

## Description

The XR38 power entry module for circuit breakers with 3/8" threadneck combines up to 3 functions in one component. A C14 appliance inlet, a resettable overcurrent protection and a line filter. Appropriate line filters can be selected for the use of the power entry module in medical equipment applications according to IEC/EN60601-1. You can choose between two standard versions: version C without actuator guard (reset button protrudes from the module) and version D with actuator guard (reset button completely recessed). Screw-type mounting from the front or from the rear.

Combination of XR38 with 1658 only available in the USA.

## Typical applications

Medical apparatus, laboratory equipment, professional kitchen equipment, 3D printers etc.

## Technical data

Rated voltage	AC 250 V
Current rating (C14 appliance inlet with/without filter)	10 A (IEC/EN) 15 A (UL/CSA)
Operating temperature	-25 °C ... +60 °C
Number of poles	L, N, + protective conductor
Degree of protection	I
Mounting method	Screw-type mounting (from the front or from the rear)
Terminals	C14 and circuit breaker: Blade terminals 6.3 x 0.8 mm
Enclosure material support plate	Thermoplastics, black, UL94V-0
Appliance inlet	C14
Circuit breaker for equipment protection	106, 1140, 1658, 2-5700



## Ordering information

<b>Type no.</b>	
<b>XR38</b>	Power entry module for 106, 1140, 1658, 2-5700 <sup>(1)</sup>
<b>Module</b>	
<b>C</b>	Push button protruding
<b>D</b>	Push button recessed
<b>Mounting method</b>	
<b>04</b>	Screw-type mounting
<b>Filters</b>	
<b>00</b>	Without
<b>01</b>	Standard line filter
<b>03</b>	Standard line filter for medical equipment
<b>06</b>	High performance line filter for medical equipment
<b>Filter rating (for version with filter only) <sup>(2)</sup></b>	
<b>01</b>	1 A
<b>03</b>	3 A
<b>06</b>	6 A
<b>08</b>	8 A
<b>10</b>	10 A
<b>12</b>	12 A
<b>15</b>	15 A
<b>Version</b>	
<b>11</b>	Wired <sup>(3)</sup>
<b>Supply status</b>	
<b>M</b>	Module supplied with circuit breaker mounted
<b>Ordering example</b>	
<b>XR38C 0401 0311 M</b>	

<sup>(1)</sup> Only the following versions are available with 3/8" threadneck and blade terminals 6.3 x 0.8mm.

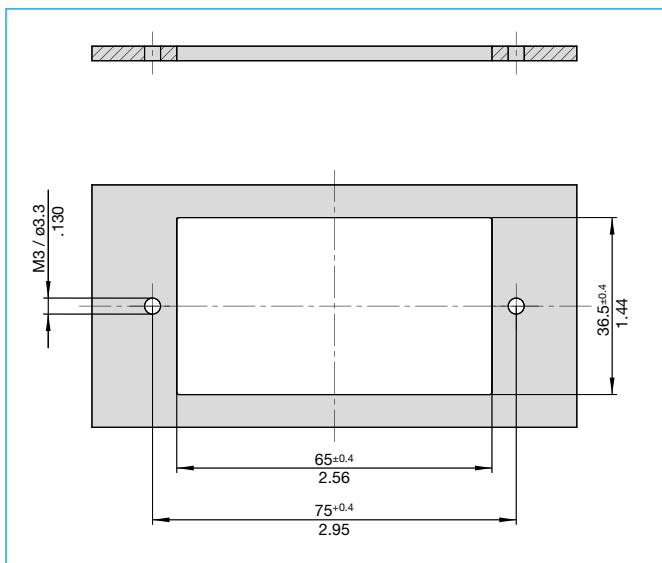
- 106-P10...  
- 1140-G0-...-P1/P7  
- 1658-G21-00-P10  
- 2-5700-iG1-P10-...

<sup>(2)</sup> For the selection of the filter current rating refer to the table in the data sheet. The current rating of the circuit breaker must not be higher than the filter current rating.

<sup>(3)</sup> For single pole circuit breakers, only one wire is routed from the circuit breaker to the C14 appliance inlet when ordered as "wired".

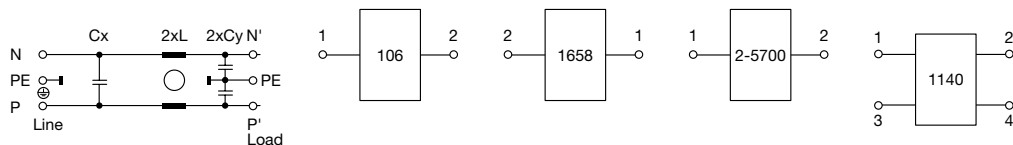
Accessories such as water splash cover upon request.

## Mounting cut-out

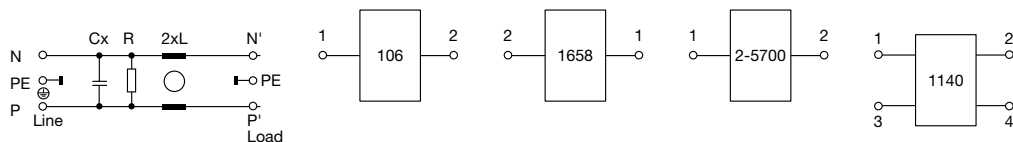


## Schematic diagrams

### Standard filter (C0401, D0401)



### Filter for medical equipment (C0403, C0406, D0403, D0406)



All information and data given on our products are accurate and reliable to the best of our knowledge, but E-T-A does not accept any responsibility for the use in applications which are not in accordance with the present specification. E-T-A reserves the right to change specifications at any time in the interest of improved design and performance. Dimensions are subject to change without notice. Please enquire for the latest dimensional drawing with tolerances if required. All dimensions, data, pictures and descriptions are for information only and are not binding. Amendments, errors and omissions excepted. Part numbers of the devices may differ from their marking.

## Approvals

C14 Appliance Inlet			
Approval authority	Standard	Rated voltage	Max. current rating
ENEC	IEC/EN 60320-1	AC 250 V	10 A
UL	UL 60320-1	AC 250 V	15 A
CSA	C22.2 no. 60320-1	AC 250 V	15 A

Complete modules XR38-C0400 and XR38-D0400 also available with approval according to UL 60320-1 at max. current of 15 A.

C14 Line Filter			
Approval authority	Standard	Rated voltage	Max. current rating
ENEC	IEC/EN 60939	AC 250 V	10 A
UL	UL 1283	AC 250 V	15 A
CSA	CSA C22.2 No. 8	AC 250 V	15 A

### Circuit breakers

See main data sheet of the circuit breaker

Please note: the current rating of the circuit breaker must not exceed the max. current of the appliance inlet / line filter, depending on the approval.

## Selection of filter current rating

The thermal circuit breaker protects the filter in the event of an overload. The current rating of the circuit breaker must not be higher than the filter current rating. For best attenuation a filter with the smallest possible current rating should be selected.

Depending on the IEC/EN or UL/CSA approval, other maximum values are permissible for the appliance inlet. The following tables serve as orientation.

Circuit breaker type 106	
Current rating of circuit breaker	Min. rating of filter
0.05-1 A	1 A
1.2-3 A	3 A
3.5-6 A	6 A
7-8 A	8 A
10 A	10 A

Circuit breaker type 1140	
Current rating of circuit breaker	Min. rating of filter
0.05-1 A	1 A
1.2-3 A	3 A
3.5-6 A	6 A
7-8 A	8 A
9-10 A	10 A
11-12 A	12 A
13-15 A	15 A

Circuit breaker type 1658	
Current rating of circuit breaker	Min. rating of filter
5-6 A	6 A
7-8 A	8 A
9-10 A	10 A
11-12 A	12 A
15 A	15 A

Circuit breaker type 2- 5700	
Current rating of circuit breaker	Min. rating of filter
0.05-1 A	1 A
1.2-3 A	3 A
3.5-6 A	6 A
7-8 A	8 A
10 A	10 A
12 A	12 A
13-15 A	15 A

## Dimensions

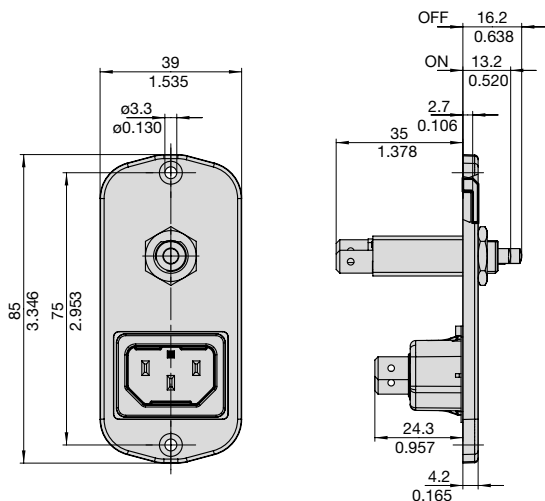
Note:

- Drawings are exemplary with circuit breakers type 106/2-5700. For combinations with 1140/1658 circuit breakers please refer to their data sheets.
- Modules are shown without wiring, to determine the necessary installation space due to the wiring see the corresponding section in this datasheet.

### Type C

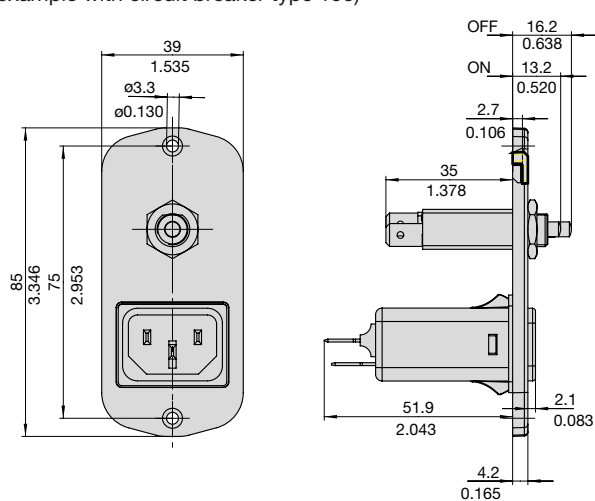
#### C0400 type

(Push-button protruding, example with circuit breaker type 106)



#### C040x type

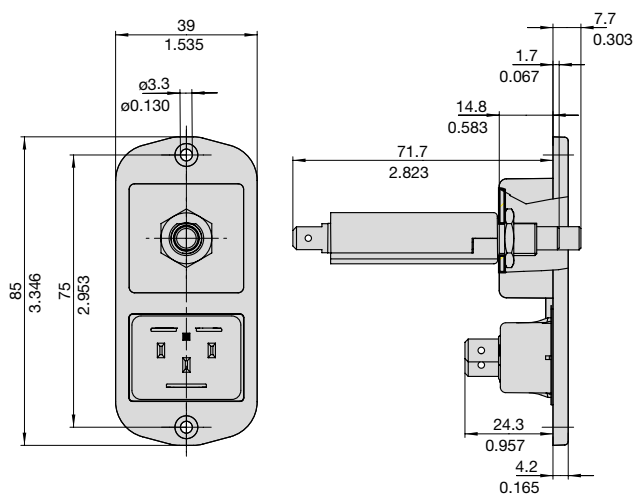
(Push-button protruding, with line filter, example with circuit breaker type 106)



### Type D

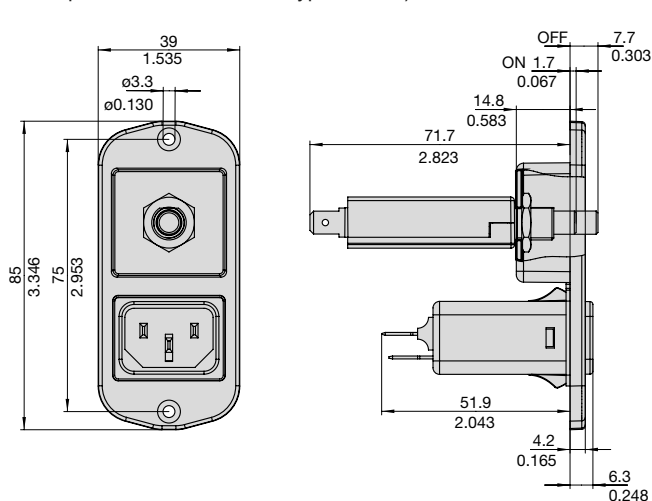
#### D0400 type

(Push-button is recessed, example with circuit breaker type 2-5700)



#### D040x type

(Push-button is recessed, with line filter, example with circuit breaker type 2-5700)

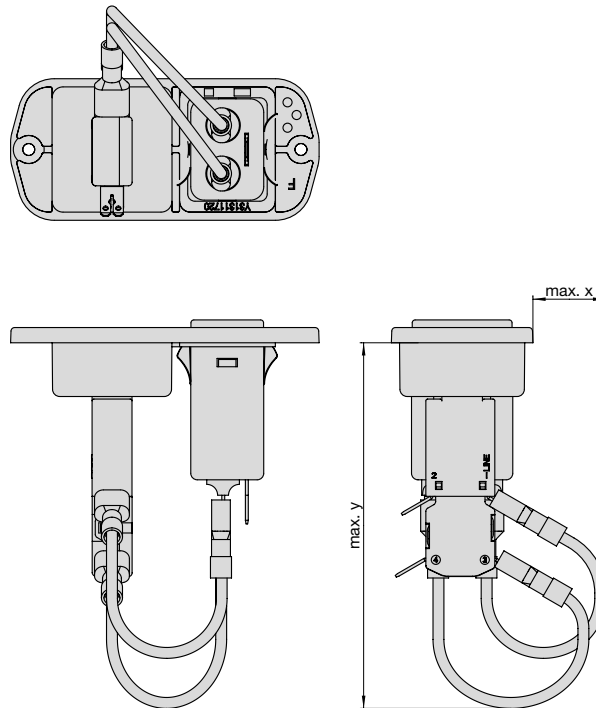


## Dimensions

Installation space for wiring (approximate indication):

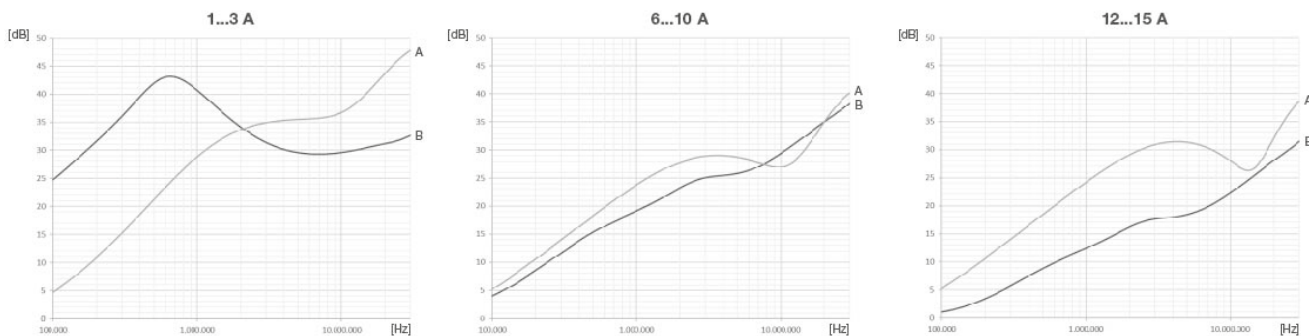
Circuit breakers	x				y			
	C00400	C040x	D0400	D040x	C0400	C040x	D0400	D040x
106					65	80	80	90
1140 (2-pole)	30	30	30	30	85	90	95	95
1658					70	80	80	90
2-5700					90	100	100	95

Specifications in mm.



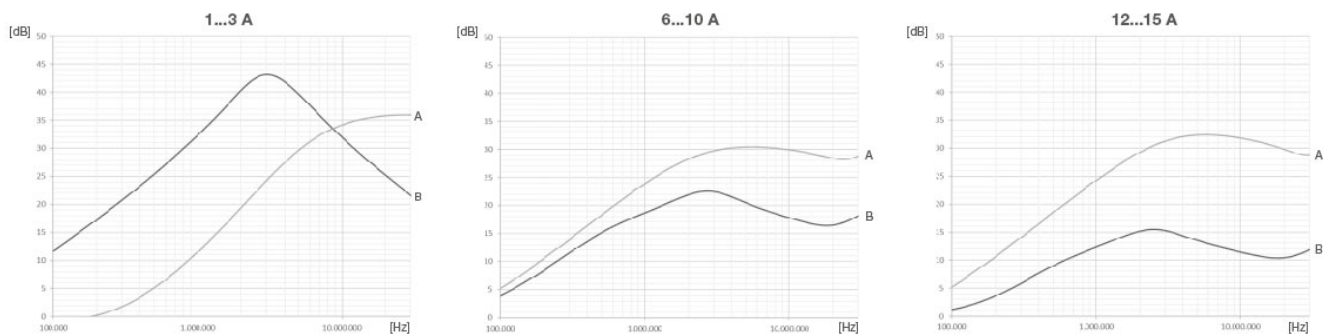
## Line filter attenuation curves

### C/D0401 standard filter

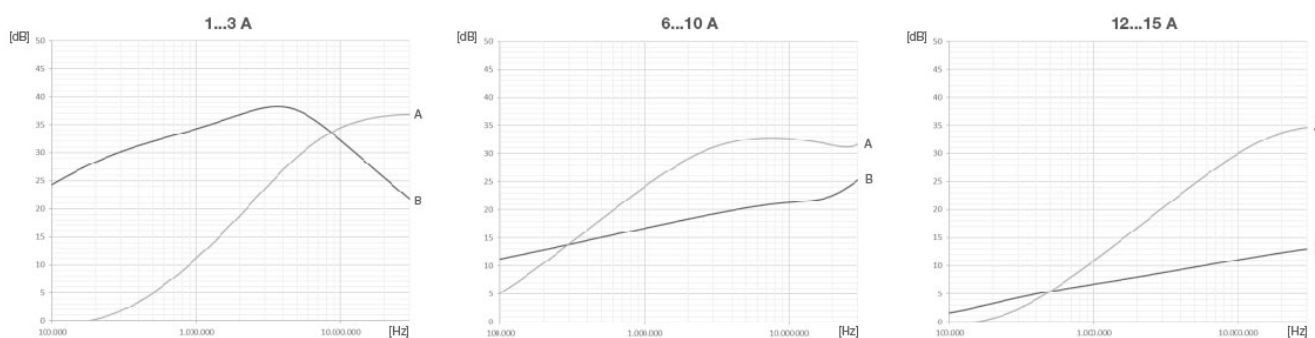


## Line filter attenuation curves

### C/D0403 standard line filters for medical equipment



### C/D0406 high performance filters for medical equipment



Attenuation curves diagram, information according to CISPR17

curve A (DM, differential mode): 50/50 Ohm sym.

curve B (CM, common mode): 50/50 Ohm asym.

## Note

The attenuation curves provide an indication of the attenuation behaviour without taking the device /machine environment into account. A measurement is mandatory to verify the EMC conformity of your device/machine.

**Filter selection table**

Filters	Current rating 50 °C (25 °C) A	Leakage current 250VAC/50Hz μA	Inductance L mH	Capacity Cx μF	Capacity Cy nF	Resistance R kΩ
Type 01 Standard line filter	1 (1.2)	373	12	0.1	2.2	
	3 (3.5)	373	2.5	0.1	2.2	
	6 (7.2)	373	0.78	0.1	2.2	
	8 (10.6)	373	0.5	0.1	2.2	
	10 (11.6)	373	0.225	0.1	2.2	
	12 (12)	373	0.11	0.1	2.2	
	15 (15)	373	0.075	0.1	2.2	
Type 03 Standard line filter for medical equipment	1 (1.2)	2	12	0.1		1000
	3 (3.5)	2	2.5	0.1		1000
	6 (7.2)	2	0.78	0.1		1000
	8 (10.6)	2	0.5	0.1		1000
	10 (11.6)	2	0.225	0.1		1000
	12 (12)	2	0.11	0.1		1000
	15 (15)	2	0.075	0.1		1000
Type 06 High-performance line filter for medical equipment	1 (1.2)	2	59.53	0.1		1000
	3 (3.5)	2	13.45	0.1		1000
	6 (7.2)	2	4.1	0.1		1000
	8 (10.6)	2	2.3	0.1		1000
	10 (11.6)	2	1.02	0.1		1000
	12 (12)	2	0.58	0.1		1000
	15 (15)	2	0.4	0.1		1000

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