PENTAIR

Schroff

# INPAC



Distributed by calgreg electronics 401-732-8100

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# 19" chassis – *inpac*

02192001

02192005

Robust 19" chassis, also for board assembly

02196001

Assembly with boards and hinged front panel

## 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



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# 19" chassis – *inpac*

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

02192003

### inpac built into 19"cabinet

30407004

### ServicePLUS from page 6.118

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)

www.schroff.biz/ServicePLUS

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

ServicePLUS .. 6.118

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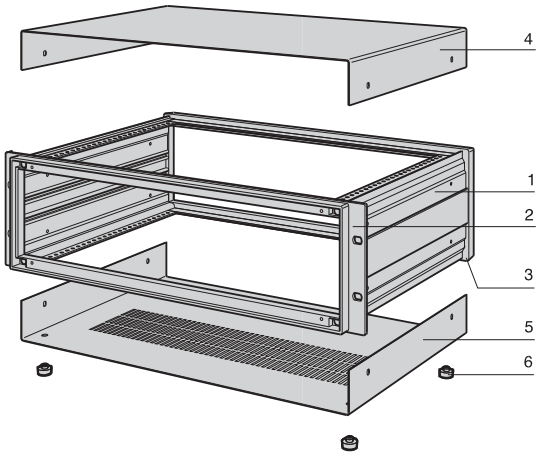
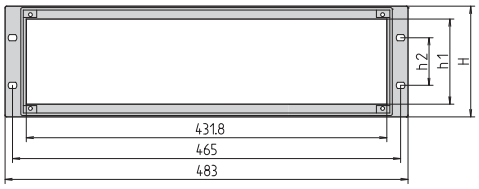
## 19" chassis

02192006

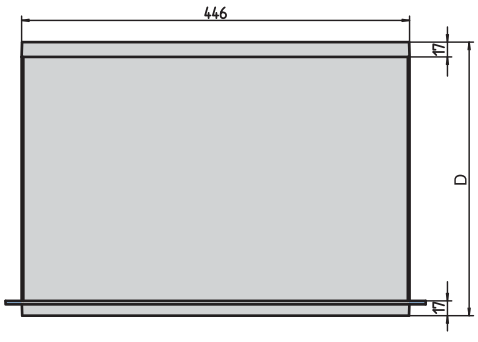



ipa30632




IPA30635

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 comprises (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 | **10828-071** |
| 2 | 88.0 | 86.0 | 57.5 | 76.2 | 314.5 | **10828-072** |
| 2 | 88.0 | 86.0 | 57.5 | 76.2 | 374.5 | **10828-073** |
| 3 | 132.5 | 130.5 | 102.0 | 57.1 | 254.5 | **10828-051** |
| 3 | 132.5 | 130.5 | 102.0 | 57.1 | 314.5 | **10828-052** |
| 3 | 132.5 | 130.5 | 102.0 | 57.1 | 374.5 | **10828-053** |
| 3 | 132.5 | 130.5 | 102.0 | 57.1 | 434.5 | **10828-054** |
| 4 | 177.0 | 174.5 | 146.5 | 101.6 | 254.5 | **10828-056** |
| 4 | 177.0 | 174.5 | 146.5 | 101.6 | 314.5 | **10828-057** |
| 4 | 177.0 | 174.5 | 146.5 | 101.6 | 374.5 | **10828-058** |
| 4 | 177.0 | 174.5 | 146.5 | 101.6 | 434.5 | **10828-059** |
| 6 | 265.9 | 263.5 | 235.4 | 190.5 | 374.5 | **10828-068** |
| 6 | 265.9 | 263.5 | 235.4 | 190.5 | 434.5 | **10828-069** |

### Note

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

ServicePLUS see page 6.118

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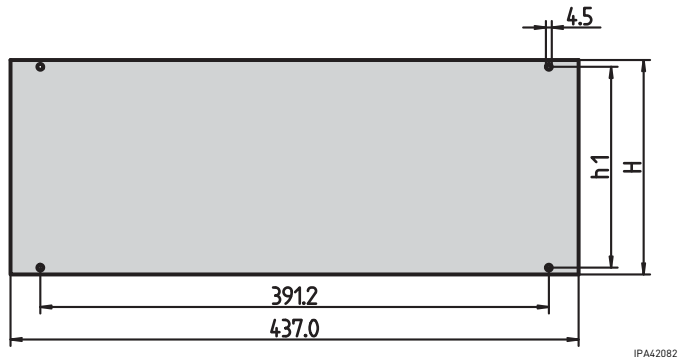
# 19" chassis – inpac

## Front panel




### Delivery comprises

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

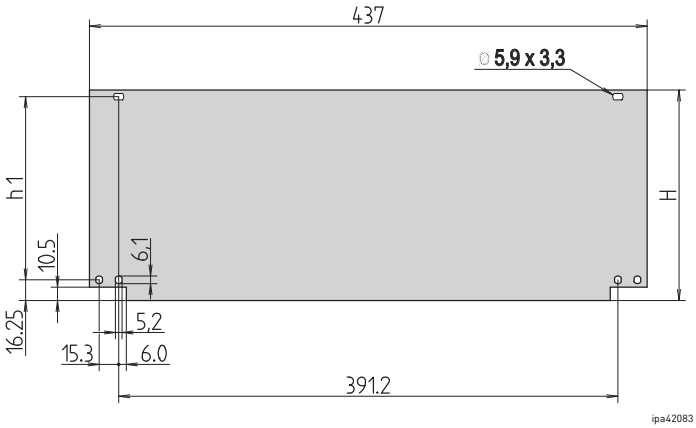
### Order Information

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

### 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 |

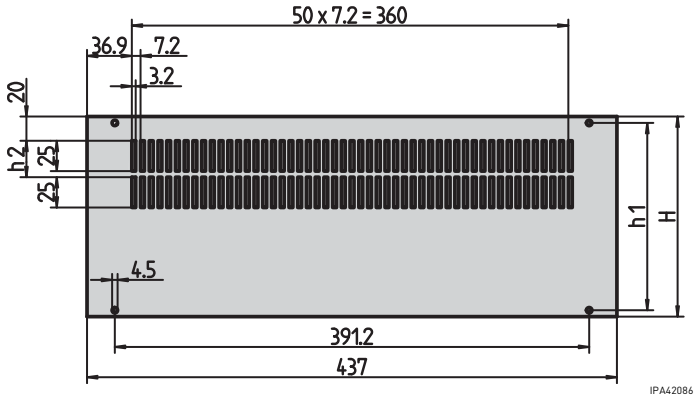
### Order Information

| Height U | Height H mm | h1 mm | Part no. |
|---|---|---|---|
| 2 | 76.0 | 54.5 | **30828-085** |
| 3 | 120.5 | 99.0 | **30828-088** |
| 4 | 165.0 | 143.5 | **30828-091** |
| 6 | 253.8 | 232.3 | **30828-097** |
| **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 | – | **30828-070** |
| 3 | 120.5 | 110.0 | – | **30828-073** |
| 4 | 165.0 | 154.5 | – | **30828-076** |
| 6 | 253.8 | 243.4 | 30 | **30828-082** |

### Note

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



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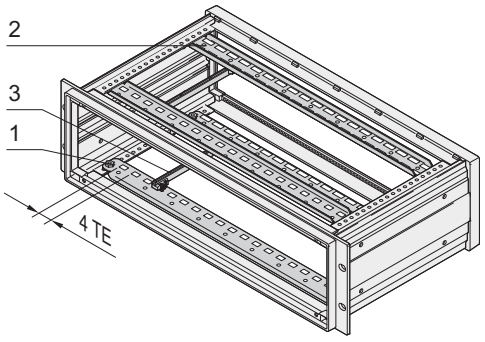
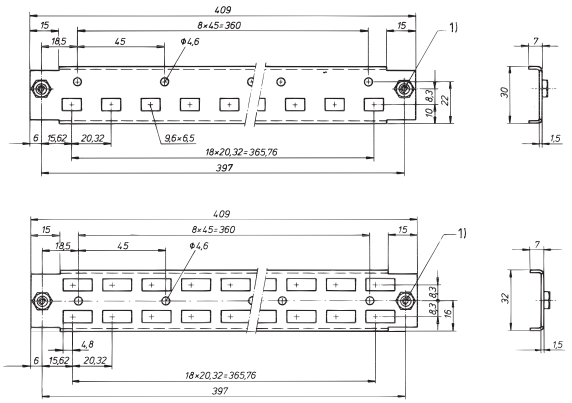
## Support rail for guide rails




IPA30639




a3-308xx

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

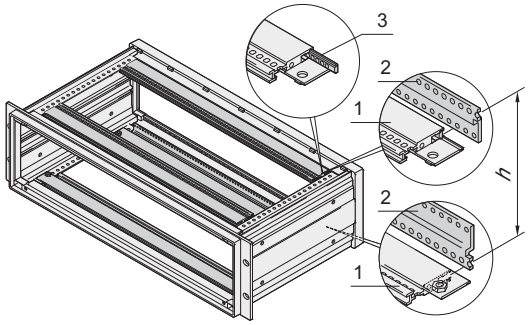
- 4 support rails to fix PCBs with guide rails
- Support rail can also be used to fix a custom mounting plate

### Order Information

| Item | Description | Part no. |
|---|---|---|
| 1 | front support rail, St, 1.5 mm, blue-passivated, 1 piece | 30828-165 |
| 2 | rear support rail, St, 1.5 mm, blue-passivated, 1 piece | 30828-174 |
| **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 | 60817-078 |
| | **Guide rail 220 mm** (Item 3), PBT, UL 94 V-0, with integrated fixture for connector to EN 60603 (DIN 41612), PU 1 pair | 60817-079 |
| | **Screw** for mounting of support rails, M4 × 8, flathead bolts with posidrive, PU 100 pieces | 21100-677 |

- Guide rails see page 6.134

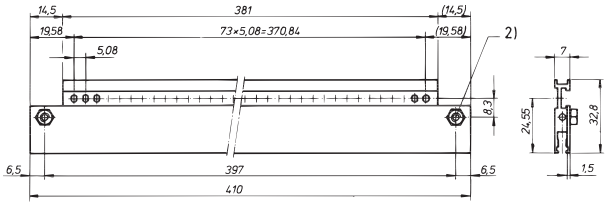
## Horizontal rail for guide rails, backplane and connector mounting




IPA30640

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

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




A4-587

2) bush M4, pressed-in

- 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 | 30828-128 |
| **Accessories** | | | |
| | **Z-rail** (item 2), Al extrusion, anodised, 1 piece | | 30814-513 |
| | **Threaded insert** (item 3), St, zinc-plated (blue), 1 piece | | 30819-604 |
| | **Screw** to fix horizontal rails, M4 × 8, Pozidrive flathead screw, 100 pieces | | 21100-677 |
| | **Cheesehead screw with slot** M2.5 × 6, DIN 84, PU 100 pieces M2.5 × 6, DIN 84, 100 pieces | | 21100-146 |

### 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

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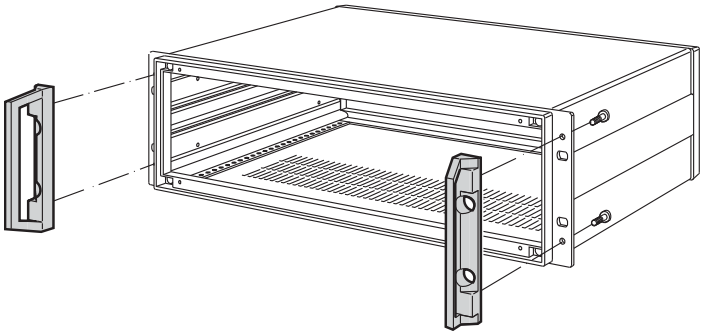
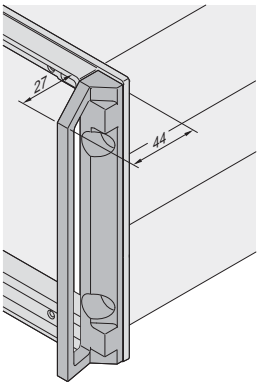
# 19" chassis – inpac

## Front handles



IPA30636




02108050

- Load-carrying capacity 35 kg per pair

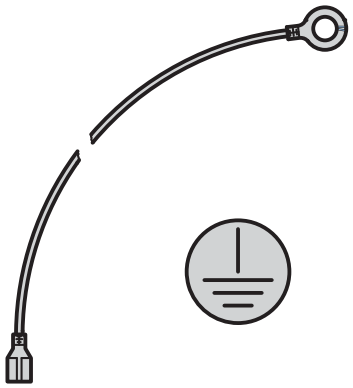
### Delivery comprises (kit)

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

### Order Information

| Height U | Part no. |
|---|---|
| 3 | 20828-127 |
| 4 | 20828-128 |
| 6 | 20828-129 |

## 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 $mm^2$, PVC sleeve, green/yellow, links side panels, top cover, base plate and rear panel | 1 | 21100-814 |



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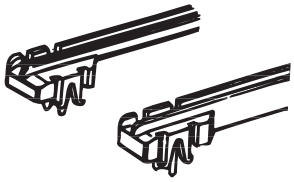
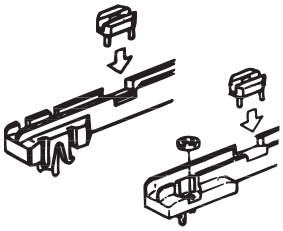
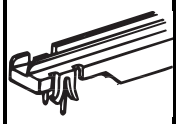
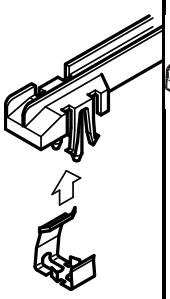
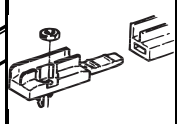
## Guide rails

04292012

### Order Information

| | |  a4-2744X | |  A42744b | |  a42744c |  bza44247 |  a4-2744d |
|---|---|---|---|---|---|---|---|---|
| | | Light version, snap-in | Standard version, snap-in | Version with board fixing, snap-in | Version with board fixing, bolt-on | Version for heavy load-carrying capacity, snap-in | Version with ESD clip | Universal version with Al middle section, bolt-on |
| Board lengths<br>mm<br>mm | Groove width<br>mm<br>mm | Part no.<br>1 piece (SPQ 50)[1)] | Part no.<br>1 piece (SPQ 50)[1)] | Part no.<br>1 piece (SPQ 50)[1)] | Part no.<br>1 piece (SPQ 50)[1)] | Part no.<br>1 piece (SPQ 50)[1)] | Part no.<br>Qty/PU<br>1 piece | Part no.<br>Qty/PU<br>1 piece |
| 100 | 2 | – | 60817-015 | – | – | – | – | – |
| 160 | 2 | 60817-064 | 60817-103 | 60817-001 | 60817-053 | 60817-102 | 20817-368 | – |
| 160 | 2.5 | – | 60817-076 | – | – | – | – | – |
| 180 | 2 | – | – | 60817-026 | – | – | – | – |
| 220 | 2 | – | 60817-149 | 60817-016 | 60817-083 | 60817-085 | 20817-369 | – |
| 220 | 2.5 | – | – | – | – | 60817-098 | – | – |
| 280 | 2 | – | – | – | – | 60817-080 | – | – |
| 340 | 2 | – | – | – | – | – | – | 20825-120 |
| 400 | 2 | – | – | – | – | – | – | 20825-121 |
| | | 1) SPQ (standard pack quantity): Part number includes 1 piece, but delivery is exclusively made in standard pack quantity (SPQ);<br>please order at least the SPQ quantity or a multiple | | | | | | |
| **Accessories** | | | | | | | | |
| **Spring clip** PPE, UL 94 V-0, red, PU 10 pieces | | | | 21100-553 | 21100-553 | – | – | – |
| **Spring clip** PPE, UL 94 V-0, red, PU 100 pieces | | | | 21100-554 | 21100-554 | – | – | – |
| **Assembly parts** for 50 guide rails PU (100 screws, 100 nuts) | | | | – | 21101-990 | – | – | 21101-990 |

### Note

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

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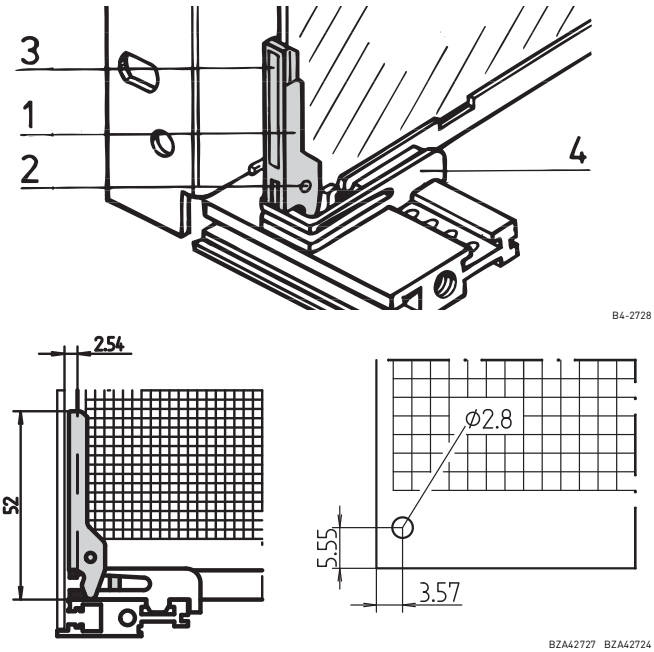
# 19" chassis – inpac

## PCB handle A



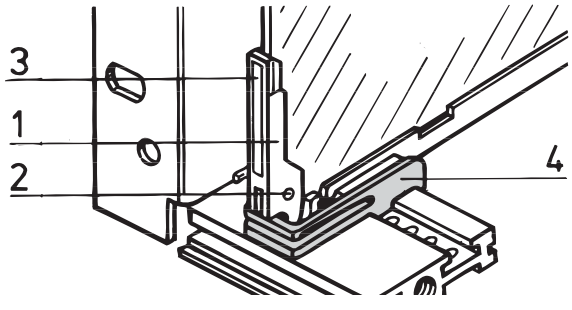

- To be mounted behind front panel, for PCB thickness 1.6 mm
- Insertion and extraction function
- Can be labelled

### Order Information

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

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



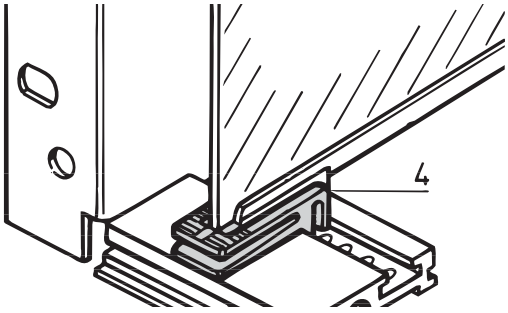

- Can also be used without PCB handle
- Application on top and bottom horizontal rail

### 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) | **60817-097** |

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 9 4 V-0 | red | 1 piece (SPQ 10) | **60817-054** |
| 4a | PCB securing top | PPE, UL 9 4 V-0 | black | 1 piece (SPQ 10) | **60817-071** |

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



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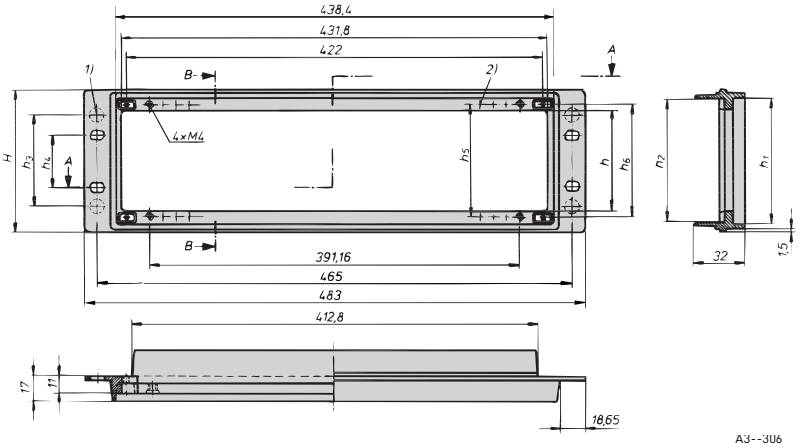
## Dimensions

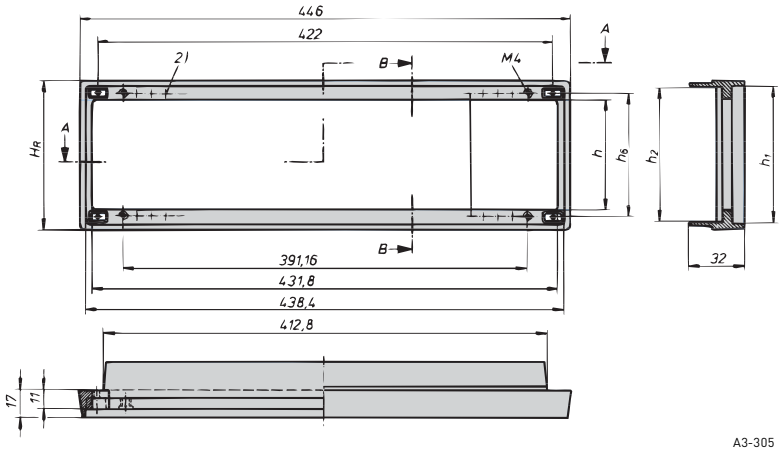
### 19" front frame




Section A-A

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

## Dimensions table

| Height in U | H | $H_R$ | h | $h_1$ | $h_2$ | $h_3$ | $h_4$ | $h_5$ | $h_6$ | $h_7$ |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 |

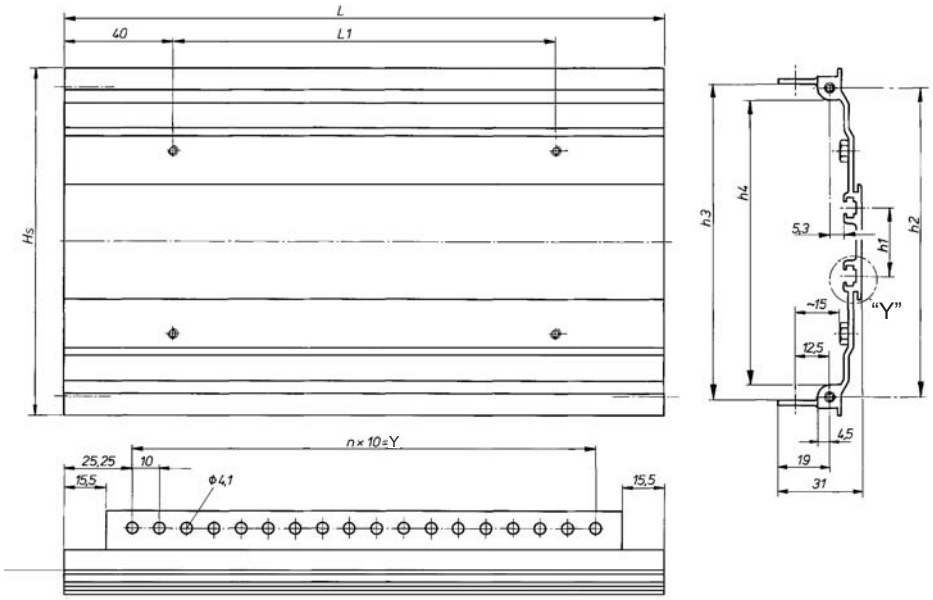


Distributed by calgreg electronics 401-732-8100

# 19" chassis – inpac

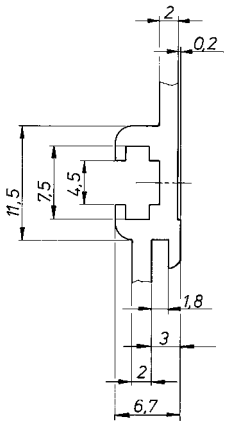
## Dimensions

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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# Appendix – Order notes

## Packaging units

A packaging unit (PU) - e.g. carton, bag - contains the stated quantity. If you order the quantity 1, you will automatically receive the quantity defined as PU.

Example: EMC textile gasket
See page 5.22
Part number 21101-853

Quantity (per part number): 10 pieces

Order quantity: . . . . . Delivery quantity:

1 . . . . . 10 pieces
2 . . . . . 20 pieces
3 . . . . . 30 pieces

## Standard pack quantity (SPQ)

Please take into consideration that deliveries may be carried out in the stated SPQs (SPQ, e.g. 5 pieces, 10 pieces, 50 pieces, etc.). Differing order quantities (e.g. 2 pieces) may be changed to the next possible delivery quantity = Standard Pack Quantity (in this case 10 pieces).

Example: Front horizontal rail
See page 5.31
Part number 34560-228

Quantity (per part number): 1 piece
Standard pack quantity (SPQ): 10 pieces

Order quantity:. . . . . Delivery quantity:

$\leq 10$. . . . . 10 pieces
$> 10 \leq 20$ . . . . . 20 pieces
$> 20 \leq 30$ . . . . . 30 pieces

## Price list

Our price list is available by e-mail from your customer consultant. Please find all contact details at www.schroff.biz/contact.

## Delivery times

Part numbers in bold face type are ready for despatch within 2 working days; part numbers in normal type are ready for despatch within 10 working days.

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The data in this catalogue have been thoroughly edited and checked - in assistance with an accredited Quality Management System in accordance with EN ISO 9001:2008.

Faults and spelling mistakes, but mainly changes due to improvements and further developments of our products are subject to change. There is no possibility to claim indemnity/compensation.



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