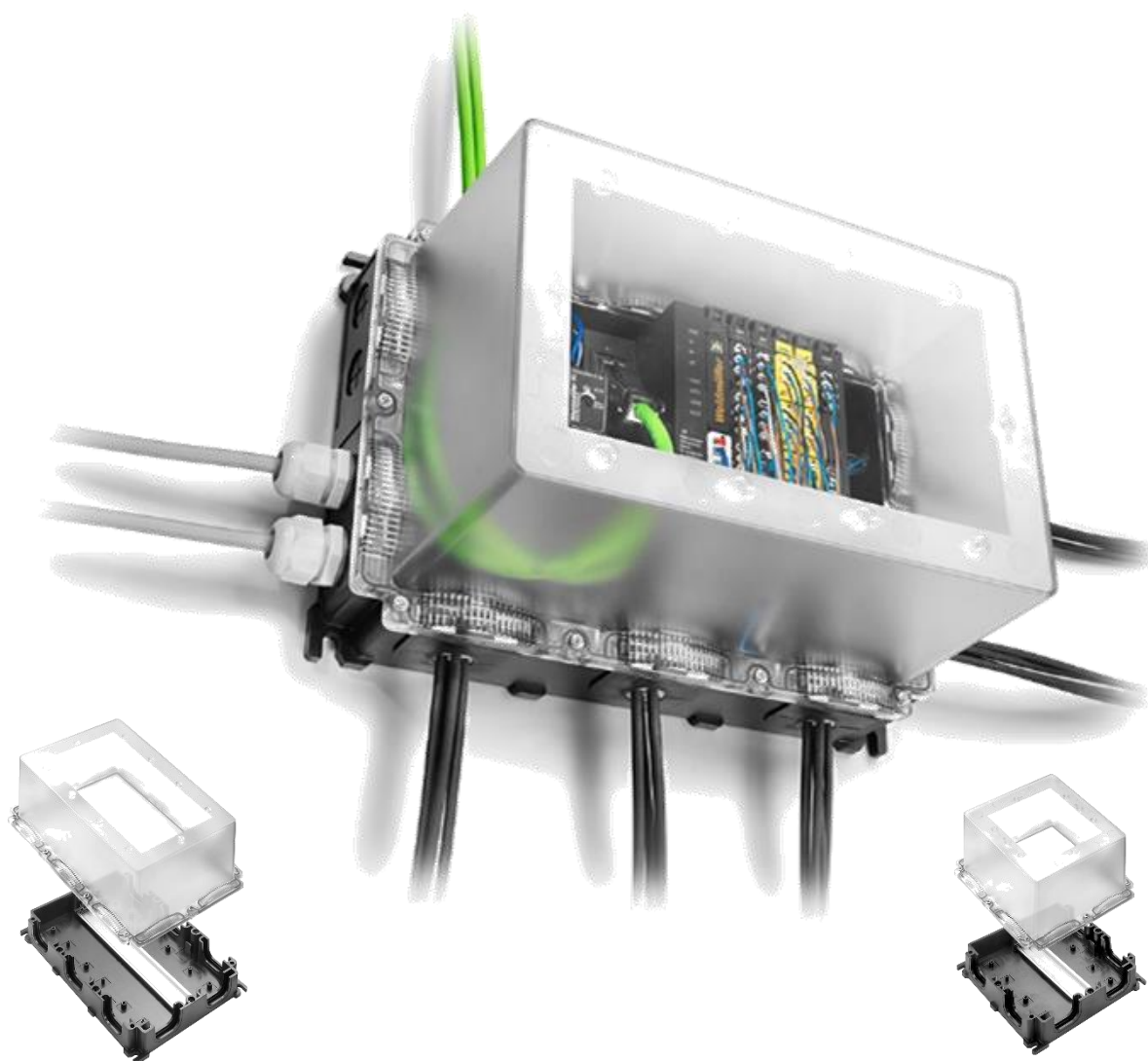


**FieldPower® enclosure
for controls and I/O system IP20**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Application note

FieldPower® enclosure for controls and I/O system IP20

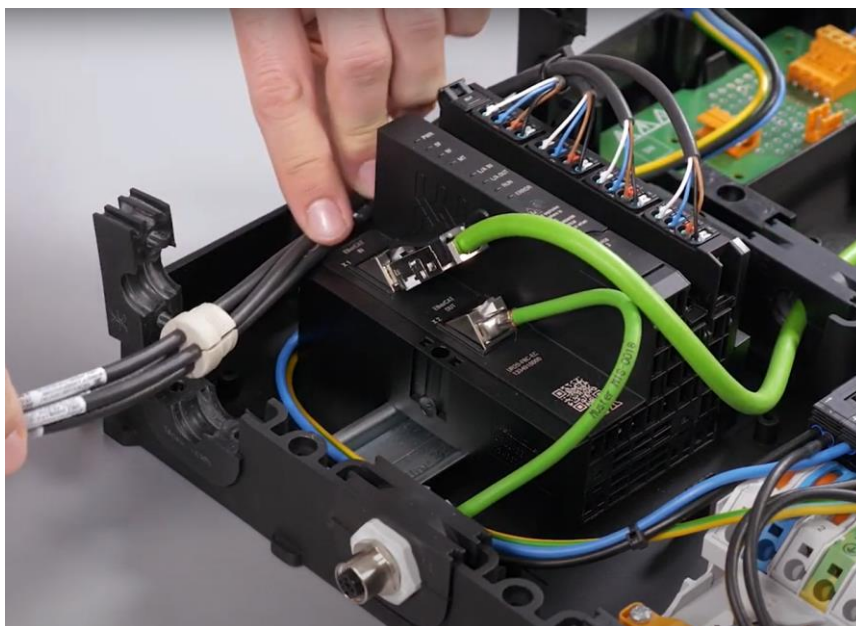


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Your benefit:

- ✓ Individual combinations of the u-control 20 / u-remote 20 modules possible
- ✓ Often reduced cost in comparison to standard IP67 modules
- ✓ Significantly reduced wiring effort of enclosed IP20 modules due to the use of pre-assembled cables



Handling Video:
<https://youtu.be/dyChOgyaQgQ>



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FieldPower® IP65 Enclosure size 2

- The FieldPower® Enclosure size 2 is suitable for the installation of

u-remote (not valid for ECO coupler) with

- 1 fieldbus coupler
- 3 modules (at 45°C ambient temperature)
- 4 modules (at 40°C ambient temperature)
- Terminal blocks for power supply

u-control WL2000* with

- 1 control unit
- 4 modules (at 45°C ambient temperature)
- Terminal blocks for power supply

u-control M3000 / M4000* with

- 1 control unit (at 50°C ambient temperature)
- Terminal blocks for power supply

For additional modules, it is necessary to calculate their power loss (without coupler) according to the ur20 manual [here](#).

In the second step, refer to the enclosure power loss – temperature – curve [here](#).

Find the corresponding temperature increase to the given power loss and subtract that value from 50°C. The result is the possible ambient temperature of the configuration.

E.g.: You add 3 modules to the control with a sum of 3 W power loss. According to the curve, this is equivalent to approx. 3 K temperature increase. Therefore $50 - 3 = 47^{\circ}\text{C}$ is your ambient temperature.

additional 24 VDC power supply

It is also necessary to check the power loss and subtract the corresponding temperature increase from the ambient temperature of the remaining configuration.

The steps for that are the same as described before.



Order details enclosure

Type	Order No.	product catalogue
FP ENC BSTS 155 2M (complete enclosure UL50)	2659760000	Link

Application example



* Thermal tests were run at 100% CPU load

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FieldPower® IP65 Enclosure size 2

- Fast and error-free wiring at the point of use: Thanks to the innovative, pluggable cable seals or round connectors, pre-assembled cables can be used.

E.g.: with the Cabtite 20x20 carrier seal in IP54, the following configuration is possible:

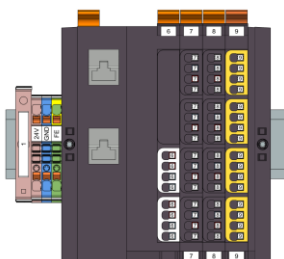
- Up to 16 M8- and M12 cables
- Two ethernet cables
- Two 24 VDC supply lines

Project planning with the Weidmüller Configurator

Project your u-remote configuration
on a 142 mm long mounting rail 35x7,5

[Link](#) to onlineshop ur20

[Link](#) to onlineshop uc20



Order details enclosure

Type	Order No.	product catalogue
FP ENC BSTS 155 2M (complete enclosure UL50)	2659760000	Link

Application example



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FieldPower® IP65 Enclosure size 3

- The FieldPower® Enclosure size 3 is suitable for the installation of

u-remote (not valid for ECO coupler) with

- 1 fieldbus coupler
- 5 modules (at 45°C ambient temperature)
- 7 modules (at 40°C ambient temperature)
- Terminal blocks for power supply

u-control WL2000* with

- 1 control unit
- 6 modules (at 45°C ambient temperature)
- 8 modules (at 40°C ambient temperature)
- Terminal blocks for power supply

u-control M3000 / M4000* with

- 1 control unit (at 50°C ambient temperature)
- Terminal blocks for power supply

For additional modules, it is necessary to calculate their power loss (without coupler) according to the ur20 manual [here](#).

In the second step, refer to the enclosure power loss – temperature – curve [here](#).

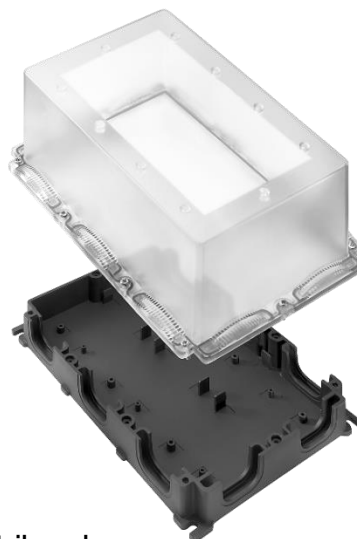
Find the corresponding temperature increase to the given power loss and subtract that value from 50°C. The result is the possible ambient temperature of the configuration.

E.g.: You add 3 modules to the control with a sum of 3 W power loss. According to the curve, this is equivalent to approx. 3 K temperature increase. Therefore $50 - 3 = 47^\circ\text{C}$ is your ambient temperature.

additional 24 VDC power supply

It is also necessary to check the power loss and subtract the corresponding temperature increase from the ambient temperature of the remaining configuration.

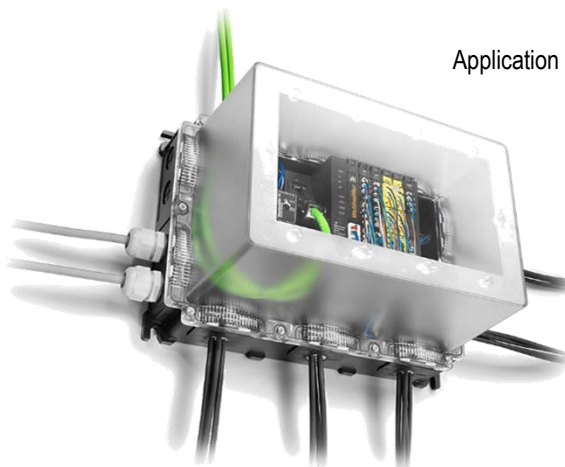
The steps for that are the same as described before.



Order details enclosure

Type	Order No.	product catalogue
FP ENC BSTS 155 3M (complete enclosure UL50)	2632940000	Link

Application example



* Thermal tests were run at 100% CPU load

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FieldPower® IP65 Enclosure size 3

- Fast and error-free wiring at the point of use: Thanks to the innovative, pluggable cable seals or round connectors, pre-assembled cables can be used.

E.g.: with the Cabtite 20x20 carrier seal in IP54, the following configuration is possible:

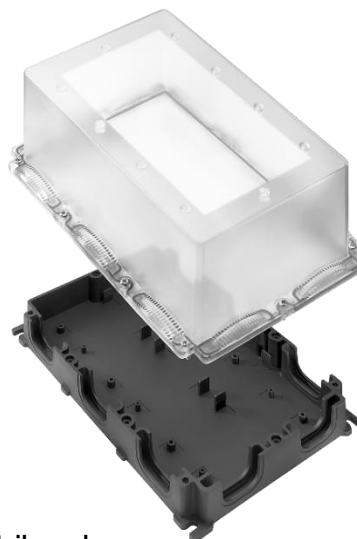
- Up to 24 M8- and M12 cables
- Two ethernet cables
- Two 24 VDC supply lines

Project planning with the Weidmüller Configurator

Project your u-remote configuration
on a 230 mm long mounting rail 35x7,5

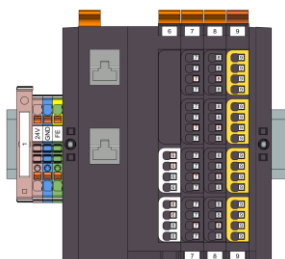
[Link](#) to onlineshop ur20

[Link](#) to onlineshop uc20

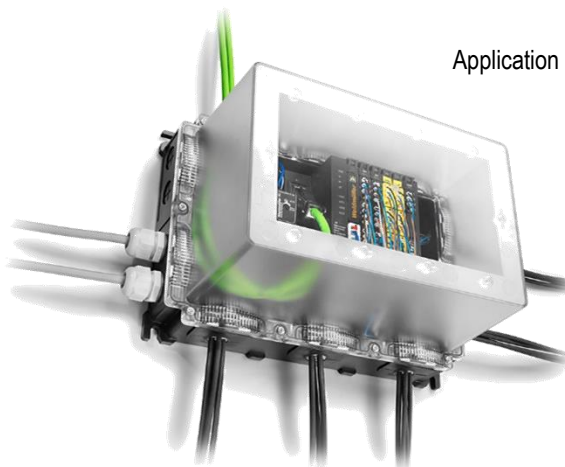


Order details enclosure

Type	Order No.	product catalogue
FP ENC BSTS 155 3M (complete enclosure UL50)	2632940000	Link



Application example



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Accessories

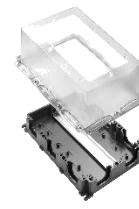
Terminal rails for snapping into the enclosure base size 2

- FP ENC DR07 142 3B 2633450000
(lengthwise or crosswise)



Terminal rails for snapping into the enclosure base size 3

- FP ENC DR07 142 3B 2633450000
(lengthwise or crosswise)
- FP ENC DR07 230 3B (230mm) 2633460000



Blind seal to close unused openings

- Blank seal DG D0 PT6 432324000



Cable entry with plug connectors

- Sealing insert DG M20 PT6 2545550000
- Sealing insert DG M16 PT6 2545550000



- M12 and 7/8" plug connectors [Link](#) to onlineshop



IP65

- HQ-Adapter 1532200000
- Pin insert 17 poles 1003210000
- Socket insert 17 poles 1003200000



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Accessories

Cable entry with the separable cable gland Cabtite

(for break-out opening 20mm or sealing insert DG M20 PT6)

- Sealing insert DG M20 PT6 2545550000
- CABTITE CGS M20 BK 2584200000



Cable entry with carrier seal for Cabtite sealing inserts

- Carrier seal for sealing inserts 4324010000



Cabtite sealing elements

- CABTITE SE (20x20) [Link](#) to onlineshop



Cable entry with foldable seals

- Split round cable seals [Link](#) to onlineshop
outer cable diameter 7-17 mm



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Technical data

Dimensions and weights

Size 2			
Height	196 mm	Width	196 mm
Depth	155 mm	Net weight	692 g
Size 3			
Height	196 mm	Width	284 mm
Depth	155 mm	Net weight	950 g

Temperatures

Ambient temperature for u-remote fieldbus coupler (not valid for ECO couplers)		Ambient temperature for u-control WL 2000 control unit	
+ 3 modules (size 2) / 5 modules (size 3)	- 20°C...+40°C	+ 4 modules (size 2) / 6 modules (size 3)	- 20°C...+45°C
+ 4 modules (size 2) / 7 modules (size 3)	- 20°C...+45°C	+ 8 modules (size 3)	- 20°C...+40°C
Ambient temperature for u-control M3000 / M4000 control unit			
alone (size 2 & 3)	- 40°C...+50°C		
+ additional modules	see page 3 & 5		
Storage temperatur	-40°C...+85°C	Note: Power Feed-modules were not thermally evaluated	

General specifications

Packaging unit	1 part	Halogen	No
Protection class	IP65, in closed state	Silicone	No
Color	black, transparent	Cover mountings	Torx screws
Enclosure fixing	Mounting brackets	Supply current for I _{OUT}	10A (ur20) / 5A (uc20)

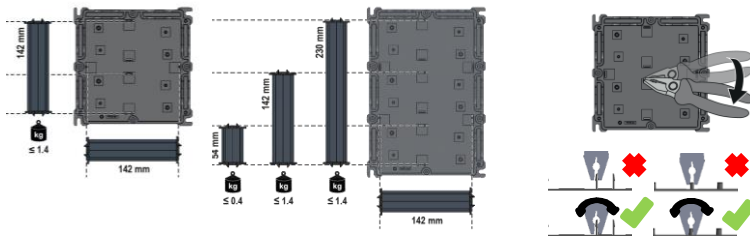
Notes

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Installation

1. Prepare the enclosure base



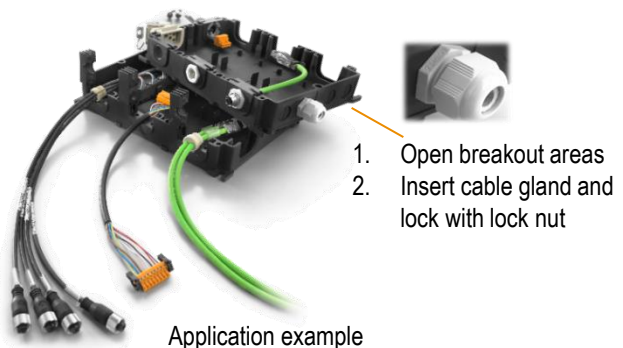
2. Equip the mounting rail and clip it in the enclosure

1. Snap control / I/O system and terminal blocks on the mounting rail
2. Clip the assembled mounting rail in the enclosure base
3. Wire electronic components with the pre-assembled cables

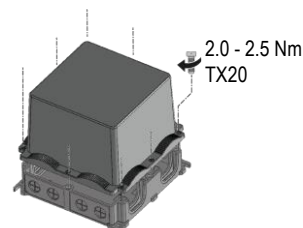
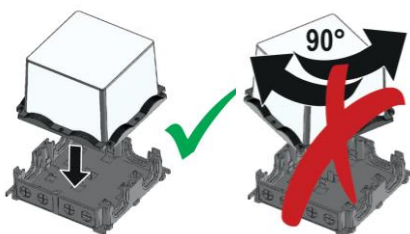


3. Insert seals (example)

1. Insert cabtite carrier seal
2. Insert pre-assembled cables into the cabtite sealing element
3. Insert the sealing element into the carrier seal



4. Screw down the cover



Handling video:
<https://youtu.be/dyChOgyaQgQ>

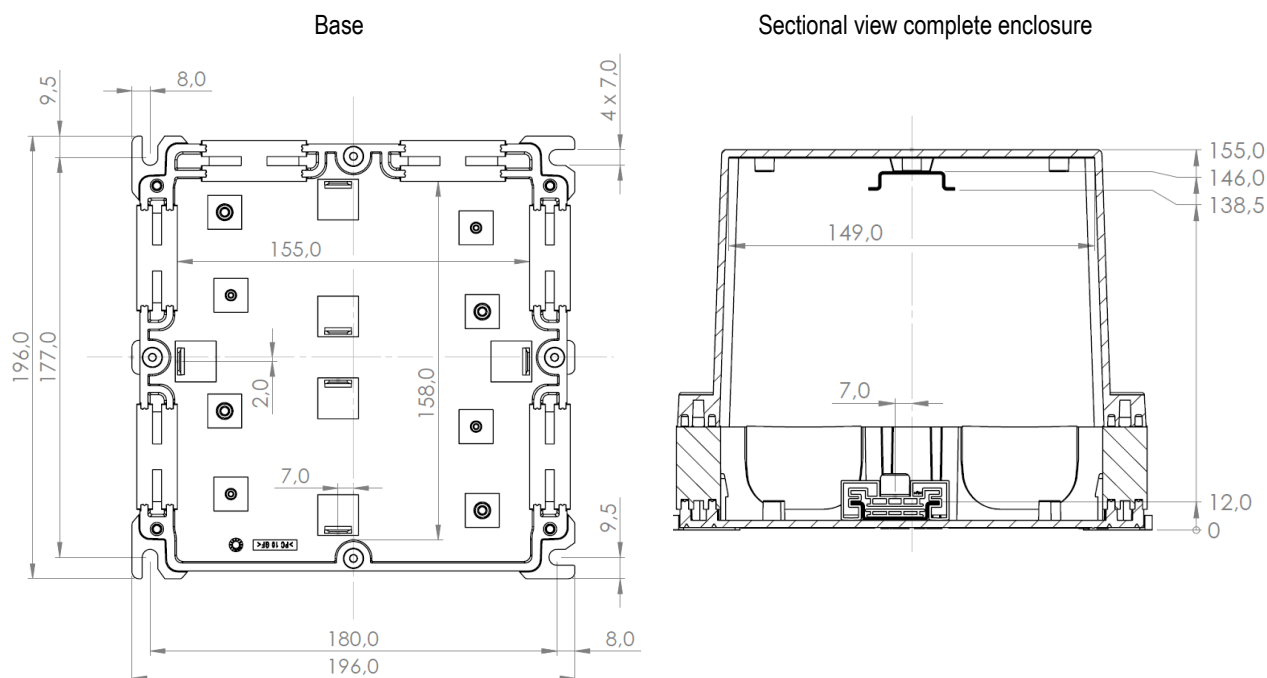


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Drawings

Dimensions size 2



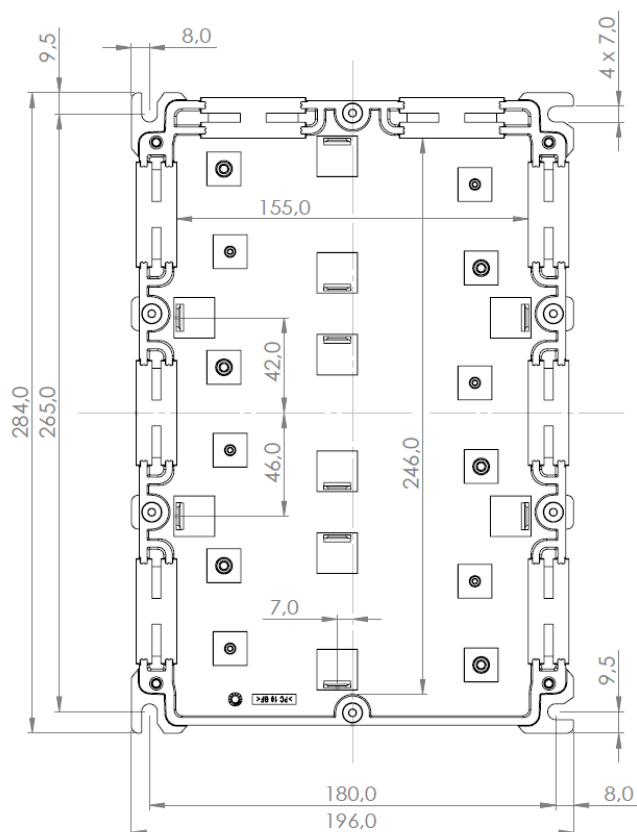
STEP File [LINK](#)



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Drawings

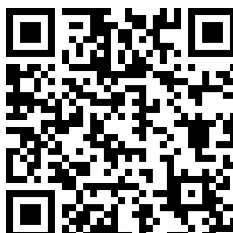
Base



Technical drawing of the front view of a metal cabinet. The drawing shows a rectangular cabinet with a hinged lid and a base. Dimensions are indicated as follows:

- Overall height: 155,0
- Height to the top of the lid: 146,0
- Height to the top of the main body: 138,5
- Width: 149,0
- Distance from the center to the side of the base: 7,0
- Height of the base: 12,0

STEP File [LINK](#)



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We are happy to answer your questions –
in person, quickly and easily

www.weidmueller.com/contact

Further information

[Landing page](#)

[Onlineshop](#)

