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**CONNECT AND PROTECT**

**Inpac**

  
**nvent**

**SCHROFF**

# 19" chassis – Inpac

## OVERVIEW

### MAIN KATALOG

- Cabinets . . . . . 1
- Wall mounted cases . . . . . 2
- Accessories for cabinets and wall mounted cases . . 3
- Climate control . . 4
- Electronics cases . . . . . 5
- Subracks/ 19" chassis . . . . . 6
- Front panels, plug-in units . . . . . 7
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- Backplanes . . . . . 10
- Connectors, front panel component system . . . . . 11
- Appendix . . . . . 12



02192001



Robust 19" chassis, also for board assembly

02192005



Assembly with boards and hinged front panel

02196001

## STANDARDS

- External dimensions in accordance with:  
IEC 60297-3-101
- Ingress protection IP 20 to IEC 60529
- GND/earthing connectors to:  
DIN EN 50178/VDE 0160  
DIN EN 60950/VDE 0805  
DIN EN 61010-1/VDE 0411 part 1  
DIN EN 61010-1A2/VDE 0411 part 1/A1

# 19" chassis – Inpac

## OVERVIEW

Overview ..... 6.128

### 19" CHASSIS WITH HIGH MECHANICAL STABILITY

- Also usable as desk-top case
- Robust cases from aluminium die-cast frames to front and rear
- Flexible assembly for standardised board formats or individually, e.g. for mounting plates
- Cost benefit with mounting service and custom processing in ServicePLUS



02192002

#### 19" CHASSIS/DESK-TOP ENCLOSURE

- 2 U, 3 U, 4 U and 6 U heights

inpac  
19" chassis ..... 6.130

Accessories  
Full-width front panels ..... 6.131  
Full-width rear panels ..... 6.131  
Support rails ..... 6.132  
Horizontal rails ... 6.132  
Front handles ..... 6.133  
GND/ earthing kit ... 6.133  
Guide rails ..... 6.134  
Dimensions ..... 6.136



02192003

#### INPAC BUILT INTO 19" CABINET

#### SERVICEPLUS

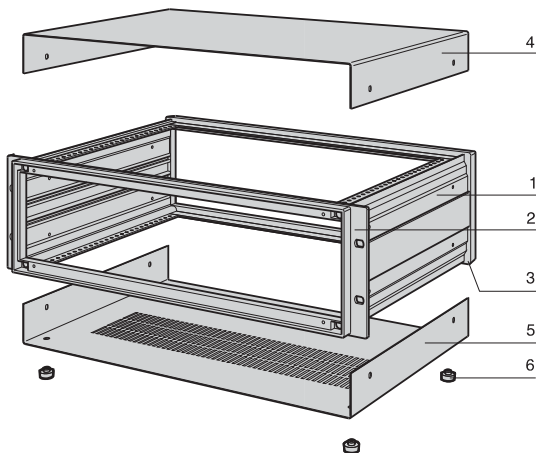
- e.g. individual configuration and assembly from 1 piece
- e.g. printing
- e.g. cut-outs in front or rear panels or cover plates
- e.g. modification (special colours)
- e.g. custom solutions (special depths, electromagnetically shielded applications)

# 19" chassis – Inpac

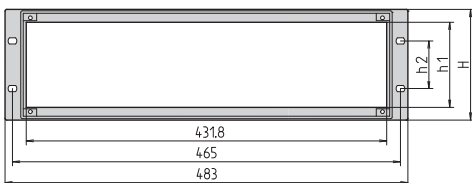
## 19" CHASSIS



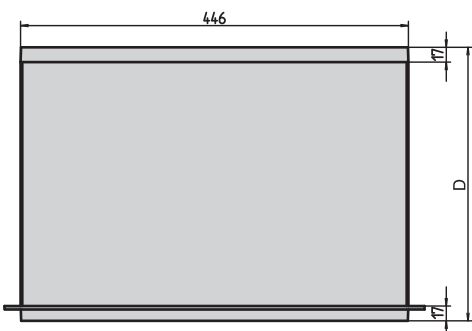
02192006



ipa30632



h1 = useable height



IPA30704



IPA30706

- For assembly with 19" components or individually with mounting plates
- Three rows ventilation slots in base for air inlet

### DELIVERY INCLUDES (Kit)

Item	Qty	Description
1	2	Side panel, Al extrusion, RAL 7030, at 6 U: 2 Al corner profiles, 1 divider plate (steel plate)
2	1	Front frame, Al die-cast, RAL 7030, rear side with counterbores for drill holes to mount handles and front panels
3	1	Rear frame, Al die-cast, RAL 7030
4	1	Cover plate, St, 1 mm, RAL 7035, plastic-coated, with GND/earthing connection
5	1	Base plate, St, 1 mm, RAL 7035, plastic-coated, with GND/earthing connection
6	4	Case foot with anti-slip protection, PC, UL 94 V-0
7	1	Assembly kit

### ORDER INFORMATION

Height H U	Height H mm	h mm	h1 mm	h2 mm	Depth D mm	Part no.
2	88.0	86.0	57.5	76.2	254.5	<b>10828-071</b>
2	88.0	86.0	57.5	76.2	314.5	<b>10828-072</b>
2	88.0	86.0	57.5	76.2	374.5	<b>10828-073</b>
3	132.5	130.5	102.0	57.1	254.5	<b>10828-051</b>
3	132.5	130.5	102.0	57.1	314.5	<b>10828-052</b>
3	132.5	130.5	102.0	57.1	374.5	<b>10828-053</b>
3	132.5	130.5	102.0	57.1	434.5	<b>10828-054</b>
4	177.0	174.5	146.5	101.6	254.5	<b>10828-056</b>
4	177.0	174.5	146.5	101.6	314.5	<b>10828-057</b>
4	177.0	174.5	146.5	101.6	374.5	<b>10828-058</b>
4	177.0	174.5	146.5	101.6	434.5	<b>10828-059</b>
6	265.9	263.5	235.4	190.5	374.5	<b>10828-068</b>
6	265.9	263.5	235.4	190.5	434.5	<b>10828-069</b>

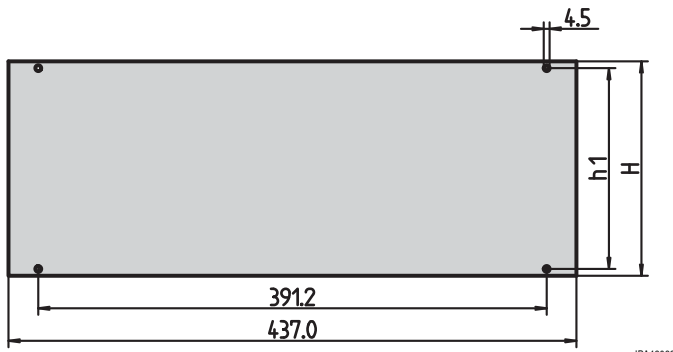
IPA30635

### Note

- Max. installation space when fitting 19" components is 75 HP
- Scope of delivery includes screws to fix rear and front panels

# 19" chassis – Inpac

## FRONT PANEL



### DELIVERY COMPRISES

Item	Qty	Description
1	1	Front panel, Al, 2.5 mm, anodised, cut edges untreated

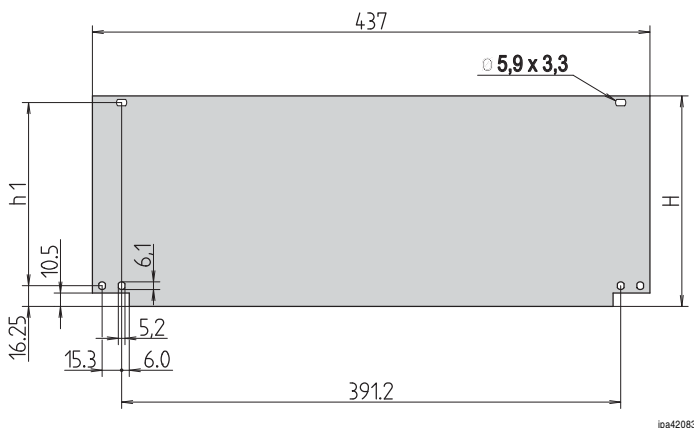
### ORDER INFORMATION

Height U	Height H mm	h1 mm	Part no.
2	76.0	65.6	<b>30828-055</b>
3	120.5	110.0	<b>30828-058</b>
4	165.0	154.5	<b>30828-061</b>
6	253.8	243.4	<b>30828-067</b>

### Note

- The assembly kit for the front panel is included with the 19" chassis

## FRONT PANEL, BOTTOM-HINGED



### DELIVERY COMPRISES

Item	Qty	Description
1	1	Front panel, hinged, Al, 2.5 mm, anodised, cut edges untreated

### ORDER INFORMATION

Height U	Height H mm	h1 mm	Part no.
2	76.0	54.5	<b>30828-085</b>
3	120.5	99.0	<b>30828-088</b>
4	165.0	143.5	<b>30828-091</b>
6	253.8	232.3	<b>30828-097</b>

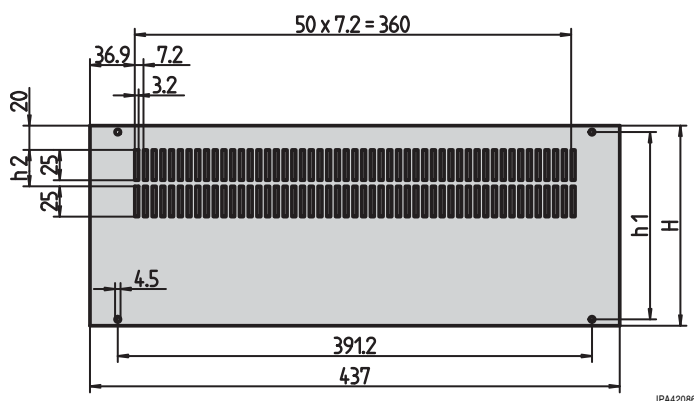
Hinge for front panel PPE, UL 94 V-0,  
PU 1 kit (includes fixing material kit and 2 collar screws)

**20828-028**

### Note

- Please order hinge for front panel separately

## REAR PANEL WITH VENTILATION OPENINGS



### DELIVERY COMPRISES (kit)

Item	Qty	Description
1	1	Rear panel, incl. assembly kit, Al, 2.5 mm, anodised, cut edges untreated

### ORDER INFORMATION

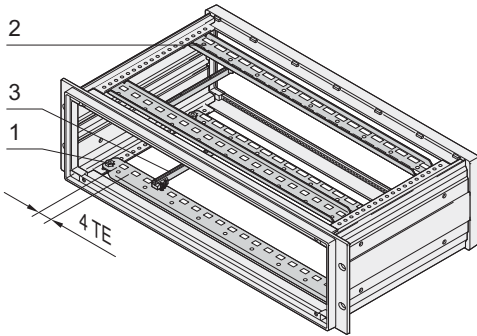
Height U	Height H mm	h1 mm	h2 mm	Part no.
2	76.0	65.6	–	<b>30828-070</b>
3	120.5	110.0	–	<b>30828-073</b>
4	165.0	154.5	–	<b>30828-076</b>
6	253.8	243.4	30	<b>30828-082</b>

### Note

- The scope of delivery of the 19" chassis includes an assembly kit for the front panel

# 19" chassis – Inpac

## SUPPORT RAIL FOR GUIDE RAILS



- 4 support rails to fix PCBs with guide rails
- Support rail can also be used to fix a custom mounting plate

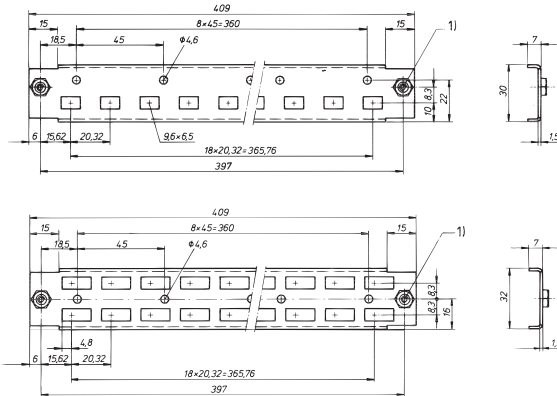
### ORDER INFORMATION

Item	Description	Part no.
1	front support rail, St, 1.5 mm, blue-passivated, 1 piece	<b>30828-165</b>
2	rear support rail, St, 1.5 mm, blue-passivated, 1 piece	<b>30828-174</b>

### Accessories

Guide rail 160 mm (Item 3), PBT, UL 94 V-0, with integrated fixture for connector to EN 60603 (DIN 41612), PU 1 pair	<b>60817-078</b>
Guide rail 220 mm (Item 3), PBT, UL 94 V-0, with integrated fixture for connector to EN 60603 (DIN 41612), PU 1 pair	<b>60817-079</b>
Screw for mounting of support rails, M4 x 8, flathead bolts with posidrive, PU 100 pieces	<b>21100-677</b>

- Guide rails see page 6.134

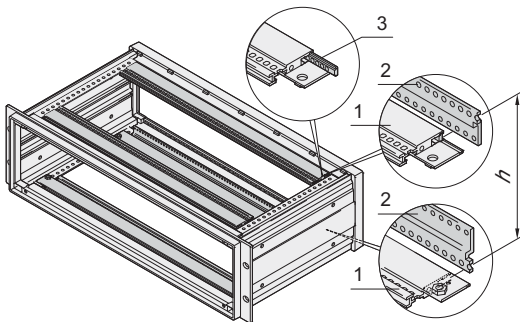


IPA30639

a3-308xx

Dimension drawing top: Front support rail,  
dimension drawing bottom: rear support rail;  
1) bush M4, pressed-in

## HORIZONTAL RAIL FOR GUIDE RAILS, BACKPLANE AND CONNECTOR MOUNTING



- 4 horizontal rails to fix guide rails (for PCBs) and for backplane or connector mounting
- Useable width 75 HP

### ORDER INFORMATION

Item	Description	Qty/PU	Part no.
1	Horizontal rail 75 HP, Al extrusion, anodised	1	<b>30828-128</b>

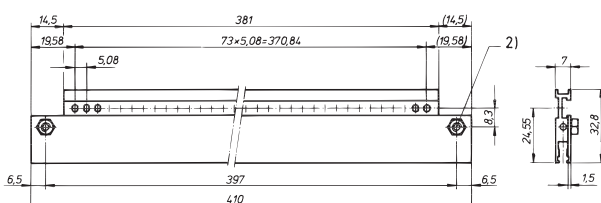
### Accessories

Z-rail (item 2), Al extrusion, anodised, 1 piece	<b>30814-513</b>
Threaded insert (item 3), St, zinc-plated (blue), 1 piece	<b>30819-604</b>
Screw to fix horizontal rails, M4 x 8, Pozidrive flathead screw, 100 pieces	<b>21100-677</b>
Cheesehead screw with slot M2.5 x 6, DIN 84, PU 100 pieces M2.5 x 6, DIN 84, 100 pieces	<b>21100-146</b>

Item 1: horizontal rail, item 2: Z-rail, item 3: threaded insert

IPA30640

h	Bolt-on dimension of backplane
U	mm
2	75.40
3	119.80
4	164.30
6	252.90



A4-587

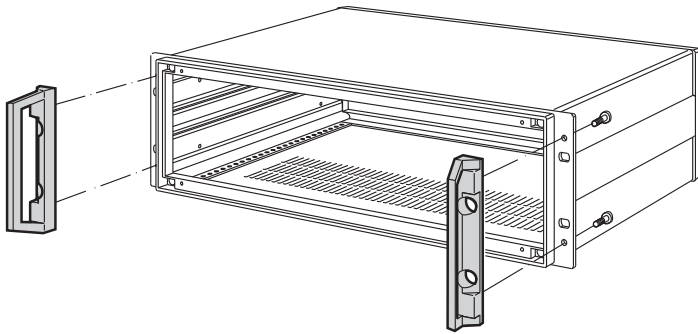
2) bush M4, pressed-in

### Note

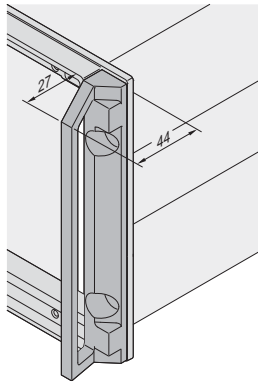
- Threaded inserts cannot be used at front
- For backplane mounting, threaded inserts are required in the rear horizontal rails
- For connector mounting, threaded inserts and Z-rails are required in the rear horizontal rails
- Guide rails see page 6.134

# 19" chassis – Inpac

## FRONT HANDLES



IPA30636



02108050

- Load-carrying capacity 35 kg per pair

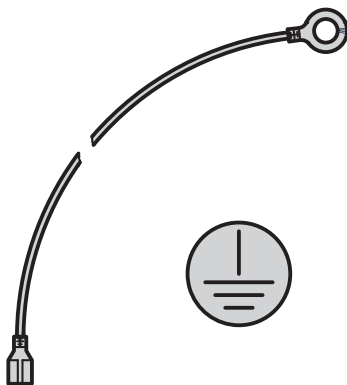
### DELIVERY COMPRISES (kit)

Item	Qty	Description
1	2	Front handle, Al die-cast, powder-coated, RAL 7030, incl. assembly kit

### ORDER INFORMATION

Height	Part no.
U	
3	<b>20828-127</b>
4	<b>20828-128</b>
6	<b>20828-129</b>

## GND/EARTHING KIT



aza43284

- The GND/earthing kit allows VDE-compliant earthing of the case to:
  - DIN EN 50178/VDE 0160
  - DIN EN 60950/VDE 0805
  - DIN EN 61010-1/VDE 0411 Part 1
  - DIN EN 61010-1A2/VDE 0411 Part 1/A
- VDE inspection has been carried out

### ORDER INFORMATION

Description	Qty/PU	Part no.
GND/earthing kit, Cu wire, 1.5 mm <sup>2</sup> , PVC sleeve, green/yellow, links side panels, top cover, base plate and rear panel	1	<b>21100-814</b>



# 19" chassis – Inpac

## GUIDE RAILS



04292012

### ORDER INFORMATION

Board lengths	Groove width	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.	Part no.
mm	mm	1 piece (SPQ 50) <sup>1)</sup>	1 piece (SPQ 50) <sup>1)</sup>	1 piece (SPQ 50) <sup>1)</sup>	1 piece (SPQ 50) <sup>1)</sup>	1 piece (SPQ 50) <sup>1)</sup>	Qty/PU 1 piece	Qty/PU 1 piece
100	2	–	<b>60817-015</b>	–	–	–	–	–
160	2	<b>60817-064</b>	<b>60817-103</b>	<b>60817-001</b>	<b>60817-053</b>	<b>60817-102</b>	<b>20817-368</b>	–
160	2.5	–	<b>60817-076</b>	–	–	–	–	–
180	2	–	–	<b>60817-026</b>	–	–	–	–
220	2	–	<b>60817-149</b>	<b>60817-016</b>	<b>60817-083</b>	<b>60817-085</b>	<b>20817-369</b>	–
220	2.5	–	–	–	–	<b>60817-098</b>	–	–
280	2	–	–	–	–	<b>60817-080</b>	–	–
340	2	–	–	–	–	–	–	<b>20825-120</b>
400	2	–	–	–	–	–	–	<b>20825-121</b>
		1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ); please order at least the SPQ quantity or a multiple						

#### Accessories

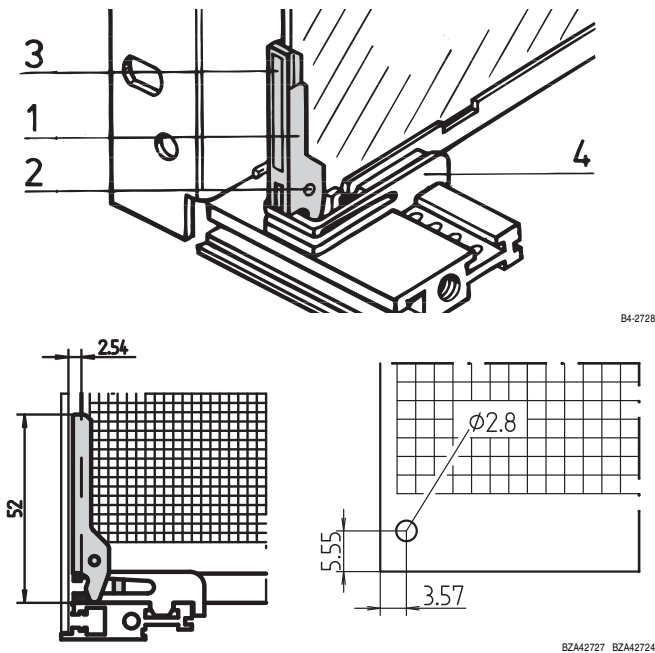
Spring clip PPE, UL 94 V-0, red, PU 10 pieces	<b>21100-553</b>	<b>21100-553</b>	–	–	–
Spring clip PPE, UL 94 V-0, red, PU 100 pieces	<b>21100-554</b>	<b>21100-554</b>	–	–	–
Assembly parts for 50 guide rails PU (100 screws, 100 nuts)	–	<b>21101-990</b>	–	–	<b>21101-990</b>

#### Note

- For a detailed description of the guide rails see our website; please enter part number in "oneclick" search

# 19" chassis – Inpac

## PCB HANDLE A



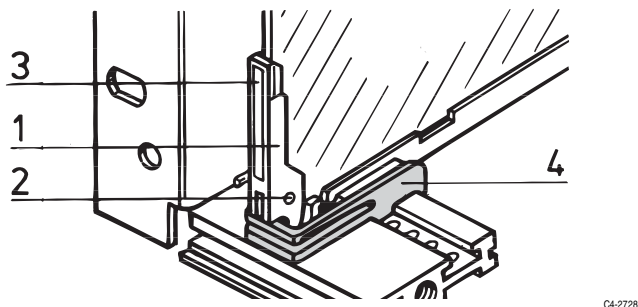
- To be mounted behind front panel, for PCB thickness 1.6 mm
- Insertion and extraction function
- Can be labelled

### ORDER INFORMATION

Item	Description	Material	Colour	Qty/PU	Part no.
1	PCB handle A	PBT, UL 94 V-0	red	1 piece (SPQ 10)	<b>60817-096</b>
2	Pivot pin DIN 7	Stainless steel	–	100	<b>21100-671</b>
3	Identification strip	Polyester film, self-adhesive	matt-silver	100	<b>21100-672</b>

SPQ (Standard Pack Quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity: Please order at least 10 pieces PCB handles or a multiple

## PCB RETAINER A



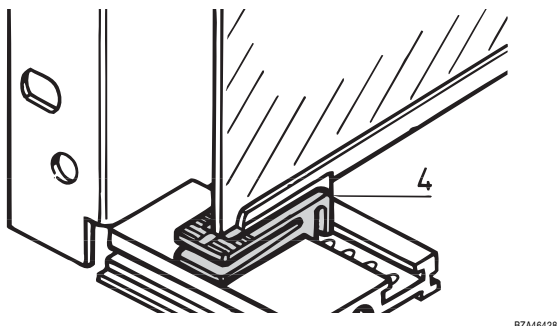
- Can also be used without PCB handle
- Application on top and bottom horizontal rail

### ORDER INFORMATION

Item	Description	Material	Colour	Qty	Part no.
4	PCB retainer A for top and bottom	PPE, UL 94 V-0	red	1 piece (SPQ 10)	<b>60817-097</b>

SPQ (Standard Pack Quantity): Part number includes 1 piece, but delivery is exclusively made in Standard Pack Quantity: Please order at least 10 pieces PCB retainers or a multiple

## PCB RETAINER B



- Can be used on upper and lower horizontal rail, for PCB thickness 1.6 mm
- Can also be used without PCB handle
- Can also be used with guide blocks

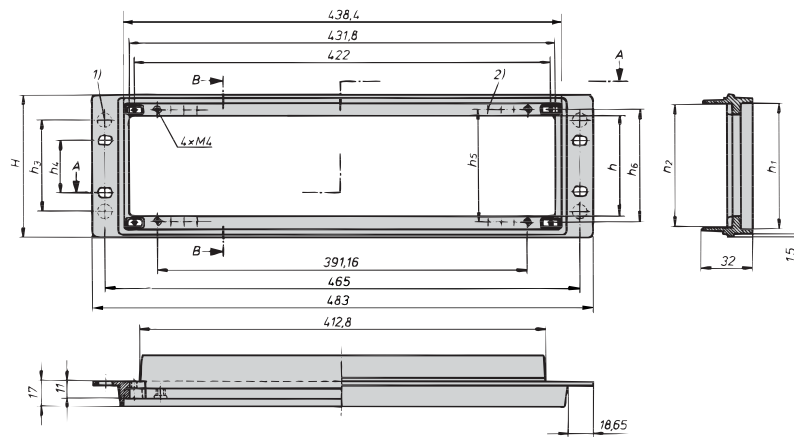
### ORDER INFORMATION

Item	Description	Material	Colour	Qty	Part no.
4	PCB retainer, bottom	PPE, UL 94 V-0	red	1 piece (SPQ 10)	<b>60817-054</b>
4a	PCB securing top	PPE, UL 94 V-0	black	1 piece (SPQ 10)	<b>60817-071</b>

SPQ (Standard Pack Quantity): Part number includes 1 piece, but delivery is exclusively made in Standard Pack Quantity: Please order at least 10 pieces PCB retainers or a multiple

# 19" chassis – Inpac

## 19" FRONT FRAME



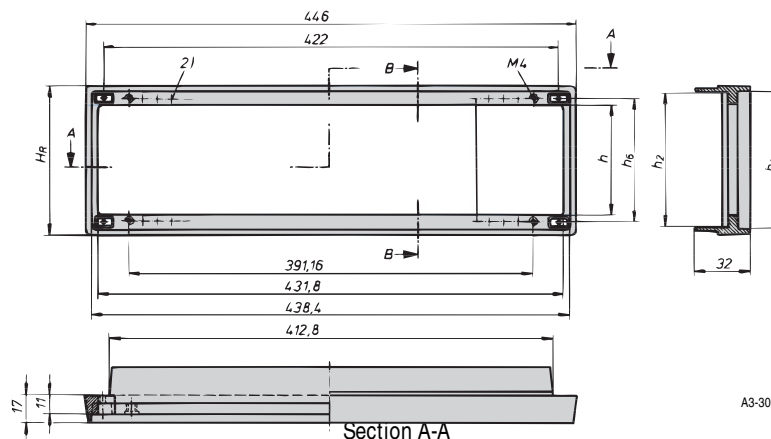
Section A-A

A3-306

There are counterbores at the rear side of the front frame which can be drilled if required:

- 1) For handle mounting
- 2) For mounting of partial-width front panel (grid 5.08 mm)

## 19" REAR FRAME



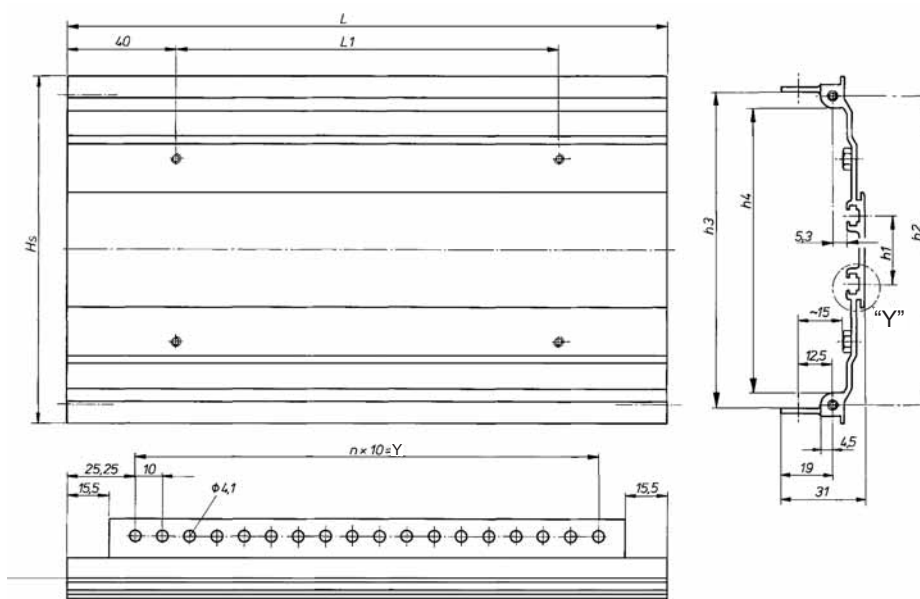
Section A-A

A3-305

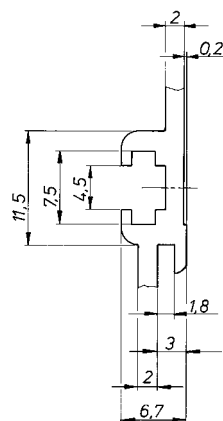
### Dimensions table

Height in U	H	H <sub>R</sub>	h	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	h <sub>5</sub>	h <sub>6</sub>	h <sub>7</sub>
2	88,0	86,0	57,5	77,3	69,8	25,0	76.2	65,5	68,0	68,4
3	132.5	130.5	102.5	121.8	114.3	90,0	57.1	110.0	112,5	112.8
4	177.0	175.0	146.5	166.3	158.8	134.5	101.6	154.5	157,0	157.3
6	265.9	263.9	235.4	255.2	247.7	233.4	190.4	243.4	245,9	245.9

# 19" chassis – Inpac

**SIDE PANEL**


A3-304a

**Detail "Y"**


A3-304b

**Dimensions table**

Height in U	H	$h_1$	$h_2$	$h_3$	$h_4$	L	$L_1$	(n)	Y	T
2	82,6	–	68,0	71,4	59,0	220,5	140,5	17,0	170	254,5
2	82,6	–	68,0	71,4	59,0	280,5	200,5	23,0	230	314,5
2	82,6	–	68,0	71,4	59,0	340,5	260,5	29,0	290	374,5
3	127,0	24,0	112,5	115,8	103,5	220,5	140,5	17,0	170	254,5
3	127,0	24,0	112,5	115,8	103,5	280,5	200,5	23,0	230	314,5
3	127,0	24,0	112,5	115,8	103,5	340,5	260,5	29,0	290	374,5
4	171,0	68,5	157,0	160,3	148,0	220,5	140,5	17,0	170	254,5
4	171,0	68,5	157,0	160,3	148,0	280,5	200,5	23,0	230	314,5
4	171,0	68,5	157,0	160,3	148,0	340,5	260,5	29,0	290	374,5
6	260,4	157,1	245,9	248,9	236,5	220,5	140,5	17,0	170	254,5
6	260,4	157,1	245,9	248,9	236,5	280,5	200,5	23,0	230	314,5
6	260,4	157,1	245,9	248,9	236,5	340,5	260,5	29,0	290	374,5

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