis mountable filter in deep drawn metal can with compact size.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Filters available in medical version without capacitor to earth.
- | General purpose filters with low leakage current for safety critical application.
- | With surge suppressor filters also available.
- | Various terminal options are available.

Attenuation Type:

Single Stage

Standard

Application

- | Consumer product
 - | Food processing machines
 - | Medical equipment
 - | Printing machinery
- Electrical automation equipment

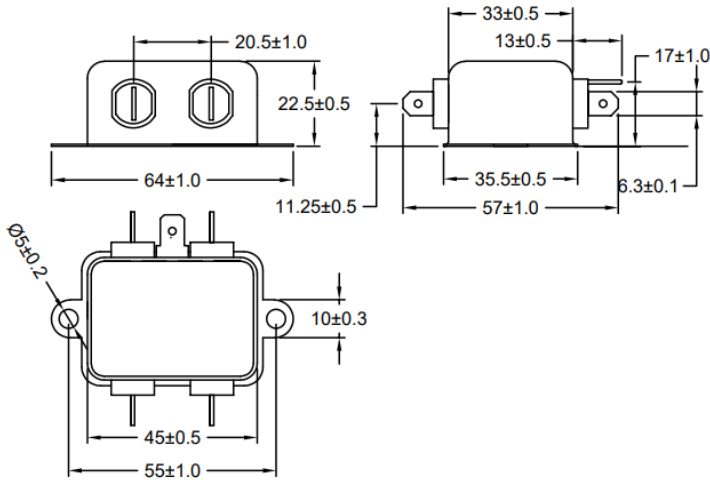
Datasheet | EC01

EP-42 Series



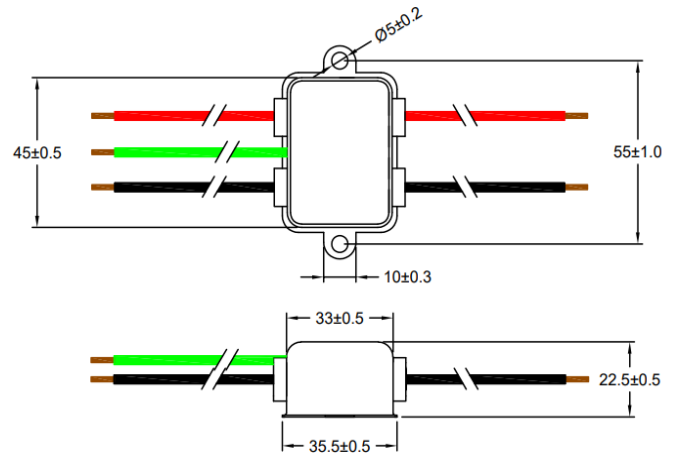
El.italia EC-EC01 [EP-42] serie

| For wire lead terminal



All dimensions in mm.

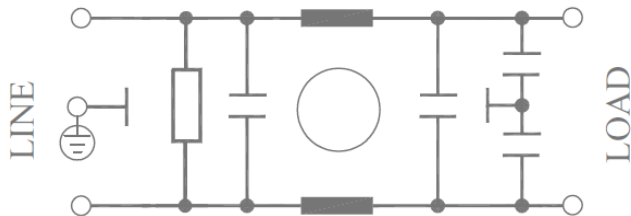
| For touch safe terminal



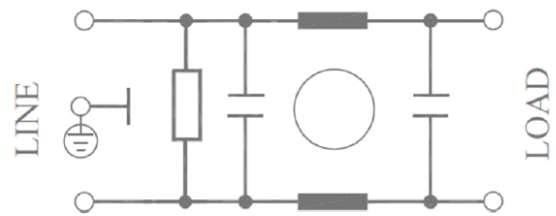
All dimensions in mm.

Electrical schematic for Single Stage Filter

General Purpose -



Medical equipment application -



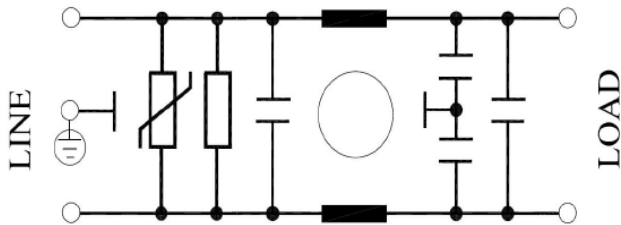
Datasheet | EC01

EP-42 Series

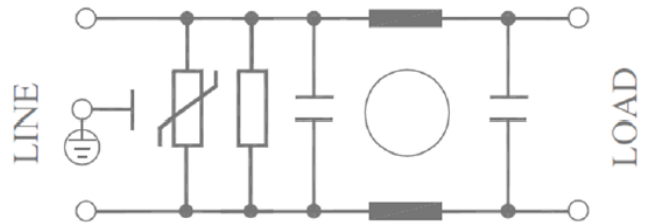


El.italia EC-EC01 [EP-42] serie

General Purpose with Surge Suppressor -



Medical equipment application with Surge Suppressor -

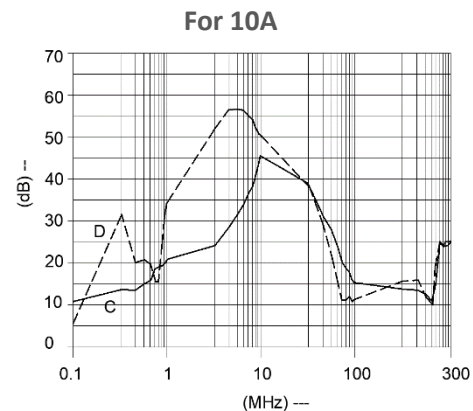
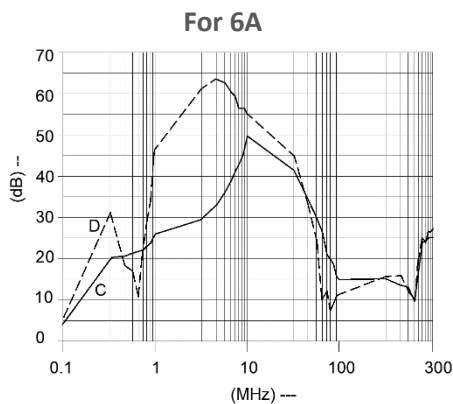
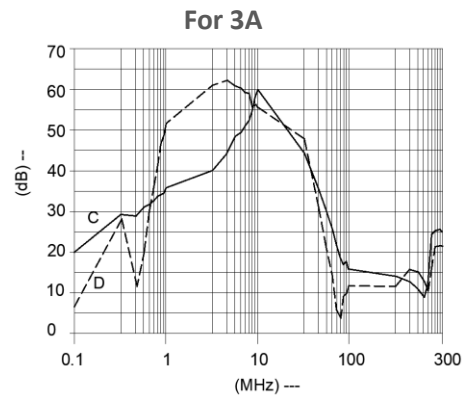
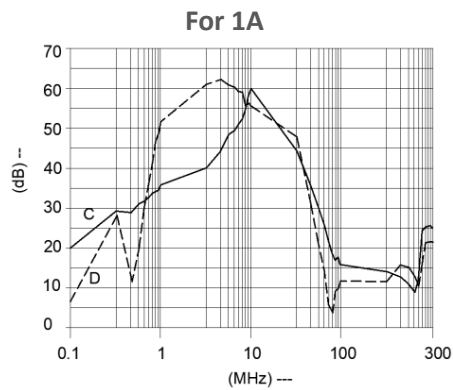


Filter attenuation Graph

C = Common mode (asymmetrical) —

D = Differential mode (symmetrical) - - - - -

For General purpose





Datasheet | EC01

EP-42 Series



Filter Selection Table

El.italia EC-EC01 [EP-42] serie

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)		Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Approx. Weight (gm)	Attenuation
				Fast-on 	Wire 				
1	EF-1B001X01E-C01	1	< 0.5	B	G	----	----	60	Standard
2	EF-1B001X02E-C01	1	< 0.5	B	G	6.5	175	60	Standard
3	EF-1B001X03E-C01	1	< 0.003	B	G	----	----	60	Standard
4	EF-1B001X04E-C01	1	< 0.003	B	G	6.5	175	60	Standard
5	EF-1B003X01E-C01	3	< 0.5	B	G	----	----	60	Standard
6	EF-1B003X02E-C01	3	< 0.5	B	G	6.5	175	60	Standard
7	EF-1B003X03E-C01	3	< 0.003	B	G	----	----	60	Standard
8	EF-1B003X04E-C01	3	< 0.003	B	G	6.5	175	60	Standard
9	EF-1B006X01E-C01	6	< 0.5	B	G	----	----	60	Standard
10	EF-1B006X02E-C01	6	< 0.5	B	G	6.5	175	60	Standard
11	EF-1B006X03E-C01	6	< 0.003	B	G	----	----	60	Standard
12	EF-1B006X04E-C01	6	< 0.003	B	G	6.5	175	60	Standard
13	EF-1B010X01E-C01	10	< 0.5	B	G	----	----	60	Standard
14	EF-1B010X02E-C01	10	< 0.5	B	G	6.5	175	60	Standard
15	EF-1B010X03E-C01	10	< 0.003	B	G	----	----	60	Standard
16	EF-1B010X04E-C01	10	< 0.003	B	G	6.5	175	60	Standard

- To compile complete part number, replace the 'X' with required I/O connection terminal. (e.g. EF-1B001B03E-C01)
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.

Datasheet | EC01

EP-42 Series



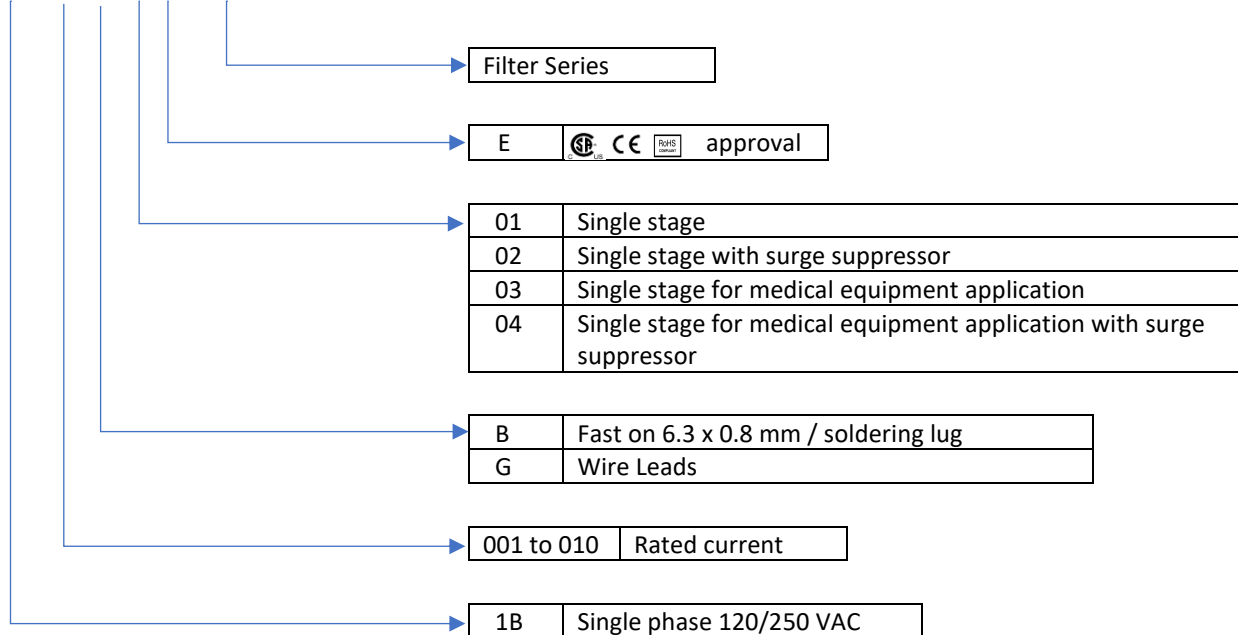
Connection Type

El.italia EC-EC01 [EP-42] serie

Current Rating (A)	Fast -on	Wire	Earthing
1,3 & 6	6.3 X 0.8mm	18AWG	Fast-on terminal/wires
10		14AWG	

Syntax

EF - 1B CCC X YY E - C01



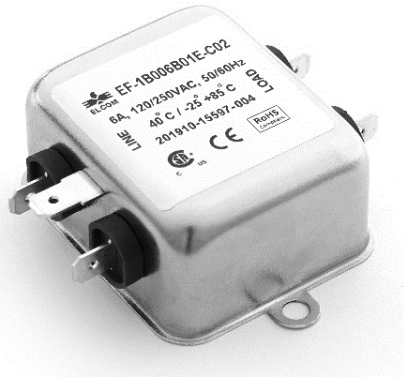
Datasheet | EC02

EP-15AP Series (For single stage) & EP-660 series (For double stage)



El.italia EC-EC02 [EP-15AP/660] serie

General Purpose AC EMI Filter



Technical specifications

Operating voltage	120/250 VAC
Current rating	1A-20A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC P -> N 1414VDC (applicable for excluding surge suppressor filter)
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°C / -25°C +85°C

*Image shown is for illustrative purpose only

Features and benefits

- | Filters available in single stage and double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards.
- | High reliable
- | Easy and fast chassis mountable filter in deep drawn metal can with compact size.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Filters available in medical version without capacitor to earth.
- | General purpose filters with low leakage current for safety critical application.
- | With surge suppressor filters also available.
- | Various terminal options are available

Attenuation Type

Single Stage	Standard
Double Stage	High

Applications

- | Consumer product
- | Defence application
- | Medical equipment
- | Industrial application
- | Automotive application
- | Weighting Machines
- | Printing Machinery
- | Electrical equipment application
- | Office automation equipment

Datasheet | EC02

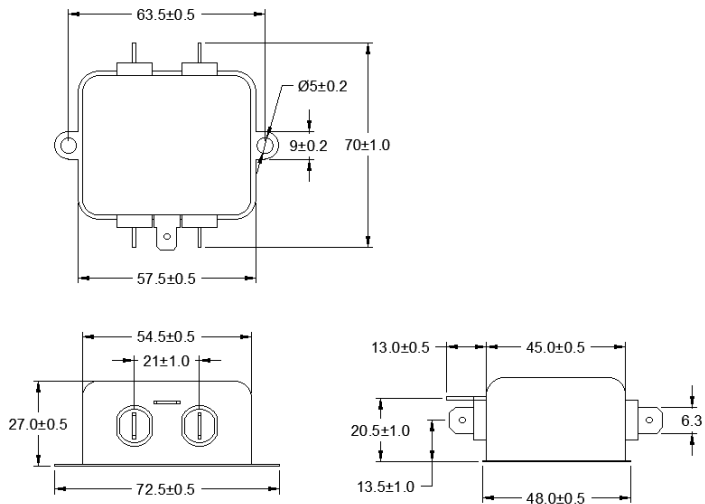
EP-15AP Series (For single stage) & EP-660 series (For double stage)



Mechanical details

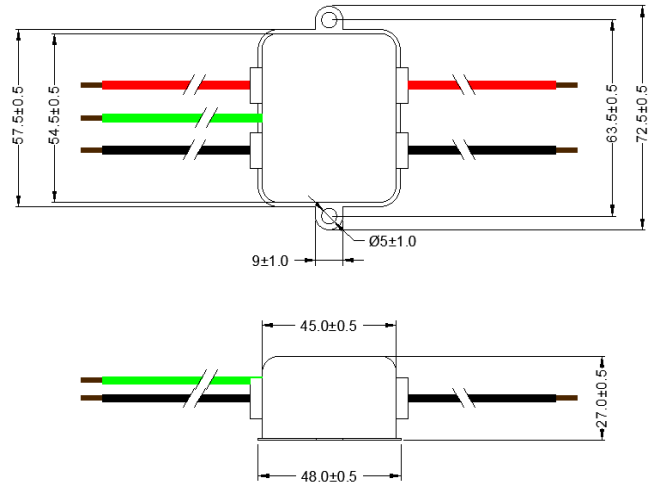
El.italia EC-EC02 [EP-15AP/660] serie

| For fast-on terminal



All dimensions in mm

| For wire lead terminal



All dimensions in mm

Datasheet | EC02

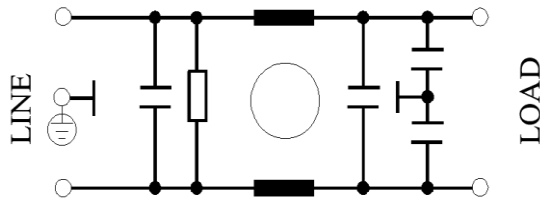
EP-15AP Series (For single stage) & EP-660 series (For double stage)



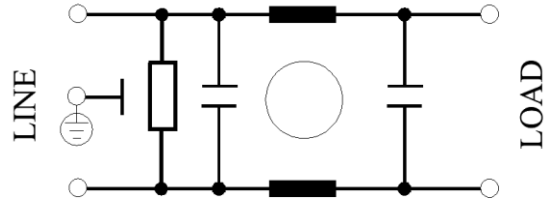
Electrical schematic for Single Stage Filter

El.italia EC-EC02 [EP-15AP/660] serie

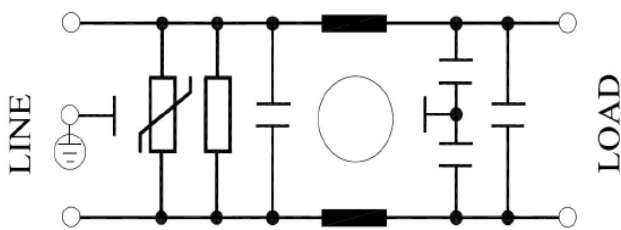
General purpose -



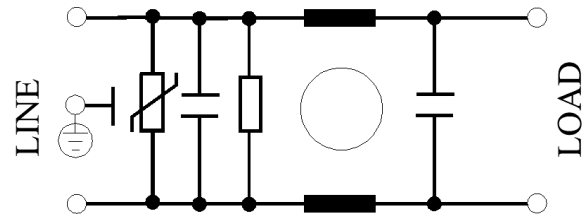
Medical equipment application -



General purpose with Surge Suppressor -

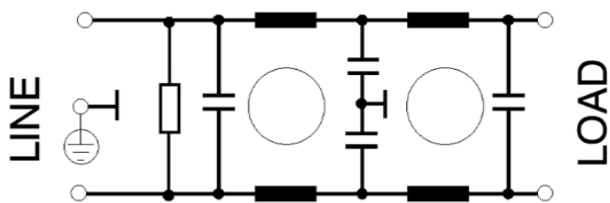


Medical equipment application with Surge Suppressor -

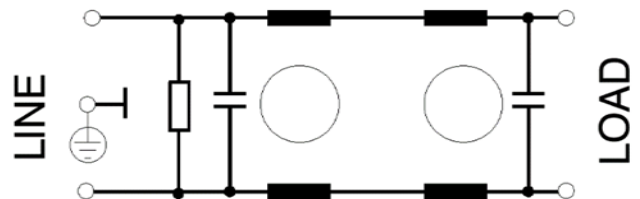


Electrical schematic for Double Stage Filter

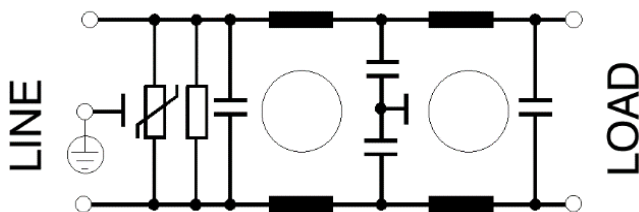
General purpose -



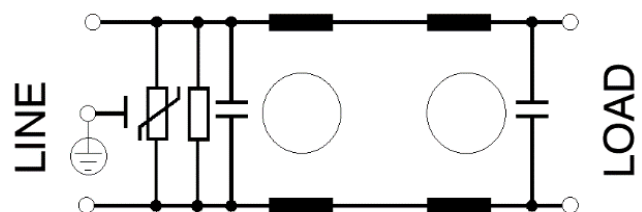
Medical equipment application -



General purpose with Surge Suppressor -



Medical equipment application with Surge Suppressor -





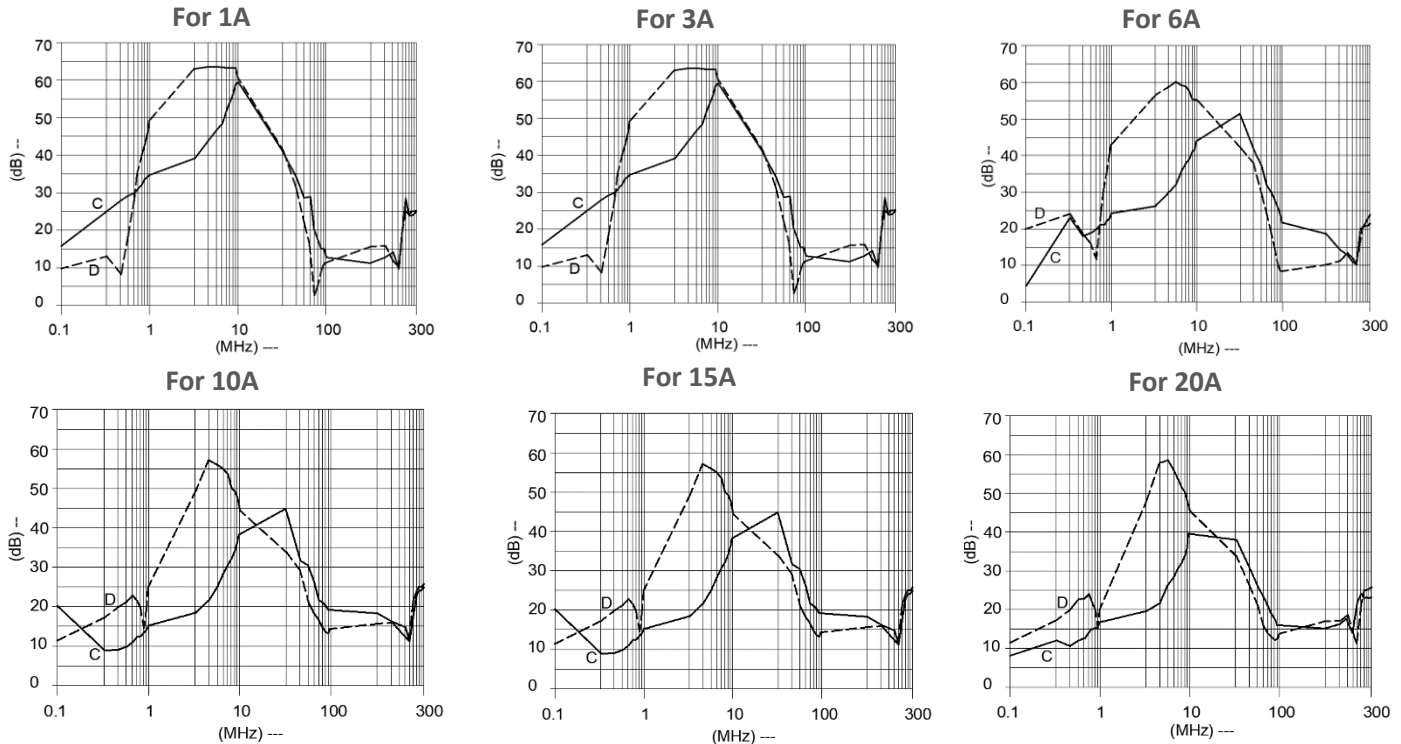
El.italia EC-EC02 [EP-15AP/660] serie

Filter attenuation Graph

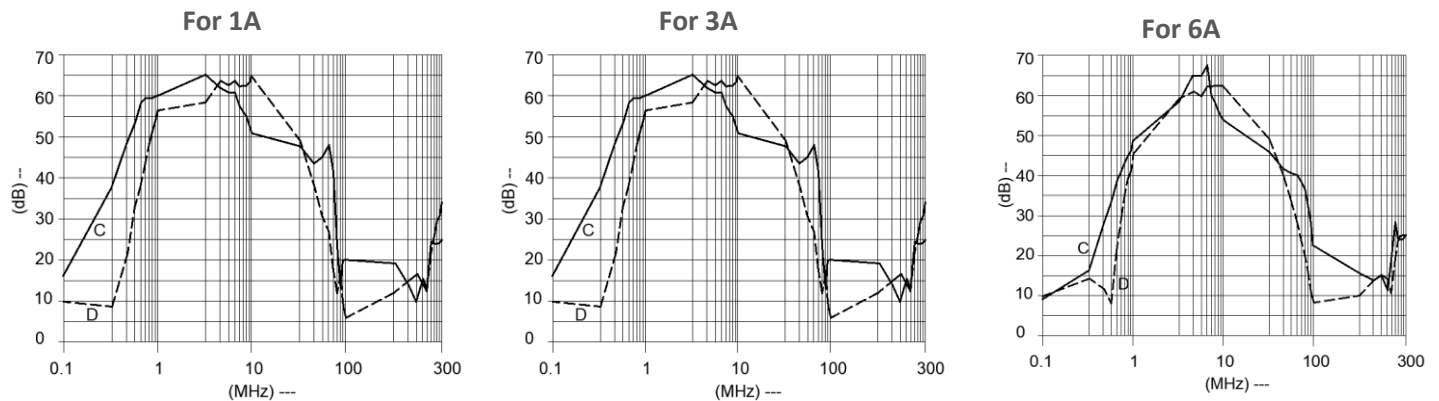
C = Common mode (asymmetrical) —————

D = Differential mode (symmetrical) - - - - -

For general application (Single Stage)

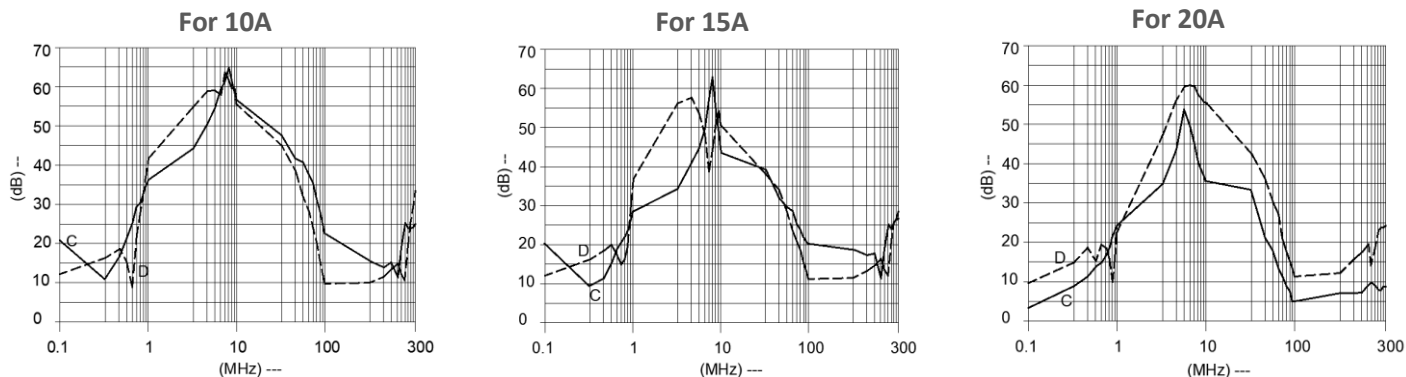


For general application (Double Stage)





El.italia EC-EC02 [EP-15AP/660] serie





Filter Selection Table

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)		Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Approx. Weight (gm)	Attenuation
				Fast-on	Wire				
1	EF-1B001X01E-C02	1	< 0.5	B	G	---	---	90	Standard
2	EF-1B001X02E-C02	1	< 0.5	B	G	6.5	175	90	Standard
3	EF-1B001X03E-C02	1	< 0.003	B	G	---	---	90	Standard
4	EF-1B001X04E-C02	1	< 0.003	B	G	6.5	175	90	Standard
5	EF-1B003X01E-C02	3	< 0.5	B	G	---	---	90	Standard
6	EF-1B003X02E-C02	3	< 0.5	B	G	6.5	175	90	Standard
7	EF-1B003X03E-C02	3	< 0.003	B	G	---	---	90	Standard
8	EF-1B003X04E-C02	3	< 0.003	B	G	6.5	175	90	Standard
9	EF-1B006X01E-C02	6	< 0.5	B	G	---	---	90	Standard
10	EF-1B006X02E-C02	6	< 0.5	B	G	6.5	175	90	Standard
11	EF-1B006X03E-C02	6	< 0.003	B	G	---	---	90	Standard
12	EF-1B006X04E-C02	6	< 0.003	B	G	6.5	175	90	Standard
13	EF-1B010X01E-C02	10	< 0.5	B	G	---	---	90	Standard
14	EF-1B010X02E-C02	10	< 0.5	B	G	6.5	175	90	Standard
15	EF-1B010X03E-C02	10	< 0.003	B	G	---	---	90	Standard
16	EF-1B010X04E-C02	10	< 0.003	B	G	6.5	175	90	Standard

Datasheet | EC02

EP-15AP Series (For single stage) & EP-660 series (For double stage)





Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)		Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Approx. Weight (gm)	Attenuation
				Fast-on 	Wire 				
17	EF-1B015X01E-C02	15	< 0.5	B	G	----	----	90	Standard
18	EF-1B015X02E-C02	15	< 0.5	B	G	10	350	90	Standard
19	EF-1B015X03E-C02	15	< 0.003	B	G	----	----	90	Standard
20	EF-1B015X04E-C02	15	< 0.003	B	G	10	350	90	Standard
21	EF-1B020X01E-C02	20	< 0.5	B	G	----	----	90	Standard
22	EF-1B020X02E-C02	20	< 0.5	B	G	10	350	90	Standard
23	EF-1B020X03E-C02	20	< 0.003	B	G	----	----	90	Standard
24	EF-1B020X04E-C02	20	< 0.003	B	G	10	350	90	Standard
25	EF-1B001X20E-C02	1	< 0.5	B	G	----	----	100	High
26	EF-1B001X21E-C02	1	< 0.5	B	G	6.5	175	100	High
27	EF-1B001X22E-C02	1	< 0.003	B	G	----	----	100	High
28	EF-1B001X23E-C02	1	< 0.003	B	G	6.5	175	100	High
29	EF-1B003X20E-C02	3	< 0.5	B	G	----	----	100	High
30	EF-1B003X21E-C02	3	< 0.5	B	G	6.5	175	100	High
31	EF-1B003X22E-C02	3	< 0.003	B	G	----	----	100	High
32	EF-1B003X23E-C02	3	< 0.003	B	G	6.5	175	100	High
33	EF-1B006X20E-C02	6	< 0.5	B	G	----	----	100	High
34	EF-1B006X21E-C02	6	< 0.5	B	G	6.5	175	100	High
35	EF-1B006X22E-C02	6	< 0.003	B	G	----	----	100	High
36	EF-1B006X23E-C02	6	< 0.003	B	G	6.5	175	100	High
37	EF-1B010X20E-C02	10	< 0.5	B	G	----	----	100	High
38	EF-1B010X21E-C02	10	< 0.5	B	G	6.5	175	100	High
39	EF-1B010X22E-C02	10	< 0.003	B	G	----	----	100	High
40	EF-1B010X23E-C02	10	< 0.003	B	G	6.5	175	100	High
41	EF-1B015X20E-C02	15	< 0.5	B	G	----	----	100	High
42	EF-1B015X21E-C02	15	< 0.5	B	G	10	350	100	High

Datasheet | EC02

EP-15AP Series (For single stage) & EP-660 series (For double stage)



Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)		Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Approx. Weight (gm)	Attenuation
				Fast-on 	Wire 				
44	EF-1B015X23E-C02	15	< 0.003	B	G	10	350	100	High
45	EF-1B020X20E-C02	20	< 0.5	B	G	----	----	100	High
46	EF-1B020X21E-C02	20	< 0.5	B	G	10	350	100	High
47	EF-1B020X22E-C02	20	< 0.003	B	G	----	----	100	High
48	EF-1B020X23E-C02	20	< 0.003	B	G	10	350	100	High

- To compile complete part number, replace the 'X' with required I/O connection terminal. (e.g. EF-1B001B20E-C02)
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.

Connection Type

Current Rating (A)	Fast -on	Wire	Earthing
1,3 & 6	6.3 X 0.8mm	18AWG	Fast-on/wire leads
10 & 15		14AWG	
20		12AWG	

Datasheet | EC02

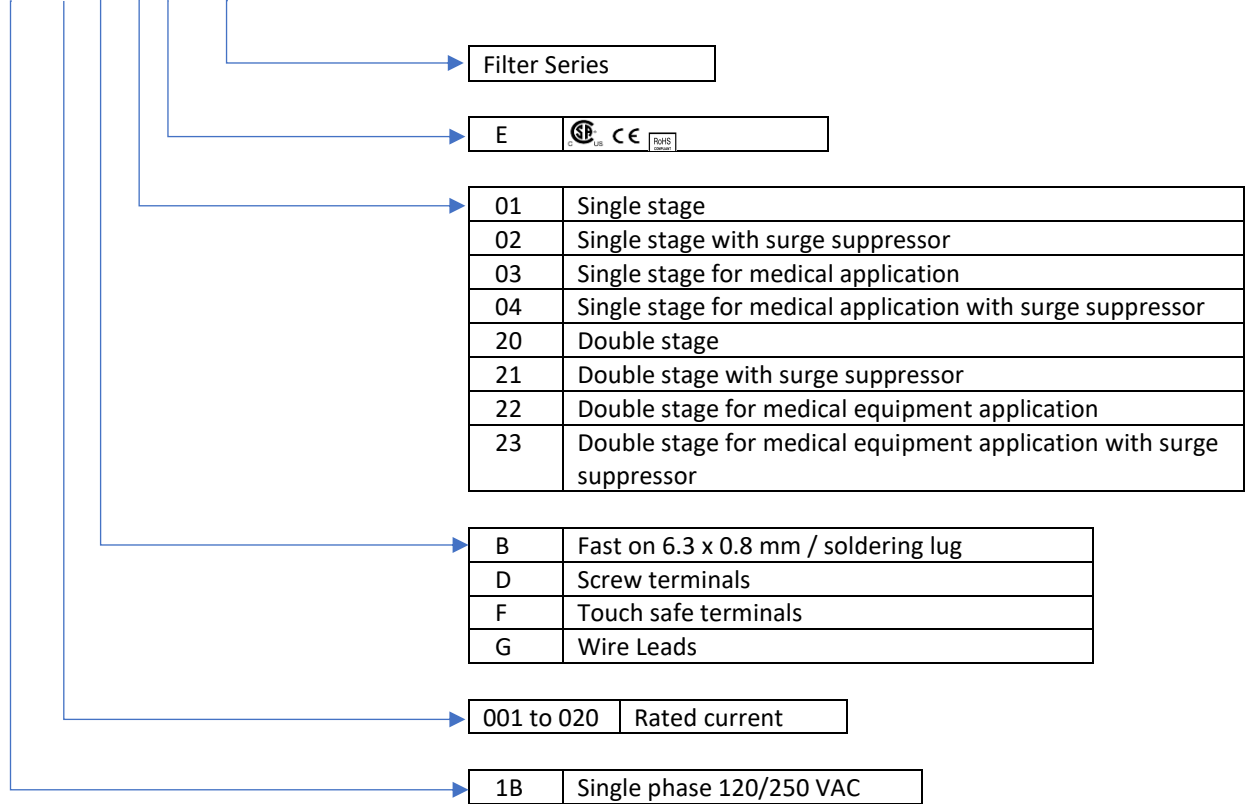
EP-15AP Series (For single stage) & EP-660 series (For double stage)



El.italia EC-EC02 [EP-15AP/660] serie

Syntax

EF - 1B CCC X YY E - C02



Datasheet | EC03

EP-422 Series



General Purpose AC EMI Filter

El.italia EC-EC03 [EP-422] serie



Technical specifications

Operating voltage	120/250 VAC
Current rating	1A-10A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC P -> N 1414VDC (applicable for excluding surge suppressor filter)
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°C / -25°C +85°C

*Image shown is for illustrative purpose only

Features and benefits

- | All filters provide high attenuation performance.
- | High reliable
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards
- | Chassis mountable filter in oval shape aluminum metal can with mounting clamp.
- | Filters available in medical version without capacitor to earth.
- | General purpose filters with low leakage current for safety critical application.
- | With surge suppressor filters also available.

Attenuation Type

Single Stage

Standard

Applications

- | Printing and packaging machines
- | White good industrial equipment
- | Medical equipment
- | Testing and measuring instruments
- | Currency counting machines
- | Analytical instruments

Datasheet | EC03

EP-422 Series

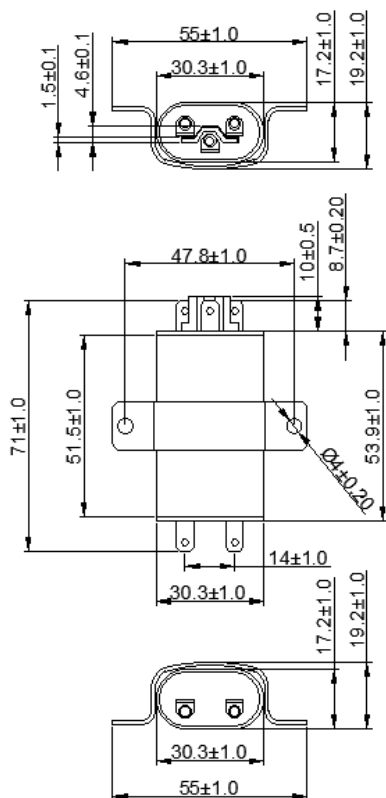


ELCOM

El.italia EC-EC03 [EP-422] serie

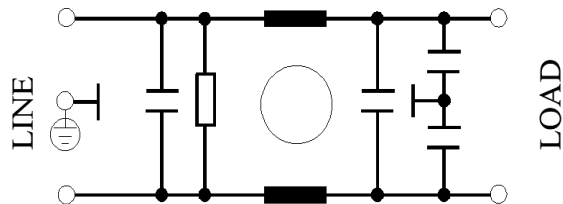
Mechanical details

I For fast-on terminal

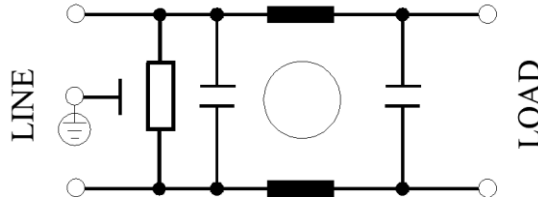


Electrical schematic

General Purpose -



Medical equipment application -



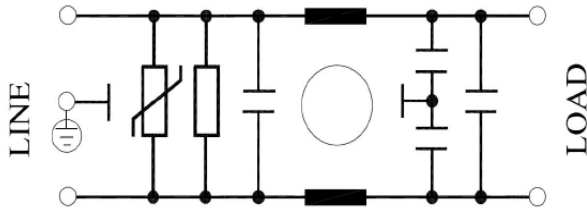
Datasheet | EC03

EP-422 Series

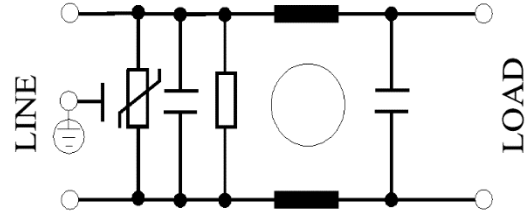


El.italia EC-EC03 [EP-422] serie

General Purpose with Surge Suppressor -



Medical equipment application with Surge Suppressor -

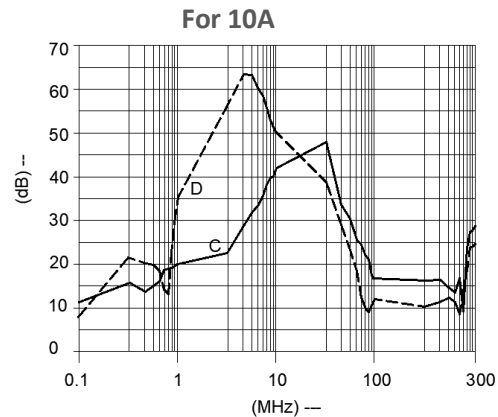
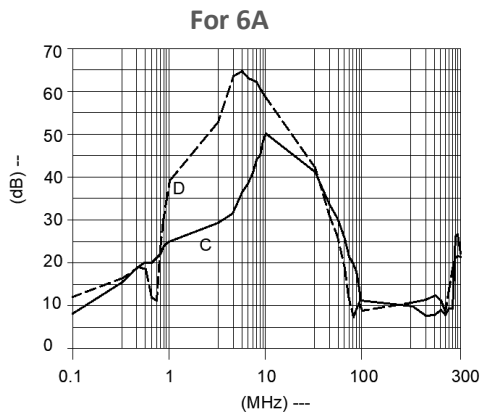
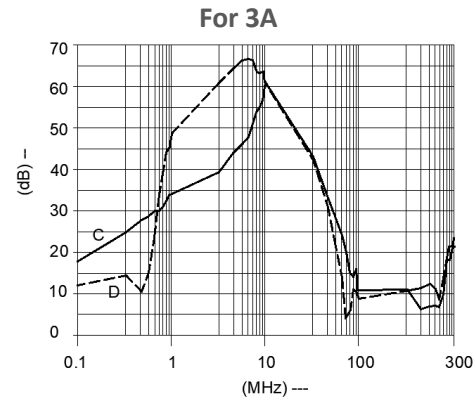
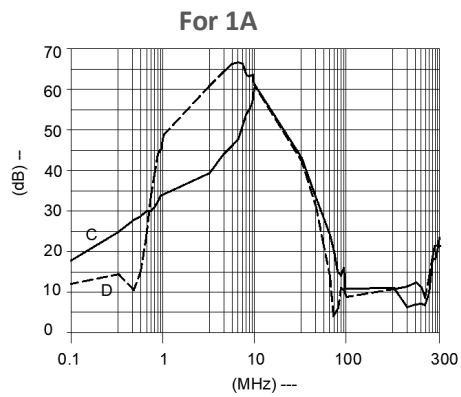


Filter attenuation Graph

C = Common mode (asymmetrical) ———

D = Differential mode (symmetrical) - - - - -

For General application (Single Stage)




Datasheet | EC03

EP-422 Series



Filter Selection Table

El.italia EC-EC03 [EP-422] serie

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)	Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Approx. Weight (gm)	Attenuation
				Fast-on 				
1	EF-1B001X01E-C03	1	< 0.5	C	----	----	60	Standard
2	EF-1B001X02E-C03	1	< 0.5	C	6.5	175	60	Standard
3	EF-1B001X03E-C03	1	< 0.003	C	----	----	60	Standard
4	EF-1B001X04E-C03	1	< 0.003	C	6.5	175	60	Standard
5	EF-1B003X01E-C03	3	< 0.5	C	----	----	60	Standard
6	EF-1B003X02E-C03	3	< 0.5	C	6.5	175	60	Standard
7	EF-1B003X03E-C03	3	< 0.003	C	----	----	60	Standard
8	EF-1B003X04E-C03	3	< 0.003	C	6.5	175	60	Standard
9	EF-1B006X01E-C03	6	< 0.5	C	----	----	60	Standard
10	EF-1B006X02E-C03	6	< 0.5	C	6.5	175	60	Standard
11	EF-1B006X03E-C03	6	< 0.003	C	----	----	60	Standard
12	EF-1B006X04E-C03	6	< 0.003	C	6.5	175	60	Standard
13	EF-1B010X01E-C03	10	< 0.5	C	----	----	60	Standard
14	EF-1B010X02E-C03	10	< 0.5	C	6.5	175	60	Standard
15	EF-1B010X03E-C03	10	< 0.003	C	----	----	60	Standard
16	EF-1B010X04E-C03	10	< 0.003	C	6.5	175	60	Standard

- To compile complete part number, replace the 'X' with required I/O connection terminal. (e.g. EF-1B001C01E-C03)
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.

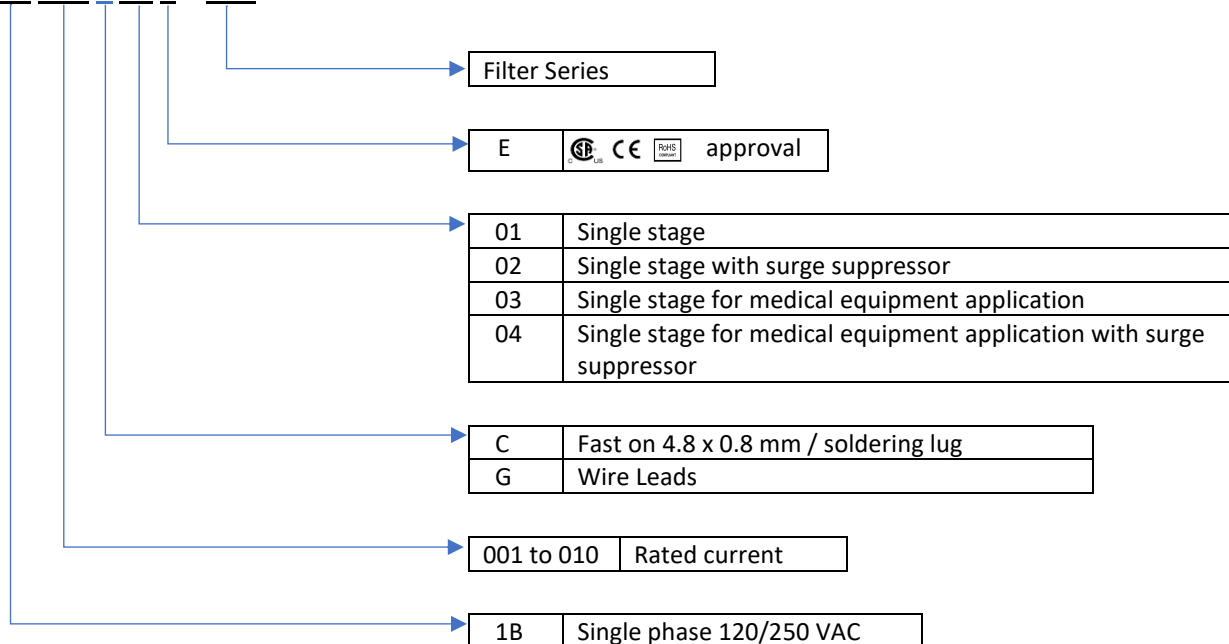


Connection Type

Current Rating (A)	Fast -on	Wire	Earthing
1,3 & 6	4.8 X 0.8mm	18AWG	Fast-on terminal/wires
10		14AWG	

Syntax

EF - 1B CCC X YY E - C03





General Purpose AC EMI Filter

Conformance



Technical specifications

Operating voltage	120/250 VAC
Current rating	1A-20A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC P -> N 1414VDC (applicable for excluding surge suppressor filter)
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°C / -25°C +85°C

*Image shown is for illustrative purpose only

Features and benefits

- | Filters available in single stage and double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards.
- | High reliable
- | Easy and fast chassis mountable filter with compact size.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Filters available in medical version without capacitor to earth.
- | General purpose filters with low leakage current for safety critical application.
- | With surge suppressor filters also available.
- | Various terminal options are available

Attenuation Type

Single Stage	Standard
Double Stage	High

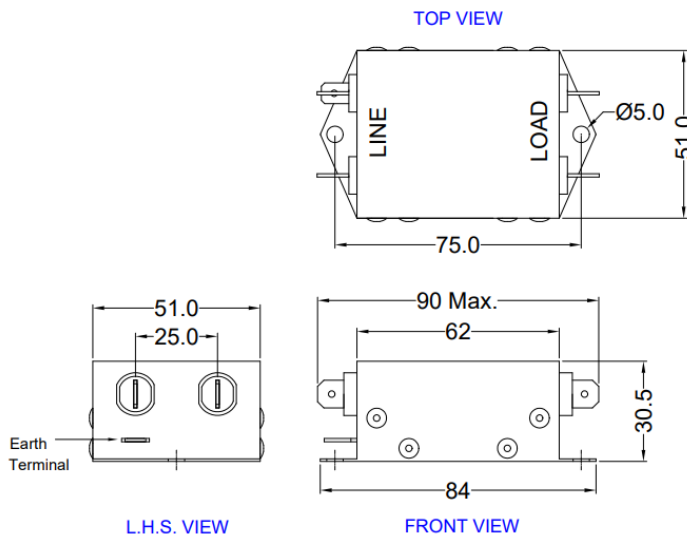
Applications

- | Consumer product
- | Defence application
- | Medical equipment
- | Industrial application
- | Automotive application
- | Weighting Machines
- | Printing Machinery
- | Electrical equipment application
- | Office automation equipment



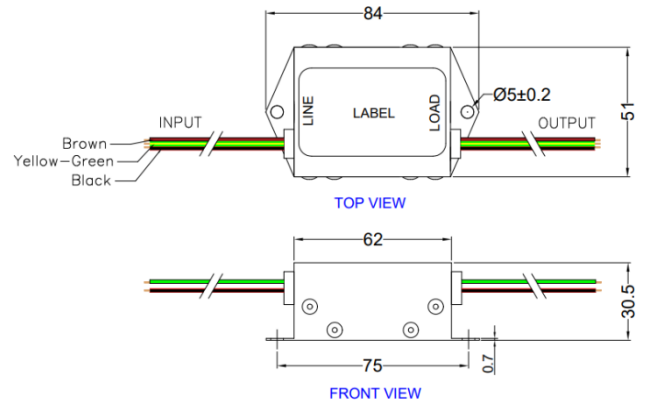
Mechanical details

| For fast-on terminal



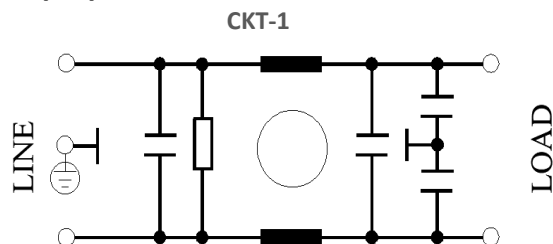
All dimensions in mm
General tolerance=±2mm

| For wire lead terminal



Electrical schematic for Single Stage Filter

General purpose –



Electrical schematic for Double Stage Filter

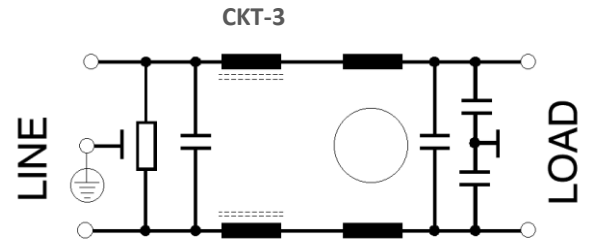
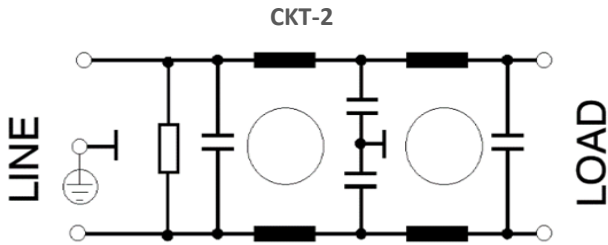


Datasheet | EC06



El.italia EC-EC06 serie

General purpose –



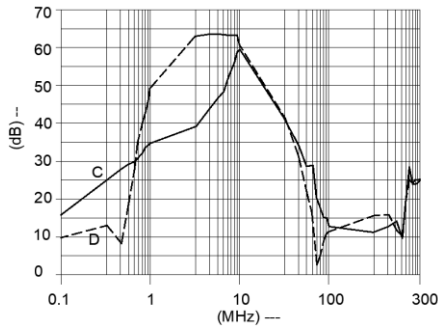
Filter attenuation Graph

C = Common mode (asymmetrical) —————

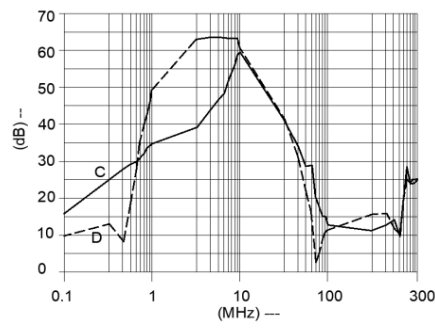
D = Differential mode (symmetrical) -----

For general application (Single Stage)

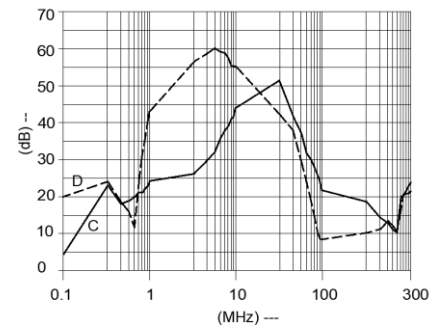
For 1A



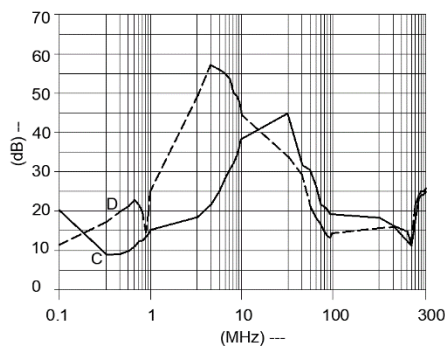
For 3A



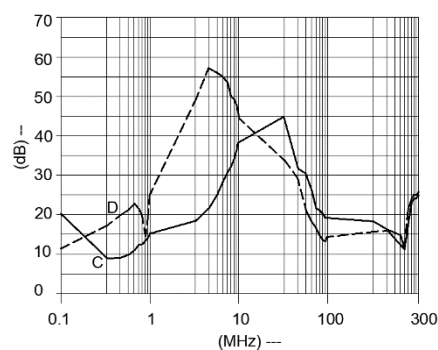
For 6A



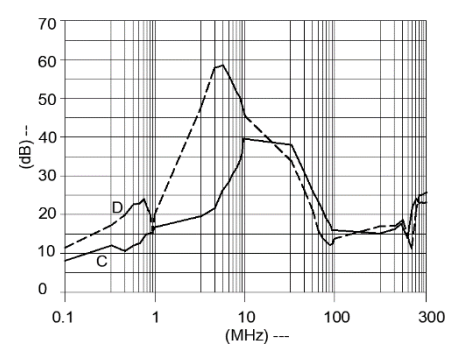
For 10A



For 15A



For 20A



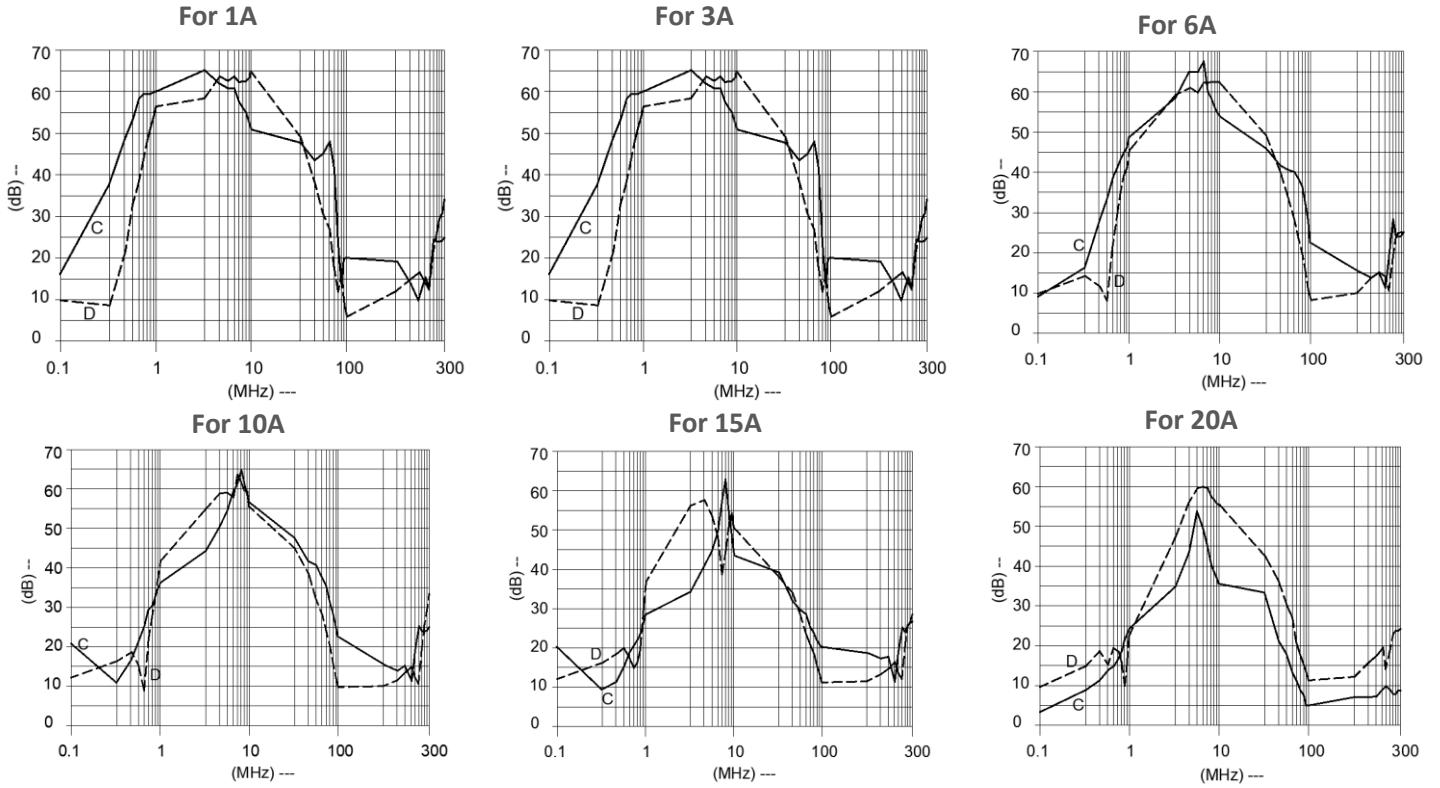
For general application (Double Stage) (CKT 2)



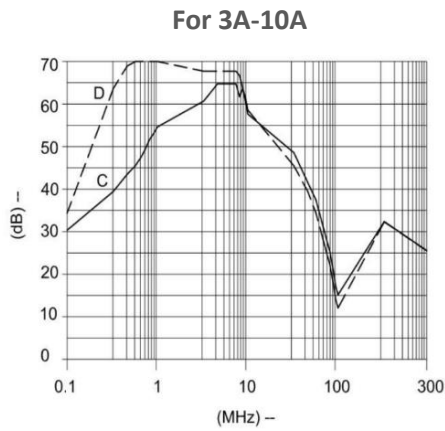
Datasheet | EC06



El.italia EC-EC06 serie



For general application (Double Stage) (CKT 3)



Filter Selection Table

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)		Approx. Weight (gm)	Attenuation
				Fast-on	Wire		
1	EF-1B001X01G-C06	1	< 0.5	B	G	150	Standard



2	EF-1B003X01G-C06	3	< 0.5	B	G	150	Standard
3	EF-1B006X01G-C06	6	< 0.5	B	G	150	Standard
4	EF-1B010X01G-C06	10	< 0.5	B	G	150	Standard
5	EF-1B015X01G-C06	15	< 0.5	B	G	150	Standard
6	EF-1B020X01G-C06	20	< 0.5	B	G	150	Standard
7	EF-1B001X20G-C06	1	< 0.5	B	G	150	High
8	EF-1B003X20G-C06	3	< 0.5	B	G	150	High
9	EF-1B006X20G-C06	6	< 0.5	B	G	150	High
10	EF-1B010X20G-C06	10	< 0.5	B	G	150	High
11	EF-1B015X20G-C06	15	< 0.5	B	G	150	High
12	EF-1B020X20G-C06	20	< 0.5	B	G	150	High
13	EF-1B003X24G-C06	3	<1.0	B	G	150	High
14	EF-1B006X24G-C06	6	<1.0	B	G	150	High
15	EF-1B010X24G-C06	10	<1.0	B	G	150	High

- To compile complete part number, replace the 'X' with required I/O connection terminal. (e.g. EF-1B001B20G-C06).
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.

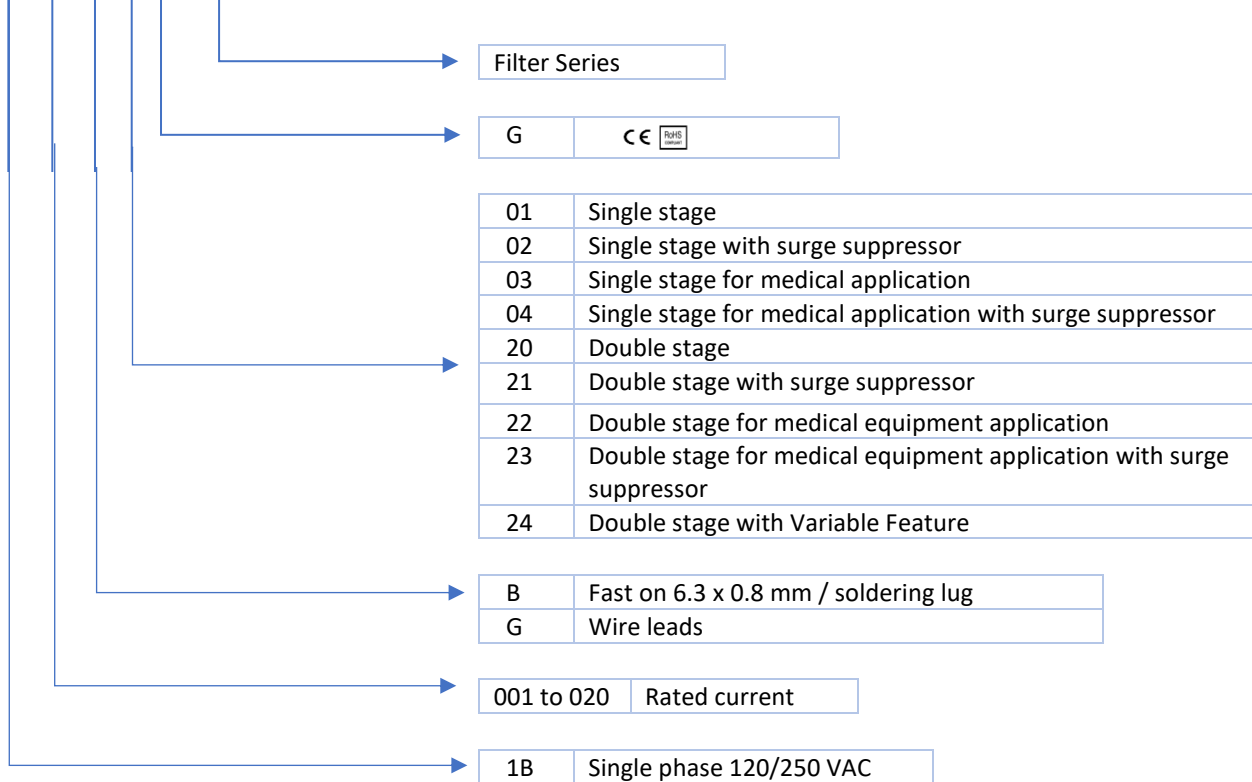
Connection Type

Current Rating (A)	Wire terminal	Fast -on terminal	Earthing
1 & 3	0.5 sqmm	6.3 X 0.8mm	Wire lead/Fast-on
6	0.75 sqmm		
10	1 sqmm		
15	1.5 sqmm		
20	2.5 sqmm		



Syntax

EF - 1B CCC X YY G - C06



Datasheet | EC09

EP-612 Series



El.italia EC-EC09 [EP-612] serie

General Purpose AC EMI Filter



*Image shown is for illustrative purpose only

Technical specifications

Operating voltage	120/250 VAC
Current rating	10A-60A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC P -> N 1414VDC (applicable for excluding surge suppressor filter)
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°c /-25°c +85°c

Features and benefits

- | Filters available in single stage and double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards.
- | High reliable
- | Chassis mountable filter in fabricated metal can.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Filters available in medical version without capacitor to earth.
- | General purpose filters with low leakage current for safety critical application.
- | With surge suppressor filters also available.
- | Various terminal options are available.

Attenuation Type

Single Stage	Standard
Double Stage	High

Application

- | Consumer product
- | Defence equipment
- | Medical equipment
- | Industrial application
- | Automotive application
- | Toggle machines
- | UPS/Inverter
- | Electrical equipment application
- | Office automation equipment

Datasheet | EC09

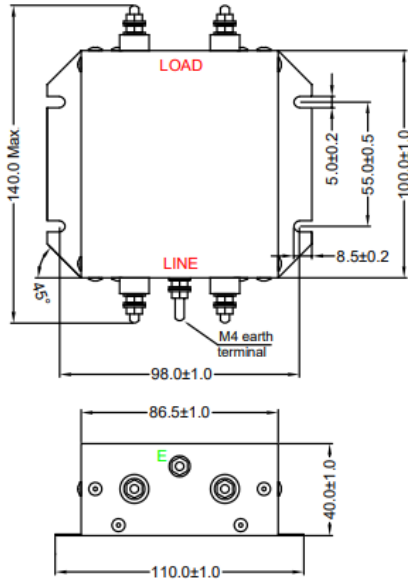
EP-612 Series



Mechanical details

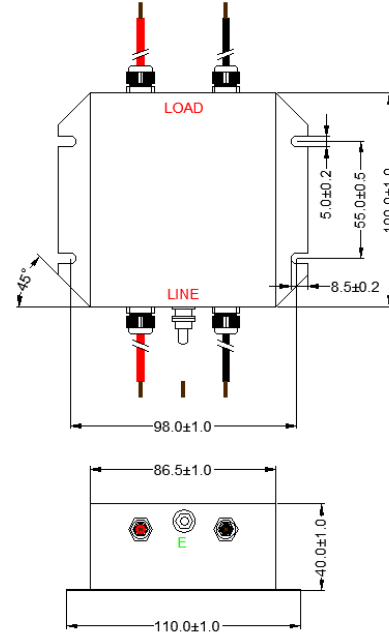
El.italia EC-EC09 [EP-612] serie

| For screw terminal



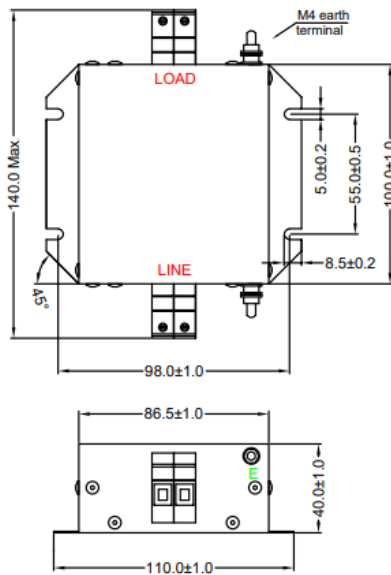
All dimensions in mm

| For wire lead terminal



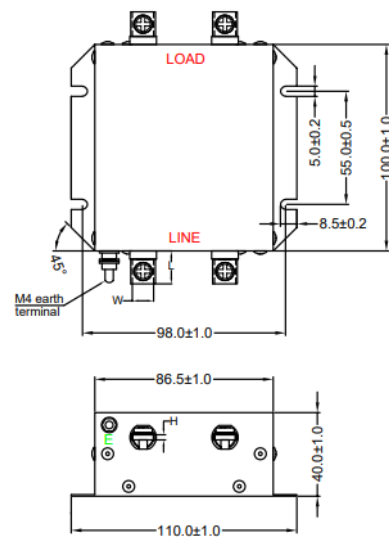
All dimensions in mm

| For touch safe terminal



All dimensions in mm

| For bus-bar terminal



All dimensions in mm

- Over 40A current rating touch will be unstackable.

Datasheet | EC09

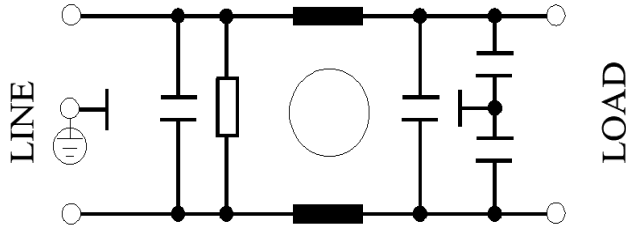
EP-612 Series



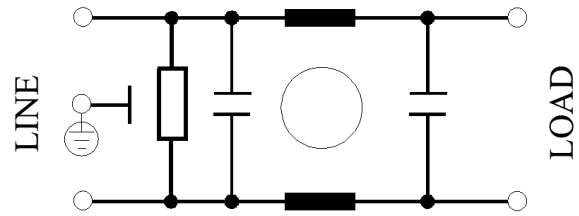
Electrical schematic for Single Stage Filter

El.italia EC-EC09 [EP-612] serie

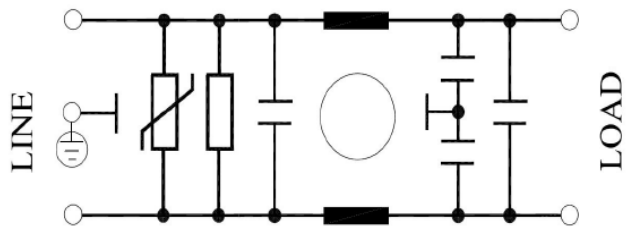
General purpose -



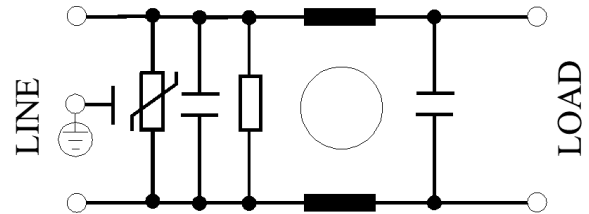
Medical equipment application -



General purpose with Surge Suppressor -

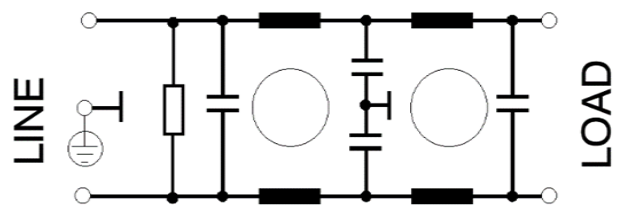


Medical equipment application with Surge Suppressor -

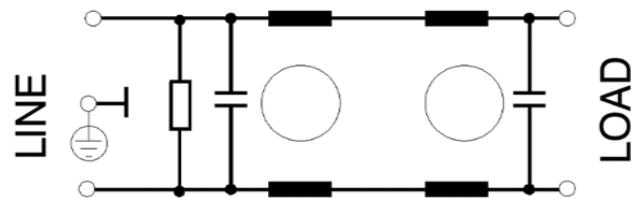


Electrical schematic for Double Stage Filter

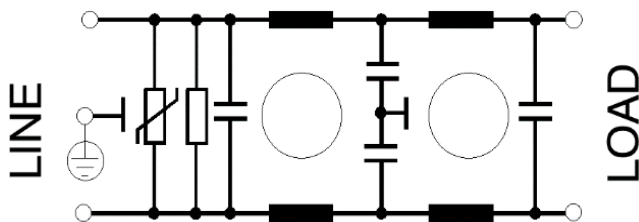
General purpose -



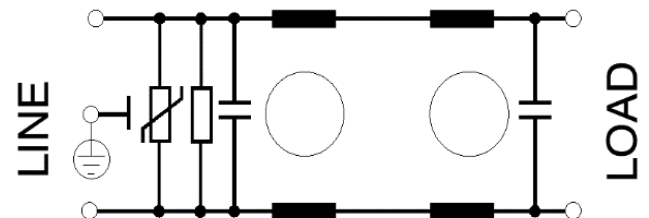
Medical equipment application -



General purpose with Surge Suppressor -



Medical equipment application with Surge Suppressor -



Datasheet | EC09

EP-612 Series



El.italia EC-EC09 [EP-612] serie

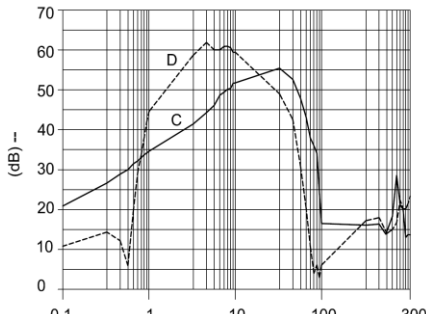
Filter attenuation Graph

C = Common mode (asymmetrical) -----

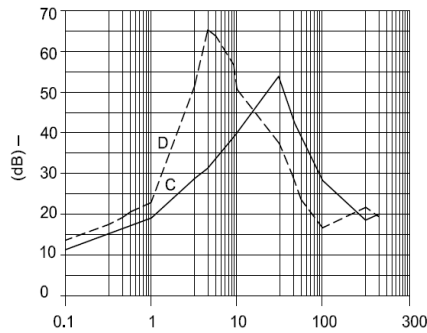
D = Differential mode (symmetrical) - - - - -

For general application (Single Stage)

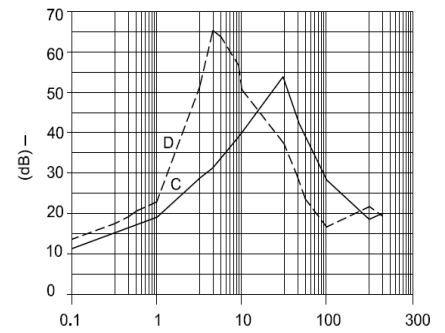
For 10A



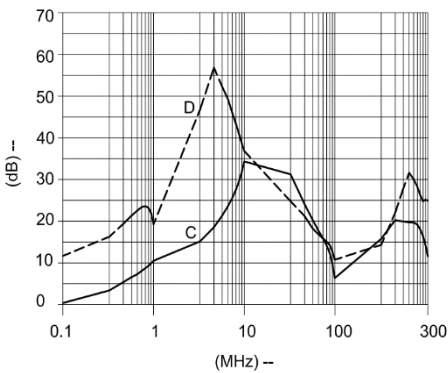
For 20A



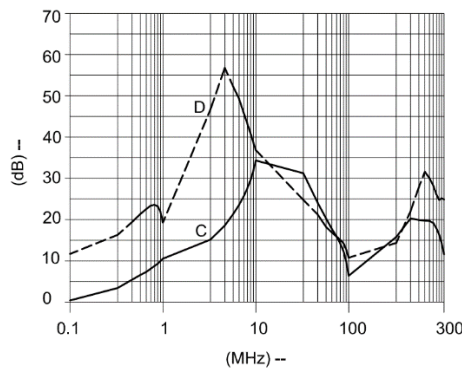
For 30A



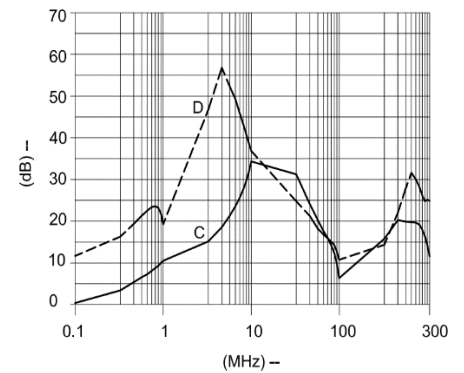
For 40A



For 50A

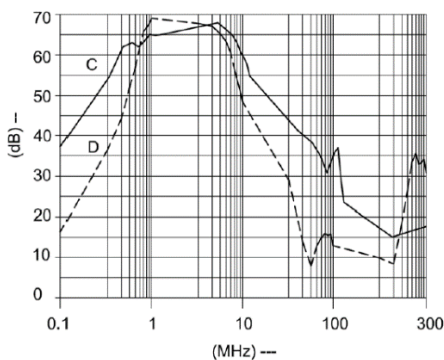


For 60A

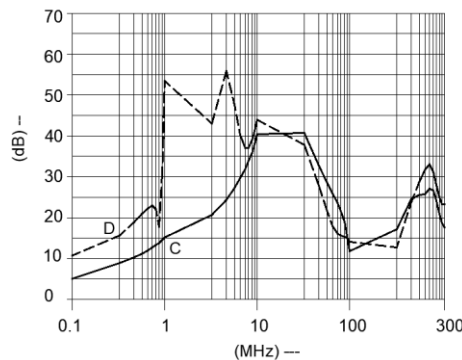


For general application (Double Stage)

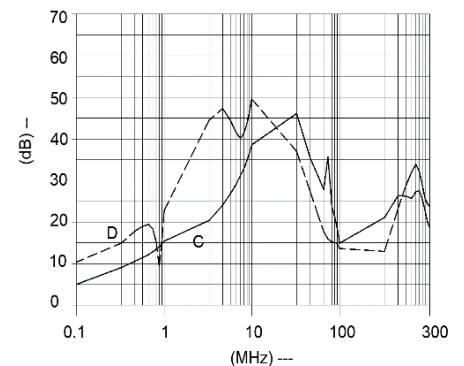
For 10A



For 20A



For 30A



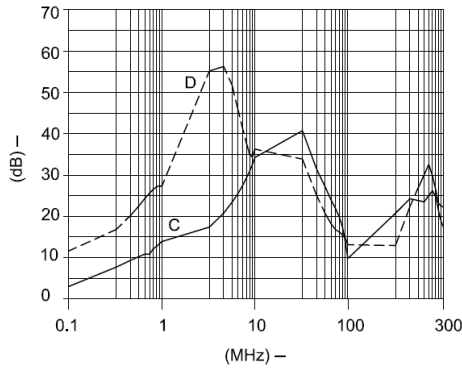
Datasheet | EC09

EP-612 Series







El.italia EC-EC09 [EP-612] serie

For 40A







Filter Selection Table

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)				Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Approx. Weight (gm)	Attenuation
				Screw 	Bus bar 	Touch-safe 	Wire 				
1	EF-1B010X01E-C09	10	< 0.5	D	E	F	G	----	----	450	Standard
2	EF-1B010X02E-C09	10	< 0.5	D	E	F	G	6.5	175	450	Standard
3	EF-1B010X03E-C09	10	< 0.003	D	E	F	G	----	----	450	Standard
4	EF-1B010X04E-C09	10	< 0.003	D	E	F	G	6.5	175	450	Standard
5	EF-1B020X01E-C09	20	< 0.5	D	E	F	G	----	----	450	Standard
6	EF-1B020X02E-C09	20	< 0.5	D	E	F	G	10	350	450	Standard
7	EF-1B020X03E-C09	20	< 0.003	D	E	F	G	----	----	450	Standard
8	EF-1B020X04E-C09	20	< 0.003	D	E	F	G	10	350	450	Standard
9	EF-1B030X01E-C09	30	< 0.5	D	E	F	G	----	----	450	Standard
10	EF-1B030X02E-C09	30	< 0.5	D	E	F	G	10	350	450	Standard
11	EF-1B030X03E-C09	30	< 0.003	D	E	F	G	----	----	450	Standard
12	EF-1B030X04E-C09	30	< 0.003	D	E	F	G	10	350	450	Standard
13	EF-1B040X01E-C09	40	< 0.5	D	E	F	G	----	----	450	Standard
14	EF-1B040X02E-C02	40	< 0.5	D	E	F	G	10	350	450	Standard
15	EF-1B040X03E-C09	40	< 0.003	D	E	F	G	----	----	450	Standard
16	EF-1B040X04E-C09	40	< 0.003	D	E	F	G	10	350	450	Standard

Datasheet | EC09

EP-612 Series



Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)				Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Approx. Weight (gm)	Attenuation
				Screw 	Bus bar 	Touch-safe 	Wire 				
17	EF-1B050X01E-C09	50	< 0.5	D	E	F	G	----	----	450	Standard
18	EF-1B050X02E-C09	50	< 0.5	D	E	F	G	10	350	450	Standard
19	EF-1B050X03E-C09	50	< 0.003	D	E	F	G	----	----	450	Standard
20	EF-1B050X04E-C09	50	< 0.003	D	E	F	G	10	350	450	Standard
21	EF-1B060X01E-C09	60	< 0.5	D	E	F	G	----	----	450	Standard
22	EF-1B060X02E-C09	60	< 0.5	D	E	F	G	10	350	450	Standard
23	EF-1B060X03E-C09	60	< 0.003	D	E	F	G	----	----	450	Standard
24	EF-1B060X04E-C09	60	< 0.003	D	E	F	G	10	350	450	Standard
25	EF-1B010X20E-C09	10	< 0.5	D	E	F	G	----	----	500	High
26	EF-1B010X21E-C09	10	< 0.5	D	E	F	G	10	350	500	High
27	EF-1B010X22E-C09	10	< 0.003	D	E	F	G	----	----	500	High
28	EF-1B010X23E-C09	10	< 0.003	D	E	F	G	10	350	500	High
29	EF-1B020X20E-C09	20	< 0.5	D	E	F	G	----	----	500	High
30	EF-1B020X21E-C09	20	< 0.5	D	E	F	G	10	350	500	High
31	EF-1B020X22E-C09	20	< 0.003	D	E	F	G	----	----	500	High
32	EF-1B020X23E-C09	20	< 0.003	D	E	F	G	10	350	500	High
33	EF-1B030X20E-C09	30	< 0.5	D	E	F	G	----	----	500	High
34	EF-1B030X21E-C09	30	< 0.5	D	E	F	G	10	350	500	High
35	EF-1B030X22E-C09	30	< 0.003	D	E	F	G	----	----	500	High
36	EF-1B030X23E-C09	30	< 0.003	D	E	F	G	10	350	500	High
37	EF-1B040X20E-C09	40	< 0.5	D	E	F	G	----	----	500	High
38	EF-1B040X21E-C09	40	< 0.5	D	E	F	G	10	350	500	High
39	EF-1B040X22E-C09	40	< 0.003	D	E	F	G	----	----	500	High
40	EF-1B040X23E-C09	40	< 0.003	D	E	F	G	10	350	500	High

Datasheet | EC09

EP-612 Series



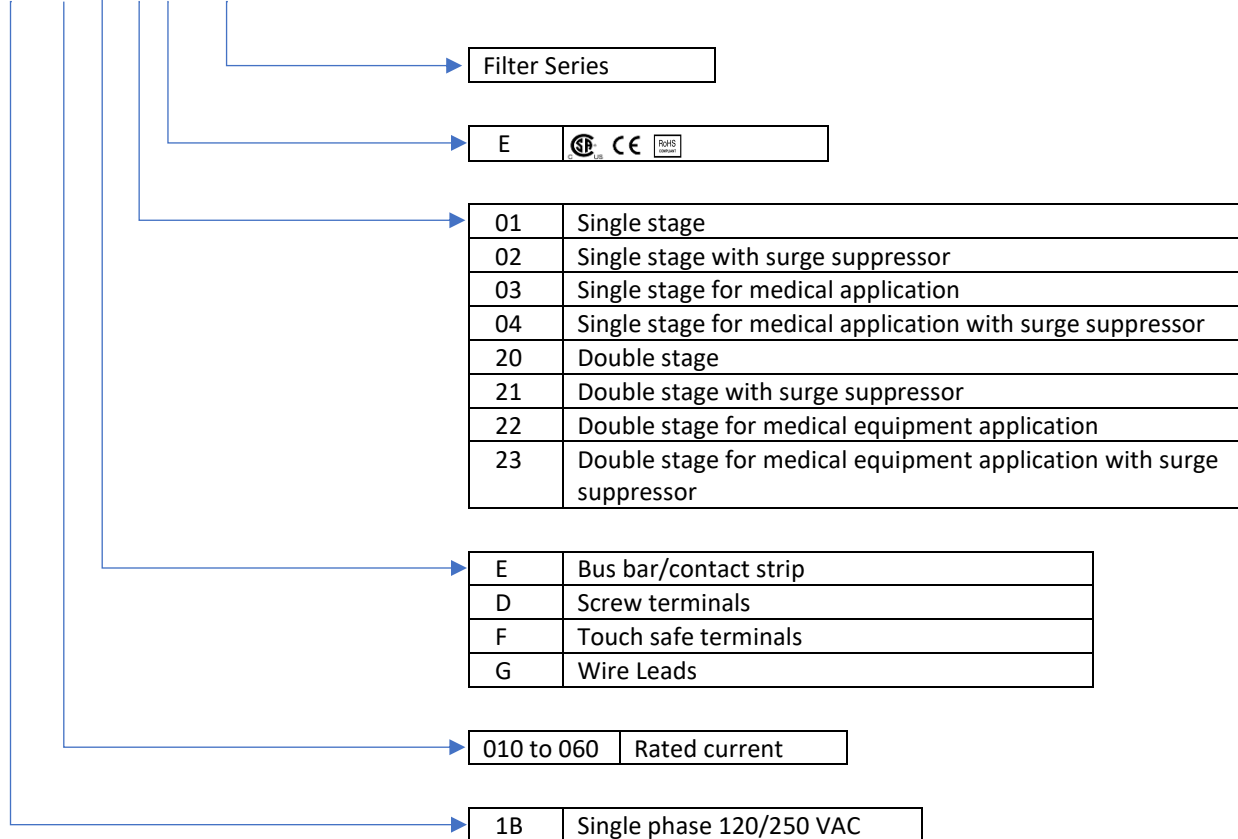
El.italia EC-EC09 [EP-612] serie

Connection Type

Current Rating (A)	Screw terminal	Bus bar (LxWxH)& Connection screw	Touch safe	Wire	Earthing
10	M4	12x10x2.5 & M4	6 Sq.mm	14 AWG	M4
20	M4	12x10x2.5 & M4	6 Sq.mm	12 AWG	M4
30	M4	12x10x2.5 & M4	6 Sq.mm	10 AWG	M4
40	M4	12x10x2.5 & M4	6 Sq.mm	8 AWG	M4
50	M6	NA	16 Sq.mm	8 AWG	M4
60	M6	NA	16 Sq.mm	6 AWG	M4

Syntax

EF - 1B CCC X YY E - C09



- To compile complete part number, replace the 'X' with required output connection terminal. (e.g. EF-1B0101B01E-C09)
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Recommended tightening torque for touch safe – For 6 sqmm. – 10.6-13 lbf.in. and for 16 sqmm – 10.6-13 lbf.in.
- Customize products provided on request.

Datasheet | EC10

EP-612 Series



El.italia EC-EC10 [EP-612] serie

General Purpose AC EMI Filter



Image shown is for illustrative purpose only

Technical specifications

Operating voltage	120/250 VAC
Current rating	50A-60A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC P -> N 1414VDC (applicable for excluding surge suppressor filter)
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°C / -25°C +85°C

Features and benefits

- | Filters available in single stage and double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards.
- | High reliable
- | Chassis mountable filter in fabricated metal can.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Filters available in medical version without capacitor to earth.
- | General purpose filters with low leakage current for safety critical application.
- | With surge suppressor filters also available.
- | Various terminal options are available.

Attenuation Type

Single Stage	Standard
Double Stage	High

Application

- | Medical equipment
- | Industrial application
- | Automotive application
- | Audio video products
- | Power supplies.
- | Electrical equipment application
- | UPS/inverter

Datasheet | EC10

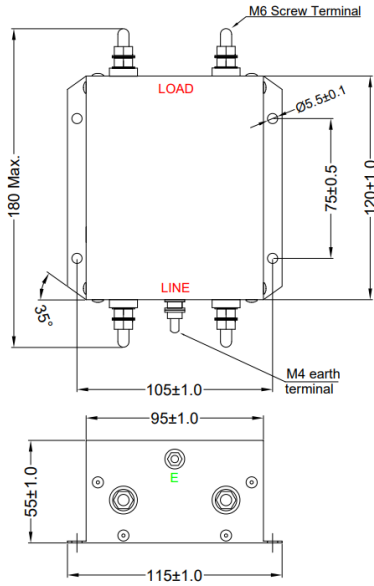
EP-612 Series



Mechanical details

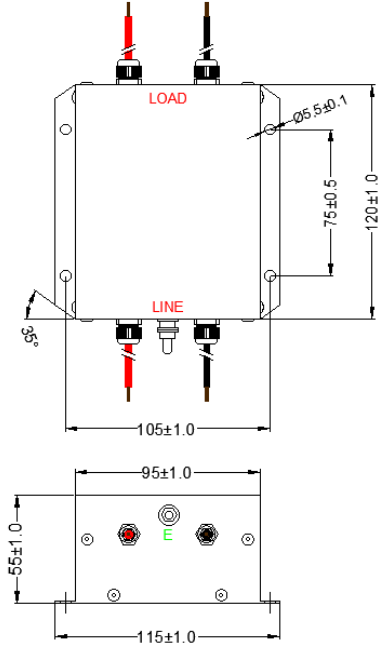
El.italia EC-EC10 [EP-612] serie

| For screw terminal



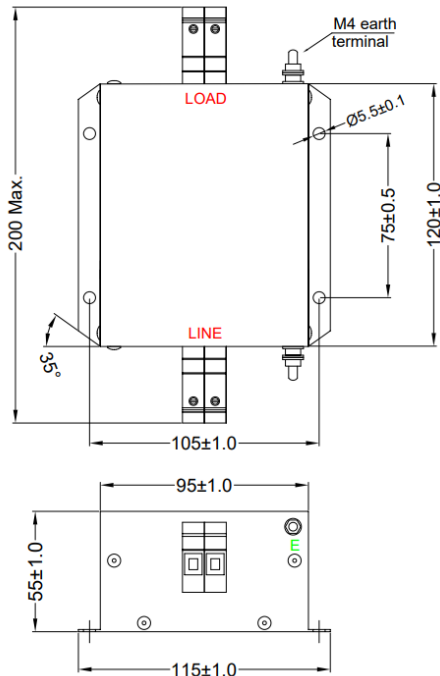
All dimensions in mm

| For wire lead terminal



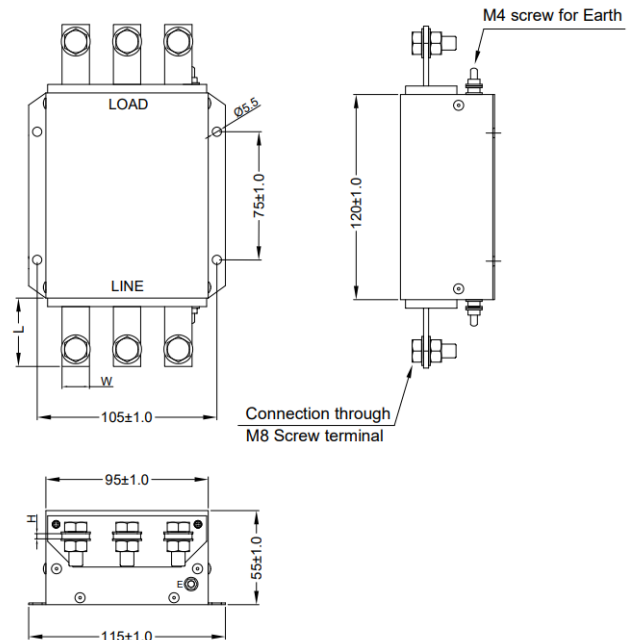
All dimensions in mm

| For touch safe terminal



All dimensions in mm

| For bus-bar terminal



All dimensions in mm

Datasheet | EC10

EP-612 Series

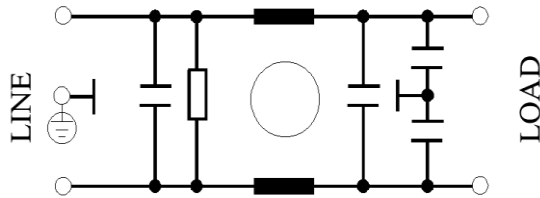


El.italia EC-EC10 [EP-612] serie

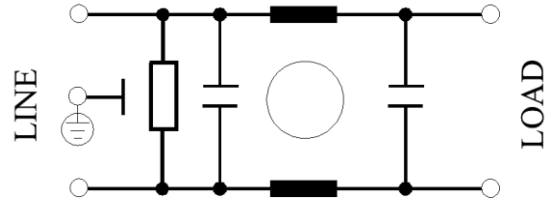


Electrical schematic for Single Stage Filter

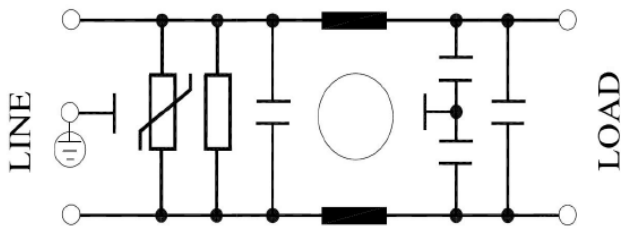
General purpose -



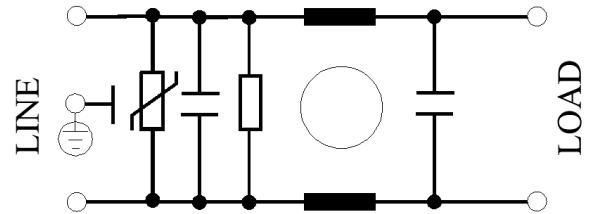
Medical equipment application -



General purpose with Surge Suppressor -

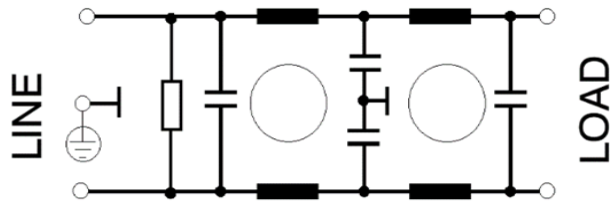


Medical equipment application with Surge Suppressor -

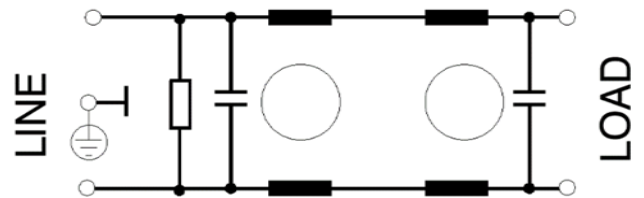


Electrical schematic for Double Stage Filter

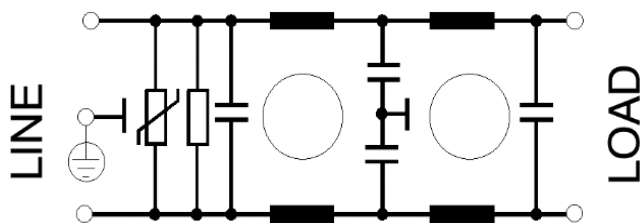
General purpose -



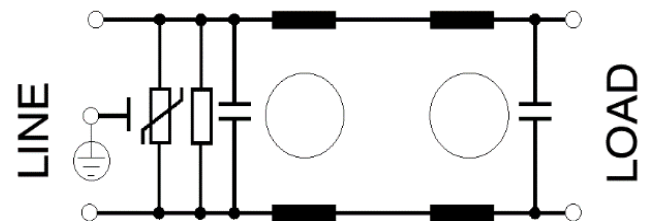
Medical equipment application -



General purpose with Surge Suppressor -



Medical equipment application with Surge Suppressor -



Datasheet | EC10

EP-612 Series



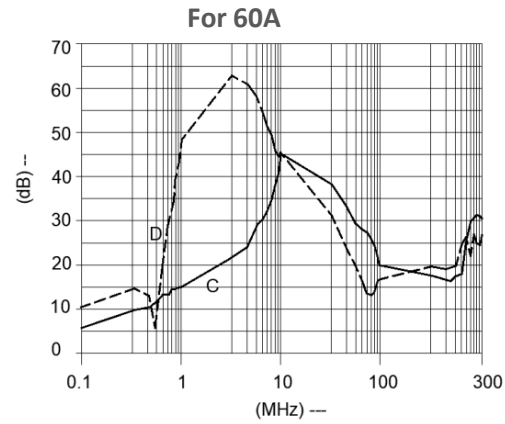
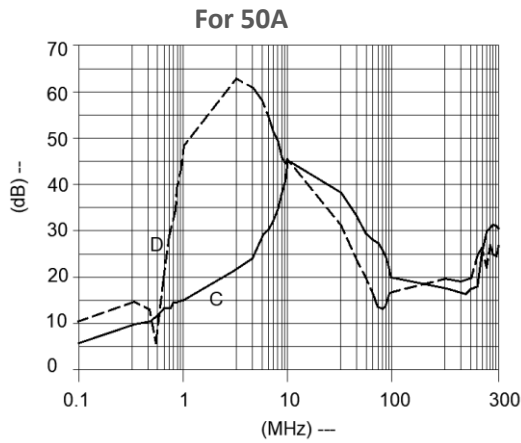
El.italia EC-EC10 [EP-612] serie

Filter attenuation Graph

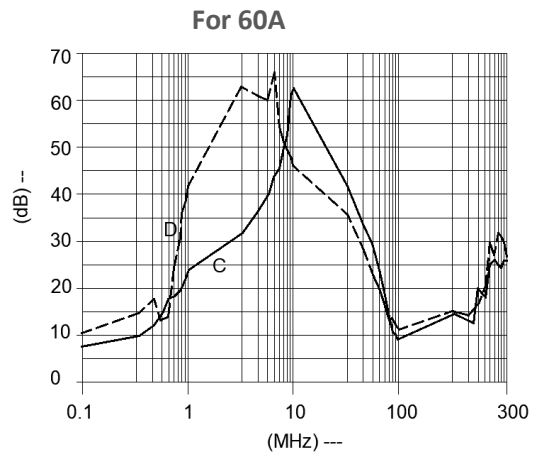
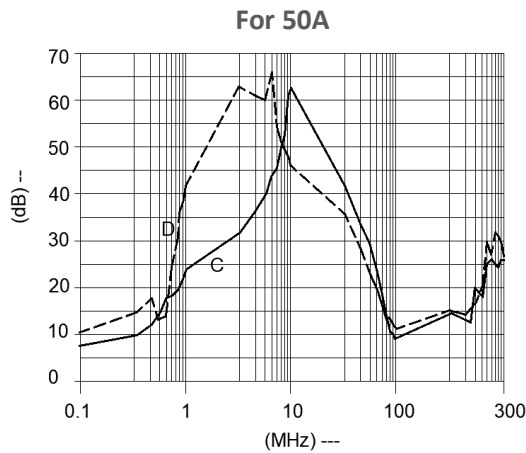
C = Common mode (asymmetrical) -----

D = Differential mode (symmetrical) -----

For general application (Single Stage)



For general application (Double Stage)







Datasheet | EC10

EP-612 Series



El.italia EC-EC10 [EP-612] serie

Filter Selection Table

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)				Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Aprrox. Weight (gm)	Attenuation
				Screw 	Bus bar 	Touch-safe 	Wire 				
1	EF-1B050X01E-C10	50	< 0.5	D	*E	F	G	----	----	900	Standard
2	EF-1B050X02E-C10	50	< 0.5	D	*E	F	G	10	350	900	Standard
3	EF-1B050X03E-C10	50	< 0.003	D	*E	F	G	----	----	900	Standard
4	EF-1B050X04E-C10	50	< 0.003	D	*E	F	G	10	350	900	Standard
5	EF-1B060X01E-C10	60	< 0.5	D	*E	F	G	----	----	900	Standard
6	EF-1B060X02E-C10	60	< 0.5	D	*E	F	G	10	350	900	Standard
7	EF-1B060X03E-C10	60	< 0.003	D	*E	F	G	----	----	900	Standard
8	EF-1B060X04E-C10	60	< 0.003	D	*E	F	G	10	350	900	Standard
9	EF-1B050X20E-C09	50	< 0.5	D	*E	F	G	----	----	1000	High
10	EF-1B050X21E-C10	50	< 0.5	D	*E	F	G	10	350	1000	High
11	EF-1B050X22E-C10	50	< 0.003	D	*E	F	G	----	----	1000	High
12	EF-1B050X23E-C10	50	< 0.003	D	*E	F	G	10	350	1000	High
13	EF-1B060X20E-C10	60	< 0.5	D	*E	F	G	----	----	1000	High
14	EF-1B060X21E-C10	60	< 0.5	D	*E	F	G	10	350	1000	High
15	EF-1B060X22E-C10	60	< 0.003	D	*E	F	G	----	----	1000	High
16	EF-1B060X23E-C10	60	< 0.003	D	*E	F	G	10	350	1000	High

- To compile complete part number, replace the 'X' with required I/O connection terminal. (e.g. EF-1B500D20E-C10)
- Recommended tightening torque for touch safe – For 16 sqmm. – 22-25 lbf.in.
- * indicates product having screw terminal I/O connection which have CE and RoHS compliance only. So to compile ordering code 'E' replace by 'G' (e.g.- EF-1B050E01G-C10)
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.

Datasheet | EC10

EP-612 Series



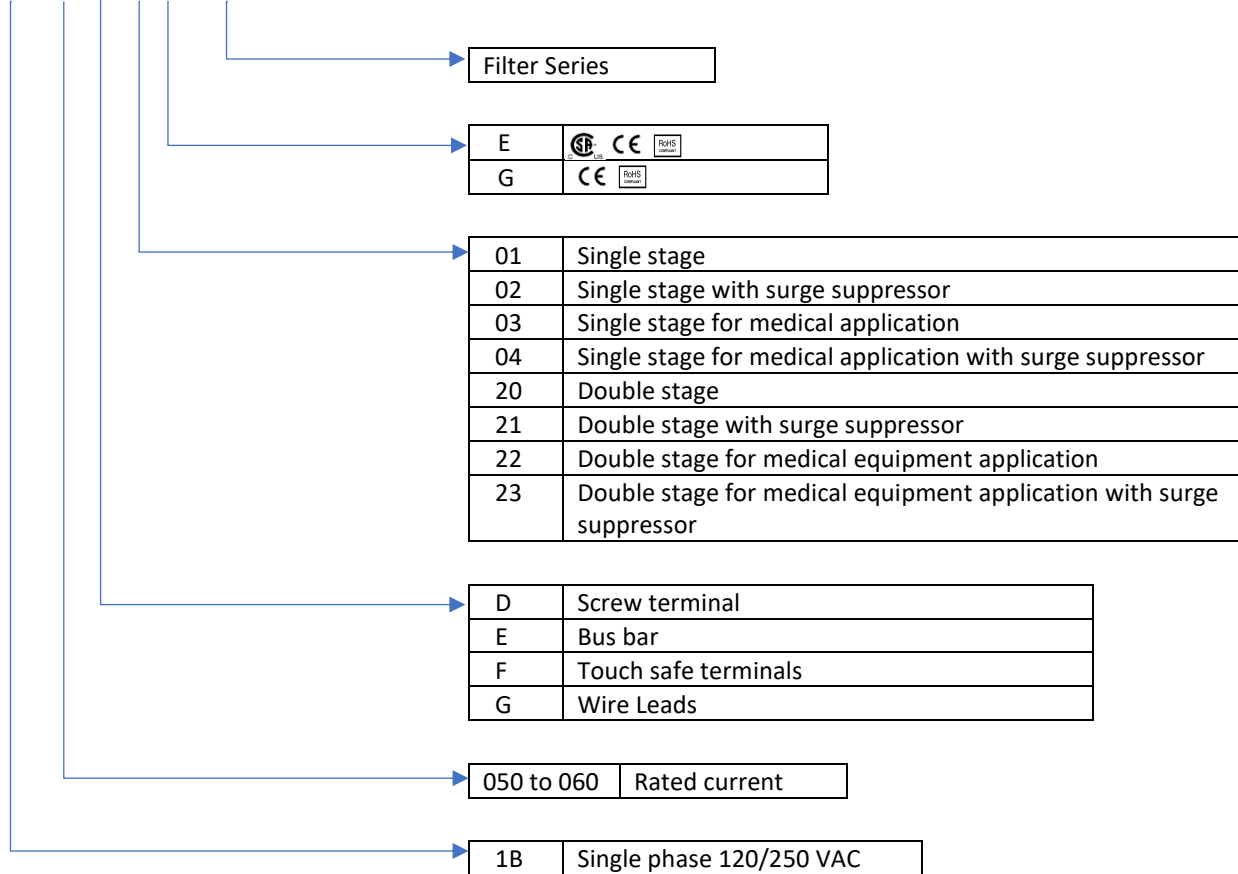
El.italia EC-EC10 [EP-612] serie

Connection Type

Current Rating (A)	Screw terminal	Bus bar (LxWxH) & Connection screw terminal	Touch safe	Wire	Earthing
50	M6	40x10x2.5 & M8	16 Sq.mm	8 AWG	M4
60	M6	40x10x2.5 & M8	16 Sq.mm	6 AWG	M4

Syntax

EF - 1B CCC X YY Z - C10



Datasheet | EC11 EP-612 series



General Purpose AC EMI Filter

El.italia EC-EC11 [EP-612] serie



Technical specifications

Operating voltage	120/250 VAC
Current rating	80A-150A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC P -> N 1414VDC (applicable for excluding surge suppressor filter)
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°c /-25°c +85°c

*Image shown is for illustrative purpose only

Features and benefits

- | Filters available in single stage and double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards.
- | High reliable
- | Chassis mountable filter in fabricated metal can.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Filters available in medical version without capacitor to earth.
- | General purpose filters with low leakage current for safety critical application.
- | With surge suppressor filters also available.
- | Various terminal options are available.

Attenuation Type

Single Stage	Standard
Double Stage	High

Applications

- | Defence application
- | Medical equipment
- | Industrial application
- | UPS
- | Solar inverter
- | Electrical equipment application

Datasheet | EC11

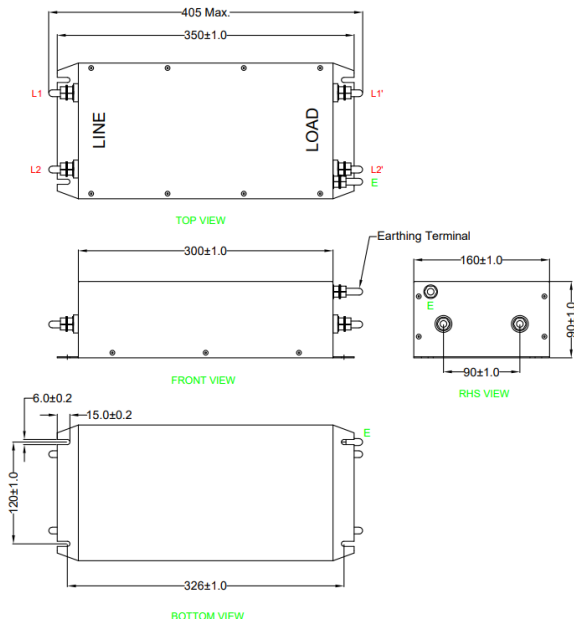
EP-612 series



El.italia EC-EC11 [EP-612] serie

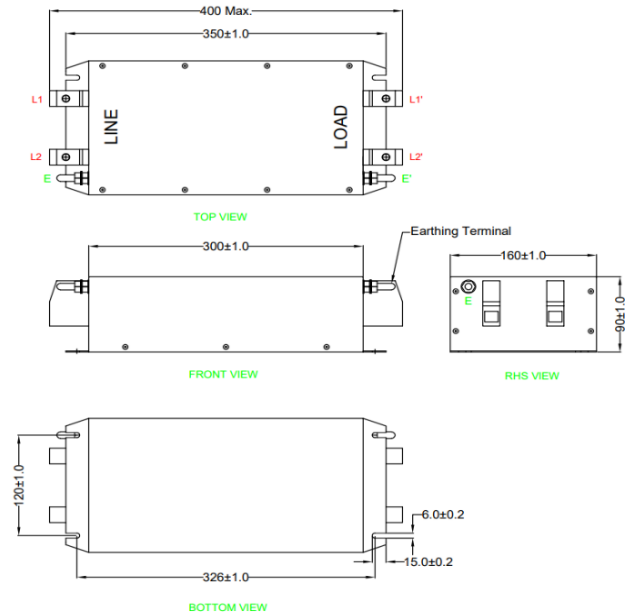
Mechanical details

For screw terminal



All dimensions in mm

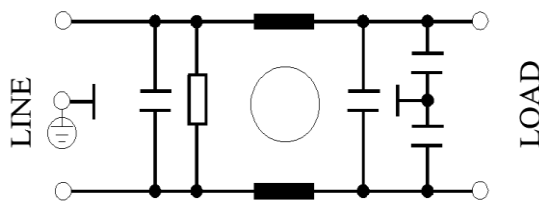
For touch safe terminal



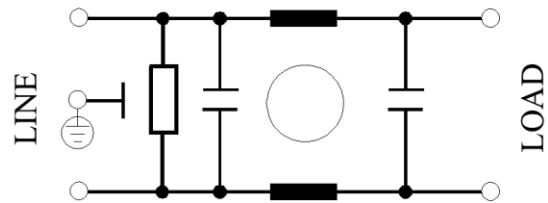
All dimensions in mm

Electrical schematic for Single Stage Filter

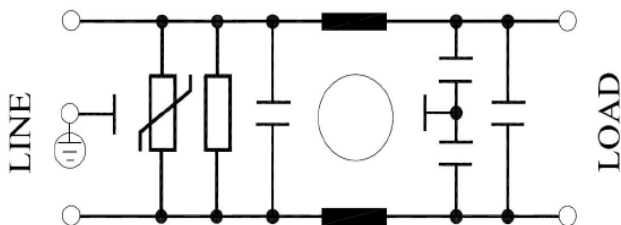
General purpose -



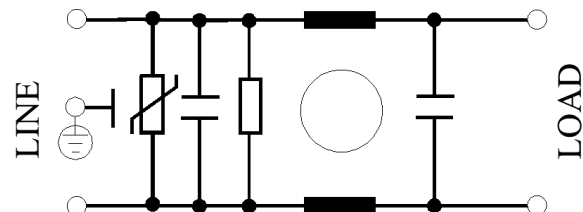
Medical equipment application -



General purpose with Surge Suppressor -



Medical equipment application with Surge Suppressor -



Datasheet | EC11

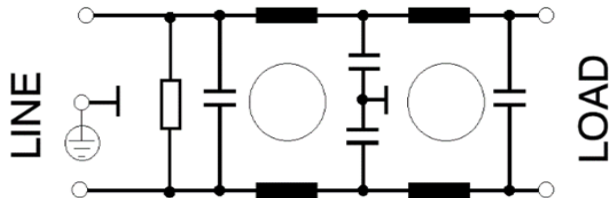
EP-612 series



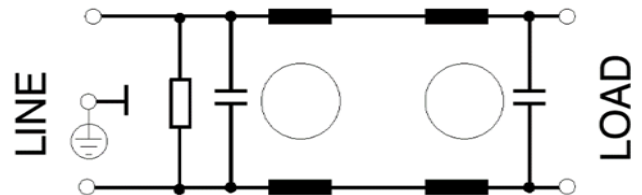
El.italia EC-EC11 [EP-612] serie

Electrical schematic for Double Stage Filter

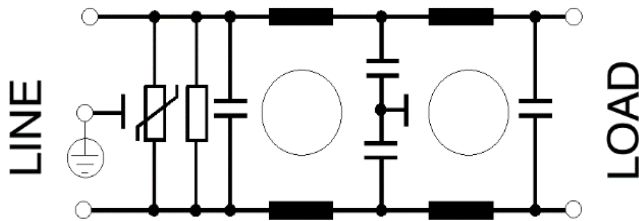
General purpose –



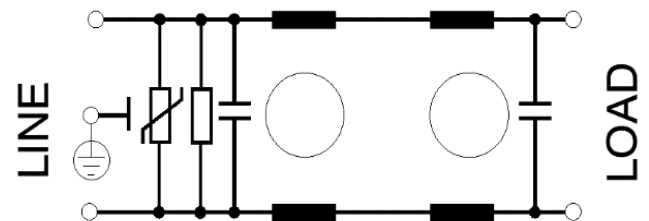
Medical equipment application –



General purpose with Surge Suppressor –



Medical equipment application with Surge Suppressor -



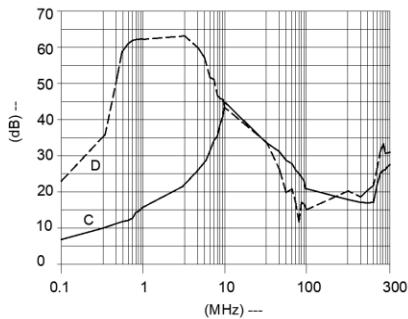
Filter attenuation Graph

C = Common mode (asymmetrical) —————

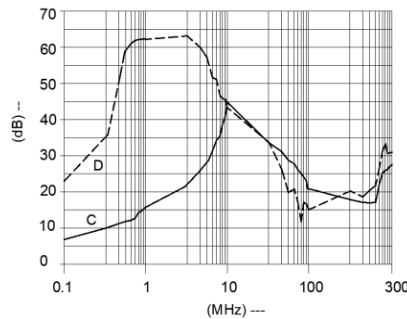
D = Differential mode (symmetrical) - - - - -

For general application (Single Stage)

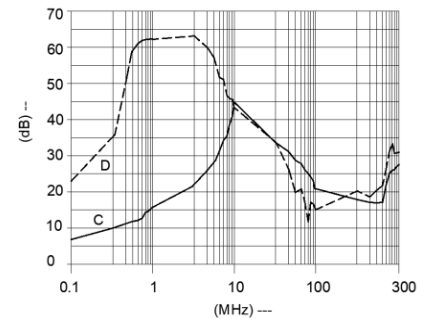
For 80A



For 100A



For 120A



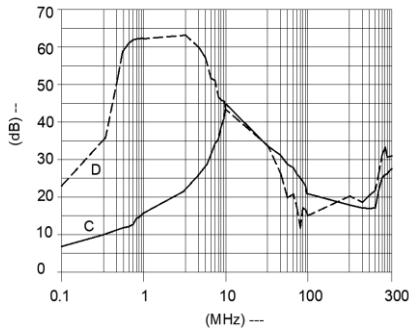
Datasheet | EC11

EP-612 series



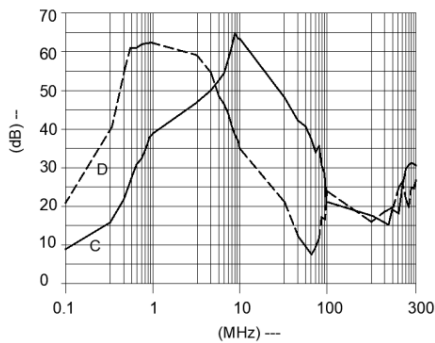
El.italia EC-EC11 [EP-612] serie

For 150A

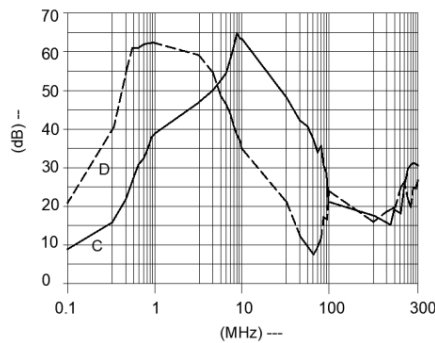


For general application (Double Stage)

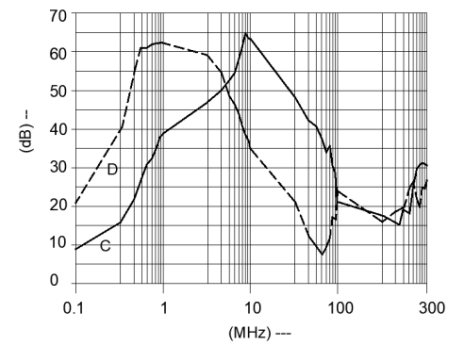
For 80A



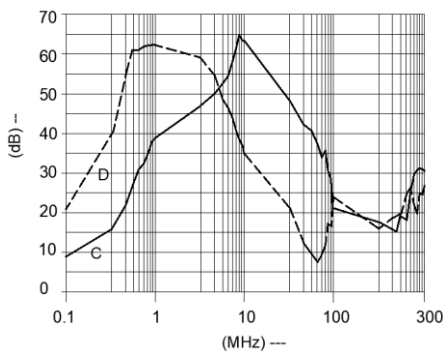
For 100A





For 120A



For 150A



Filter Selection Table

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)		Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Approx. Weight (Kg)	Attenuation
				Screw 	Touch-safe 				
1	EF-1B080X01E-C11	80	< 0.5	D	F	----	----	3.5	Standard
2	EF-1B080X02E-C11	80	< 0.5	D	F	10	350	3.5	Standard
3	EF-1B080X03E-C11	80	< 0.003	D	F	----	----	3.5	Standard
4	EF-1B080X04E-C11	80	< 0.003	D	F	10	350	3.5	Standard
5	EF-1B100X01E-C11	100	< 0.5	D	F	----	----	4	Standard



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 CONTACT US info@elitaliaweb.it

Datasheet | EC11

EP-612 series



6	EF-1B100X02E-C11	100	< 0.5	D	F	10	350	4	Standard
7	EF-1B100X03E-C11	100	< 0.003	D	F	----	----	4	Standard
8	EF-1B100X04E-C11	100	< 0.003	D	F	10	350	4	Standard
9	EF-1B120X01E-C11	120	< 0.5	D	F	----	----	4	Standard
10	EF-1B120X02E-C11	120	< 0.5	D	F	10	350	4	Standard
11	EF-1B120X03E-C11	120	< 0.003	D	F	----	----	4	Standard
12	EF-1B120X04E-C11	120	< 0.003	D	F	10	350	4	Standard
13	EF-1B150X01E-C11	150	< 0.5	D	F	----	----	4.5	Standard
14	EF-1B150X02E-C11	150	< 0.5	D	F	10	350	4.5	Standard
15	EF-1B150X03E-C11	150	< 0.003	D	F	----	----	4.5	Standard
16	EF-1B150X04E-C11	150	< 0.003	D	F	10	350	4.5	Standard
17	EF-1B080X20E-C11	80	< 0.5	D	F	----	----	4	High
18	EF-1B080X21E-C11	80	< 0.5	D	F	10	350	4	High
19	EF-1B080X22E-C11	80	< 0.003	D	F	----	----	4	High
20	EF-1B080X23E-C11	80	< 0.003	D	F	10	350	4	High
21	EF-1B100X20E-C11	100	< 0.5	D	F	----	----	4.5	High
22	EF-1B100X21E-C11	100	< 0.5	D	F	10	350	4.5	High
23	EF-1B100X22E-C11	100	< 0.003	D	F	----	----	4.5	High
24	EF-1B100X23E-C11	100	< 0.003	D	F	10	350	4.5	High
25	EF-1B120X20E-C11	120	< 0.5	D	F	----	----	4.5	High
26	EF-1B120X21E-C11	120	< 0.5	D	F	10	350	4.5	High
27	EF-1B120X22E-C11	120	< 0.003	D	F	----	----	4.5	High
28	EF-1B120X23E-C11	120	< 0.003	D	F	10	350	4.5	High
29	EF-1B150X20E-C11	150	< 0.5	D	F	----	----	5	High
30	EF-1B150X21E-C11	150	< 0.5	D	F	10	350	5	High
31	EF-1B150X22E-C11	150	< 0.003	D	F	----	----	5	High
32	EF-1B150X23E-C11	150	< 0.003	D	F	10	350	5	High

- To compile complete part number, replace the 'X' with required I/O connection terminal. (e.g. EF-1B100D20E-C11)
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.

Datasheet | EC11

EP-612 series



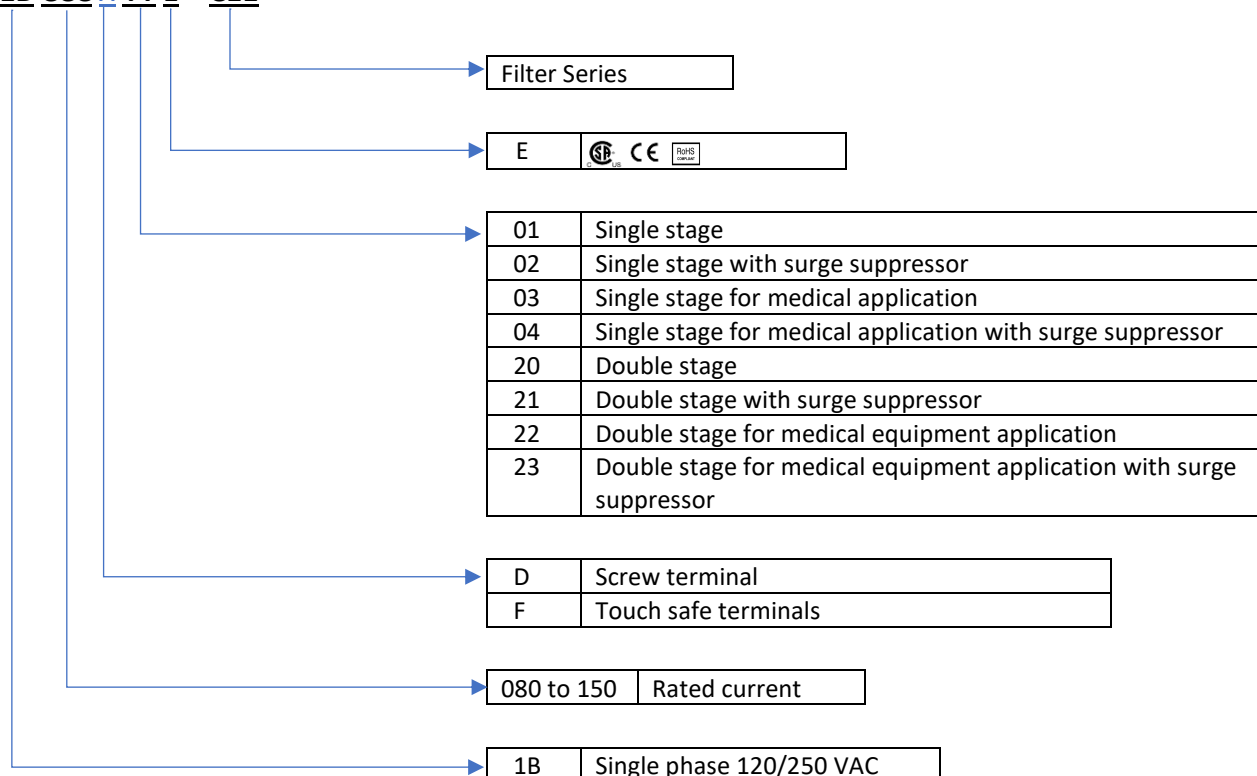
El.italia EC-EC11 [EP-612] serie

Connection Type

Current Rating (A)	Screw terminal details		Touch safe terminal details		Earthing screw terminal details
	Screw	Recommended tightening torque	Touch safe	Recommended tightening torque	
80	M8	25-30Kgcm	16 Sq.mm	22-25 lbf.in	M6
100	M10	35-40Kgcm	50 Sq.mm	38-40 lbf.in	M6
120	M10	35-40Kgcm	50 Sq.mm	38-40 lbf.in	M6
150	M12	35-40Kgcm	50 Sq.mm	38-40 lbf.in	M6

Syntax

EF - 1B CCC X YY E - C11



Datasheet | EC12

EP-612 series



General Purpose AC EMI Filter

El.italia EC-EC12 [EP-612] serie



Image shown is for illustrative purpose only

Technical specifications

Operating voltage	120/250 VAC
Current rating	180A-250A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC P -> N 1414VDC (applicable for excluding surge suppressor filter)
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°C / -25°C +85°C

Features and benefits

- | Filters available in single stage and double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards.
- | High reliable
- | Chassis mountable filter in fabricated metal can.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Filters available in medical version without capacitor to earth.
- | General purpose filters with low leakage current for safety critical application.
- | With surge suppressor filters also available.

Attenuation Type

Single Stage	Standard
Double Stage	High

Application

- | Defence application
- | Medical equipment
- | Industrial application
- | UPS
- | Solar inverter
- | Electrical equipment application

Datasheet | EC12

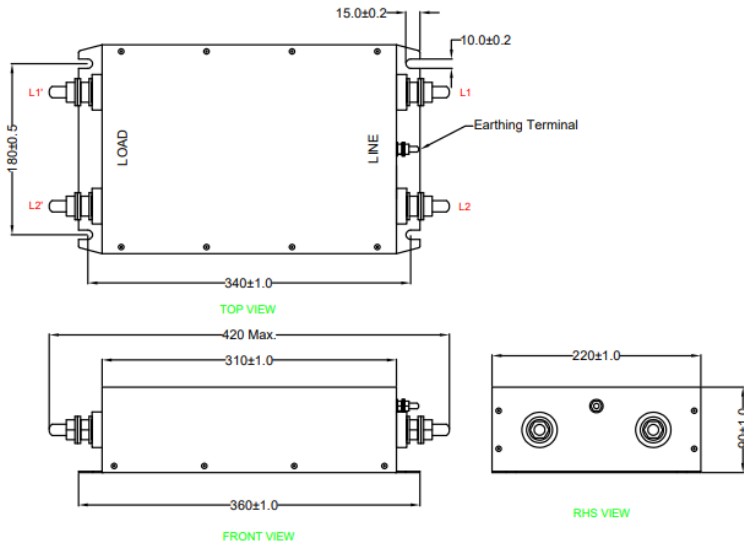
EP-612 series



Mechanical details

El.italia EC-EC12 [EP-612] serie

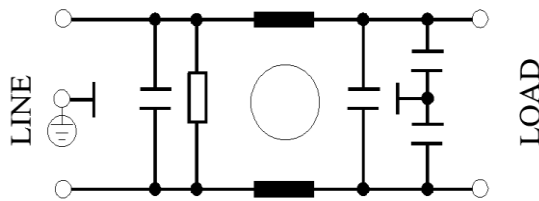
I For screw terminal



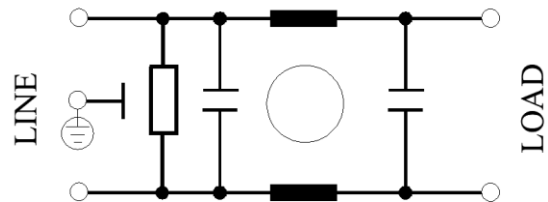
All dimensions in mm

Electrical schematic for Single Stage Filter

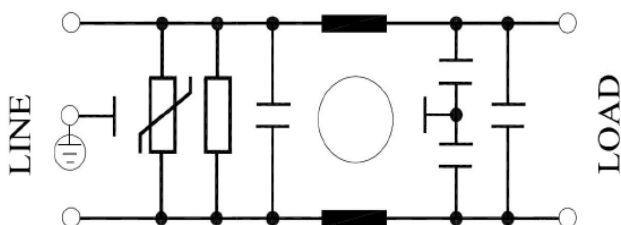
General purpose -



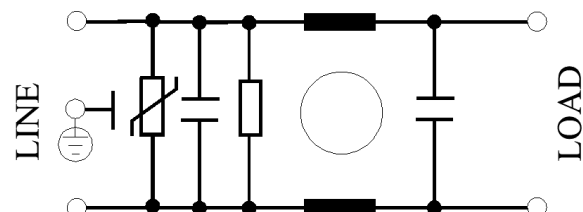
Medical equipment application -



General purpose with Surge Suppressor -



Medical equipment application with Surge Suppressor -



Datasheet | EC12

EP-612 series

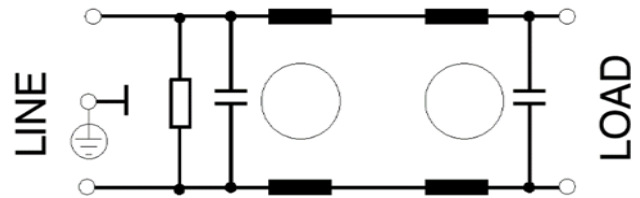
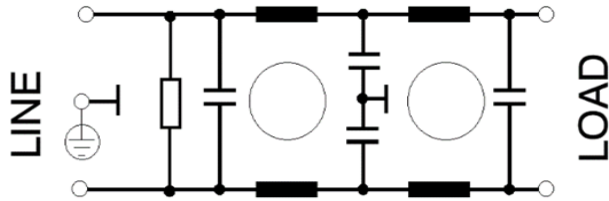


Electrical schematic for Double Stage Filter

El.italia EC-EC12 [EP-612] serie

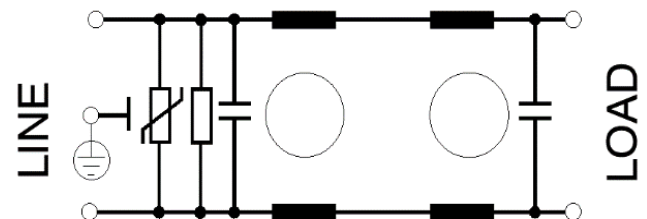
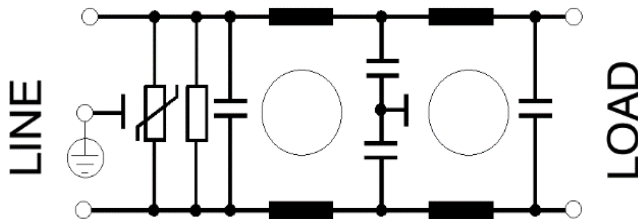
General purpose –

Medical equipment application –



General purpose with Surge Suppressor –

Medical equipment application with Surge Suppressor -



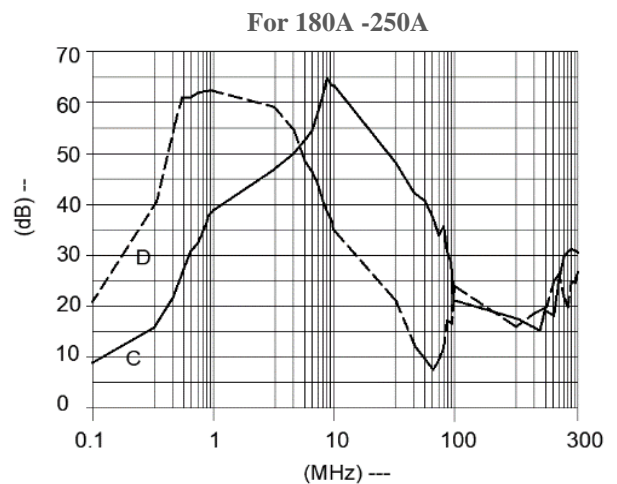
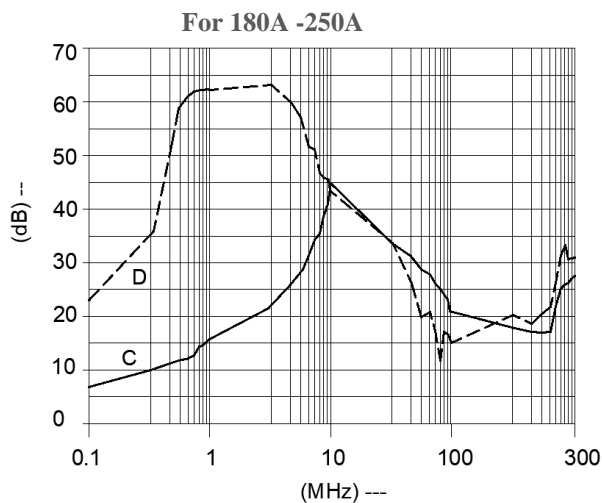
Filter attenuation Graph

C = Common mode (asymmetrical) -----

D = Differential mode (symmetrical) -----

For general application (Single Stage)

For general application (Double Stage)




Datasheet | EC12

EP-612 series



Filter Selection Table

El.italia EC-EC12 [EP-612] serie

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals	Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Weight (Kg)	Attenuation
				(X) Screw 				
1	EF-1B180X01E-C12	180	< 0.5	D	----	----	6	Standard
2	EF-1B180X02E-C12	180	< 0.5	D	10	350	6	Standard
3	EF-1B180X03E-C12	180	< 0.003	D	----	----	6	Standard
4	EF-1B180X04E-C12	180	< 0.003	D	10	350	6	Standard
5	EF-1B200X01E-C12	200	< 0.5	D	----	----	7	Standard
6	EF-1B200X02E-C12	200	< 0.5	D	10	350	7	Standard
7	EF-1B200X03E-C12	200	< 0.003	D	----	----	7	Standard
8	EF-1B200X04E-C12	200	< 0.003	D	10	350	7	Standard
9	EF-1B250X01E-C12	250	< 0.5	D	----	----	8	Standard
10	EF-1B250X02E-C12	250	< 0.5	D	10	350	8	Standard
11	EF-1B250X03E-C12	250	< 0.003	D	----	----	8	Standard
12	EF-1B250X04E-C12	250	< 0.003	D	10	350	8	Standard
17	EF-1B180X20E-C12	180	< 0.5	D	----	----	7	High
18	EF-1B180X21E-C12	180	< 0.5	D	10	350	7	High
19	EF-1B180X22E-C12	180	< 0.003	D	----	----	7	High
20	EF-1B180X23E-C12	180	< 0.003	D	10	350	7	High
21	EF-1B200X20E-C12	200	< 0.5	D	----	----	8	High
22	EF-1B200X21E-C12	200	< 0.5	D	10	350	8	High
23	EF-1B200X22E-C12	200	< 0.003	D	----	----	8	High
24	EF-1B200X23E-C12	200	< 0.003	D	10	350	8	High
25	EF-1B250X20E-C12	250	< 0.5	D	----	----	9	High
26	EF-1B250X21E-C12	250	< 0.5	D	10	350	9	High
27	EF-1B250X22E-C12	250	< 0.003	D	----	----	9	High
28	EF-1B250X23E-C12	250	< 0.003	D	10	350	9	High

Datasheet | EC12

EP-612 series



El.italia EC-EC12 [EP-612] serie

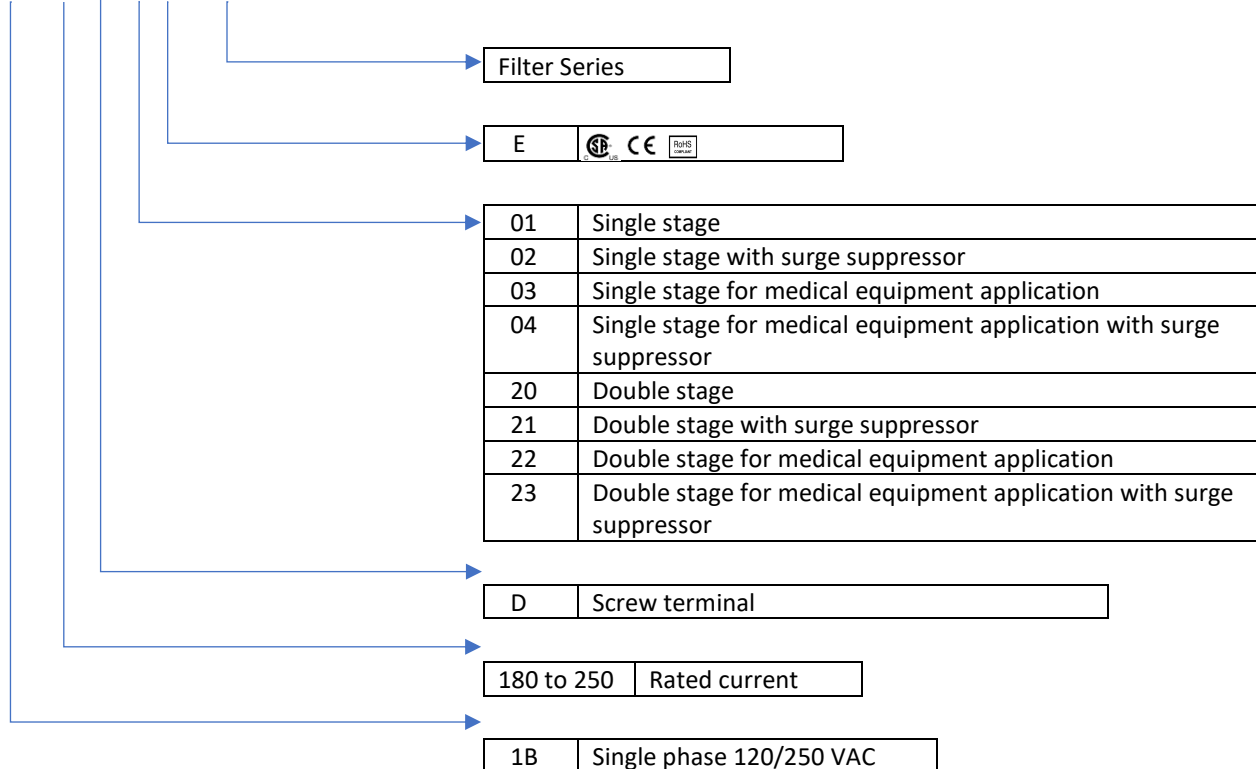
- To compile complete part number, replace the 'X' with required I/O connection terminal. (e.g. EF-1B180D20E-C12)
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: Worst case leakage could reach twice this level.
- Customize products provided on request.

Connection Type

Current Rating (A)	Screw terminal details		Earthing screw terminal details
	Screw	Recommended tightening torque	
180	M12	35-40Kgcm	M6
200	M12	35-40Kgcm	M6
250	M12	35-40Kgcm	M6

Syntax

EF - 1B CCC X YY Z - C12



Datasheet | EC21 EP-612 Series



El.italia EC-EC21 [EP-612] serie

General Purpose AC EMI Filter



Technical specifications

Operating voltage	120/250 VAC
Current rating	300A-650A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°C / -25°C +85°C

Image shown is for illustrative purpose only

Features and benefits

- | Filters available in single stage and double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards.
- | High reliable
- | Chassis mountable filter in fabricated metal can.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Various terminal options are available.

Attenuation Type

Single Stage	Standard
Double Stage	High

Application

- | Industrial application
- | Automotive application
- | Audio video products
- | Power supplies.
- | Electrical equipment application
- | UPS/inverter

Datasheet | EC21

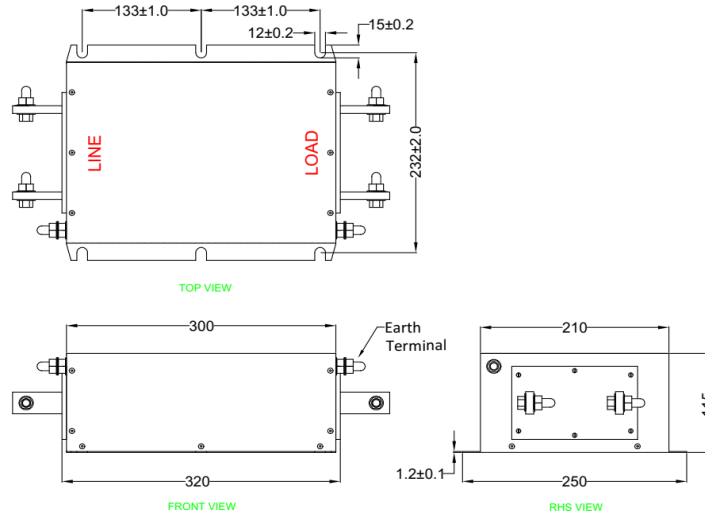
EP-612 Series



Mechanical details

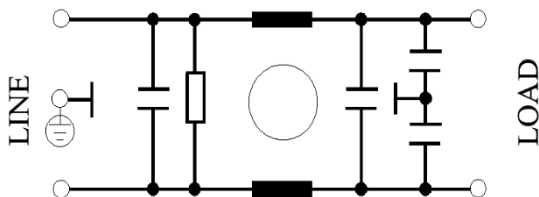
El.italia EC-EC21 [EP-612] serie

I For bus-bar terminal



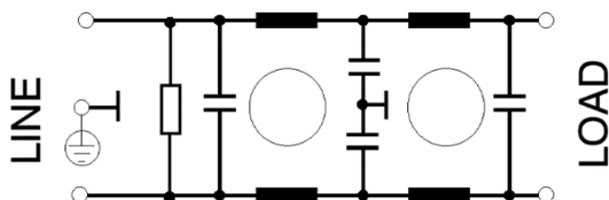
Electrical schematic for Single Stage Filter

General purpose -



Electrical schematic for Double Stage Filter

General purpose -



Datasheet | EC21

EP-612 Series



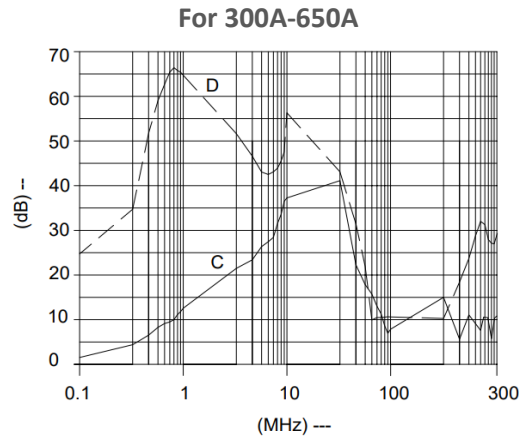
El.italia EC-EC21 [EP-612] serie

Filter attenuation Graph

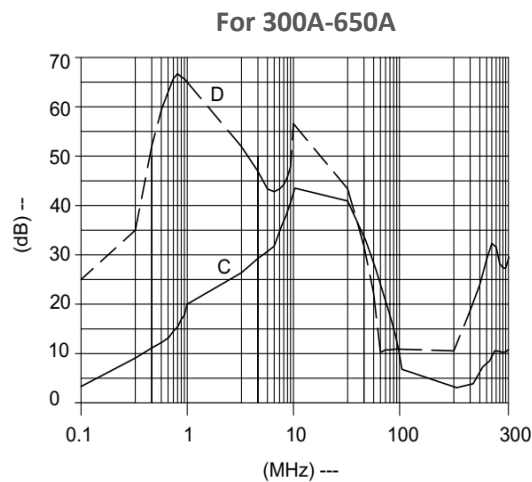
C = Common mode (asymmetrical) -----

D = Differential mode (symmetrical) -----

For general application (Single Stage)



For general application (Double Stage)



Filter Selection Table

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Approx. Weight (Kg)	Attenuation
1	EF-1B300E01G-21	300	< 0.5	10	Standard
2	EF-1B350E01G-21	350	< 0.5	10	Standard
3	EF-1B400E01G-21	400	< 0.5	11	Standard
4	EF-1B450E01G-21	450	< 0.5	11	Standard
5	EF-1B500E01G-21	500	< 0.5	12	Standard
6	EF-1B550E01G-21	550	< 0.5	12	Standard

Datasheet | EC21

EP-612 Series

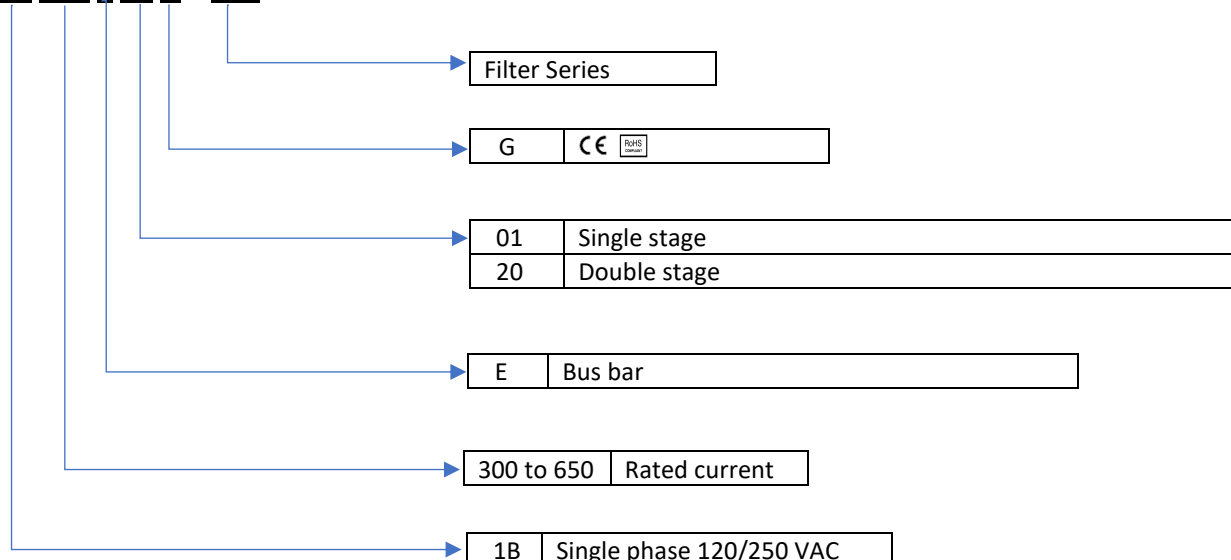


7	EF-1B600E01G-21	600	< 0.5	12	Standard
8	EF-1B650E01G-21	650	< 0.5	12	Standard
9	EF-1B300E20G-21	300	< 0.5	10	High
10	EF-1B350E20G-21	350	< 0.5	10	High
11	EF-1B400E20G-21	400	< 0.5	11	High
12	EF-1B450E20G-21	450	< 0.5	11	High
13	EF-1B500E20G-21	500	< 0.5	12	High
14	EF-1B550E20G-21	550	< 0.5	12	High
15	EF-1B600E20G-21	600	< 0.5	12	High
16	EF-1B650E20G-21	650	< 0.5	12	High

- Product having CE and RoHS compliance only.
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.

Syntax

EF - 1B CCC E YY G - C21



Datasheet | EC22

EP-612 Series



El.italia EC-EC22 [EP-612] serie

General Purpose AC EMI Filter



Technical specifications

Operating voltage	120/250 VAC
Current rating	700A-1000A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°c /-25°c +85°c

Image shown is for illustrative purpose only

Features and benefits

- | Filters available in single stage and double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards.
- | High reliable
- | Chassis mountable filter in fabricated metal can.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.

Attenuation Type

Single Stage	Standard
Double Stage	High

Application

- | Industrial application
- | Automotive application
- | Audio video products
- | Power supplies.
- | Electrical equipment application
- | UPS/inverter

Datasheet | EC22

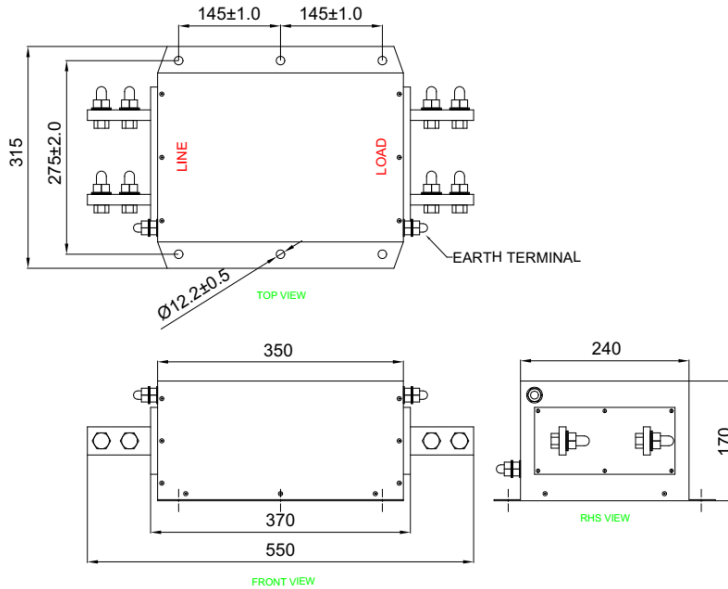
EP-612 Series



Mechanical details

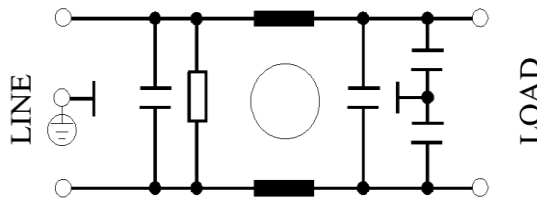
El.italia EC-EC22 [EP-612] serie

For bus-bar



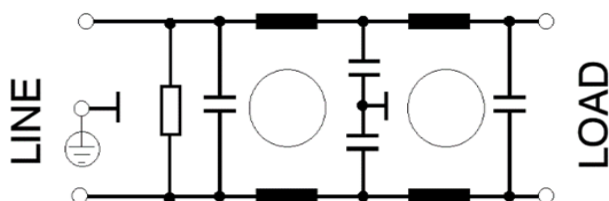
Electrical schematic for Single Stage Filter

General purpose -



Electrical schematic for Double Stage Filter

General purpose -





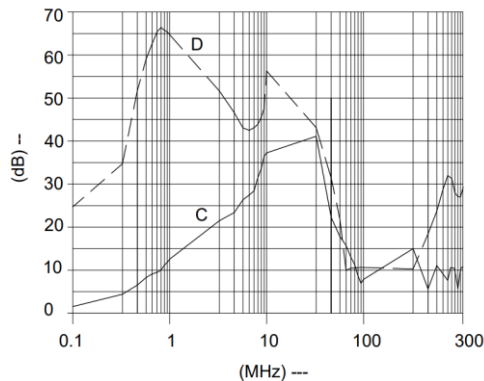
Filter attenuation Graph

C = Common mode (asymmetrical) -----

D = Differential mode (symmetrical) -----

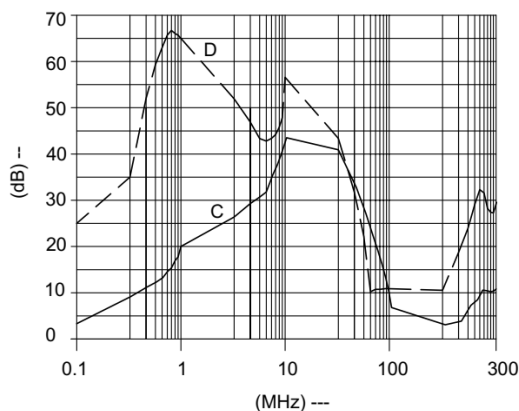
For general application (Single Stage)

For 700A-1000A



For general application (Double Stage)

For 700A-1000A



Filter Selection Table

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Approx. Weight (Kg)	Attenuation
1	EF-1B700E01G-22	700	< 0.5	14	Standard
2	EF-1B800E01G-22	800	< 0.5	14	Standard
3	EF-1B1K0E01G-22	1000	< 0.5	15	Standard
4	EF-1B700E20G-22	700	< 0.5	14	High
5	EF-1B800E20G-22	800	< 0.5	14	High
6	EF-1B1K0E20G-22	1000	< 0.5	15	High

Datasheet | EC22

EP-612 Series

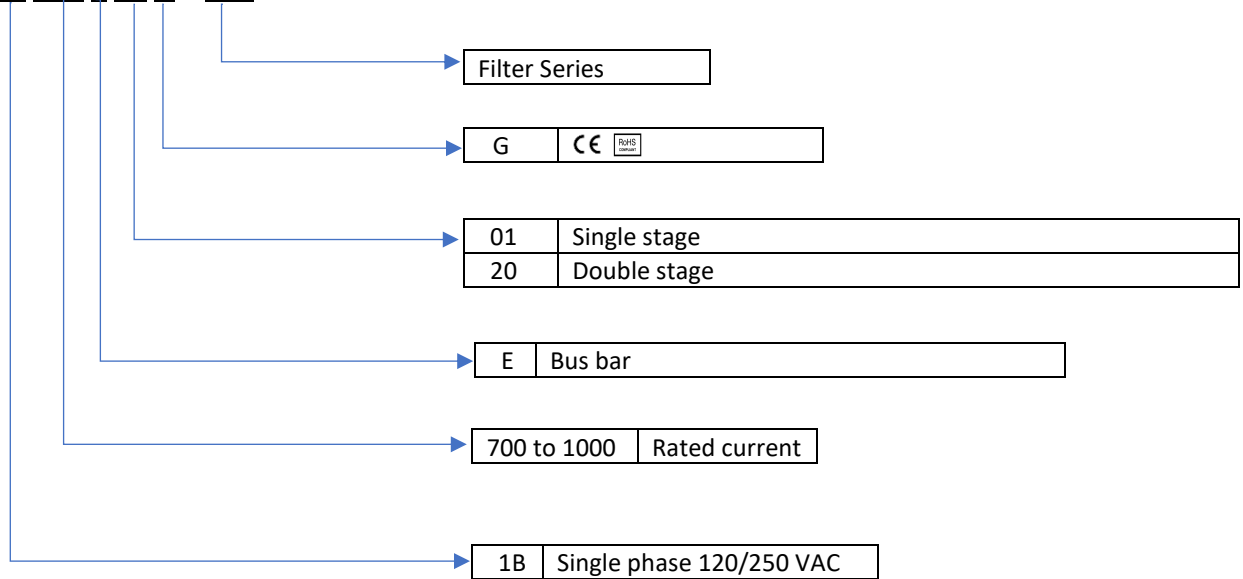


El.italia EC-EC22 [EP-612] serie

- Product having CE and RoHS compliance only.
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.

Syntax

EF - 1B CCC E YY G - C22





General Purpose AC EMI Filter

El.italia EC-EC28 serie



Technical specifications

Operating voltage	120/250 VAC
Current rating	20A & 60A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°c /-25°c +85°c

*Image shown is for illustrative purpose only

Features and benefits

- | Filters available in double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | High reliable
- | Easy and fast chassis mountable filter with compact size.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Filters available in medical version without capacitor to earth.
- | Input and Output connection through circular connector.
- | General purpose filters with low leakage current for safety critical application.

Attenuation Type

Double Stage **High**

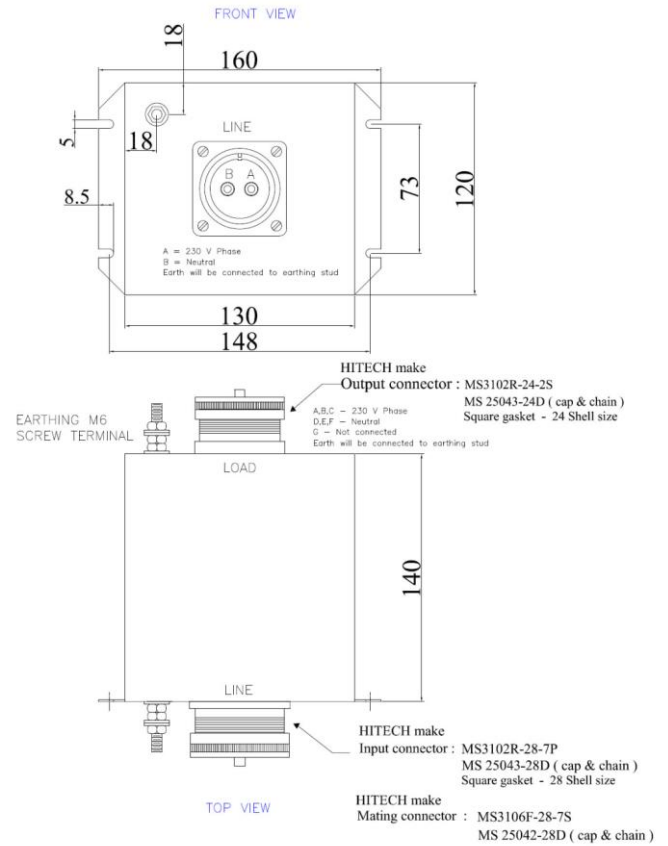
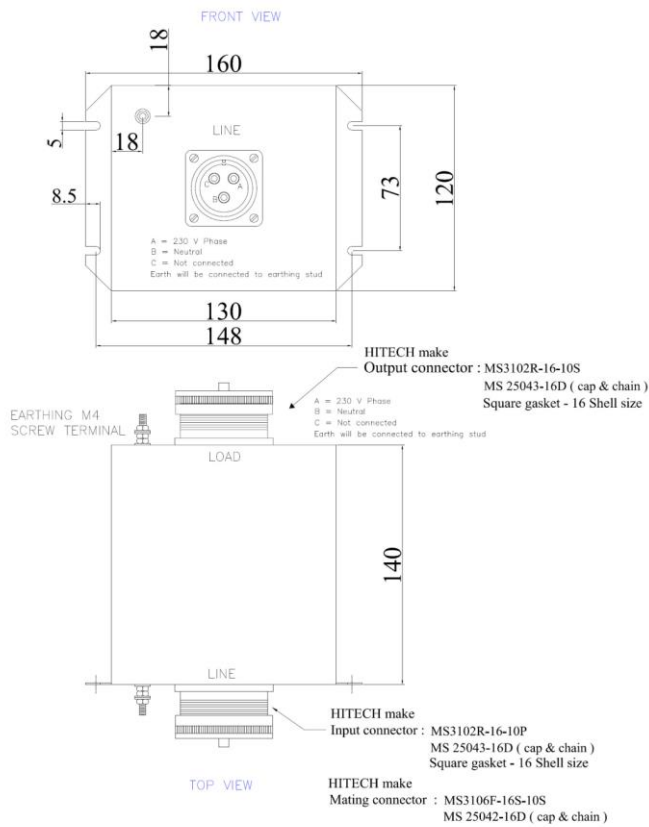
Applications

- | Defence application
- | Industrial application
- | Automotive application
- | Electrical equipment application
- | Office automation equipment



Mechanical details

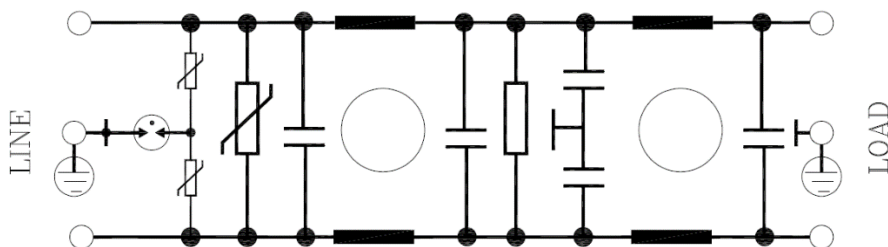
El.italia EC-EC28 serie



All dimensions in mm
General tolerance=±2mm

Electrical schematic for Double Stage Filter

General purpose –



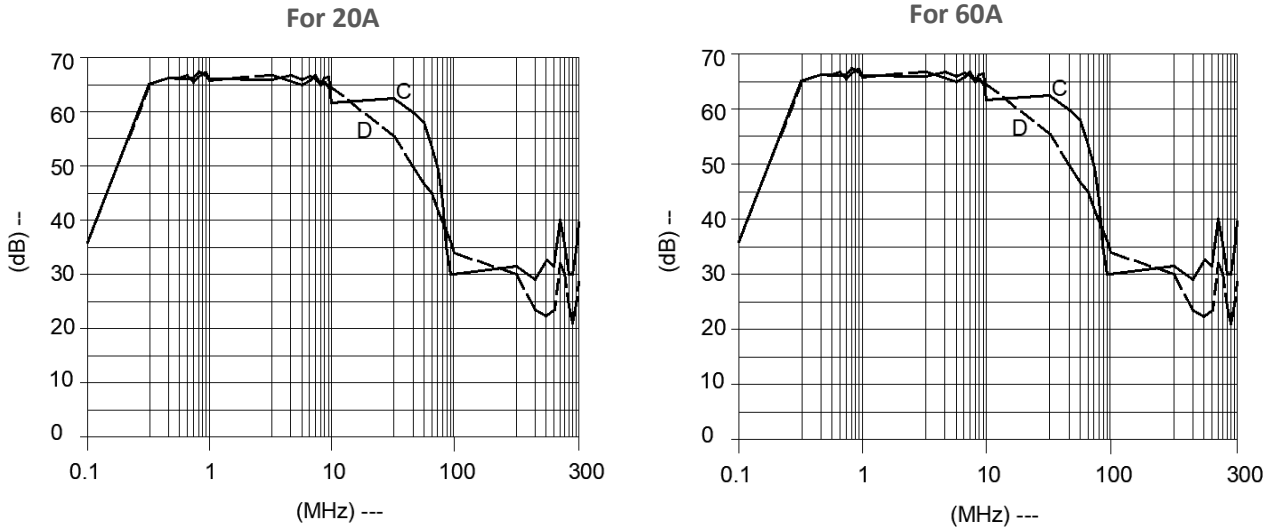


El.italia EC-EC28 serie


Filter attenuation Graph

C = Common mode (asymmetrical)
 D = Differential mode (symmetrical) -----

For general application (Double Stage)



Filter Selection Table

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250V AC	Terminals (X)	Max. Peak current (8/20 μ sec 1 time) (KA)	Energy surge rating (10/1000 μ sec) (Joules)	Approx. Weight (kg)	Attenuation
				Circular connector 				
1	EF-1B020X24A-C28	20	< 30	I	10	350	5	High
2	EF-1B060X24A-C28	60	< 30	I	10	350	5	High

- To compile complete part number, replace the 'X' with required I/O connection terminal. (e.g. EF-1B020I24A-C28).
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.

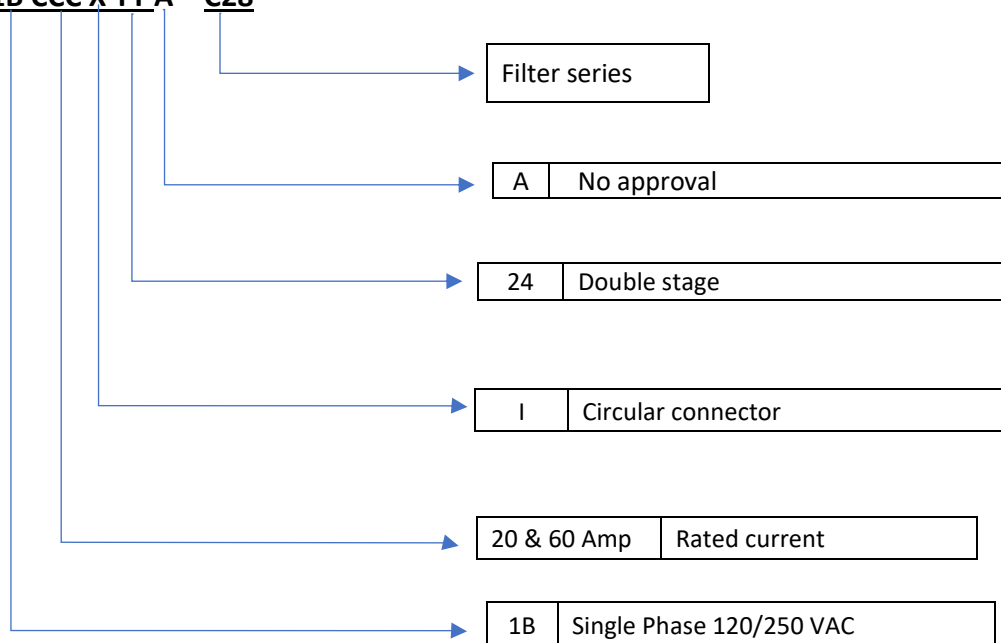


Connection Type

Current Rating (A)	Circular connector	Earthing
20	I	M4 Screw
60		M6 Screw

Syntax

EF - 1B CCC X YY A - C28





General Purpose AC EMI Filter

El.italia EC-EC30 serie



Technical specifications

Operating voltage	120/250 VAC
Current rating	1A-30A
Frequency	50/60Hz
Voltage drop	1 Volt max.
High potential test voltage	P -> E 1500VAC P -> N 1414VDC (applicable for excluding surge suppressor filter)
Insulation resistance	≥ 300 MΩ @ 500VDC (PN→E)
Operating temperature	40°C / -25°C +85°C

*Image shown is for illustrative purpose only

Features and benefits

- | Filters available in single stage and double stage
- | All filters provide high attenuation performance.
- | Two stage filters designed for noisy application requiring excellent filter performance.
- | All filters compliance to EN60939-3:2015 & EN60939-2:2005 standards.
- | High reliable
- | Easy and fast chassis mountable filter with compact size.
- | CRCA metal can with nickel plating provides good aesthetic and corrosion protection.
- | Filters available in medical version without capacitor to earth.
- | General purpose filters with low leakage current for safety critical application.
- | With surge suppressor filters also available.
- | Various terminal options are available

Attenuation Type

Single Stage	Standard
Double Stage	High

Applications

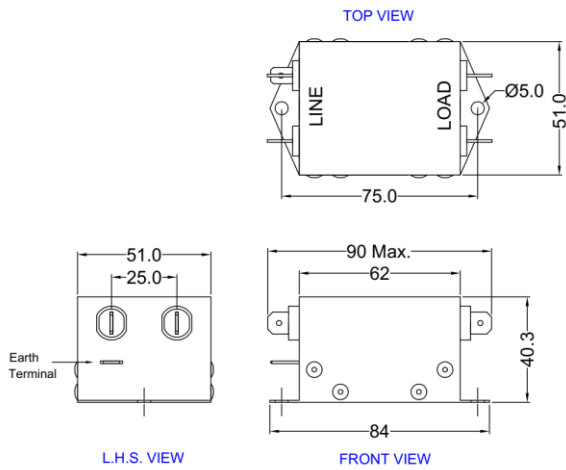
- | Consumer product
- | Defence application
- | Medical equipment
- | Industrial application
- | Automotive application
- | Weighting Machines
- | Printing Machinery
- | Electrical equipment application
- | Office automation equipment



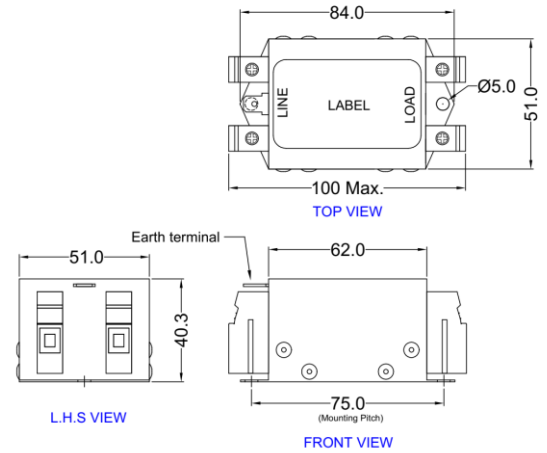
Mechanical details

El.italia EC-EC30 serie

| For fast-on terminal



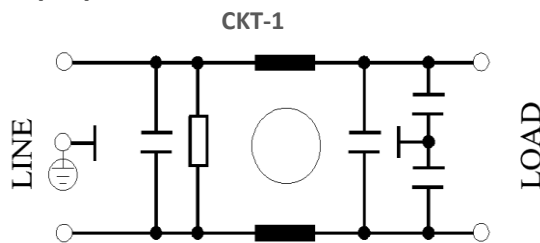
| For touch safe terminal



All dimensions in mm
General tolerance=±1mm

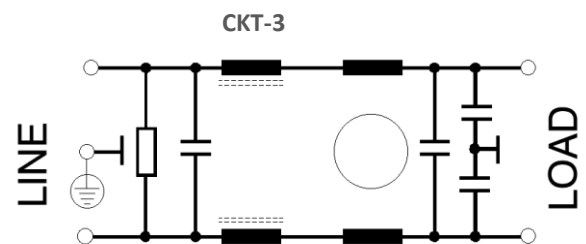
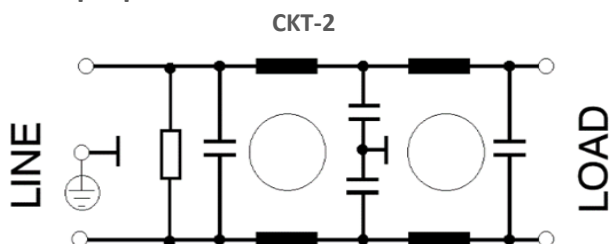
Electrical schematic for Single Stage Filter

General purpose –



Electrical schematic for Double Stage Filter

General purpose –





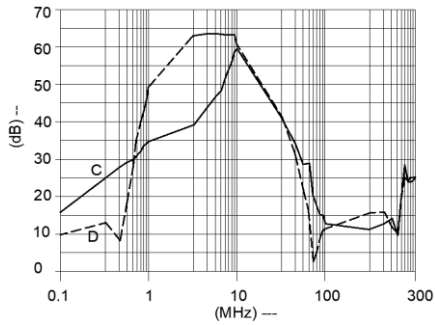
Filter attenuation Graph

C = Common mode (asymmetrical) —————

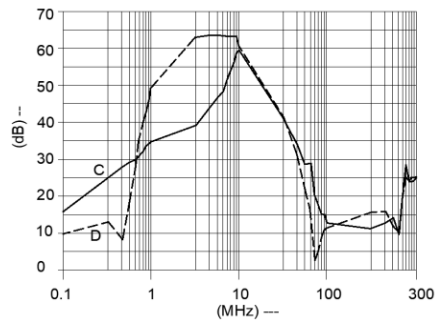
D = Differential mode (symmetrical) - - - - -

For general application (Single Stage)

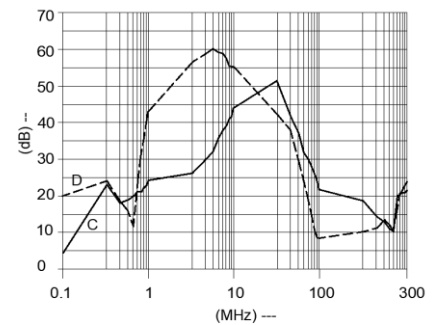
For 1A



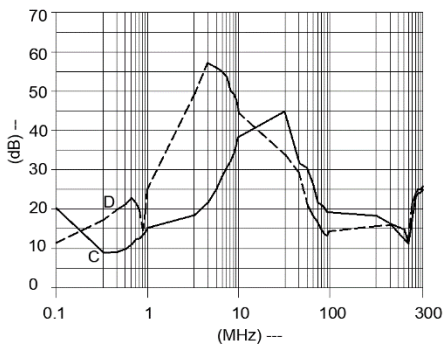
For 3A



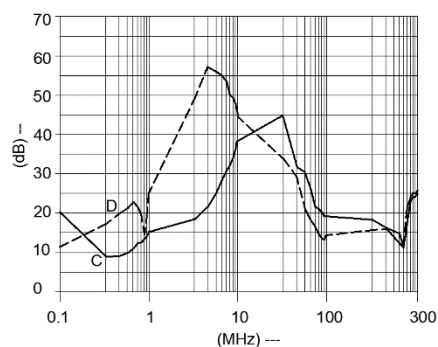
For 6A



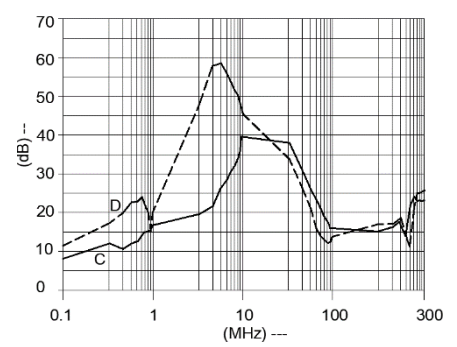
For 10A



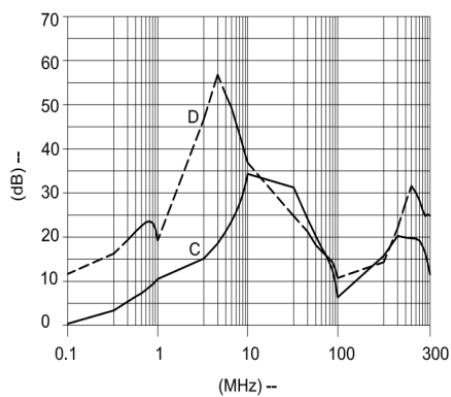
For 15A



For 20A



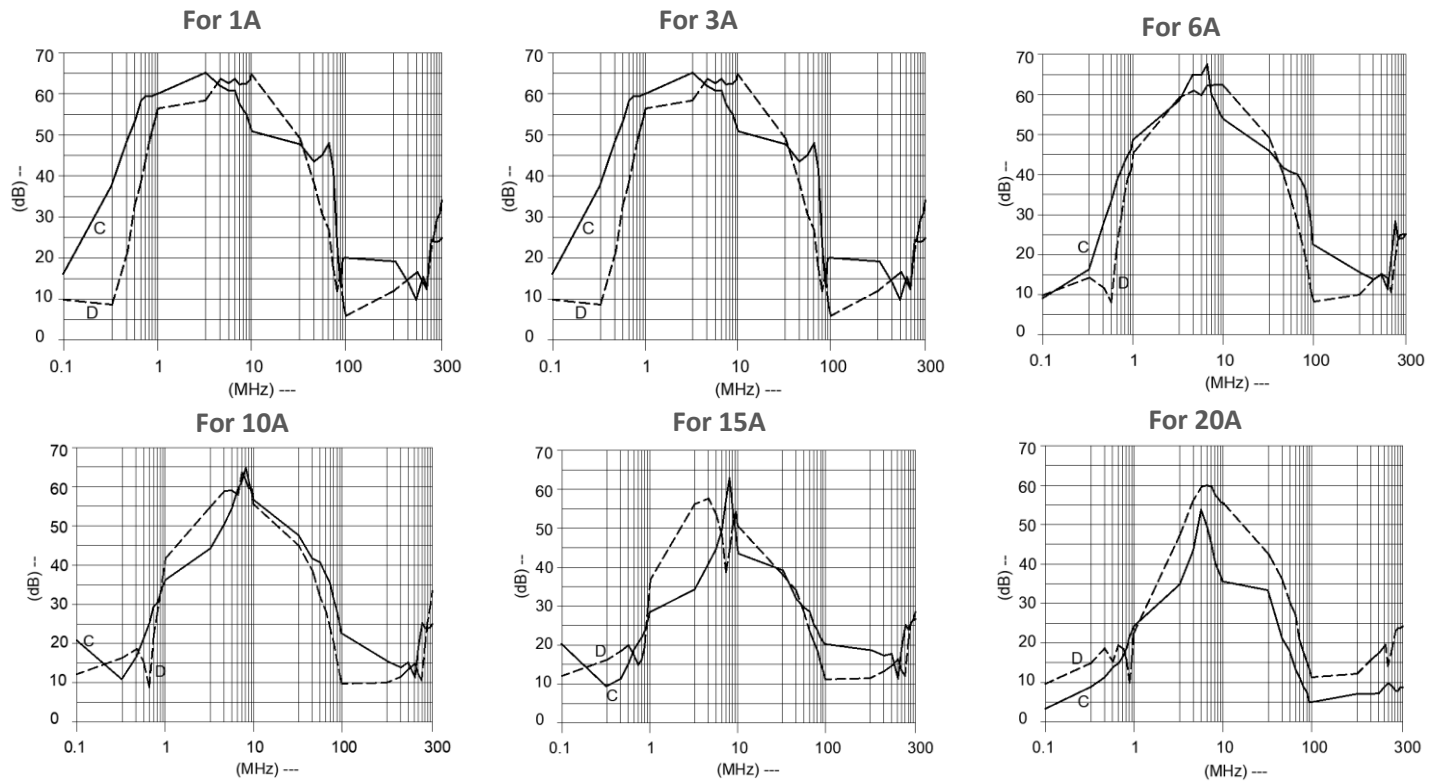
For 25A & 30A



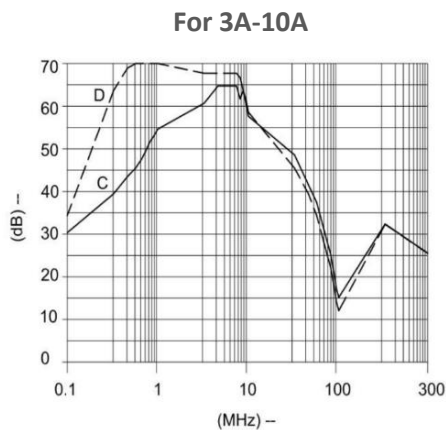


For general application (Double Stage) (CKT 2)

El.italia EC-EC30 serie





For general application (Double Stage) (CKT 3)





Filter Selection Table

El.italia EC-EC30 serie

Sr. No.	Elcom part codes (ordering code)	Rated Current rating (A) @40°C	Leakage current (mA) @250VAC	Terminals (X)		Approx. Weight (gm)	Attenuation
				Fast-on 	Touch safe 		
1	EF-1B001X01G-C30	1	< 0.5	B	F	160	Standard
2	EF-1B003X01G-C30	3	< 0.5	B	F	160	Standard
3	EF-1B006X01G-C30	6	< 0.5	B	F	160	Standard
4	EF-1B010X01G-C30	10	< 0.5	B	F	160	Standard
5	EF-1B015X01G-C30	15	< 0.5	B	F	160	Standard
6	EF-1B020X01G-C30	20	< 0.5	B	F	160	Standard
6	EF-1B025X01G-C30	25	< 0.5	B	F	160	Standard
6	EF-1B030X01G-C30	30	< 0.5	B	F	160	Standard
7	EF-1B001X20G-C30	1	< 0.5	B	F	160	High
8	EF-1B003X20G-C30	3	< 0.5	B	F	160	High
9	EF-1B006X20G-C30	6	< 0.5	B	F	160	High
10	EF-1B010X20G-C30	10	< 0.5	B	F	160	High
11	EF-1B015X20G-C30	15	< 0.5	B	F	160	High
12	EF-1B020X20G-C30	20	< 0.5	B	F	160	High
13	EF-1B003X24G-C30	3	<1.0	B	F	170	High
14	EF-1B006X24G-C30	6	<1.0	B	F	170	High
15	EF-1B010X24G-C30	10	<1.0	B	F	170	High

Connection Type

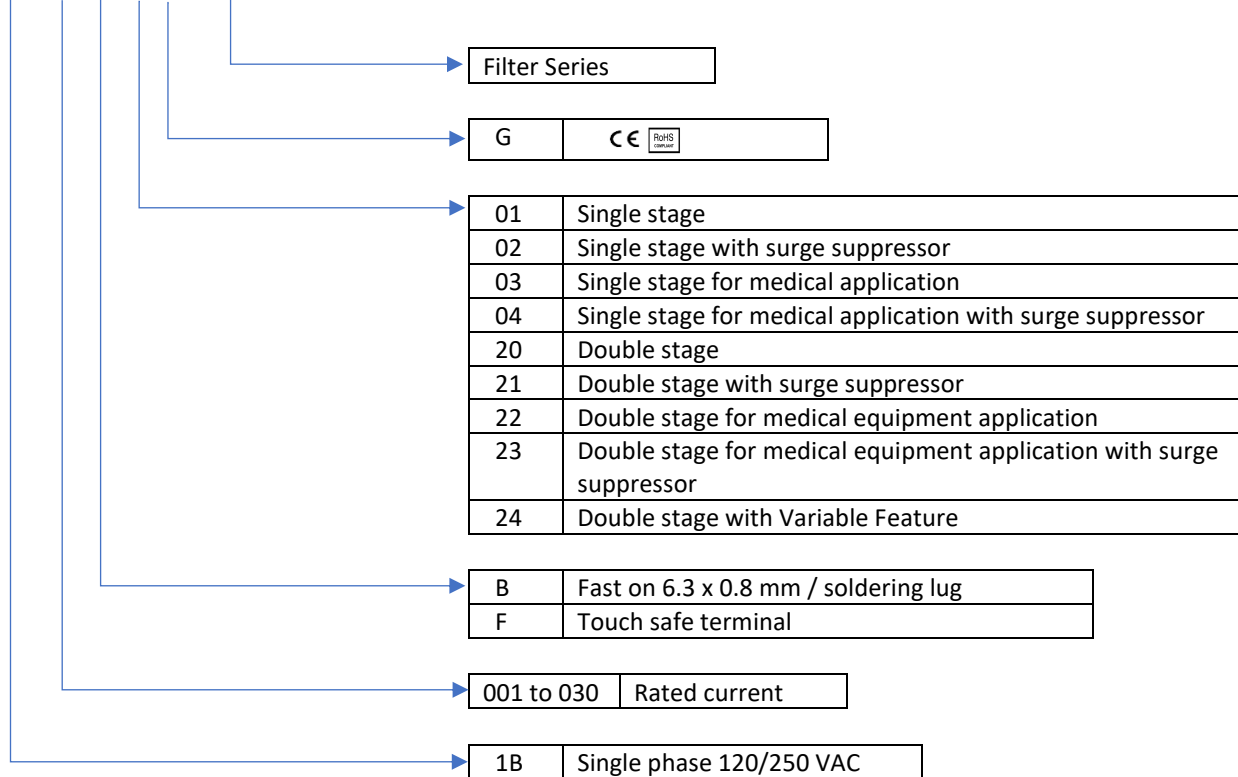
Current Rating (A)	Fast -on	Touch safe	Earthing
1A-20A	6.3 X 0.8mm	6 sqmm	Fast on terminal
21A-30A	-----	6 sqmm	Fast on terminal



El.italia EC-EC30 serie

Syntax

EF - 1B CCC X YY G - C30



- To compile complete part number, replace the 'X' with required I/O connection terminal. (e.g. EF-1B006E20G-C30)
- Above 21A current rating filters have only touch safe terminal,
- Touch safe terminal tightening torque for 6 sqmm touch safe – 10.6-13 lbf.in
- Maximum leakage under usual AC operating conditions (acc. IEC 60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.
- Customize products provided on request.