

Filter Module FIL-USB-3.2-C-PD-S1

MTS-No.: 30700-01

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Description

The feedthrough Filter Module USB 3.2 with integrated ESD protection and EMI filter is designed to be built in at MTS Shielding Boxes series MSB. It supports Super Speed (Plus, up to 40 Gbit/s), High Speed (up to 480 Mbit/s), Gigabit-Ethernet, 8K-HDMI and is suitable for testing mobiles, tablets or similar devices with high data rates under shielded conditions.

Passive filter elements are included and the module can handle power delivery (PD) up to 100 watts.

The connectors are USB Type-C receptacles.



Technical data:

1 USB specifications:

1.1 Supported standards	USB 2.0, USB 3.x, USB4	
1.2 Transfer rates (depends on host)		
@ USB 2.0	320 Mbit/s typ. (40 MB/s)	
@ USB 3.0	3600 Mbit/s typ. (450 MB/s)	
@ USB 3.1	8000 Mbit/s typ. (1000 MB/s)	
@ USB 3.2	16000 Mbit/s typ. (2000 MB/s)	
@ USB4	32000 Mbit/s typ. (4000 MB/s)	
1.3 Voltage	20 V DC max.	
1.4 Current capacity	5 A max.	
1.5 ESD protection (IEC-61000-4-2)	±15 kV (air), ±8 kV (contact)	
1.6 EMI filter	Common mode chokes	
1.7 RF shielding	80 dB typ.	
1.8 Pinning USB interface A/B		
@ Pin 1	GND	Ground
@ Pin 2	SSTX+	ESD + EMI
@ Pin 3	SSTX-	ESD + EMI
@ Pin 4	VBUS	ESD + pi filter
@ Pin 5	CC	ESD
@ Pin 6	D+	ESD + EMI
@ Pin 7	D-	ESD + EMI
@ Pin 8	SBU	ESD
@ Pin 9	VBUS	ESD + pi filter
@ Pin 10	SSRX-	ESD + EMI
@ Pin 11	SSRX+	ESD + EMI
@ Pin 12	GND	Ground
@ Shell	Shield	Housing + GND

3 General specifications:

3.1 Operating temperature	-30 °C - +70 °C
3.2 Storage temperature	-40 °C - +80 °C
3.3 Reference temperature for specifications	+25 °C
3.4 Dimensions (without connections) (LxWxH)	71 mm x 27.8 mm x 31 mm
3.5 Case style	Milled aluminium enclosure
3.6 Colour	SurTec650 (chromit Al)
3.7 Weight	125 grams

4 Delivered parts:

Filter Module FIL-USB-3.2-C-PD-S1
Datasheet

5 Comments:

Warranty	12 months
RoHS-compliant	Yes

6 Recommended accessories:

Full-featured USB4 Type-C cables male to male (plug to plug) with a total length up to 1 meter.
(SuperSpeed USB 40 Gbit/s and PD up to 100 watts compatible.)

Full-featured USB 3.2 Gen 2x2 Type-C cables male to male (plug to plug) with a total length up to 2 meters.
(SuperSpeed USB 20 Gbit/s and PD up to 100 watts compatible.)

2 Connections (outside / inside):

2.1 USB interface	USB Type-C receptacle (jack)
2.2 Durability @ each connector	10000 cycles

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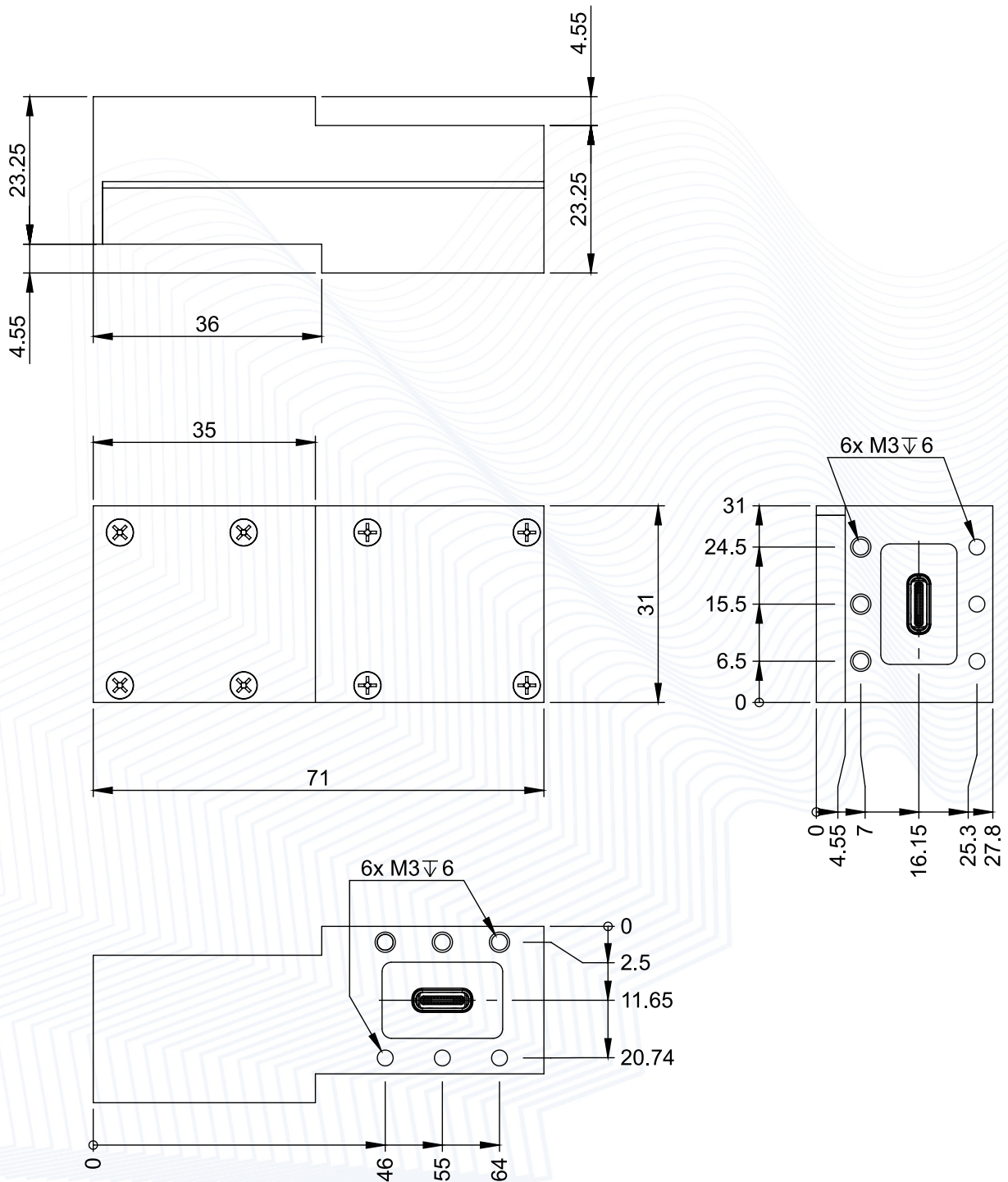
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Technical subject to change

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Typical RF shielding:

