

# #01 POLYRACKTECH-GROUP MAGIC

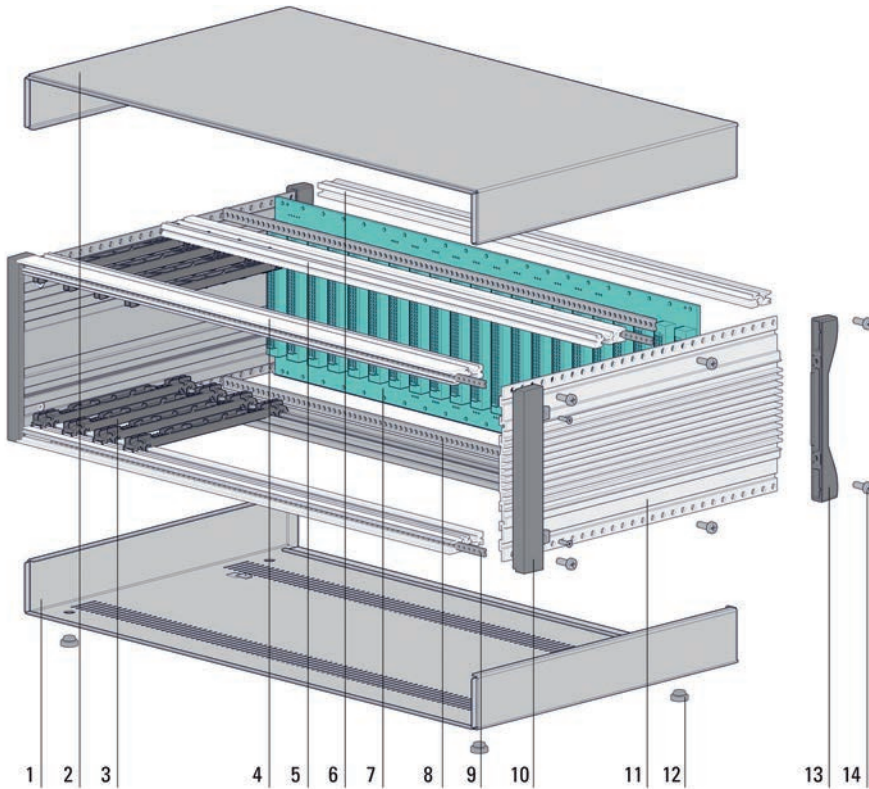
// Product information



# //02 19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

// Product information



## Configuration example

The diagram shows the configuration of a 19" Magic Series rackmount/desktop case (Basic Unit type B)

- 1 Bottom cover
- 2 Top cover
- 3 Card guide\*
- 4 Front rail
- 5 Rear rail B\*
- 6 Rear rail with M3 threads
- 7 Backplane\*
- 8 Isolating strip\*
- 9 Threaded inserts\*
- 10 Corner bracket\*
- 11 Side extrusion
- 12 Plug-in foot
- 13 Corner bracket
- 14 Assembly hardware

Parts marked with \* are not included in the scope of delivery of the basic unit, i. e. must be ordered separately.

## Surface finishing

- Bezel and extrusions powder-coated RAL 7001 (silver gray)
- Top and bottom cover powder-coated RAL 7035 (light gray)

# //02

19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

## // Basic units

### Basic units

The Magic series cases are available in two basic versions. The corner brackets and the 19" mounting brackets are not supplied as standard; these must be ordered separately. The model with the carrying/support handle is ideal for use as a desktop case or for mobile use.

Further configurations can be made by combining different components as required

### Features of the basic units

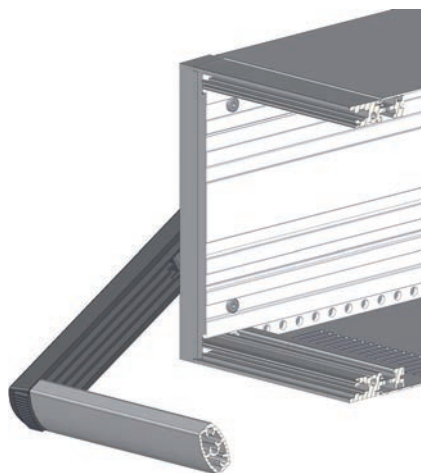
#### Standard

„Standard corner brackets – Magic“ are not included in the scope of delivery of the basic units.



#### With carrying/support handle

„Standard corner brackets – Magic“ are not included in the scope of delivery of the basic units.



# //02 19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

// Single components

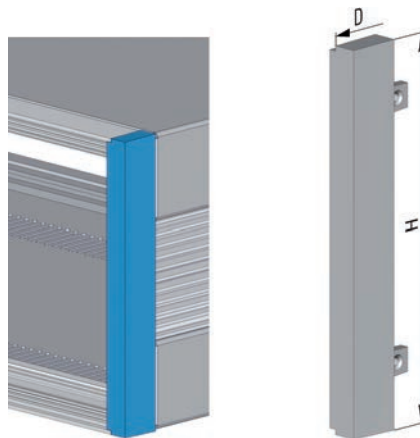
## Corner brackets

### Standard corner bracket – Magic

For front trimming of case

#### Material

Die-cast aluminum, powder-coated in RAL 7001 (silver gray), contact points uncoated

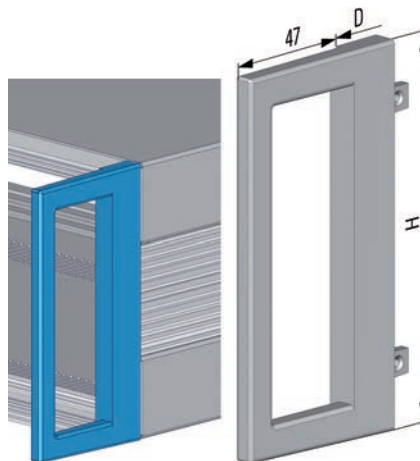


### Corner bracket with handle – Magic

For front trimming of case

#### Material

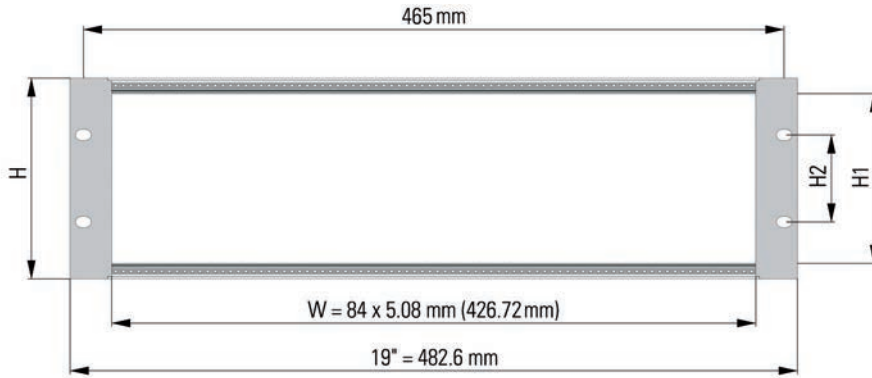
Die-cast aluminum, powder-coated in RAL 7001 (silver gray), contact points uncoated



# //02 Magic

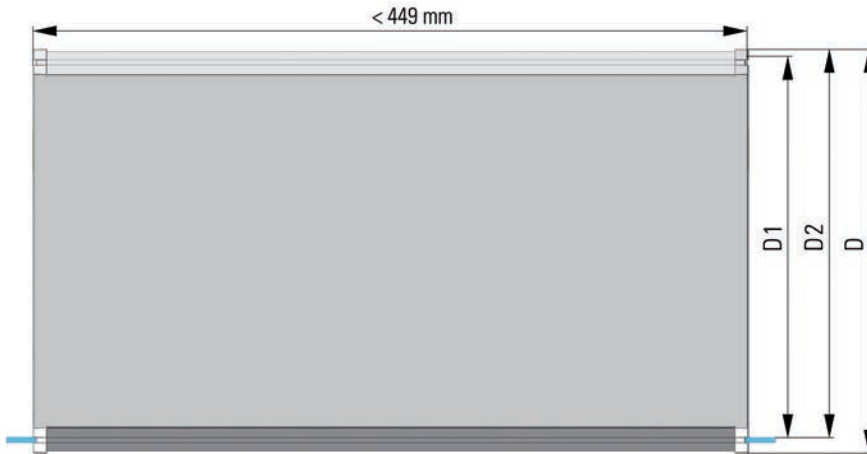
19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

## // General information

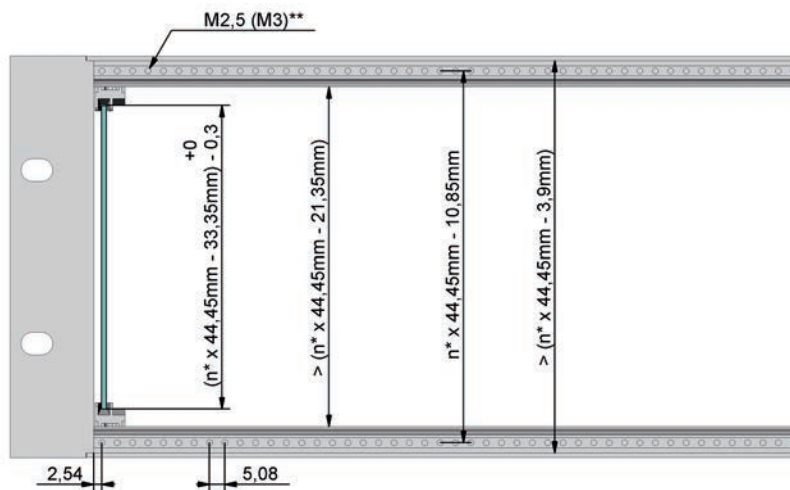


Mounting dimensions (mm)

	H	H1	H2
1 U	= 43.6	≤ 23.1	= 31.7
2 U	= 88.1	≤ 67.5	= 76.2
3 U	= 132.5	≤ 112.0	= 111.7
4 U	= 177.0	≤ 156.45	= 157.2
6 U	= 265.9	≤ 245.35	= 245.7



D = overall depth  
 D1 = usable internal dimension  
 D2 = mounting depth in 19" rack



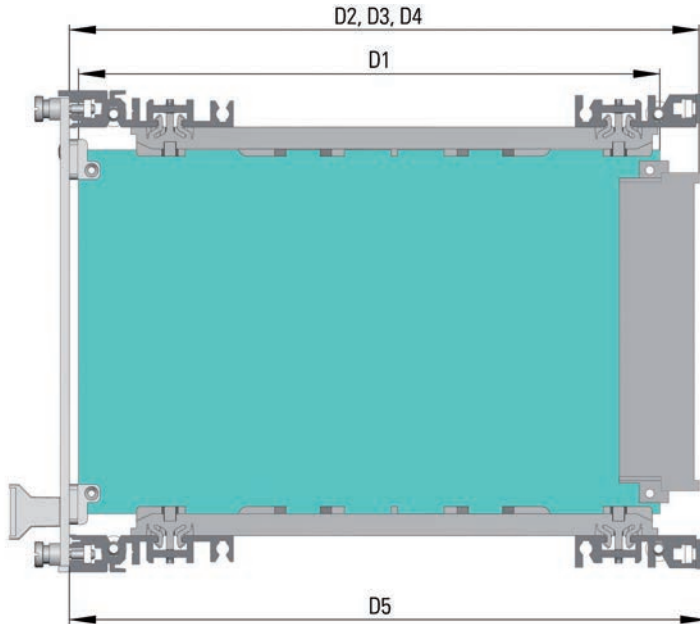
\* (U)

\*\* Mounting holes for front panels

# //02 Magic

19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

## // General information



Dimensions for plug-in modules (mm)

D1*	D2 ± 0.4**	D3 ± 0.4***	D4 ± 0.4****
80.00	89.93	91.93	91.74
100.00	109.93	111.93	111.74
160.00	169.93	171.93	171.74
220.00	229.93	231.93	231.74
280.00	289.93	291.93	291.74

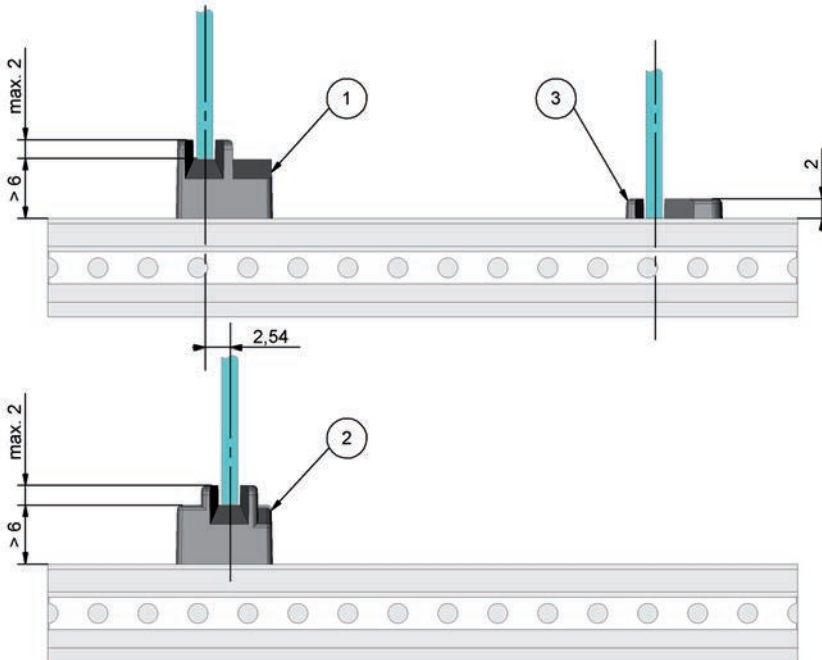
\* PCB depth

\*\* Insertion depth for IEC 60603-2 connectors, styles B, C, D and IEC 61076-4-113

\*\*\* Insertion depth for IEC 60603-2 connectors, styles F, G, H

\*\*\*\* Insertion depth for IEC 61076-4-101 connectors

$$D5 = D1 + 15.5 \text{ mm}$$



Card guides - front view

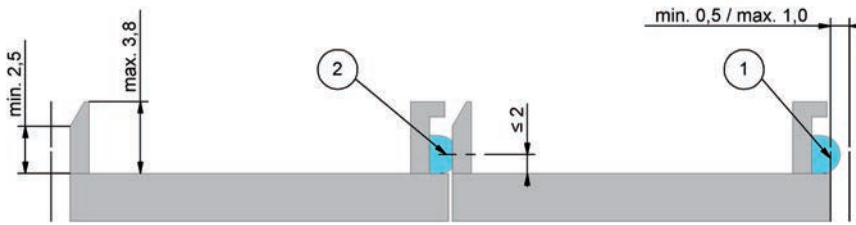
- 1 Card guide, standard
- 2 Card guide 2.54 mm offset
- 3 Card guide 4.4" (111.7 mm)

Slot width – depending on type – choice of 2 or 2.4 mm

# //02 Magic

19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

## // General information

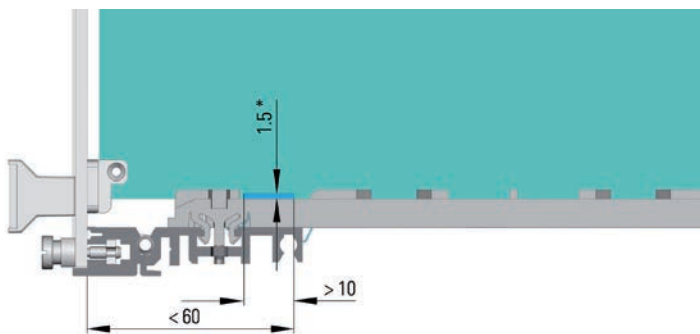
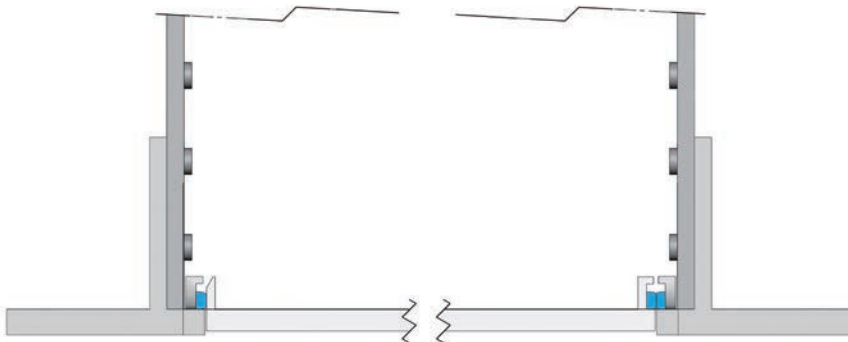


### EMC fabric shielding concept - front panel

In terms of a standardized contact point (contact level), this is defined as part of IEEE.1101.10.

The diagram shows excerpts from the IEEE 1101.10 standard based on EMC fabric.

- 1 Non-compressed shielding
- 2 Compressed shielding



### ESD contact area

The electrostatic discharge is via a contact clip which is mounted in the front of the card guide.

To ensure faultless performance, the ESD clip must make contact with the grounded sections of the card cage and the conductive section of the board.

\*ESD contact area

## // Manufacturing tolerances

All parts are subject to POLYRACK's factory specifications, whereby:

Extrusion specifications comply with  
DIN EN 12020-1

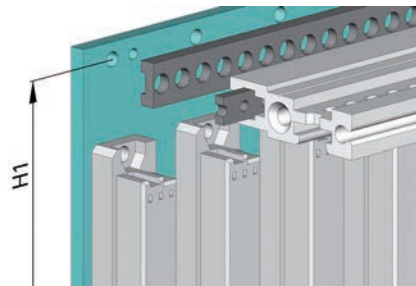
Punched parts comply with  
DIN ISO 6930-1/6930-2 and DIN 6932

# //02 19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS Magic

## // General information

### // Basic units

There is a choice between 3 basic units, depending on the application.



#### Basic unit B

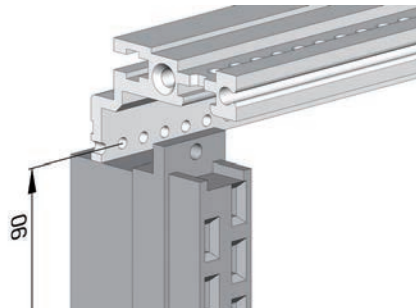
For indirect mounting of backplanes with isolating strips or for mounting Z-rails.

The dimensions for backplane mounting are calculated as follows:

$$H1 = n \times U - 10.85 \text{ mm}$$

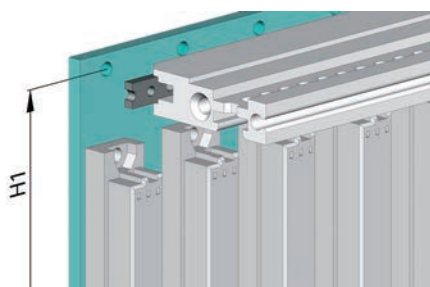
Calculation example for 3 U:

$$H1 = 3 \times 44.45 \text{ mm} - 10.85 \text{ mm} = 122.5 \text{ mm}$$



#### Basic unit C

With integrated Z-rail for connectors according to IEC 60603-2.



#### Basic unit E

For direct mounting of backplanes without isolating strips or for mounting perforated rails, extrusion width + 3 mm compared to basic unit B.

The dimensions for backplane mounting are calculated as follows:

$$H1 = n \times U - 10.85 \text{ mm}$$

Calculation example for 3 U:

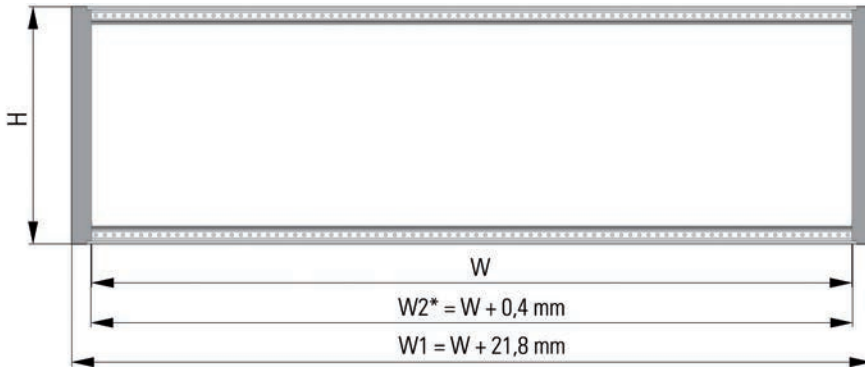
$$H1 = 3 \times 44.45 \text{ mm} - 10.85 \text{ mm} = 122.5 \text{ mm}$$



# //02 19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

// Product information



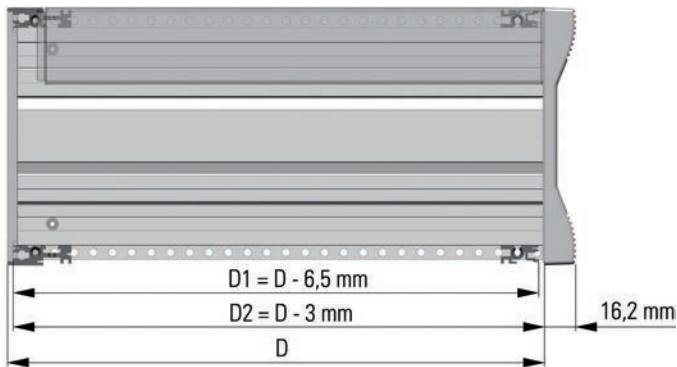
## Dimension diagrams

### Front view

\*  $W2$  = inner mounting dimension

### Note

- To prevent electric spark-over from the PC board to the side plate in the 1st slot, use an isolating mat if necessary



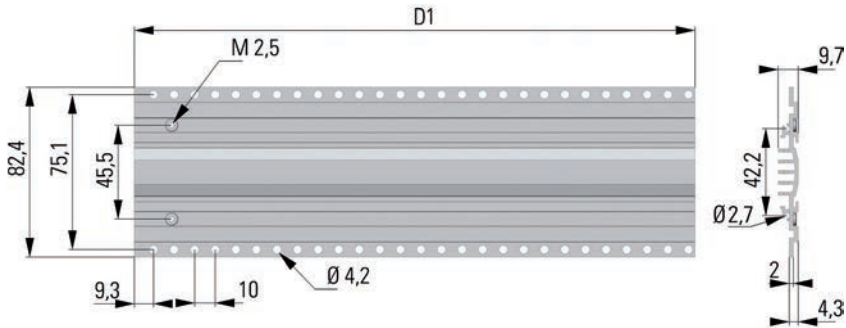
### Side view

$D$  = overall depth  
 $D1$  = usable internal dimension  
 $D2$  = mounting depth in 19" rack

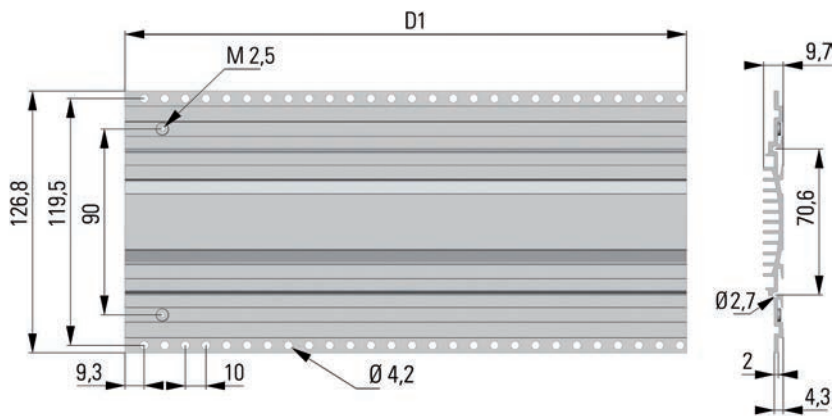
# //02 19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

// Product information



Side extrusion 2 U

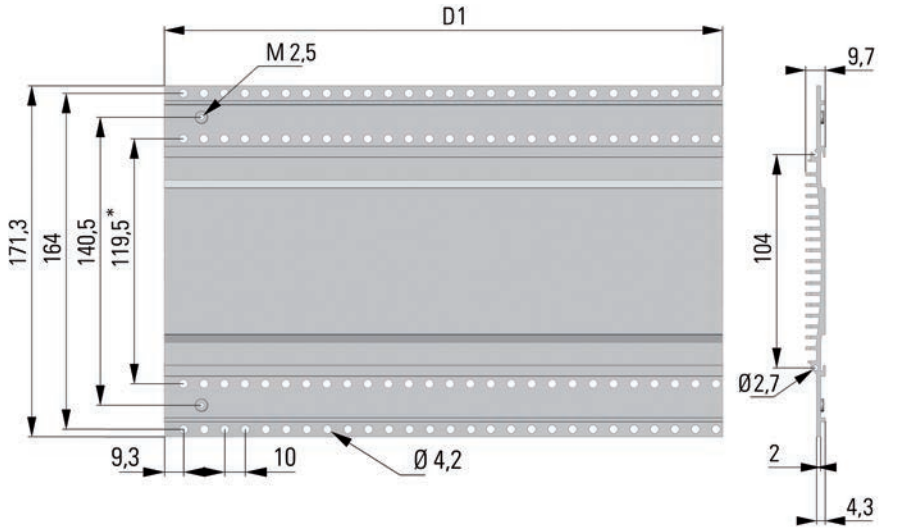


Side extrusion 3 U

# //02 Magic

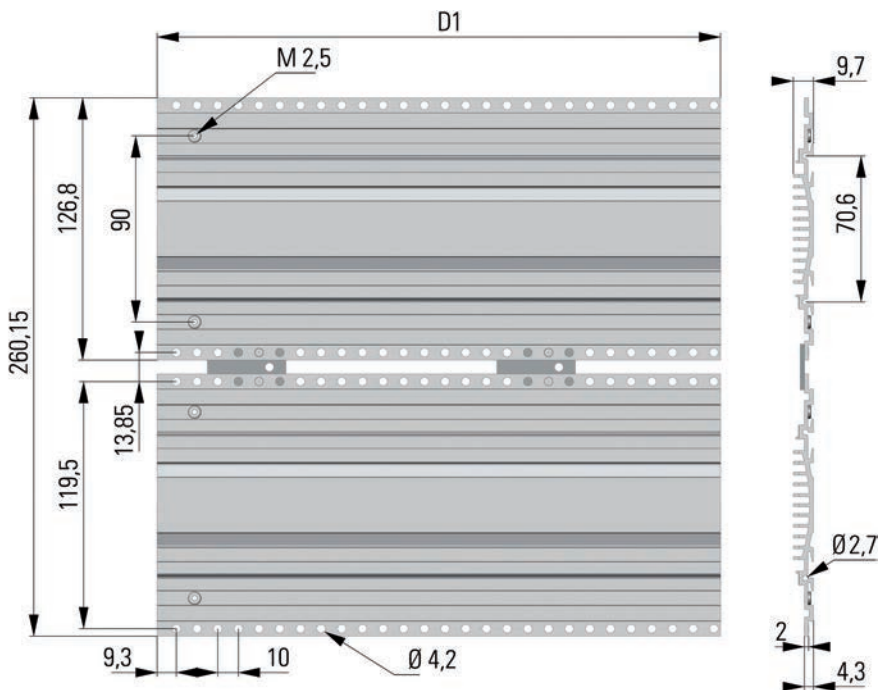
19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

// Product information



Side extrusion 4 U

\* (3 U)



Side extrusion 6 U (2 x 3 U)

With connecting plates

# //02 19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

// Single components

## Corner brackets

### Standard corner bracket – Magic

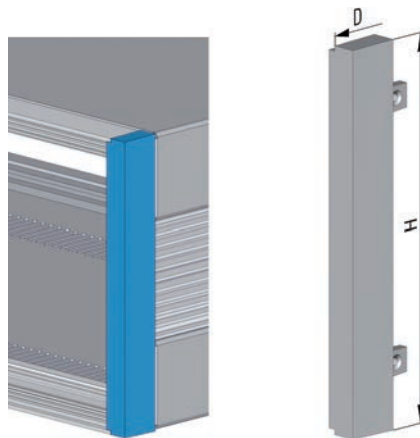
For front trimming of case

#### Material

Die-cast aluminum, powder-coated in RAL 7001 (silver gray), contact points uncoated

#### Dimensions

H
2 U
3 U
4 U
6 U



### Corner bracket with handle – Magic

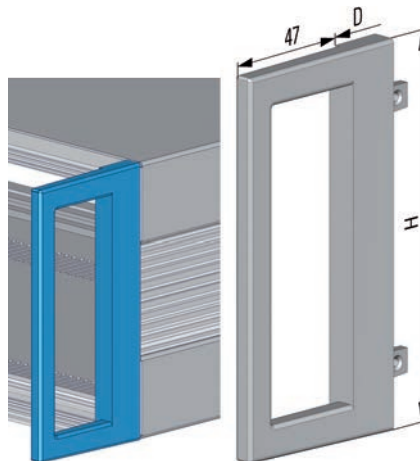
For front trimming of case

#### Material

Die-cast aluminum, powder-coated in RAL 7001 (silver gray), contact points uncoated

#### Dimensions

H
2 U
3 U
4 U
6 U

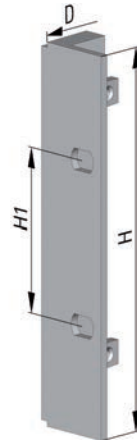
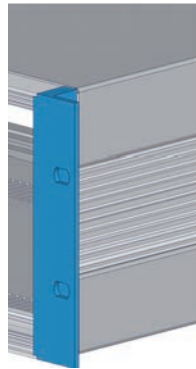


# //02 19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

// Single components

## 19" mounting bracket



## 19" mounting bracket – Magic

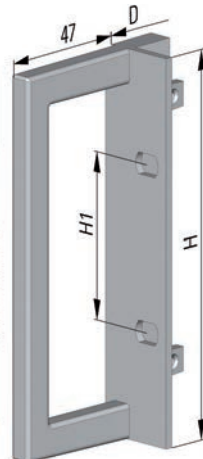
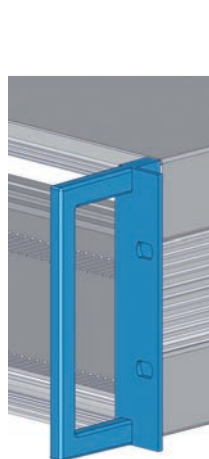
Enables mounting in 19" racks

### Material

Die-cast aluminum, powder-coated in RAL 7001 (silver gray), contact points uncoated

### Dimensions

H	H1 in mm
2 U	76.20
3 U	57.15
4 U	101.60
6 U	190.50



## 19" mounting bracket with handle – Magic

Enables mounting in 19" racks

### Material

Die-cast aluminum, powder-coated in RAL 7001 (silver gray), contact points uncoated

### Dimensions

H	H1 in mm
2 U	76.20
3 U	57.15
4 U	101.60
6 U	190.50

# //02

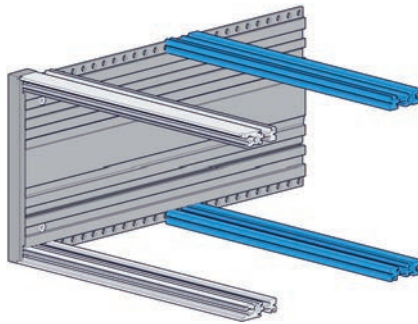
19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

// Single components

## Conversion

Front-end M4 threads are provided for mounting to side plate. Rear rails include incremented holes for the insertion of card guides. Center rails do not have incremented holes and are used solely for mounting backplanes, either directly or indirectly, or for mounting Z-rails or perforated rails in 6 U cases.

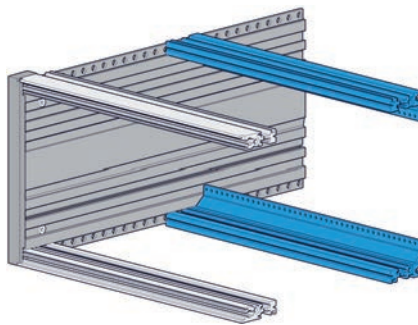


### Conversion kit, basic unit B – Magic

For indirect mounting of backplanes with isolating strips or for mounting Z-rails

#### Material

Aluminum extrusion, alodined

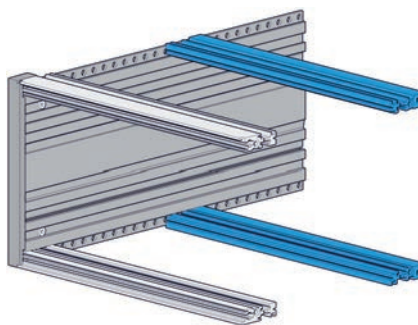


### Conversion kit, basic unit C – Magic

With integrated Z-rail for connectors according to IEC 60603-2

#### Material

Aluminum extrusion, alodined



### Conversion kit, basic unit E – Magic

For direct mounting of backplanes without isolating strips or for mounting perforated rails

#### Material

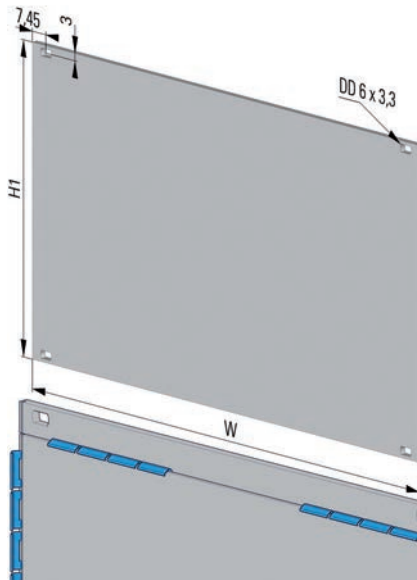
Aluminum extrusion, alodined

# //02 19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

// Single components

Front/rear panels, EMC, rear panel



Front/rear panels – Magic

With grooves for mounting EMC springs

**Material**

Aluminum 2.5 mm, alodined

**Dimensions**

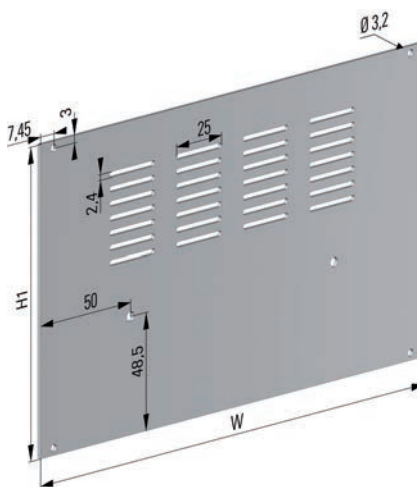
H	H1 in mm
2 U	84.1
3 U	128.5
4 U	173.0
6 U	261.9

Rear panel – Magic

With ventilation slits for better heat dissipation

**Material**

Aluminum 1.5 mm, clear anodized/cutting edges raw



**Dimensions**

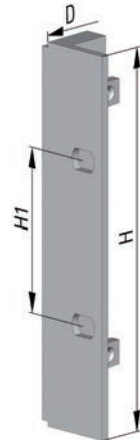
H	H1 in mm
2 U	84.1
3 U	128.5
4 U	173.0
6 U	261.9

# //02 19" RACKMOUNT/DESKTOP CASES FOR PLUG-IN UNITS

# Magic

// Single components

## 19" mounting bracket



## 19" mounting bracket – Magic

Enables mounting in 19" racks

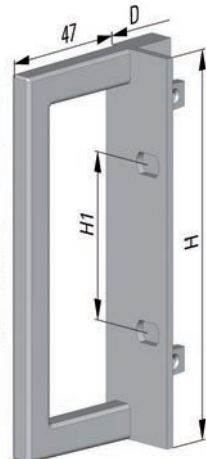
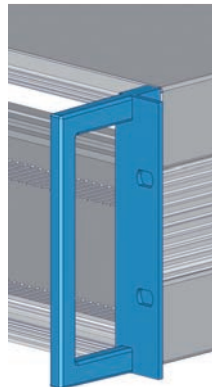
### Material

Die-cast aluminum, powder-coated in RAL 7001 (silver gray), contact points uncoated

### Dimensions

H	H1 in mm
2 U	76.20
3 U	57.15
4 U	101.60
6 U	190.50

## 19" mounting bracket with handle – Magic



Enables mounting in 19" racks

### Material

Die-cast aluminum, powder-coated in RAL 7001 (silver gray), contact points uncoated

### Dimensions

H	H1 in mm
2 U	76.20
3 U	57.15
4 U	101.60
6 U	190.50