

**Fire safety
housing
floor-standing/w
all assembly
FBxxLE/FBxxSE**

Installation and operating manual

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1 For your safety

General safety information

- Before commissioning, check the smoke alarm to ensure it is functioning properly.
- The operating/installation manual must be stored at the operating site of the fire safety housing at all times.
- Legally required safety notices must be displayed in a clearly visible location for users.
- All safety and danger notices, and the nameplate must be maintained in a legible condition.
- Observe the relevant provisions of the VDE (Association for Electrical, Electronic & Information Technologies).
- Observe the requirements of the fire authorities.
- Observe the general building law and building regulations.
- Observe accident prevention guidelines and workplace guidelines.
- Observe the instructions of the technical supervisory service.
- Ensure compliance with the relevant standards when evaluating fire protection and structural engineering aspects.
- Only use the products if they are in proper condition.
- Make sure that the required safety checks are carried out by personnel authorized by us.
- Due to the heavy weight of the product, damage and defects caused by improper transport and installation can only be reliably avoided by specialist personnel trained and authorized by us.
- The stability of the housing will be impaired if the doors are open when the housing has not yet been screwed onto the structure.
- Keep the opening range of the door free at all times.
- Observe the technical specifications in our catalogue or data sheet for the relevant product.
- Take into account the total power loss of the installed devices and wiring in comparison with the specified power loss of the housing. The specified power loss estimations are ideal values; they assume average ambient values such as temperature, humidity, mounting surface, uniform arrangement of the switching elements, etc.
- Please also note that, depending on the positioning of the installed elements, "hot spots" can form. It is therefore important to ensure that the built-in components are distributed as evenly as possible. If necessary, this should be verified by means of a test measurement in the interior.
- Unauthorised access to the housings is not permitted.
- The doors of the housing must be kept closed when in operation.
- Incorrect installation can impair the protection function.
- Observe all of the instructions in this manual.
- Only use approved and suitable screws/dowels to screw the housing onto the structure.
- Check the suitability of the screws/dowels for the specific structure.
- The housing must not be glued, varnished or coated in any other way.
- The body of the housing must not be damaged (holes, screws).
- The locking systems may not be modified or replaced.
- All screw heads must be fitted with cover caps.

Intended use

- The products described in this operating/installation manual are state-of-the-art and built in accordance with established safety regulations.

- They may only:
 - be used as intended and
 - in a technically proper and safe condition
- The housings consist of coated, non-metallic, plate type components. The edges are in a different colour.
- Follow this operating manual carefully for information on how to handle the products and the cable entry correctly.
- Any use beyond this scope is considered unintended use. Hager is not liable for any damage caused as a result or for consequential damages.

Transport



As a general rule, at least 2 people should carry out transport work.

- The housings are packaged and placed upright on the pallet for shipping.
- Any damage to the packaging must be indicated to the shipping agent in writing on the delivery note. Transport damage will not be acknowledged if a "clean receipt" is issued to the shipping agent who arranges delivery to you.
- This also applies to packages missing as per the delivery note.
- The pallet must only be lifted from the narrow side with full-length forks all the way through to the end of the pallet.
- Do not open the pallet before reaching the installation location to eliminate the risk of damage during transportation to the installation location.
- The housings may be damaged if pointed or sharp objects such as knives are used to open the pallet. Handle with care!
- Dispose of packaging material in an environmentally friendly manner or reuse it.
- Store the fire safety housing in a suitable place if it is not used or installed immediately. Do not store outdoors.
- Fire safety housing FB2xLE/FB2xSE with integrated base with ground clearance for easy lifting. The cover at the front must be unscrewed for use.
- Ensure compliance with the safety regulations during transportation.
- The housing must be transported in an upright position on the pallet.
- Do not release the strapping until you reach the installation site.
- Do not place individual parts down on their corners and lay soft material over the storage area beforehand, e.g. a packaging cover.
- If you need to move the housing, do so without jerking it and place it fully on its rear or side.
- Do not lie the housing on the door(s)!
- The housing must be closed when moving.
- Pay attention to the heavy weight of the fire safety housing.
- The housing may only be tilted onto its side or rear panel when bringing it into position.
- As a general rule, it is safe to tilt the housing onto its side or rear up to an angle of 45°.
- If it is tilted by 90°, the door must be secured all around with appropriate spacing blocks. Alternatively, the door leaf can also be dismantled.
- As a general rule, the doors of double-panel housings should be dismantled if the housing needs to be placed on its side or back.
- The outer edges must be protected accordingly (see factory packaging).
- Pay attention to the heavy weight -> Ensure compliance with accident prevention regulations!

Summary of important transport and storage information

- Transport and storage conditions: -5°C to +40°C
- Beware of the risk of tilting during transportation!
- Only remove the protective film, protective corners or other packaging material directly at the installation site!
- Pay attention to the enclosed mounting material on the protective film or on the housing!
- Never transport the housing with the doors open!
- Always have two people transport the housing!
- If transporting the housing using a forklift, ensure the forks are long enough for the dimensions.
- Pay attention to any protruding parts.
- If transporting the housing using a crane, do not walk under suspended loads.
- Notify us immediately of any damage.
- The products must not be stored outdoors and must be protected against moisture (water).

Basic information

- Do not install damaged parts as this will immediately render the warranty and proof of usability null and void.
- The housing is not covered by the required building control usability certificate if it is not assembled completely and properly.
- Ensure compliance with building laws and guidelines, as well as instructions from the relevant building authorities and the responsible fire protection expert.
- As the installer, you may only issue an unreserved manufacturer's declaration in relation to compliance with building authority approval if the installation has been completed in a compliant manner.
- In the declaration, make a note of any deviations that are not minor.
- Observe the relevant provisions of the VDE (Association for Electrical, Electronic & Information Technologies).
- Observe the requirements of the fire authorities.
- Observe accident prevention guidelines and workplace guidelines.
- Keep the opening range of the doors free at all times.
- Unauthorised access to the housings is not permitted.
- The doors of the fire safety housing must be kept closed when in operation.
- Secure the housing to prevent it from tilting.

Installation conditions of fire safety housings

- This product be mounted vertically and horizontally.
- The surface underneath it must be even
- Only suitable for indoor installation
- The installation location must be frost-free and dry, with an ambient temperature of -5°C to +35°C
- Not suitable for outdoor installation
- The floor/wall must be suitable (bearing capacity, classification, fire-resistance class)
- Carefully check the suitability of the wall properties for the heavy weight of the housing prior to on-wall mounting of the fire safety housing (FBxxLE/FBxxSE).
- Check that the supplied dowels are suitable in relation to the wall properties.

- Take into account the power loss of the installed devices and wiring in comparison with the specified power loss of the distribution board (DIN EN 61439-1: 2012-06 (VDE 0660-600-1: 2012-06), DIN EN 61439-2: 2012-06 (VDE 0660-600-2: 2012-06)).
- The housing must be aligned at its final installation site. To do this, lift the housing at the corners and adjust the height using shim plates.
- After doing so, the housing should be in a horizontal position.
- Secure the housing to prevent it from tilting (installation material provided).
- Make sure that the fire protection sealing strips are not damaged.
- Check the door locks properly when closing the housing.


2 About these instructions

- These instructions are not a manufacturer declaration and not a usability certificate from the building authorities.
- The information in these instructions applies for a large number of products. Binding technical information and information concerning the approval can be found solely in the usability certificates from the building authorities, the submitted manufacturer declarations of the installing company, and our order confirmation, which has become a component of the purchase agreement due to its signing by our contractual partner.





Warranty, declaration of transfer

- Always comply with the installation instructions to ensure optimal function of our products.
- The Hager warranty includes the delivered products.
- Changes and modifications to the design may only be made following consultation with Hager since the approval/warranty will otherwise be invalidated.
- The warranty for installation services must be assumed by the installer.
- Warranty and liability claims for personal injury and material damage are excluded if they can be traced back to one or more of the following causes:
 - improper installation, commissioning, operation, maintenance,
 - non-compliance with the instructions with regard to transport, storage, operation and installation,
 - improper repairs or
 - catastrophes due to external influences and force majeure.

Structure of warning messages

 Signal word
Type and source of the danger! Consequences if the danger is ignored
➤ Measures for averting the danger

Danger levels in warning messages

Colour	Signal word	Consequences of non-compliance
	DANGER	Death, serious personal injury
	WARNING	Death or serious personal injury possible
	CAUTION	Personal injury
	ATTENTION	Property damage




Procedural instructions with a fixed order:

Step	Action
1	Procedural instruction step 1
2	Procedural instruction step 2

Lists and instructions

Visual representation	Meaning
1., 2., 3., etc.	Numbered lists with a fixed order
-	Lists and procedural instructions without a fixed order
➤	Measure / procedural instruction for averting danger

Additional symbols and their meaning

Symbol	Meaning
	The work must only be performed by an electrically skilled person.
	The product is intended for indoor installation and indoor use.
	The transportation work must generally be carried out with at least 2 persons.

3 About the fire safety housing

Coding

FBxxLE	30 minutes' fire resistance
FBxxSE	90 minutes' fire resistance
FB2xLE/FB2xSE	Floor-standing housing
FBxxLE/FBxxSE	Surface-mounted wall mounting

Properties

- Floor-standing housing (FB2xLE/FB2xSE) or surface-mounted wall mounting (FBxxLE/FBxxSE)
- Door can be taken off the hinges to reduce weight during transport
- Door locking via swivel lever with two-way key bit
- Cable entry at the top and bottom
- Cable bulkhead for single entry
- External fastening lugs
- Door closes flush with body, opening angle 180°
- Ventilation in the housing rear panel
- C-rails for the direct installation of mounting plates or device carriers

Protection type IP44

ATTENTION

Protection type IP44 is only achieved if the fire safety housing is mounted on a suitable wall.

The wall and floor must meet fire resistance class F30 or F90.

- If the fire safety housing is set up as a free-standing unit, an additional rear panel must be installed. This must be ordered as an additional item.

Scope of delivery

- The scope of delivery includes everything that is required and logical for installation.
- The fire safety housings are delivered as described in the catalogue. Please refer to the catalogue for ordering options.
- 230 V fan which switches off automatically in the event of a fire.
- Smoke detector with switch socket connection to fan (fan switches off when smoke is detected - for use in escape routes).
- Fan unit with integrated smoke detector.

4 Technical data

Material	Surface coating non-combustible, classification A2 - s1, d0
Fire resistance	over 30 or 90 minutes, fire-retardant
Type of protection	IK10, IP44
Protection class	II
Degree of pollution	3
Application area	Indoors
Min. ambient temperature	-5°C
Max. ambient temperature	40°C
Ambient temperature 24 h average	35°C
Smoke-proof	yes
Cold-smoke proof	yes
Door stop	replaceable
Door opening angle	180°, single-panel door
Locking type: lock	swivel lever with half-cylinder
Rated insulation voltage U_i	520 V
Rated impulse withstand voltage U_{imp}	8 kV

NOTICE

The technical data applies in conjunction with the components of the univers N interior system.

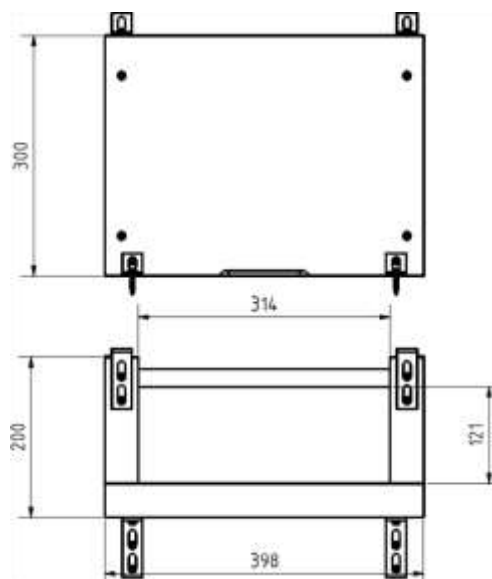
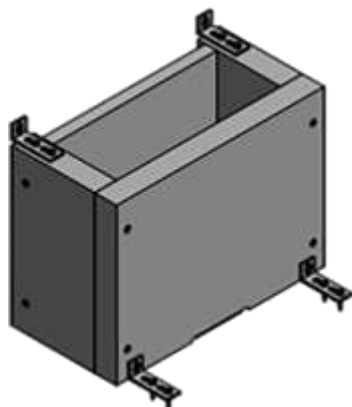
- Please also read system manual 6LE007035 (univers N system manual)

4.1 Cooling cable duct - dimensions

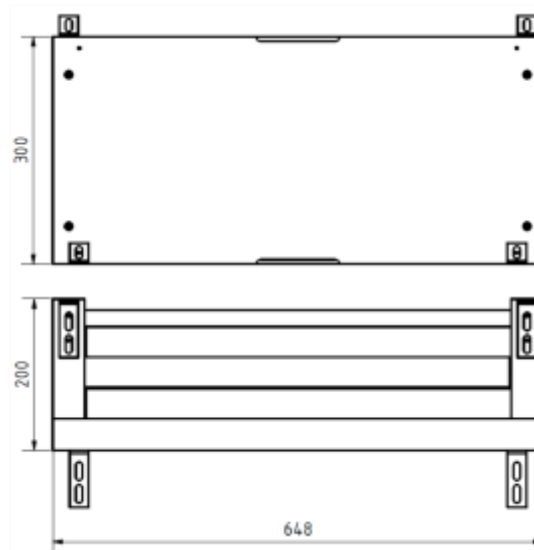
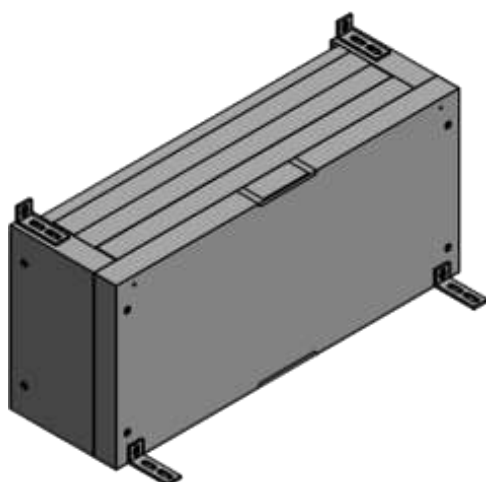
Dimensions

Dimensions [mm]

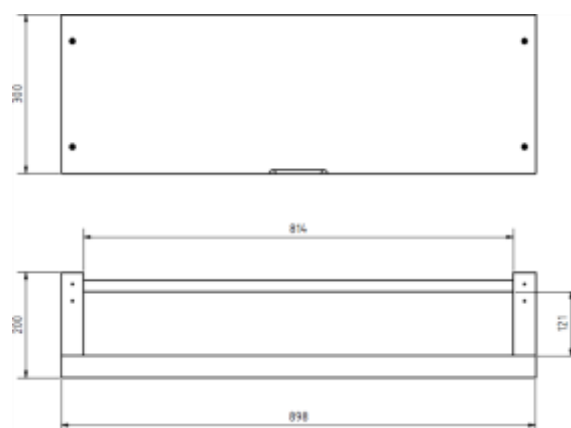
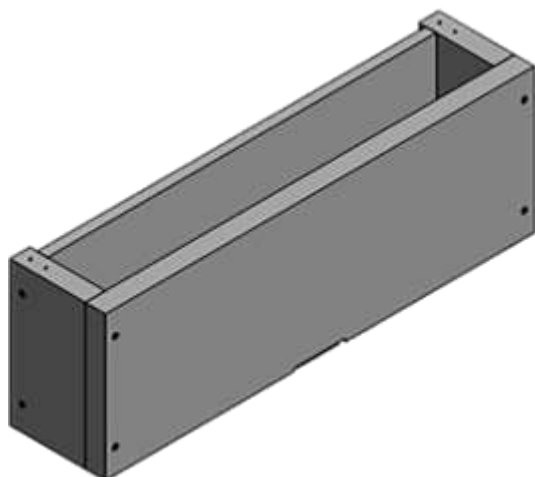
FZ391N



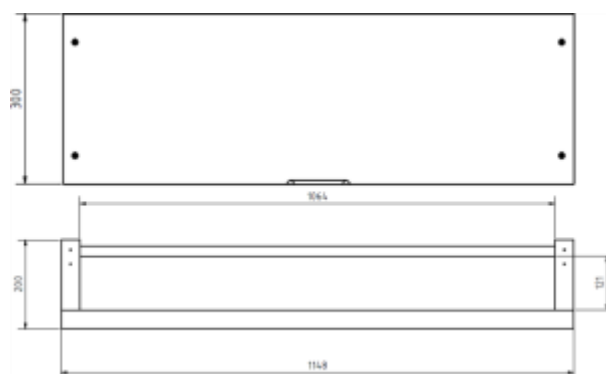
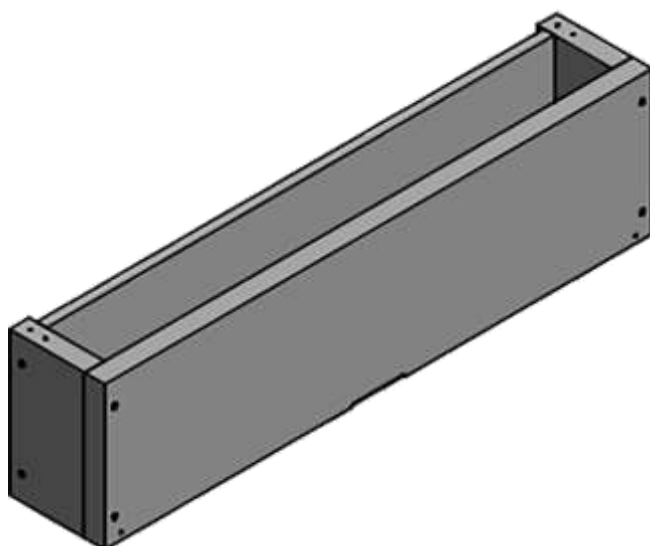
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FZ393N



FZ394



5 Planning information

Power loss

The manufacturer (switchgear manufacturer) of the system is responsible for calculating the power loss. The calculation must take into account the fact that the ventilation switches off in the event of a fire. It continues to run in normal operation.

- Please note the power loss information below when installing devices in empty enclosures.

Power loss with active fan

Item	Dimensions in mm	Power loss in W at ΔT in K (with active fan)					DIN door (R/L)	Panel height	Effective panel height	Panel width	PLE
		ΔT									
		10 K	15 K	20 K	25 K	30 K					
Floor-standing enclosures 30 min.											
FB21LE	2048 x 398	83	125	166	209	250	R	12	11	1	132
FB22LE	2048 x 648						R	12	11	2	264
FB23LE	2048 x 898	134	202	270	340	410	R	12	11	3	396
FB24LE	2048 x 1148	186	280	372	465	588	R	12	11	4	528
Wall-mounted enclosures 30 min.											
FB31LE	598 x 398	83	125	166	209	250	R	3	2	1	24
FB32LE	598 x 648						R	3	2	2	48
FB41LE	748 x 398						R	4	3	1	36
FB42LE	748 x 648						R	4	3	2	72
FB51LE	898 x 398						R	5	4	1	48
FB52LE	898 x 648						R	5	4	2	96
FB61LE	1048 x 398						R	6	5	1	60
FB62LE	1048 x 648						R	6	5	2	120
FB63LE	1048 x 898						R	6	5	3	180
FB71LE	1198 x 398						R	7	6	1	72
FB72LE	1198 x 648						R	7	6	2	144
FB73LE	1198 x 898						R	7	6	3	216
FB81LE	1348 x 398						R	8	7	1	84
FB82LE	1348 x 648						R	8	7	2	168
FB83LE	1348 x 898						R	8	7	3	252
FB91LE	1498 x 398						R	9	8	1	96
FB92LE	1498 x 648						R	9	8	2	192

Item	Dimensions in mm	Power loss in W at ΔT in K (with active fan)					DIN door (R/L)	Panel height	Effective panel height	Panel width	PLE
		ΔT									
		10 K	15 K	20 K	25 K	30 K					

Floor-standing enclosures 90 min.

FB21SE	2048 x 398	83	125	166	209	250	R	12	11	1	132
FB22SE	2048 x 648						R	12	11	2	264
FB23SE	2048 x 898	134	202	270	340	410	R	12	11	3	396
FB24SE	2048 x 1148	186	280	372	465	588	R	12	11	4	528

Wall-mounted enclosures 90 min.

FB31SE	598 x 398	83	125	166	209	250	R	3	2	1	24
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FB71SE	1198 x 398						R	7	6	1	72
FB72SE	1198 x 648						R	7	6	2	144
FB73SE	1198 x 898						R	7	6	3	216
FB82SE	1348 x 648						R	8	7	2	168
FB83SE	1348 x 898						R	8	7	3	252

Power loss with fan switched off

(The fan switches off at an ambient temperature of 77°C at the control enclosure, fan unit:
Technical data.

Item	Dimensions in mm	Power loss in W at ΔT in K (without fan)					DIN door (R/L)	Panel height	Effective panel height	Panel width	PLE
		ΔT									
		10 K	15 K	20 K	25 K	30 K					
Floor-standing enclosures 30 min.											
FB21LE	2048 x 398	34	50	67	84	101	R	12	11	1	132
FB22LE	2048 x 648	57	85	113	140	169	R	12	11	2	264
FB23LE	2048 x 898	80	119	158	196	236	R	12	11	3	396
FB24LE	2048 x 1148	101	151	202	253	303	R	12	11	4	528
Wall-mounted enclosures 30 min.											
FB32LE	598 x 648	16	25	33	42	50	R	3	2	2	48
FB41LE	748 x 398	22	33	44	55	66	R	4	3	1	36
FB42LE	748 x 648	18	27	37	46	55	R	4	3	2	72
FB51LE	898 x 398	26	39	52	65	78	R	5	4	1	48
FB52LE	898 x 648	20	30	41	51	61	R	5	4	2	96
FB61LE	1048 x 398	22	33	45	55	66	R	6	5	1	60
FB62LE	1048 x 648	33	50	67	84	101	R	6	5	2	120
FB63LE	1048 x 898	45	67	90	112	135	R	6	5	3	180
FB71LE	1198 x 398	24	36	48	60	72	R	7	6	1	72
FB72LE	1198 x 648	37	56	74	93	112	R	7	6	2	144
FB73LE	1198 x 898	51	75	101	126	152	R	7	6	3	216
FB81LE	1348 x 398	26	39	52	65	78	R	8	7	1	84
FB82LE	1348 x 648	41	62	82	104	124	R	8	7	2	168
FB83LE	1348 x 898	59	88	118	147	177	R	8	7	3	252
FB91LE	1498 x 398	28	42	56	70	84	R	9	8	1	96
FB92LE	1498 x 648	45	68	90	112	135	R	9	8	2	192

Planning information**ATTENTION**

Property damage due to increased heat in the event of a fire.

The increase in heat that occurs inside the enclosure in the event of fire must be taken into account.

➤ This must also be factored in when designing the layout.

Item	Dimensions in mm	Power loss in W at ΔT in K (without fan)					DIN door (R/L)	Panel height	Effective panel height	Panel width	PLE
		ΔT									
		10 K	15 K	20 K	25 K	30 K					

Floor-standing enclosures 90 min.

FB21SE	2048 x 398	34	50	67	84	101	R	12	11	1	132
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Wall-mounted enclosures 90 min.

FB31SE	598 x 398	16	25	33	42	50	R	3	2	1	24
FB32SE	598 x 648	22	33	44	55	66	R	3	2	2	48
FB41SE	748 x 398	18	27	37	46	55	R	4	3	1	36
FB42SE	748 x 648	26	39	52	65	78	R	4	3	2	72
FB51SE	898 x 398	20	30	41	51	61	R	5	4	1	48
FB52SE	898 x 648	29	44	60	75	90	R	5	4	2	96
FB61SE	1048 x 398	22	33	45	55	66	R	6	5	1	60
FB62SE	1048 x 648	33	50	67	84	101	R	6	5	2	120
FB63SE	1048 x 898	45	67	90	112	135	R	6	5	3	180
FB71SE	1198 x 398	24	36	48	60	72	R	7	6	1	72
FB72SE	1198 x 648	37	56	74	93	113	R	7	6	2	144
FB73SE	1198 x 898	51	75	101	126	152	R	7	6	3	216
FB82SE	1348 x 648	41	62	82	104	124	R	8	7	2	168
FB83SE	1348 x 898	59	88	118	147	177	R	8	7	3	252

Planning information

ATTENTION

Property damage due to increased heat in the event of a fire.

The increase in heat that occurs inside the enclosure in the event of fire must be taken into account.

➤ This must also be factored in when designing the layout.

To facilitate more detailed planning, an example is provided below of the temperature increase in the event of fire, according to the Standard Time-Temperature Curve, in an empty housing at a height of 2/3 in the FB23LE fire protection enclosure:

Duration	Temperature curve
10 minutes	2 K
15 minutes	4 K
20 minutes	9 K
25 minutes	15 K
30 minutes	24 K

- Information about other enclosure versions can be provided on request.

Additional information**Maximum short-circuit current**

- The prospective short-circuit current at the supply point of the switch system must not exceed 10 kA ($I_{cp} \leq 10 \text{ kA}$).
- The on-state current of the upstream protective device must not exceed 17 kA.

Circuit integrity maintenance

The tests were carried out with empty enclosures in accordance with the standard specifications. This means that the installer is responsible for the appropriate design of the electrical installations to ensure the required functional duration in the event of a fire.

With a fire resistance time of at least 30/90 minutes, the fire safety housings have been tested for exposure to fire from the outside in accordance with standard DIN 1363-1:2012-10.

The duration of circuit integrity maintenance depends on various aspects; for example, the shut-down behaviour of the installed electrical equipment or the temperature behaviour in the event of a fire. Therefore, Hager cannot specify the duration of circuit integrity maintenance.

- Project-specific fire protection conditions and requirements must always be borne in mind. In addition, the risk and spread of fire and any compensation measures must be taken into account within the context of the fire protection system.

Temperature behaviour

- When installing electrical equipment, take the temperature behaviour of each component into account.

Temperature-sensitive components such as thermomagnetic tripping mechanisms should not be used. Hager cannot provide any guarantee for the functionality of the fire protection enclosures in the event of fire as the system installer is responsible for the design of the circuits. Functionality depends primarily on the correct configuration. For example, screw-type fuses are recommended instead of miniature circuit breakers (MCB).

Humidity

As a further guide, here are the average humidity values of the fire safety housing when exposed to fire from the outside, based on existing test reports for empty housings and type test reports:

- The maximum humidity was approx. 80% when exposed to fire from the outside for more than 30 minutes.
- The maximum humidity was approx. 98% when exposed to fire from the outside for more than 90 minutes.
- Please note that these are the permitted values according to the standard for fire protection distribution boxes.

6 Assembly

Check the supplied mounting accessories to make sure that they are complete:

- 2 lugs
- 1 two-way key bit
- 10 countersunk screws 4.5x20
- 2 countersunk screws 6.0x120
- 6 short and 3 long strips of fire protection sealing
- 1 insertable air filter

Opening and closing the door(s)

Opening:

- Insert the key into the lock.
- Rotate the key a quarter of a turn clockwise and pull out the swivel lever.
- Turn the swivel lever upwards by 180° anti-clockwise.
- Open the door.

Closing:

- Close the door, making sure that the swivel lever is in the open position.
- Press the door lightly and turn the swivel lever downwards 180° clockwise.
- Allow the swivel lever to snap into the swivel lever holder until you hear it click into place.
- Remove the key.

Note when removing the doors from the hinges



- Pull the pin out of the hinges to remove the doors.

! CAUTION

At least two people should always remove the door panels from the hinges for safety reasons.

Protection type IP44

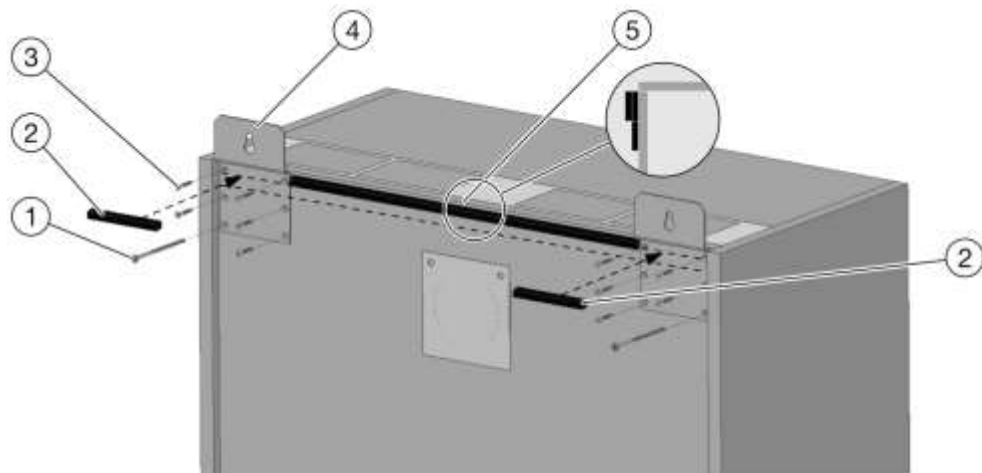
ATTENTION

Protection type IP44 is only achieved if the fire safety housing is mounted on a suitable wall.

The wall and floor must meet fire resistance class F30 or F90.

- If the fire safety housing is set up as a free-standing unit, an additional rear panel must be installed. This must be ordered as an additional item.

Securing the lugs at the rear of the housing



1	Countersunk screws 6 x 120, 2x, tightening torque 1 Nm max.
2	Intumescent coating (apply to the lugs): <ul style="list-style-type: none"> - two layers on top of each other at the top - one layer at the bottom
3	Countersunk screws 4.5 x 20, 10x, tightening torque 2.5 Nm max.
4	Lugs
5	Intumescent coating (apply to the enclosure rear panel): <ul style="list-style-type: none"> - two layers on top of each other at the top - one layer at the bottom

Selecting dowels

Use dowels with steel screws generally approved by the building authorities, or covered by European Technical Approval or European Technical Assessment, and which are suitable for the intended purpose in accordance with the static requirements.

Ensure compliance with the specific requirements of the general building authorities, European Technical Approval or European Technical Assessment.

Suitable dowels must be selected for stonework depending on the type of stone (solid or perforated stone) and the different materials such as brick, sand-lime brick or normal/lightweight/ autoclaved aerated concrete products.

The dowels we supply are suitable for DIN-compliant stonework and stone types.

Carry out tensile strength tests if the stonework is unknown.

Sealing strips



Do not remove the sealing strips at the rear of the enclosure.

Rear of enclosure

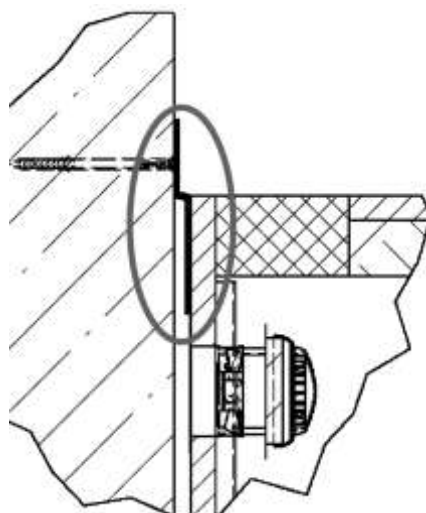
Check the silicone seam

- Check the silicone seam for cracking in the area near the thermocouple elements



Silicone seam near the thermocouple elements

FBxxLE wall mounting



Lugs with suitable screws or dowels for the type of wall.

- The wall on which the housing is mounted must be even and straight.

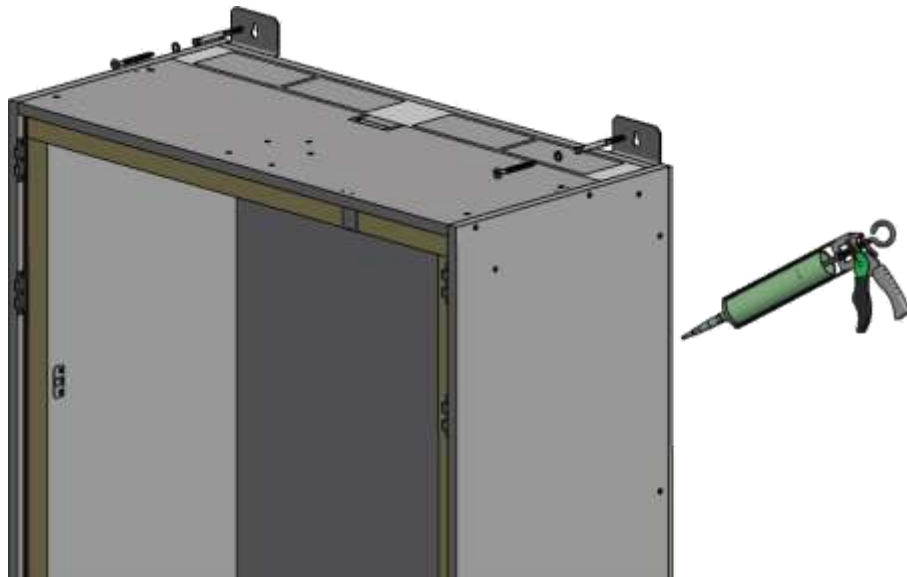
- Align the fire safety housing so that it is in a horizontal position on the wall.

WARNING

An electric shock results in life-threatening injuries or death.

The ventilation system can come into contact with the wall at the back.

- Make sure that the fire safety housing is only mounted on non-conductive surfaces.



- Mark out the pilot holes through the fastening lugs at the top.
- Make holes for the dowels.
- Insert the dowels.
- Secure the housing.
- If necessary, place the doors back in the hinges.
- Seal the side panel connection on the existing wall with silicone.
- Make sure the vents at the top and bottom are kept free.

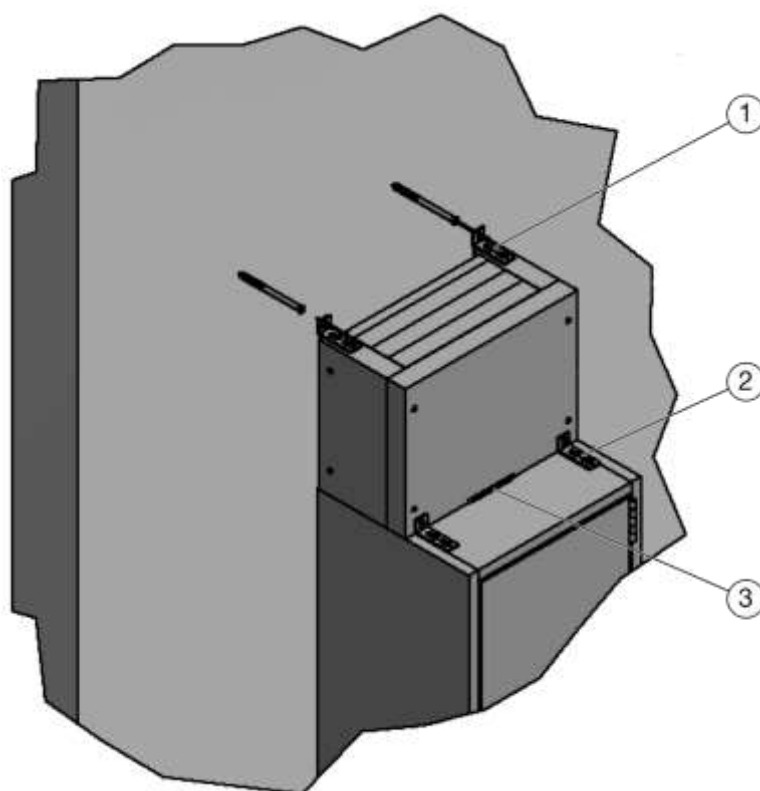
FBxxSE wall mounting including cooling cable duct

- Wall mounting is the same as for the FBxxLE enclosure.

For the FBxxSE, a cooling cable duct must be placed over all the cables. The cooling cable duct must be filled with mineral wool, melting point $>1000^{\circ}\text{C}$ (included in delivery).

Securing the cooling cable duct

- The cooling cable duct is secured to the housing and the wall using two brackets.
- Use two dowels each to fasten it to the wall. (Use suitable fastening materials)
- Use flat headed screws 4.5 x 35 including washers to secure the housing and the cooling cable duct.



- 1 Securing bracket and dowel affixed to existing wall
- 2 Securing bracket affixed to housing
- 3 Temperature sensor

ATTENTION

The temperature sensor (3) should not be placed inside the cooling cable duct!

Inserting the air filter

ATTENTION

The air filter's filtering function can be impaired as a result of incorrect mounting.

This can impair the functionality of the ventilation system and cause subsequent device damage.

- When installing, make sure that the air filter fits flush.

ATTENTION

The air filter's filtering function can be impaired as a result of dirt.

This can impair the functionality of the ventilation system and cause subsequent device damage.

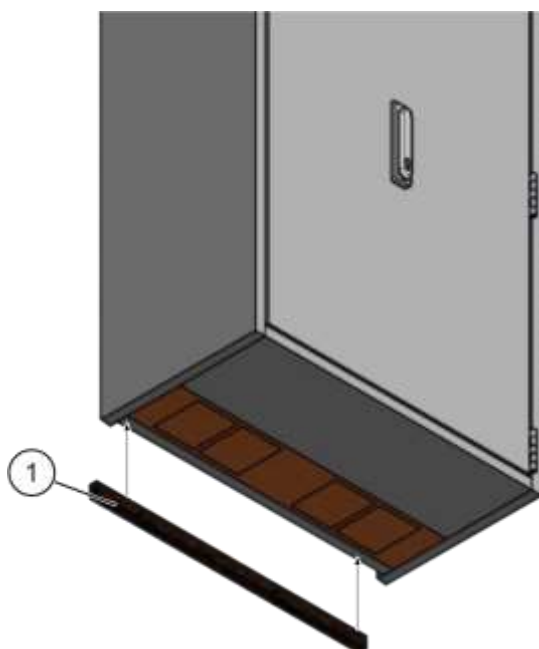
- Check the air filter regularly for dirt.
- Clean or replace the air filter if required.

Air filter as replacement item

Panel width	Item no.
1	FZ399N
2	FZ400N
3	FZ401N
4	FZ402N

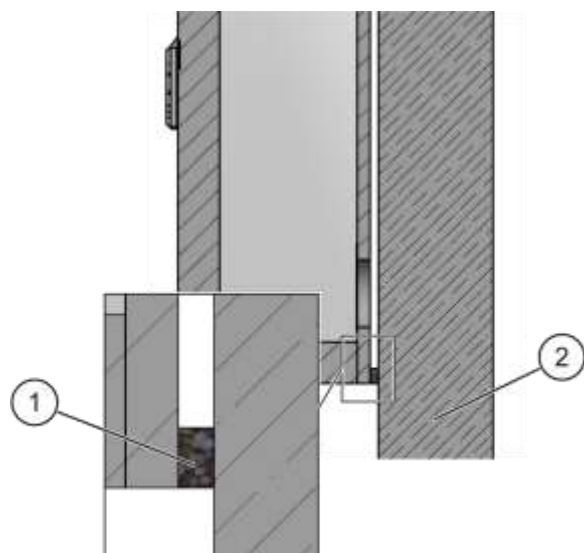
Inserting the air filter - wall-mounted housing

- Once the housing is fitted on the wall, slide the air filter into the bottom ventilation gap so that it fits flush.



- 1 Air filter
- 2 F30/F90 wall

Insert air filter (1)



Air filter inserted in the bottom ventilation gap between enclosure and wall so that it fits flush.

Inserting the air filter - floor-standing housing

In floor-standing housings, the air filter is located behind the front plinth cover.

Step	Action
1	Remove the front plinth cover.
2	Insert the air filter in the bottom ventilation gap
3	Refit the front plinth cover

6.1 Free-standing installation of the additional rear panel

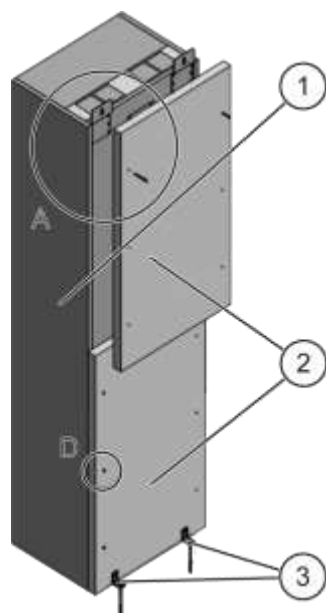
⚠ CAUTION

Risk of tilting during installation.

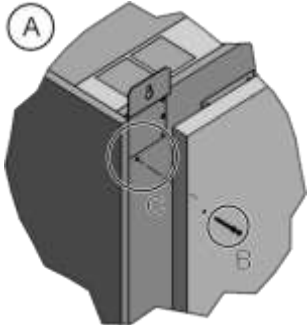
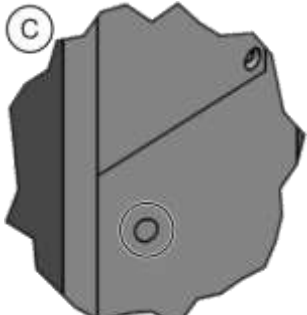
Personal injury or property damage can result.

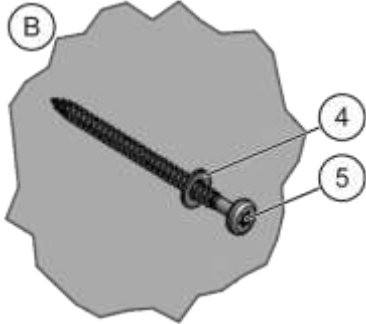
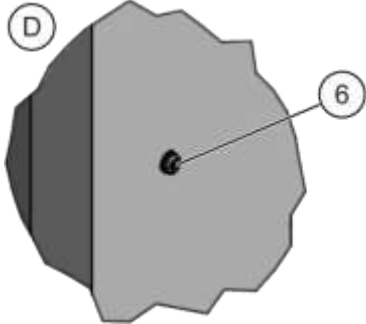
- Secure the enclosure so that it does not tilt or fall over when the additional rear panel is installed.

Enclosure without cooling cable duct

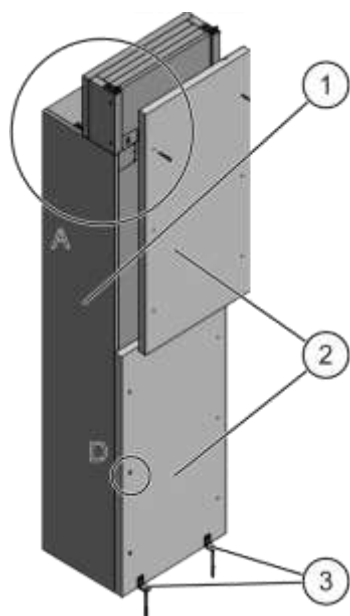


- | | |
|---|---|
| 1 | Fire safety housing |
| 2 | Additional rear panel (1 or 2 parts, depending on enclosure size) |
| 3 | Supplied securing brackets to prevent tilting |

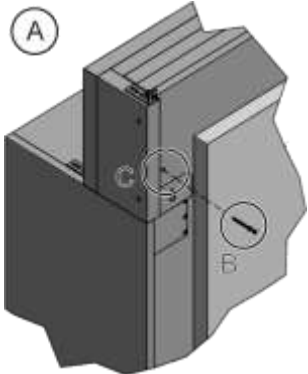
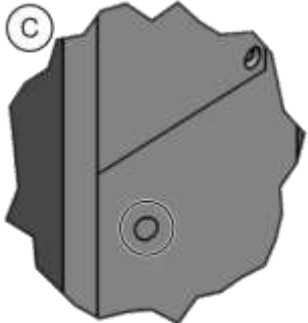
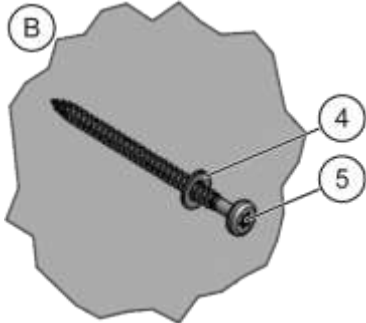
Step	Action	
1		<ul style="list-style-type: none"> - Position the additional rear panel (2), - mark the drill hole and - remove the rear panel again
2		<ul style="list-style-type: none"> - Drill a hole with Ø 3.5 mm and 15 mm depth in the marked location

3		<ul style="list-style-type: none"> - Reposition the rear panel and fix it in place using the flat headed screw 4.5 x 70 mm (5) and M5 washer (4)
4		<ul style="list-style-type: none"> - Screw the additional rear panel to the fire safety housing in position D using the supplied screws (6) <p>Note: max. tightening torque 2 Nm</p>
5	<p>Install the securing brackets at an external depth of (d) < 600 mm:</p> <ul style="list-style-type: none"> - Screw the supplied securing brackets to prevent tilting (3) to the additional rear panel (2) using flat headed screws 4.5 x 35 mm - Anchor to the floor using the dowels supplied 	

Enclosure with cooling cable duct

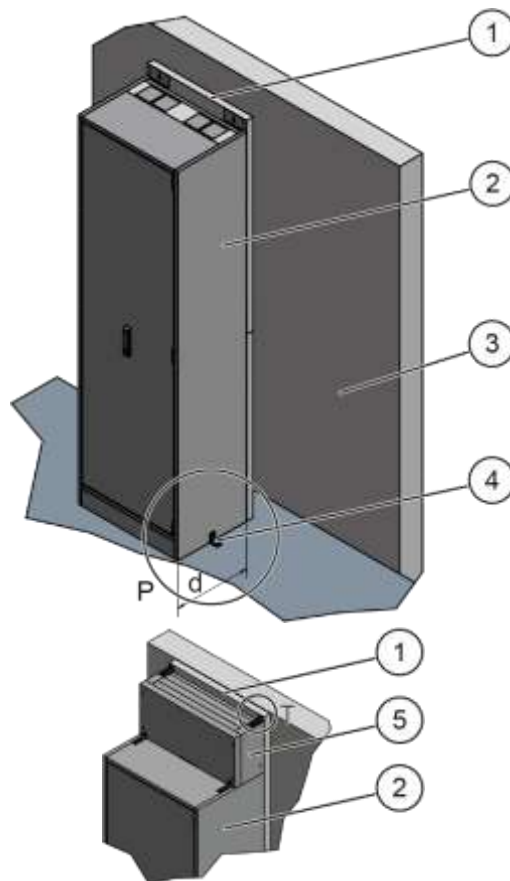


- | | |
|---|---|
| 1 | Fire safety housing |
| 2 | Additional rear panel (1 or 2 parts, depending on enclosure size) |
| 3 | Supplied securing brackets to prevent tilting |

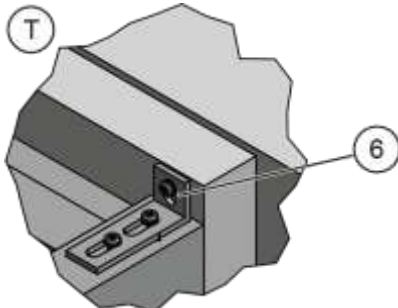
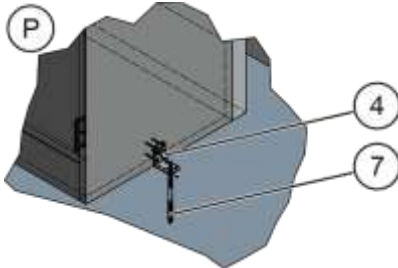
Step	Action
1	 <p>(A)</p> <ul style="list-style-type: none"> - Position the additional rear panel (2), - mark the drill hole and - remove the rear panel again
2	 <p>(C)</p> <ul style="list-style-type: none"> - Drill a hole with Ø 3.5 mm and 15 mm depth in the marked location
3	 <p>(B)</p> <ul style="list-style-type: none"> - Reposition the rear panel and fix it in place using the flat headed screw 4.5 x 70 mm (5) and M5 washer (4)

Step	Action
4	<div data-bbox="475 230 842 562"> <p>The diagram shows a cross-section of a fire safety housing. A dark grey panel, labeled 'D' in a circle, is being attached to the back of a lighter grey housing. A screw, labeled '6' in a circle, is shown passing through the panel into the housing. A line points from the label '6' to the screw head.</p> </div> <ul style="list-style-type: none"> - Screw the additional rear panel to the fire safety housing in position D using the supplied screws (6) <p>Note: max. tightening torque 2 Nm</p>
5	<p>Install the securing brackets at an external depth of (d) < 600 mm:</p> <ul style="list-style-type: none"> - Screw the supplied securing brackets to prevent tilting (3) to the additional rear panel (2) using flat headed screws 4.5 x 35 mm - Anchor to the floor using the dowels supplied

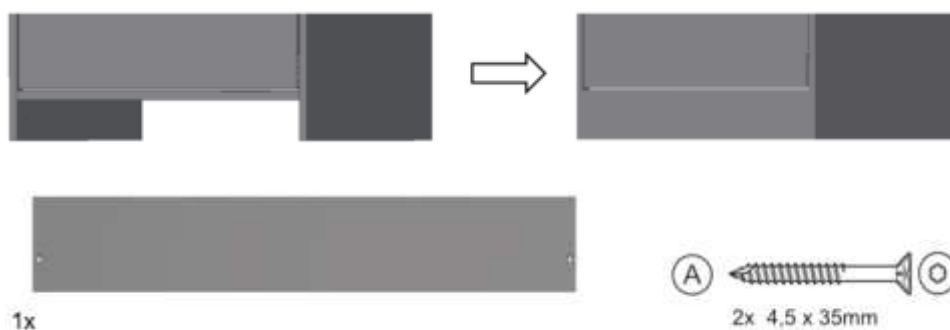
Installation on an existing wall (with/without cooling cable duct)



1	Additional rear panel
2	Fire safety housing
3	Existing wall
4	Securing bracket to prevent tilting
5	Cooling cable duct

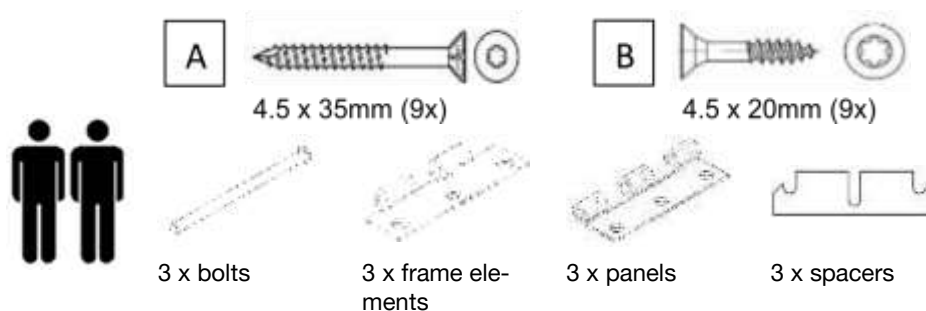
Step	Action
1	<ul style="list-style-type: none"> - Attach the additional rear panel (1) to the fire safety housing as described above. - Position and align the housing (2) against the existing wall (3)
2	 <ul style="list-style-type: none"> - Drill pilot holes through the securing bracket (5) - Fasten the securing bracket (6) to the additional rear panel using flat headed screws 4.5 x 35 mm and the supplied washer
3	 <p>Install the securing bracket at an external depth of $d < 600$ mm:</p> <ul style="list-style-type: none"> - Screw the securing brackets to prevent tilting (4) to the left/right side of the housing using flat headed screws 4.5 x 35 mm - Anchor to the floor using dowels (7)


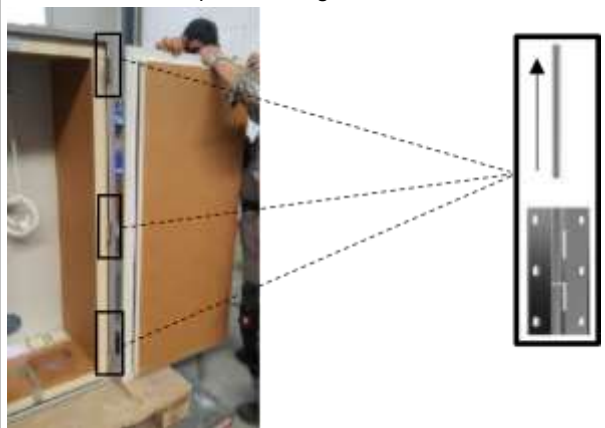
6.2 Floor-standing housing plinth cover

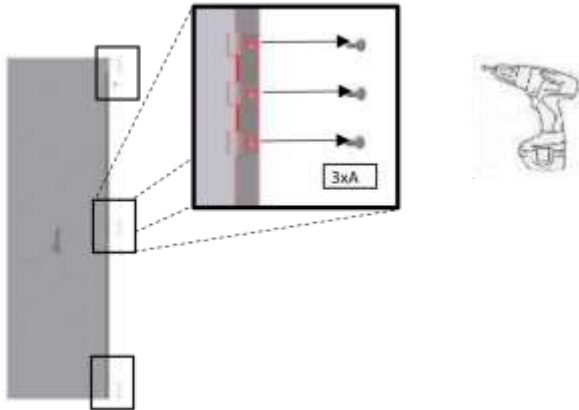
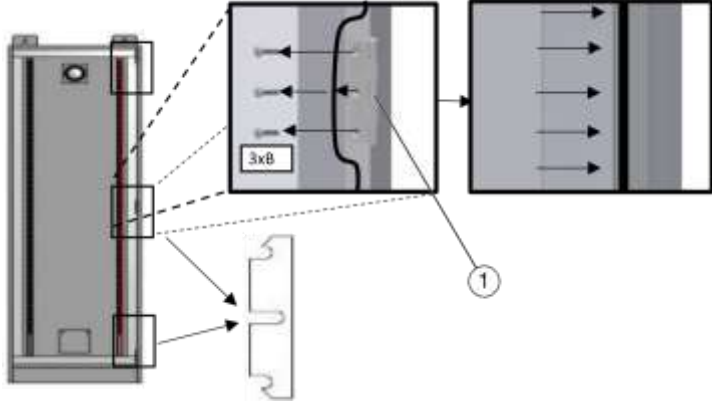
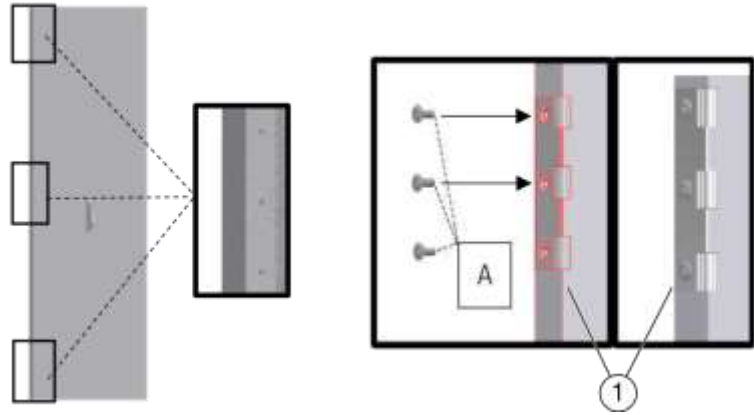


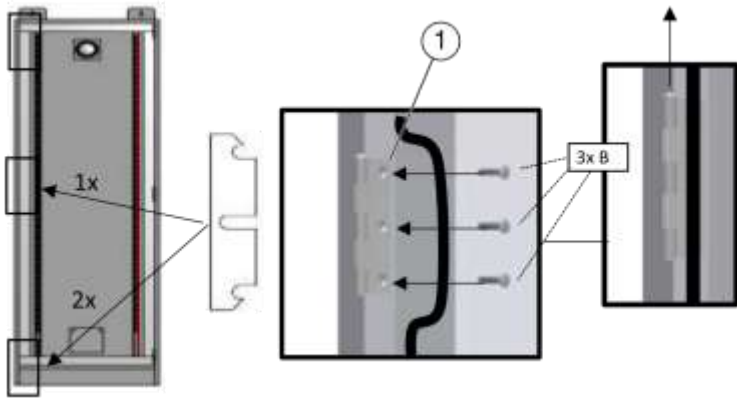
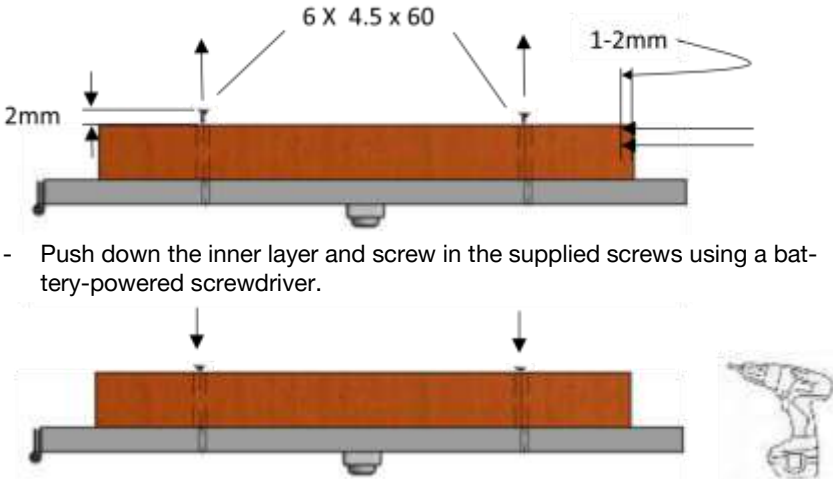
Step	Action
1	<p>Transporting and positioning</p>
2	<p>- Hold the plinth cover and remove from the rear panel by releasing the countersunk screws (A).</p>
3	<p>- Use the countersunk screws (A) from step 2 and the accessories kit to screw the plinth panel onto the front of the double panel.</p>

6.3 Changing the door stop side



Step	Action
1	<ul style="list-style-type: none"> - Identify a suitable storage location and prepare with blocks. e.g.
	
2	<p>Disassembling the door panel:</p> <ul style="list-style-type: none"> - Hold the door panel in place. - Pull the pins out of the hinges. - Lift out the door panel and place it on a suitable surface with the outer surface of the panel facing downwards. 

Step	Action
3.1	<ul style="list-style-type: none"> - Dismantle the hinges on the door panel. - Remove and store the screws and hinges <p>Door panel side (old)</p> 
3.2	<ul style="list-style-type: none"> - Remove the sealing strip from the hinge area. - Remove the hinges from the door panel and housing. - Remove and store screws, spacers and hinges. - Evenly press the sealing strip back on. <p>Hinge side (old)</p>  <p>1) Frame element</p>
4	<ul style="list-style-type: none"> - Screw the panel into the pilot holes provided on the door on the preferred side (opposite side), using the supplied screws. <p>Door side (new)</p>  <p>1) Door panel</p>

Step	Action
5	<ul style="list-style-type: none"> - Remove the sealing strip. - Screw the frame element to the desired hinge side with the spacer. - Press the sealing strip onto the installed frame element. <p>Hinge side (new)</p>  <p>1) Frame element</p>
6	<ul style="list-style-type: none"> - Remove the inner layer and evenly push it 2 mm in the direction of the hinges.  <ul style="list-style-type: none"> - Push down the inner layer and screw in the supplied screws using a battery-powered screwdriver.

ATTENTION

Incorrect tightening torque of screws.

This causes material damage.

- Avoid overtightening the screws during installation
- Observe the maximum tightening torque of 1 Nm for the screws.

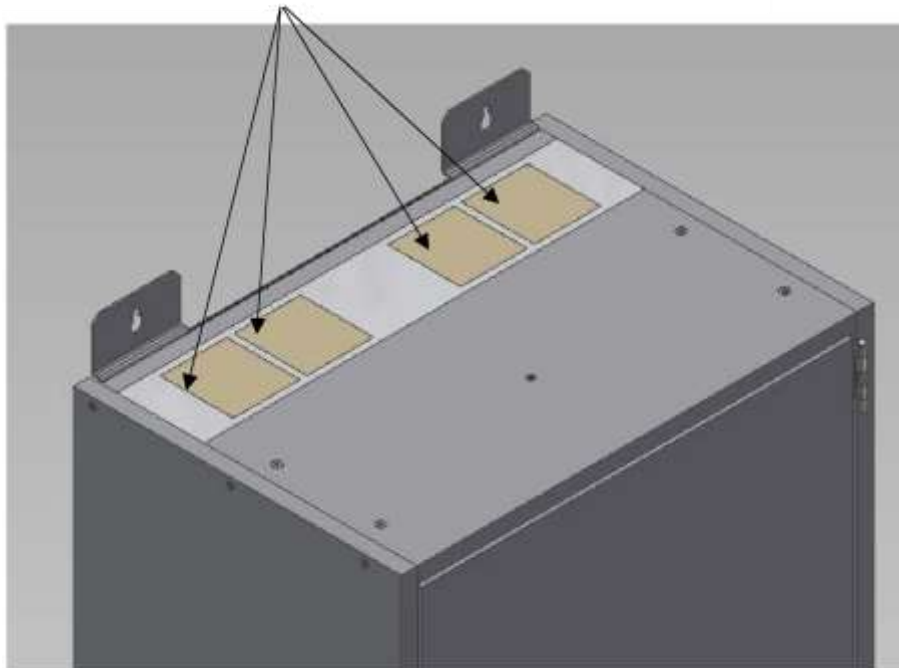
Step	Action
7	- Position the door in place, connect each panel and frame element with a bolt, and insert the bolt all the way through.



6.4 Cable entry

- Drill a hole the size of the cable diameter at the point of the cable entry.
- Pay attention to the interior insulation, mounting plates and fan!
- Insert the cable through the cable bulkhead of the housing.

Make the necessary holes for the cable entries.



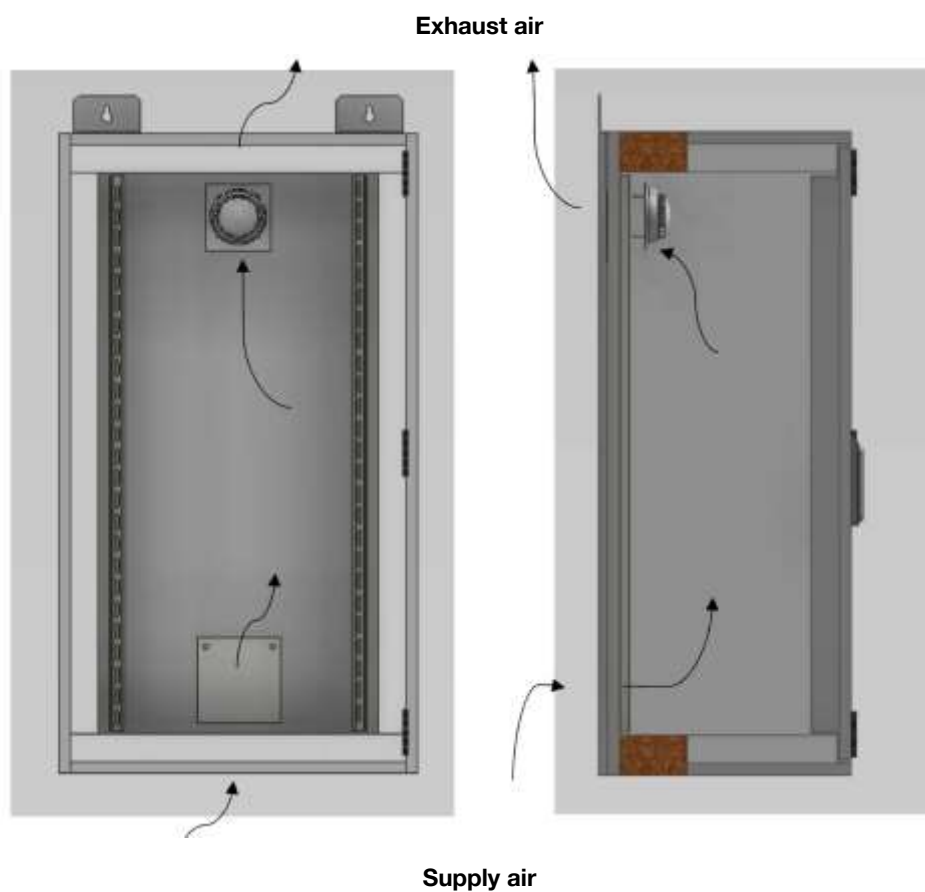
WARNING

Loss of protection type

No protection against contact with dangerous live parts.


- It is critical that the protection type is restored.
- Fill any gaps with mineral wool once the cable has been inserted.

6.5 Ventilation diagram



Schematic diagram of the ventilation

6.6 Connecting the fan unit

	<p>The work must only be performed by an electrically skilled person.</p>
---	---

The EBEL-VENT-L230R2 fan unit must be connected to 230 V/AC.

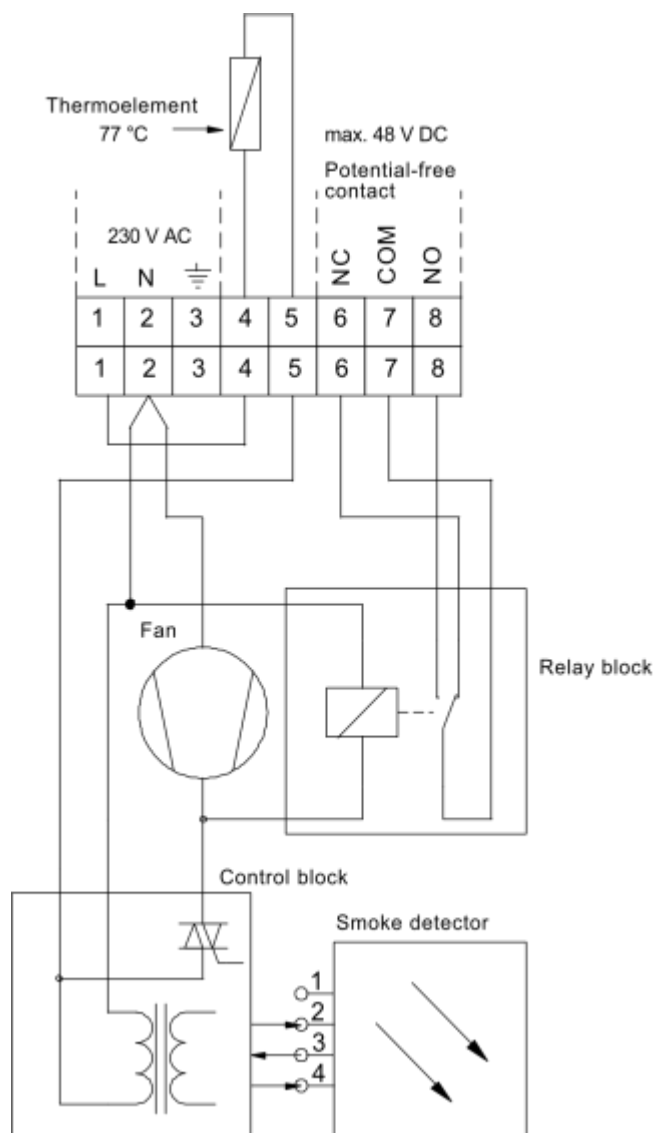
The monitoring contacts on the fan unit should be used to ensure an alarm (central fire alarm system/visual alarm).



EBEL-VENT-L230R2 fan unit

Wiring diagram

EBEL-VENT-L230R2



⚠ DANGER

Danger to persons due to electrical current.

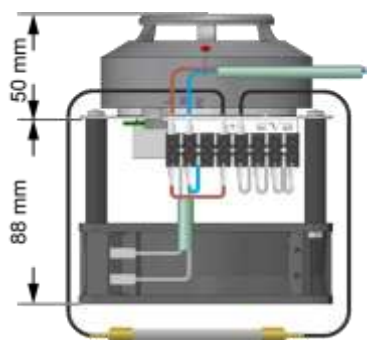
Dangerous voltage. May result in death, severe injury or extensive material damage.

- Disconnect all the poles of the device from the electricity supply before assembly/disassembly or the performance of any structural modifications. Observe VDE 0100 for 230 V mains connections.

NOTICE

- Check the smoke alarm to ensure it is functioning properly prior to commissioning.

Technical data



Supply

Nominal voltage	220 - 240 V AC
Operating voltage range	185 ~ 245 V AC
Power consumption	0.14 A
Performance	22 W

Fan

Speed	2850 rpm
Airflow	164 m³/h
Static pressure	8.64 mmH₂O
Noise level	45 dB(A)
Operating temperature	-10 - 70°C

Thermal fuse

Safety level	77°C
--------------	------


Output relay

Contact load	48 V DC max.
--------------	--------------

Smoke detector



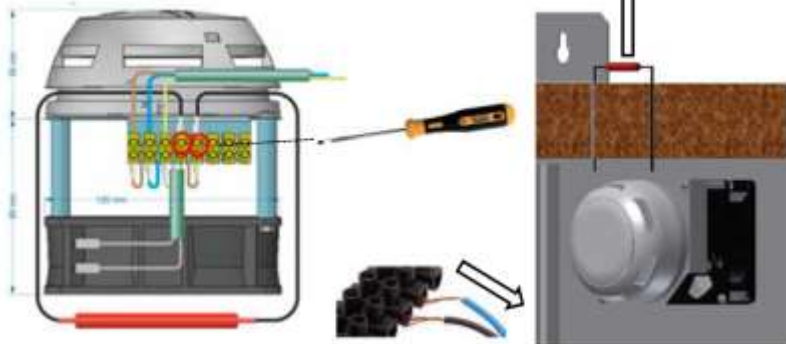
Type	SPD-3.1M
Manufacturer	Arton UA
Light signal	Red LED
Connection method	2-wire cable
Power supply	10 to 30 V DC
Monitoring current	95 µA
Current for alarm	6 to 30 mA
Average service life	10 years
Degree of protection	IP32
Operating temperature	-30 to +55°C
Compliance with standard	EN 54-7/2018-10

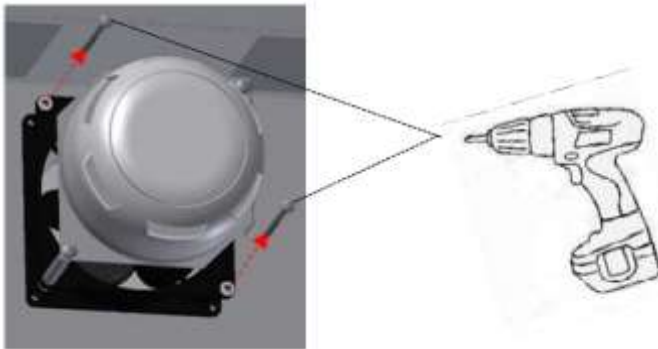
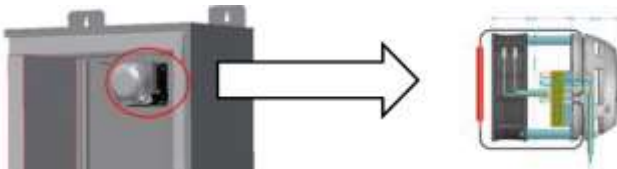
6.7 Dismantling the fan unit

	<p>The work must only be performed by an electrically skilled person.</p>
---	---



Position of the fan unit on the fire safety housing

Step	Action
1	<ul style="list-style-type: none"> - Disconnect all the poles of the fan unit from the electricity supply and verify compliance with VDE 0100 for the 230 V mains connection before assembly. - Verify the absence of voltage. <div data-bbox="504 1055 699 1223">  </div> <div data-bbox="699 1061 978 1211"> <p>WARNING! 230 V AC Dangerous voltage. May result in death, severe injury or extensive material damage.</p> </div> <div data-bbox="1034 958 1331 1317">  </div>
2	<p>Disconnect the temperature sensor and remove.</p> <ul style="list-style-type: none"> - Release the two contacts on the terminal strip using a flat-head screwdriver. Pull the temperature probe and cable out of the housing. - Seal the remaining holes with mineral wool. <div data-bbox="536 1491 1326 1834">  </div>

Step	Action
3	<p>Dismantle the fan unit:</p> <ul style="list-style-type: none">- Hold the fan unit with one hand and release the 2 fastening screws (4.5 x 55 mm) on the fan. 
4	<ul style="list-style-type: none">- Remove the EBEL-VENT-L230 fan unit and the supply cable from the housing. 

6.8 Fixing system

General information

univers UN*A vertical uprights need to be ordered, depending on the size of enclosure, for the fixation of univers N extension system kits.

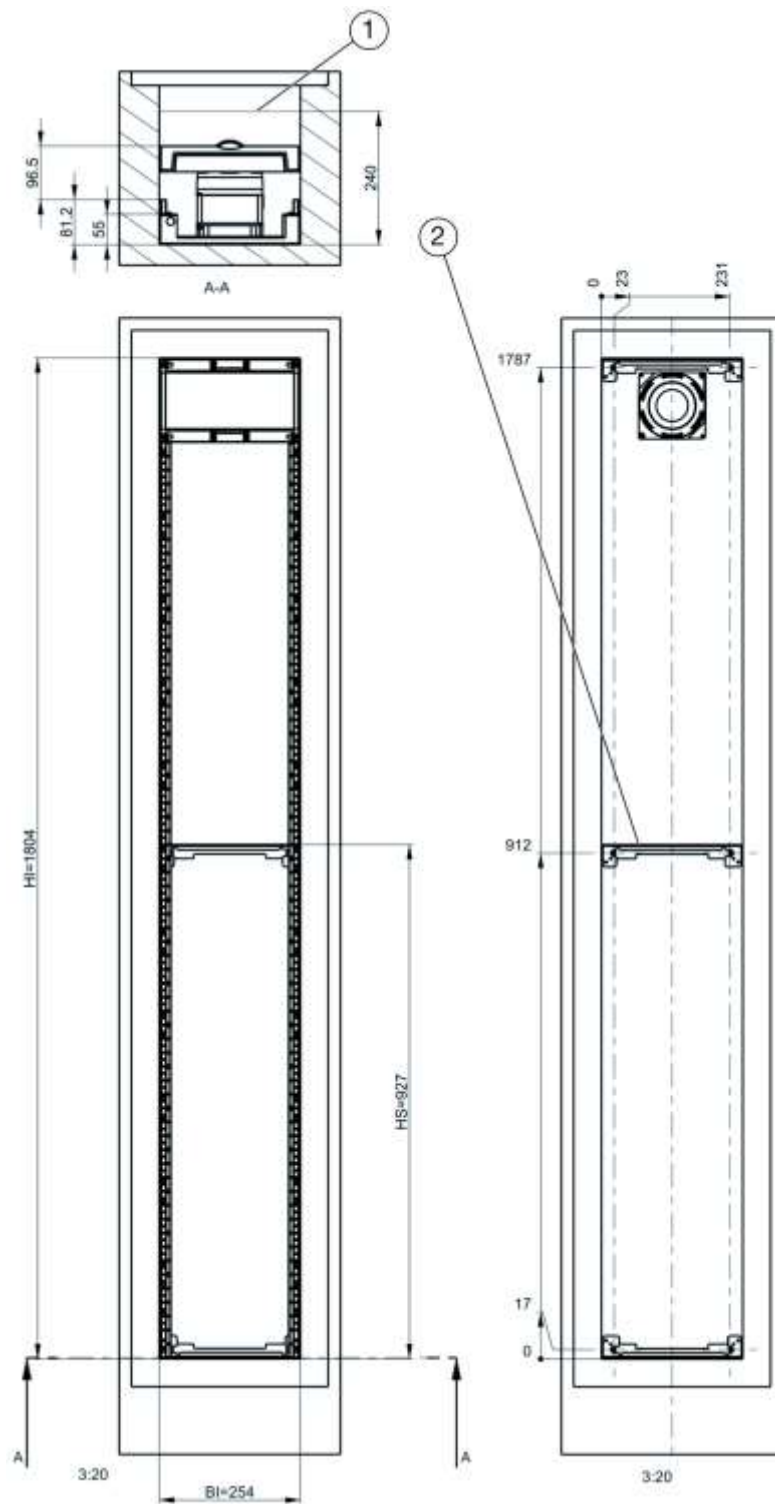
The uprights have to be mounted on the fixation brackets inside the fire protection enclosure.

- enclosure for on-wall installation (FBxxLE / FBxxSE)
- floor standing enclosure (FB2xLE / FB2xSE)

Scope of supply

Number varies depending on the type

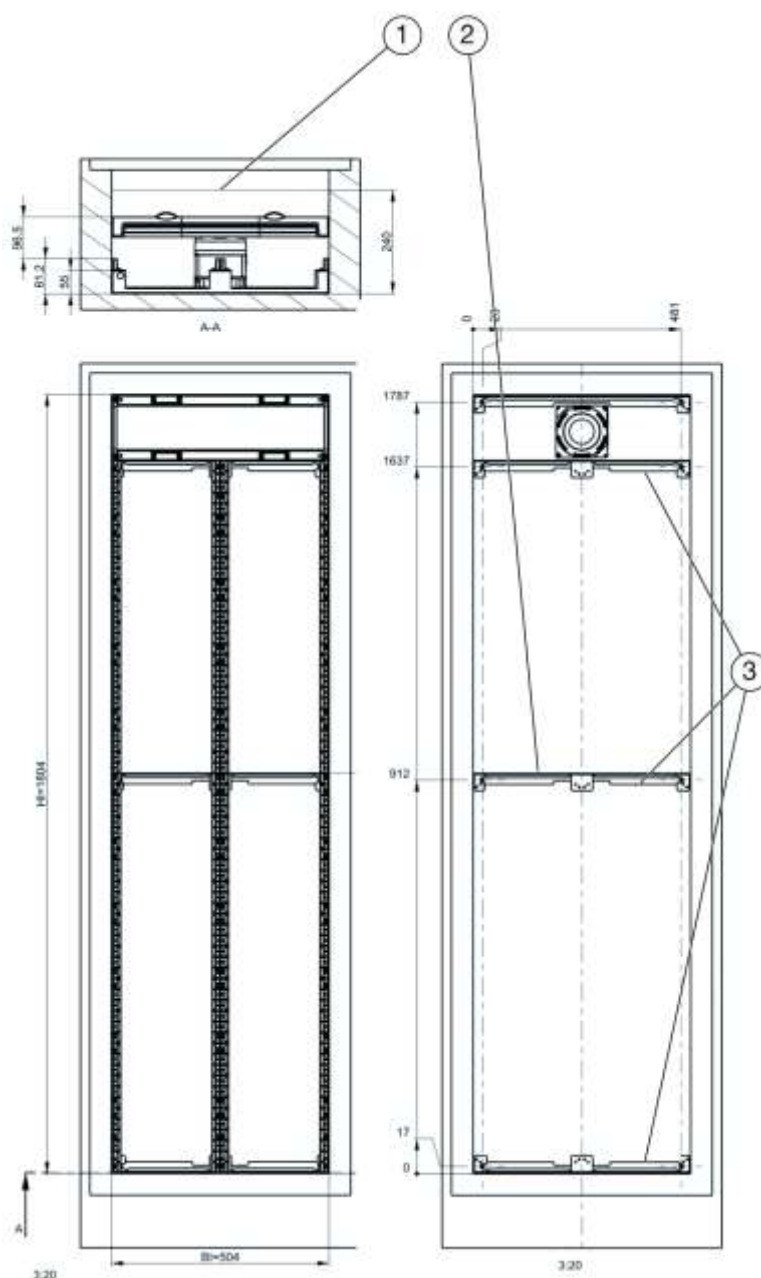
Assembly dimensions for 1-field enclosure



- 1) Inside edge of the door
- 2) middle rail only for free-standing enclosures

HI	BI	Qty.	HS
454	254	2	/
604			
754			
904			
1054			
1204			
1354			
1804	254	3	927

Assembly dimensions for 2-field enclosure



HI	BI	Qty.	HS
454	504	2	/
		1	
604		2	
		1	
754		2	
		1	
904		2	
		1	
1054		2	
		1	
1204		2	
		1	
1354		2	
		1	
1804		3	
		1	324

- 1) Inside edge of the door
- 2) middle rail only for free-standing enclosures
- 3) 1FB00800

7 Functional test, inspection, maintenance and care

- The fire safety housings must be serviced at least twice a year and checked to ensure they are functioning properly. We recommend that you carry out a functional test (visual inspection) once a month. Only a qualified technician can carry out the safety inspection with the necessary care as this requires adequate experience and a comprehensive level of knowledge.
- Check the silicone seam twice a year for cracking.
- Common and mild household cleaning agents can be used to clean the outside of the fire safety housing.
- The doors' closing mechanism must be oiled twice a year.
- The fire safety housing must be protected against water, moisture penetration and splashing water.
- If any safety relevant damage is identified, the fire safety housing must be serviced with original parts before continued use.
- Check the fan unit and smoke detector twice a year.
- Check the air filter regularly (depending on ambient conditions) for dirt and clean. Replace if necessary.

Air filter as replacement item

Panel width	Item no.
1	FZ399N
2	FZ400N
3	FZ401N
4	FZ402N

8 Disposal information



Environmental protection:

Electrical waste products should not be disposed of with household waste. Please recycle electrical components in a designated location. You can get advice from your local authority on professional recycling.

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