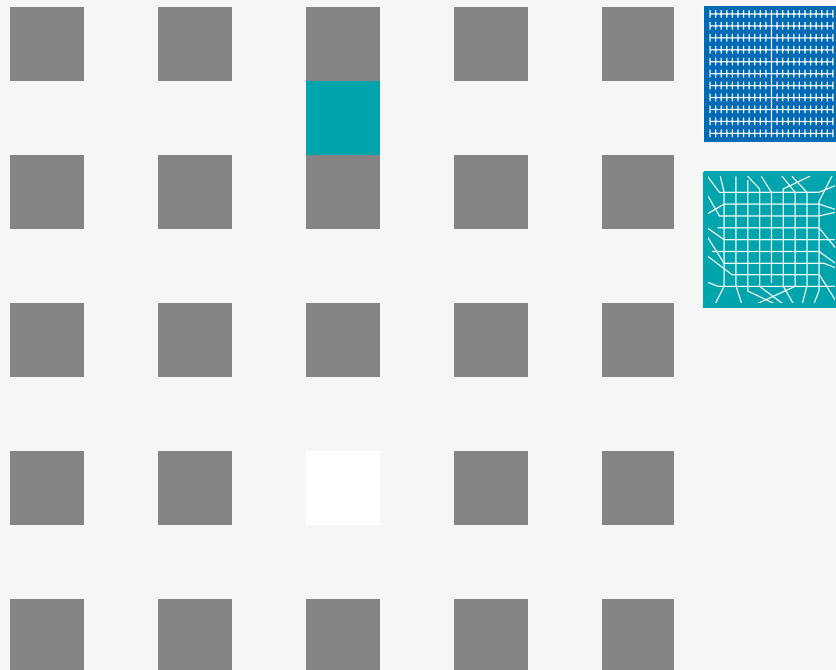


# Enclosures and connection devices 2000 - 2001

Insulated, metal & weatherproof enclosures  
Connection devices



## **Welcome to the new edition of our general catalogue**

For easy reference purposes, Hager general catalogue has been divided into four separate catalogues each representing the following product groups :

1. Enclosures and Connection Systems
2. Circuit Protection Devices
3. Modular Automation and Control Devices
4. Moulded Case Circuit Breakers

A technical section, at the end of each catalogue provides detailed information of the products and its applications.

**hager**

The success is in the system

# The Hager Group

With over 6000 dedicated employees worldwide, and an innovative, carefully structured product range, Hager is one of the leading international manufacturers of electrical distribution systems.

Hager has 12 manufacturing sites in France, Germany, Italy, Spain and the United Kingdom and has an established marketing network throughout Europe, Asia and Australia serviced by Hager subsidiary companies.

Other areas are served by wholly or partially owned distribution companies and these ensure the availability of Hager Group products in over 60 countries worldwide.



*Obernai - France*



*Tehalit headquarters in Heltersberg*



*Ensheim - Germany*



*Blieskastel - Germany*



*Telford - UK*

# Hager product brands



## hager

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Hager products form a fully integrated system for safe, efficient and effective protection and control of electrical distribution systems.

- Consumer units system.
- Distribution board system.
- Enclosures.
- Busbars and connections.
- Protection devices.
- Modular control devices.
- Intelligent installation system for control of lighting, heating and shutters.



## TEHALIT

---

Tehalit products cover the complete spectrum of cable management and include systems for domestic, commercial and industrial applications.

- Skirting systems.
- Multi - compartment dado systems.
- Architectural systems.
- Island systems.
- Industrial trunking systems.
- Panel trunkings.
- Fire resistant trunkings.



## ashley

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Ashley manufacture a full range of "British standard" wiring devices and wiring accessories and the company's name is synonymous with quality.

- Wall switches and sockets in white, brass and stainless steel finishes.
- Metalclad accessories.
- Safety lampholders.
- Ceiling switches and roses.
- Junction boxes and mounting boxes.



## klik

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KLIK secure connection systems provide an innovative solution to a variety of connection requirements. Systems are available for power and lighting distribution applications.

- KLIK lighting
- KLIK AX
- KLIK Power
- KLIK LV.
- Lighting distribution systems.
- Occupancy sensors.

# Hager quality and service

All Hager products benefit from a heavy investment in research and development and from rigorous quality control procedures at all stages of manufacture.

This has resulted in the company achieving registration to ISO9001.

Hager products are approved by all relevant bodies and the ongoing process of harmonisation of European and International Standards will ensure continuing success in our Global marketing strategy.



Hager manufacturing, assembly and despatch procedures are subject to the rigorous quality standards demanded by registration to ISO9001.





*Comprehensive product literature such as this catalogue are supplemented by more technical information.*



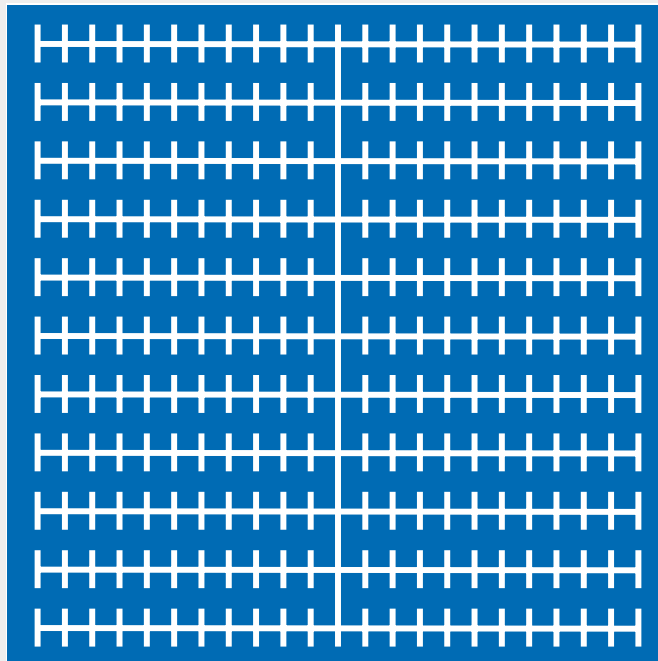
Hager's business philosophy is totally focussed on providing quality products and we are committed to excel at customer service. We achieve these aims by establishing partnership relationships with our suppliers and customers.



*Participation in major international and local trade exhibitions enables us to stay in close contact with our customers.*

## Enclosures

- 8 30V surface mounting enclosures IP30
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- 32 Invicta TP&N distribution boards IP41 split load with incomers
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## 30V surface mounting enclosures IP30



**Serie 30V**  
**1 row boxes from 1 to 8 I**  
 monobloc chassis and cover  
 made out of insulating material.  
 fixed DIN rail for devices of a  
 shoulder measurement of 47mm.  
 RAL 9010

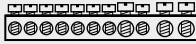


IEC 60 695-2-1/0 and  
 60 695-2-1/1

**IP30 IK04**

**Options**  
 blanking clips P031, P032.

For technical information,  
 see page 68

Designation		Width in 17.5mm	Pack qty.	Cat. ref.
<b>1 row, 1 I</b> w. 50 x h. 140 x d. 65mm	-		10	<b>V 301</b>
<b>1 row, 2 I</b> w. 50 x h. 140 x d. 65mm	-		10	<b>V 302</b>
<b>1 row, 4 I</b> w. 90 x h. 160 x d. 65mm	-		5	<b>V 304</b>
<b>1 row, 6 I</b> w. 125 x h. 160 x d. 65mm	-		1	<b>V 306</b>
<b>1 row, 8 I</b> w. 160 x h. 160 x d. 65mm	-		1	<b>V 308</b>
<b>1 row, 6 I</b> w. 125 x h. 160 x d. 65mm	2x16 + 2x10□		1	<b>V 306F1</b>
<b>1 row, 8 I</b> w. 160 x h. 160 x d. 65mm	2x16 + 2x10□		1	<b>V 308F8</b>

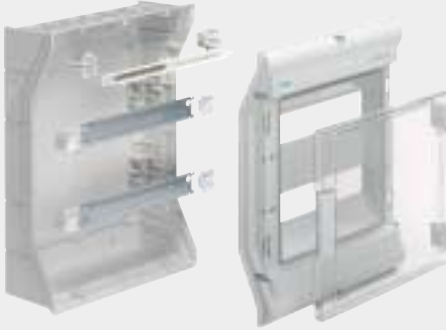


V 302



V 308





VE 212

**Surface mounting enclosures with transparent doors**  
 1 to 4 rows from 2 to 48 ■,  
 1 to 3 rows from 18 to 54 ■.

Adjustable DIN rail for shoulder measurement 47 and 63 mm, transparent hinged cover (2 to 10 ) or door (12 to 54 ), 2 lateral knock outs for cable entry or coupling pieces:  
 Pg16 for VE110 and VE116  
 Pg21 for VE112 to VE318.

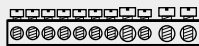



With premarked knock outs for bushes or cable glands M20, M25, M32, M40 and M50; delivered with loose cable bushes, without terminals ( VE..E), with 1 terminals (VE..F); colour : light grey RAL7035 nominal voltage : Ui 400V~ nominal current : 63A at 230/400V~




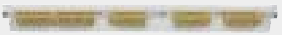


IEC 60 695-2-1/0 and 60 695-2-1/1

**IP65** IK07 < 12 ■  
 IK08 > 12 ■  
**class II** □

□ For technical information, see page 68

Designation		Pack Qty.	Cat. ref. 1 terminal	Cat. ref. no terminal
 VE 106 <b>1 row 2 + 1 ■</b> w. 111 x h. 175 x d. 93 mm	E : 2x16 + 2x10 □ supplied cable bushes 3xM20	1	VE 103F	VE 103E
<b>1 row, 4 + 2 ■</b> w. 165 x h. 190 x d. 113 mm	E : 3x16 + 4x10 □ supplied cable bushes 2xM20+2xM25+1xM32	1	VE 106F	VE 106E
 VE 312 <b>1 row, 8 + 2 ■</b> w. 237 x h. 210 x d. 114 mm	E : 5x16 + 6x10 □ supplied cable bushes 4xM20+2xM25+1xM32	1	VE 110F	VE 110E
<b>1 row, 12 ■</b> w. 310 x h. 302 x d. 151 mm	E : 1x25 + 5x16 + 7x10 □ supplied cable bushes 10xM20+2xM25+1xM32	1	VE 112F	VE 112E
<b>2 rows, 24 ■</b> w. 310 x h. 427 x d. 151 mm	E : 1x25 + 7x16 + 9x10 □ supplied cable bushes 14xM20+4xM25+1xM32	1	VE 212F	VE 212E
<b>3 rows, 36 ■</b> w. 310 x h. 552 x d. 151 mm	E : 1x25 + 10x16 + 11x10 □ supplied cable bushes 8xM20+14xM25+1xM32	1	VE 312F	VE 312E
 VE 218 <b>4 rows, 48 ■</b> w. 310 x h. 677 x d. 151 mm	E : 1x25 + 11x16 + 13x10 □ supplied cable bushes 8xM20+14xM25+1xM32	1	VE 412F	VE 412E
<b>1 row, 18 ■</b> w. 418 x h. 302 x d. 151 mm	E : 1x25 + 7x16 + 9x10 □ supplied cable bushes 14xM20+4xM25+1xM32	1	VE 118F	VE 118E
<b>2 rows, 36 ■</b> w. 418 x h. 452 x d. 151 mm	E : 1x25 + 10x16 + 11x10 □ supplied cable bushes 8xM20+14xM25+1xM32	1	VE 218F	VE 218E
<b>3 rows, 54 ■</b> w. 418 x h. 602 x d. 151 mm	E : 1x (1x25 + 11x16 + 13x10 □) +1x(1x25 + 2x16 + 2x10 □) supplied cable bushes 8xM20+18xM25+2xM32	1	VE 318F	VE 318E

## Accessories for Vector enclosures

	<i>Designation</i>	<i>Characteristics</i>	<i>Pack Qty.</i>	<i>Cat. ref.</i>
 VZ 403	<b>Single phase connection assembly 63A</b>  snaps on lateral support	2x(3x16 + 4x10□)	1	<b>VZ 403</b>
 VZ 428	<b>Three phase + N connection assembly 63A</b>  snaps on lateral support	3x(3x16 + 2x10□) 1x(5x16 + 6x10□)	1	<b>VZ 428</b>
 VZ 428	<b>Lock with 2 keys</b>  to juxtapose or superpose enclosures  reduction of ingress protection to IP54	for all enclosures from 2 to 54	1	<b>VZ 311</b>
 VZ 754	<b>Coupling sleeve</b>  reduction of ingress protection IP54	fit on lateral PG21 knock outs of the enclosures VE 112, VE 212, VE 312 VE 412, VE 118, VE 218 and VE 318	1 set	<b>VZ 754</b>
	<b>Cable entry</b>  reduction of ingress protection IP54	14xM20 + 10xM25 + 2xM32	1	<b>VZ 758</b>
	<i>Designation</i>	<i>Characteristics</i>		<i>Cat. ref.</i>
	<b>PE/N terminals with support for VE 103E</b>	2 x (2x16□ + 2x10□)		<b>VZ 722</b>
	<b>PE/N terminals with support for VE 106E</b>	2 x (3x16□+ 4x10□)		<b>VZ 723</b>
	<b>PE/N terminals with support for VE 110E</b>	2 x (5x16□ + 6x10□)		<b>VZ 724</b>
	<b>PE/N terminals with support for VE 112E</b>	2 x (6x16□+ 7x10□)		<b>VZ 725</b>
	<b>PE/N terminals with support for VE 212E</b>	2 x (8x16□ + 9x10□)		<b>VZ 726</b>
	<b>PE/N terminals with support for VE 312E</b>	2 x (10x16□+ 12x10□)		<b>VZ 727</b>
	<b>PE/N terminals with support for VE 412E</b>	2 x (12x16□ + 13x10□)		<b>VZ 728</b>
	<b>PE/N terminals with support for VE 318E</b>	2 x (13x16□ + 17x10□)		<b>VZ 729</b>
	<b>Adaptor for mounting terminal supports</b>	to be ordered for all enclosures		<b>VZ 744</b>

**Vector enclosures - IP65**



VP 54M

**2 ranges of monobloc enclosures** made out of insulating material, colour RAL7035

**Modular distribution enclosure** surface mounting with transparent door  
2 to 4 rows, 20 to 72  
removable chassis with DIN rails  
depth adjustable, 150 mm between rails  
front covers with modular cut out, made out of insulating material

**IP65 IK 10**  
**class II**

**Non modular distribution enclosure (VPxxG)**  
surface mounting with plain door fitted with a plain zincked mounting plate 2 mm thickness

Plain sides without knock out for cable entries

Symmetrical enclosure permits change of the door opening direction by simple reversal of the enclosure door fitted with either one or two locks with 8mm triangular key.

Delivered with :  
4 wall mounting brackets, terminals, marking stripe (for VP..M)

**Options :**

- key lock, VP01Z
- plain front cover (for VP..M)
- blanking clip (for VP..M)



IEC 60 695-2-1/0 and 60 695-2-1/1

For technical information, see page 69



VP 54M



VP 72G



VP 01Z



VP 04Z

Designation		Pack qty	Cat. ref.
<b>2 rows, 20 I</b>	N : 5 x 16 + 5 x 10 E : 1 x 25 + 2 x 16 + 3 x 10	1	<b>VP 20M</b>
<b>non modular</b>		1	<b>VP 20G</b>
h. 350 x w. 250 x d. 160mm			
<b>3 rows, 36 I</b>	N : 5 x 16 + 6 x 10 E : 5 x 16 + 5 x 10	1	<b>VP 36M</b>
<b>non modular</b>		1	<b>VP 36G</b>
h. 500 x w. 300 x d. 160mm			
<b>3 rows, 54 I</b>	N : 6 x 16 + 7 x 10 T : 5 x 16 + 5 x 10	1	<b>VP 54M</b>
<b>non modular</b>		1	<b>VP 54G</b>
h. 500 x l. 400 x p. 210mm			
<b>3 rows, 72 I</b>	N : 6 x 16 + 7 x 10 T : 5 x 16 + 5 x 10	1	<b>VP 72M</b>
<b>non modular</b>		1	<b>VP 72G</b>
h. 650 x l. 400 x p. 210mm			
<b>Lock with key</b>	to replace the delivered triangular lock, delivered with 2 keys	1	<b>VP 01Z</b>
<b>Blank for cover (for VP ...M)</b>	for enclosure width 250mm	4	<b>VP 02Z</b>
	width 300mm	4	<b>VP 03Z</b>
to replace the front covers with modular cut outs (height 150mm)	width 400mm	4	<b>VP 04Z</b>
<b>Blanking clips</b>	width 1 I	20	<b>VP 05Z</b>

## Volta surface mounting enclosures IP30



**Surface mounting enclosures with metallic door 1 to 4 rows, 12 to 48 I.**  
 manufactured from insulated material, colour RAL 9010, for devices up to 68 mm depth, DIN rails for shoulder measurement 47 mm, distance between rails 125 mm.  
 metallic door, reversible with integrated handle, sealable front cover

Delivered with terminals, blanking stripes with 12 I premarked, and circuit identification labelling

**Options :**  
 key lock  
 connection assembly



IEC 60 695-2-1/0 and 60 695-2-1/1

**IP 30**  **IK 07**  
**class II**

For technical information, see page 71

*Designation*



*Pack Qty*

*Cat. ref.*



**1 row 12 I**

E : 1 x 25 + 5 x 16 + 7 x 10

1

**VA 12D**

I. 305 x h. 245 x p. 97mm

**2 rows 24 I**

E : 1 x 25 + 9 x 16 + 12 x 10

1

**VA 24D**

I. 305 x h. 370 x p. 97mm

**3 rows 36 I**

E : 1 x 25 + 11 x 16 + 13 x 10

1

**VA 36D**

I. 305 x h. 515 x p. 97mm

**4 rows 48 I**

E : 2 x (1 x 25 + 7 x 16 + 9 x 10)

1

**VA 48D**

I. 305 x h. 640 x p. 97mm

**Lock with key**

**VZ 303**

I. 305 x h. 640 x p. 97mm

**Connection assembly single phase**

2 x (3 x 16 + 4 x 10)

1

**VZ 403**

TP + N 63A

3 x (3 x 16 + 2 x 10)

1

**VZ 428**

1 x (5 x 16 + 6 x 10)

VA 24D



VA 24D



VZ 403



VZ 303



VZ 428

## Volta flush mounting enclosures IP30



VU 24D

**Distribution enclosures with metallic door 1 to 4 rows, 12 to 48 I**

flush mounting in brick or partition walls removable chassis for devices of shoulder measurement 47 mm, distance between rails 125 mm flush part made out of insulated material, frame and door manufactured from metal, reversible door with integrated handle, sealable front cover, colour RAL 9010

**IP 30** **class II** **IK 07**

**Options :**  
key lock

Compliance to : EN 60 439-3

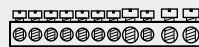


IEC 60 695-2-1/0 and 60 695-2-1/1

**delivered with :**  
earth bar, blanking stripes with 12 I premarked, mounting kit for partition walls, circuit identification labelling

For technical information, see page 70

*Designation*



*Pack qty.*

*Cat. ref.*



VU 24D

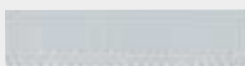
VU 12D



VZ 132



VZ 303



P 012

<b>1 row 12 I</b>	E : 1 x 25 + 5 x 16 + 7 x 10	1	<b>VU 12D</b>
<b>2 rows 24 I</b>	E : 1 x 25 + 9 x 16 + 12 x 10	1	<b>VU 24D</b>
<b>3 rows 36 I</b>	E : 1 x 25 + 11 x 16 + 13 x 10	1	<b>VU 36D</b>
<b>4 rows 48 I</b>	E : 2 x (1 x 25 + 7 x 16 + 9 x 10)	1	<b>VU 48D</b>
<b>Transparent door</b>	for enclosure VU 12D	1	<b>VZ 131</b>
	VU 24D	1	<b>VZ 132</b>
	VU 36D	1	<b>VZ 133</b>
	VU 48D	1	<b>VZ 134</b>
<b>Lock with key</b>	delivered with 2 keys		<b>VZ 303</b>
<b>Connection assembly single phase</b>	2 x (3 x 16 + 4 x 10)	1	<b>VZ 403</b>
	TP + N 63A	1	<b>VZ 428</b>
	3 x (3 x 16 + 2 x 10) 1 x (5 x 16 + 6 x 10)	1	<b>VZ 428</b>
<b>Blanking strip</b>	12 I premarked	1	<b>P 012</b>

## Gamma surface mounting enclosures IP30



GD 26A

### IP30 surface mounting enclosures

1-4 rows 15-52 modules. enclosures are of an insulating material coloured RAL 9010. insulating chassis and frame. fixed DIN rail for devices of a maximum shoulder measurement of 45mm, distance between rails 125mm premarked cable entries on top, bottom and side.

### delivered with

- terminals
- blanking clips
- marking strip

### options

- additional connection assemblies
- cable trunking
- back plates
- plain and transparent doors
- door locks

these enclosures can be delivered with brass terminals and supports for neutral and earth connection

**IP30**    **IK 07**



IEC 60 695-2-1/0 and 60 695-2-1/1

For technical information, see page 71

### Designation



Pack  
qty.

Cat.  
ref.



GD 05A

**1 row, 5 I**  
with premarked cut for **6 I**

w. 145 x h. 140 x d. 65mm

N : 2 x 16 + 2 x 10  
E : 2 x 16 + 2 x 10

1

**GD 05A**



GD 13A

**1 row, 10 I**  
with premarked cut for **12 I**

w. 250 x h. 140 x d. 65mm

E : 3 x 16 + 4 x 10



2 + fi

1

**GD 10A**



GD 52A

**2 rows, 26 I**  
w. 250 x h. 350 x d. 88mm

Ph : 2 x 16 + 2 x 10  
N : 2 x 16 + 2 x 10  
E : 10 x 16 + 12 x 10



4 + fi

1

**GD 26A**

**3 rows, 39 I**  
w. 250 x h. 475 x d. 88mm

Ph : 3 x 16 + 4 x 10  
N : 3 x 16 + 4 x 10  
E : 12 x 16 + 13 x 10



6 + 3/2

1

**GD 39A**

**4 rows, 52 I**  
w. 250 x h. 600 x d. 88mm

Ph : 3 x 16 + 4 x 10  
N : 3 x 16 + 4 x 10  
E : 2 x (1x25 + 7x16 + 9x10)



8 + 4/2

1

**GD 52A**



GD 26C

**1 row, 26 I**  
w. 500 x h. 200 x d. 85mm

Ph : 2 x 16 + 2 x 10  
N : 2 x 16 + 2 x 10  
E : 10 x 16 + 12 x 10



4 + 2/2

1

**GD 26C**

**Doors for Gamma enclosures** offers an additional protection of modular devices and increases ingress protection to IP40. Plain (RAL 9010) or transparent. Delivered with 2 hinges, 1 latch and 2 screws.

**option**  
lock.



IEC 60 695-2-1/0 and  
60 695-2-1/1



GP 26P

GP 26T



GZ 05A



JP 014

<i>Designation</i>	<i>Characteristics</i>	<i>Pack qty.</i>	<i>Cat. ref.</i>
<b>Plain door</b>	for : GD 13A	1	<b>GP 13P</b>
	GD 26A	1	<b>GP 26P</b>
	GD 39A	1	<b>GP 39P</b>
	depth : 26.5mm GD 52A	1	<b>GP 52P</b>
<b>Transparent door</b>	for : GD 13A	1	<b>GP 13T</b>
	GD 26A	1	<b>GP 26T</b>
	GD 39A	1	<b>GP 39T</b>
	depth : 26.5mm GD 52A	1	<b>GP 52T</b>
<b>Door lock with key</b>	for doors : GP 13P, GP 26P, GP 39P, GP 52P, GP 13T, GP 26T, GP 39T, GP 52T	1	<b>GZ 05A</b>
<b>Back plate</b> insulated material	for enclosure : GD 13A	1	<b>GS 13D</b>
	GD 26A	1	<b>GS 26D</b>
	GD 32A	1	<b>GS 39D</b>
	GD 52A	1	<b>GS 52D</b>
	GD 26C	1 set of 2 plates	<b>GS 26C</b>
<b>Connection assembly</b> without terminals	accepts terminals : K 140, K 142, K 143, K 148 K 151, K 156	10	<b>GZ 10A</b>
TP&N	Ph : 3 x (3 x 16 + 2 x 10) N : 1 x (4 x 16 + 7 x 10)	10	<b>GZ 12A</b>
<b>Blanking strip</b> to blank unused rows	width 13	10	<b>JP 014</b>

## Golf surface mounting enclosures IP41



### IP41 surface mounting enclosures

1-3 rows, 4-36 modules.  
enclosures are of an insulating material coloured RAL9010.  
fixed Din rail for devices of a maximum shoulder measurement of 47mm, distance between rails 125mm reversible door-opening 180°.

**delivered with**  
- blanking clips

**IP41** IK 07  
**class II**




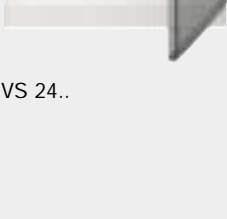
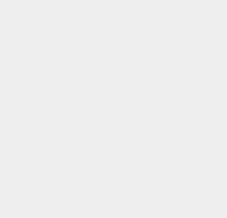
**Option :**  
- key lock

these enclosures can be delivered with brass terminal and supports for neutral and earth connection.



IEC 60 695-2-1/0  
and 60 695-2-1/1

for dimensional information, see page 72

Designation	Door	Pack qty.	Cat. ref.
 <b>1 row, 4</b> ■  dimensions mm: (width x height x depth) 130 x 180 x 86	opaque	1	<b>VS 04P.</b>
	transparent	1	<b>VS 04T.</b>
 <b>1 row, 8</b> ■  dimensions mm: (width x height x depth) 200 x 180 x 86	opaque	1	<b>VS 08P.</b>
	transparent	1	<b>VS 08T.</b>
 <b>1 row, 12</b> ■  dimensions mm: (width x height x depth) 275 x 225 x 95	opaque	1	<b>VS 12P.</b>
	transparent	1	<b>VS 12T.</b>
 <b>2 rows, 24</b> ■  dimensions mm: (width x height x depth) 275 x 350 x 95	opaque	1	<b>VS 24P.</b>
	transparent	1	<b>VS 24T.</b>
 <b>3 rows, 36</b> ■  dimensions mm: (width x height x depth) 275 x 500 x 95	opaque	1	<b>VS 36P.</b>
	transparent	1	<b>VS 36T.</b>
<b>Key lock</b>	golf enclosures 12, 24, 36 ■	1	<b>VZ 311</b>

VS 24..



## Golf flush mounting enclosures IP41



**IP41 flush mounting enclosures**

1-3 rows, 4-36 modules.  
enclosures are of an insulating material coloured RAL 9010.  
fixed Din rail for devices of a maximum shoulder measurement of 47mm, distance between rails 125mm reversible door-opening 180°.

**delivered with**  
- blanking clips

IP41 IK 07  
class II





**Option :**  
- key lock

these enclosures can be delivered with brass terminal and supports for neutral and earth connection.



IEC 60 695-2-1/0  
and 60 695-2-1/1

for dimensional information, see page 72

Designation		door	pack qty.	Cat. ref.
 <b>1 row, 4</b>		opaque	1	<b>VF 04P.</b>
		transparent	1	<b>VF 04T.</b>
 <b>1 row, 8</b>		opaque	1	<b>VF 08P.</b>
		transparent	1	<b>VF 08T.</b>
VF 12..  <b>1 row, 12</b>		opaque	1	<b>VF 12P.</b>
		transparent	1	<b>VF 12T.</b>
 <b>2 rows, 24</b>		opaque	1	<b>VF 24P.</b>
		transparent	1	<b>VF 24T.</b>
VF 24.. <b>3 rows, 36</b>		opaque	1	<b>VF 36P.</b>
		transparent	1	<b>VF 36T.</b>
<b>Key lock</b>	golf enclosures 12, 24, 36		1	<b>VZ 311</b>

## Vega surface mounting enclosures IP40



VB 36E

**IP40 surface mounting enclosures**

with transparent or plain doors.  
1 -3 rows 18-54 modules.  
enclosures are of an insulating material coloured white RAL 9010.  
the enclosures feature a removable chassis with Din rails for ease of installation.  
top and bottom cable entry plates are removable and interchangeable.  
the door is also reversible with an integral flush handle.

**options**

door lock.  
cable trunking,

**IP40** IK 08

**class II**



IEC 60 695-2-1/0  
and 60 695-2-1/1

for dimensional information, see page 73



VB 18E

Designation		Pack qty.	Cat. ref.
<b>1 row 18I</b> w. 370 x h. 300 x d. 145mm	E : 1x25 + 7x16 + 9x10□	1	opaque <b>VB 18P</b>
			transparent <b>VB 18T</b>
<b>2 rows 36I</b> w. 370 x h. 450 x d. 145mm	E : 1x25 + 11x16 + 13x10□	1	opaque <b>VB 36P</b>
			transparent <b>VB 36T</b>
<b>3 rows 54I</b> w. 370 x h. 600 x d. 145mm	E : 2x(1x25 + 7x16 + 9x10□)	1	opaque <b>VB 54P</b>
			transparent <b>VB 54T</b>



VZ 310



VZ 709

Designation		Pack qty.	Cat. ref.
<b>Key lock</b> for transparent or opaque doors	supplied with 2 keys	1	<b>VZ 310</b>
<b>Connection assemblies</b>			
<b>3 Ph + N 63A</b>	2 x (3x16 + 2x10□) 1 x (4x16 + 7x10□)	1	<b>VZ 709</b>
<b>1 Ph + N 90A</b>	incoming 1x25□ outgoing 4x16□	1	<b>VZ 712</b>

Gamma :  
A new system of trunking + enclosure



Make one out of two !

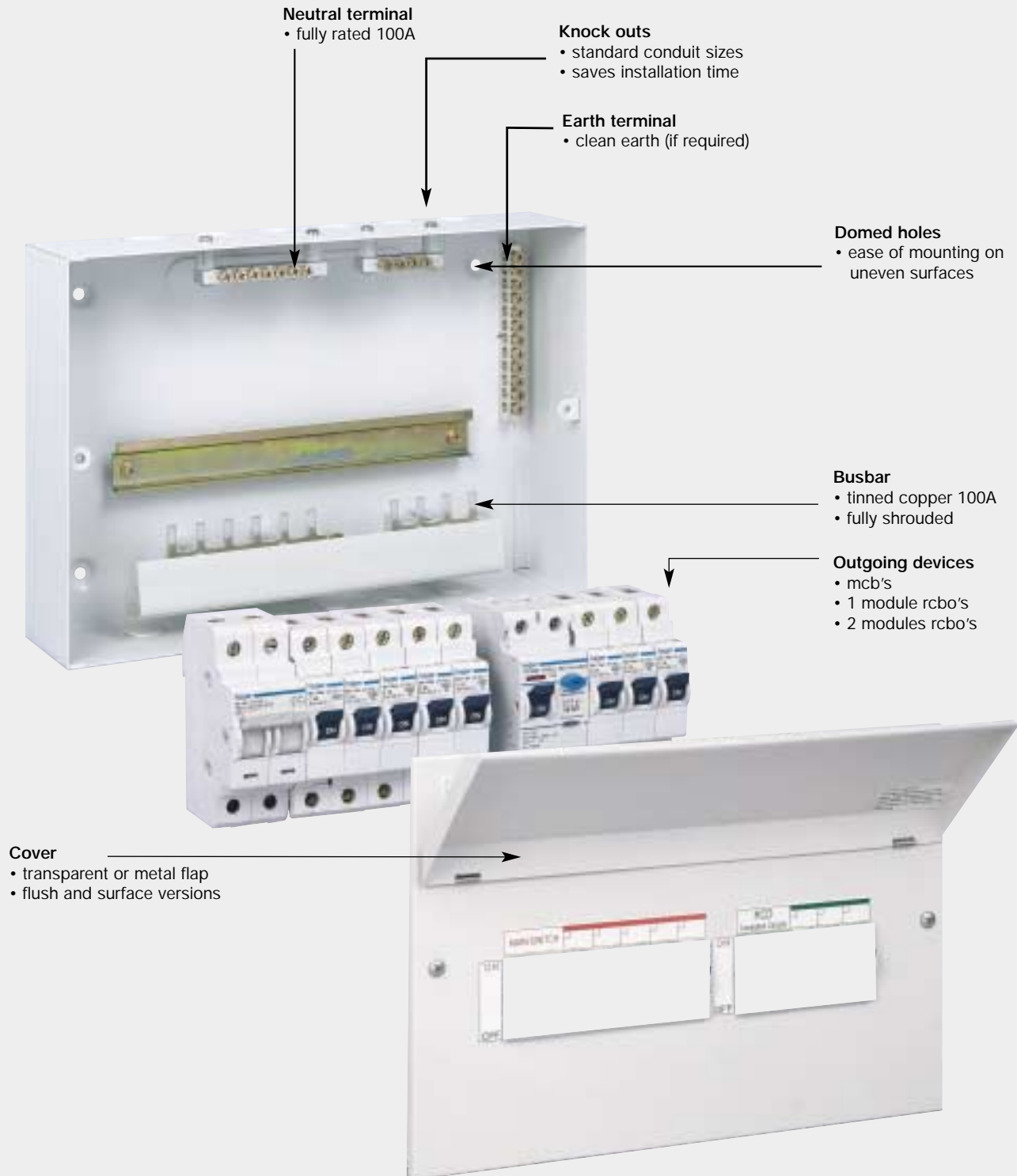
## Invicta consumer units IP41

The metal clad range of consumer units are available with a fixed and split load 100A fully tinned busbar. The units feature either a transparent or metal cover, protecting the devices, and can be supplied as

either a surface or flush mounted option. The 2 pole incomer options can be either a switch disconnecter, RCCB or MCB. The outgoing devices are either MCB's or single / double modules RCBO's.

Blank inserts are available to cover unused ways. All consumer units have standard size knockouts and are delivered with earth bar, neutral bar, busbar shroud and label kit.

The units have been fully ASTA tested and comply with BSEN60439-3 (annexZA).



**Cover**  
 • transparent or metal flap  
 • flush and surface versions

**Neutral terminal**  
 • fully rated 100A

**Knock outs**  
 • standard conduit sizes  
 • saves installation time

**Earth terminal**  
 • clean earth (if required)

**Domed holes**  
 • ease of mounting on uneven surfaces

**Busbar**  
 • tinned copper 100A  
 • fully shrouded

**Outgoing devices**  
 • mcb's  
 • 1 module rcbo's  
 • 2 modules rcbo's

## Invicta consumer units IP41

**Description:**

The metal range of consumer units with fixed tinned busbar offer up to a maximum 16 ways in a fixed load configuration, and 8 + 4 ways in a split load configuration. The incoming and outgoing devices have to be separately selected and fitted by the installer. A neutral & earth terminal is supplied for each outgoing

way and extra earthing terminals for bonding purposes. All options must be internally wired by the contractor.

**Electrical Specification:**

Rated Voltage (Ue) = 240V -  
 Rated Current (In) = 100A  
 Insulation Voltage (Ui) = 6kV  
 Conditional Short Circuit Current = 25kA

**Mechanical Specification:**

Protection Category: IP 41  
 Material 1.25mm CR4: Steel  
 Powder Coated: RAL 9010

**Devices**

incoming:  
 MCB 2P-35mm<sup>2</sup>  
 100A 2P Switch  
 Disconnector - 35mm<sup>2</sup>  
 ≤63A 2P RCCB - 25mm<sup>2</sup>

**Outgoing:**

SP MCB  
 SP RCBO (with flying lead) DP  
 RCBO's (with flying lead)

□ For technical information, see page 74



No. of Outgoing Ways	Surface Cat. Ref.		Flush Cat. Ref.	
	Metal flap	Plastic flap	Metal flap	Plastic flap
4	VT 04SM	VP 04SM	VT 04FM	VP 04FM
6	VT 06SM	-	VT 06FM	-
8	VT 08SM	VP 08SM	VT 08FM	VP 08FM
10	VT 10SM	VP 10SM	VT 10FM	VP 10FM
12	VT 12SM	VP 12SM	VT 12FM	VP 12FM
16	VT 16SM	VP 16SM	VT 16FM	VP 16FM

## Invicta consumer units IP41 split load



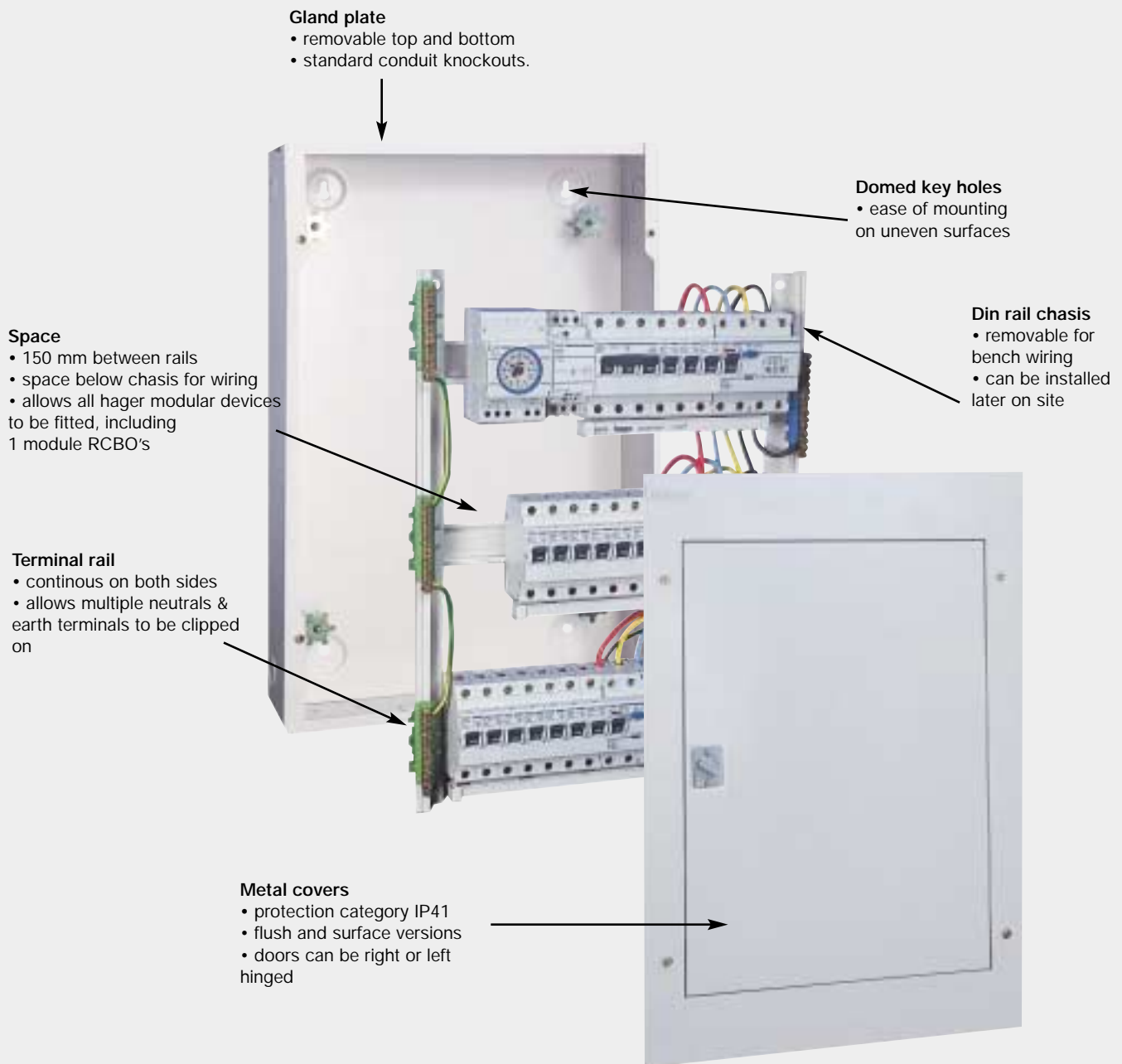
No. of Outgoing Ways			Surface Cat. Ref.		Flush Cat. Ref.	
Split Load	Switch	RCCB	Metal flap	Plastic flap	Metal flap	Plastic flap
4 + 2	4	2	VT 42SM	VP 42SM	VT 42FM	VP 42FM
5 + 3	5	3	VT 53SM	VP 53SM	VT 53FM	VP 53FM
4 + 4	4	4	VT 44SM	VP 44SM	VT 44FM	VP 44FM
7 + 3	7	3	VT 73SM	VP 73SM	VT 73FM	VP 73FM
8 + 4	8	4	VT 84SM	-	VT 84FM	-

## Invicta DIN rail enclosures IP41

Invicta DIN rail distribution boards are available from 1 row to 5 rows of 16 modules per row. The units feature a metal cover with hinged metal doors. The doors can be hinged for right or left opening. A removable DIN rail chassis facilitates wiring of the boards and installation on sites. A continuous rail on each side allows for multiple neutral and earth terminals to be clipped on. The boards can be fitted with all hager modular devices as

incomers and outgoing ways for protection and controls. Invicta DIN rail boards are available for flush and surface mounting. The center distance between rows is 150mm which ensures adequate space for ease of wiring even with all devices fitted. Unused ways can be blanked off for subsequent use. Gland plates are removable and have pre-punched knockouts for ease of installation on sites.

The boards can be vertically and horizontally combined together to form various combinations for extensions and distribution requirements above 5 rows or suited with Type 'B' boards.



## Invicta DIN rail enclosures IP41

**Description:**

The metal range of din rail boards offer 8, 12 & 18 ways on one row, 16, 32, 48, 64 and 80 ways on 2, 3, 4, & 5 rows respectively. On the 8, 12 and 18 way a neutral and earth terminal is supplied for each outgoing way and also extra earth terminals. The multi row enclosures are supplied with

an adjustable din rail frame and earth and neutral terminals have to be selected by the installer. See page 60

**Devices**

Designed to accept all modular devices.

**Mechanical Specification:**

Protection Category: IP 41  
Material: 1.25mm CR4 Steel  
Powder Coated: RAL 9010

☐ For technical information, see page 75



VT 08SD



JK 48FD

	No. of Rows	No.of Modules	Surface Cat. ref.		Flush Cat. ref.	
			Metal flap	Plastic flap	Metal flap	Plastic flap
	1	8	VT 08SD	VP 08SD	VT 08FD	VP 08FD
	1	12	VT 12SD	VP 12SD	VT 12FD	VP 12FD
	1	18	VT 18SD	VP 16SD*	VT 18FD	VP 16FD*
	1	16	JK 16SD	-	JK 16FD	-
	2	32	JK 32SD	-	JK 32FD	-
	3	48	JK 48SD	-	JK 48FD	-
	4	64	JK 64SD	-	JK 64FD	-
	5	80	JK 80SD	-	JK 80FD	-

\* Note : 16 ways maximum

description	qty	Cat. Ref.
-------------	-----	-----------

**Accessories**

Blank Plate 1 Module	1	P 032H
Keylock Kit	1	P 063K

\* For comb busbars refer pages 58-59

## Invicta - TP&N distribution board IP41

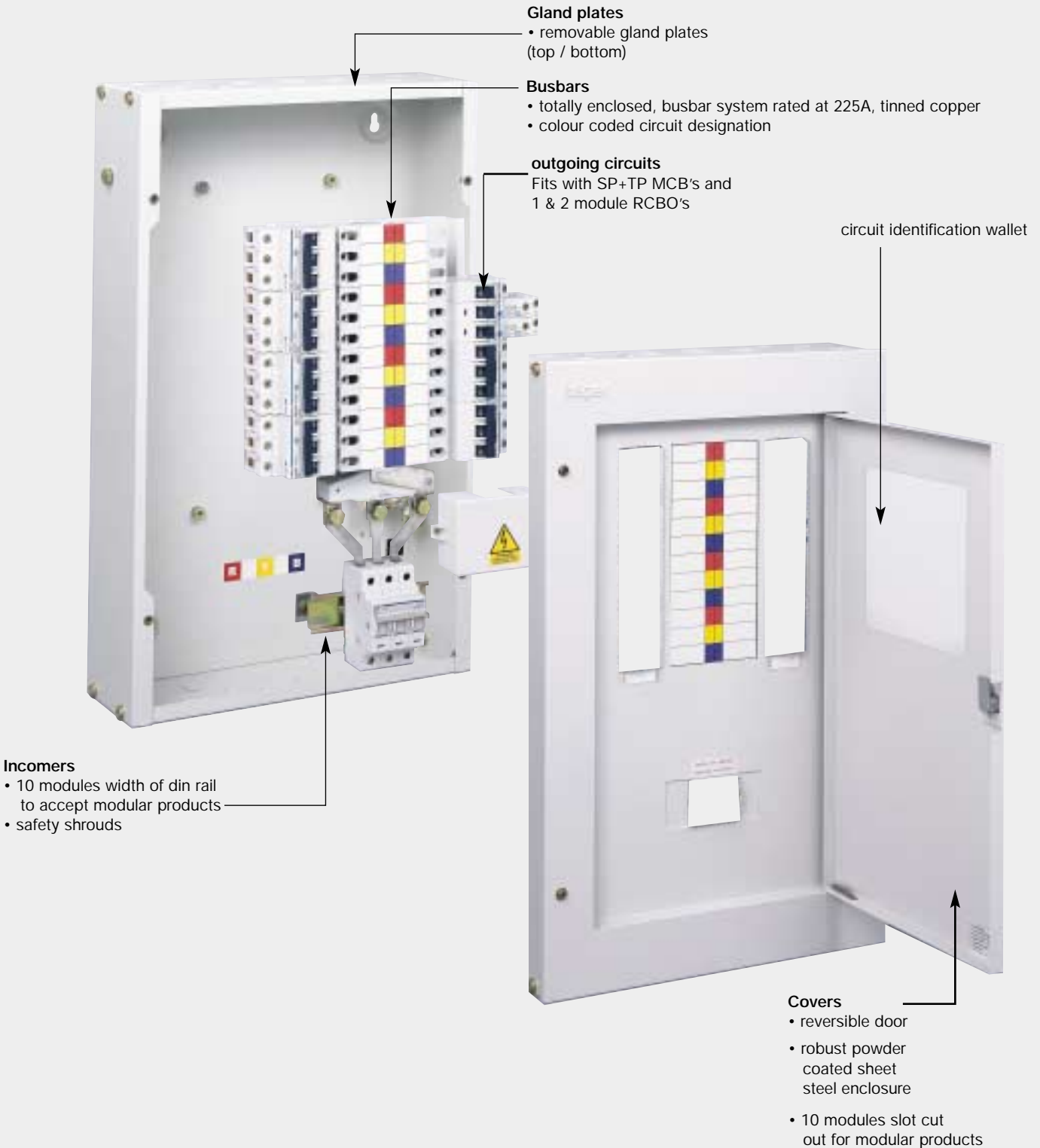
**Description:**

The invicta metal clad range of three phase and neutral distribution boards are available with a fixed load or split load pan assembly. They all have a fully flush fitted metal door with a "slam" type catch. The 100A version comes with a din rail slot, 10 modules wide, to allow the fixing of a 100A, 125A &

160A incomer and various other modular devices. The 200A version has a cut out for the incomer only. All boards are delivered with both Neutral and Earth bars fitted and the neutral is designed to wrap around the incoming device to ensure that extra wiring space is available for the outgoing devices. The incoming device must be

selected and fitted by the installer. The top and bottom gland plates are removable and also include knock-outs to suit standard size conduits. The pan assembly is fully shrouded and the busbars are one piece in design, this ensures that no "hot spots" can occur as there are no mechanical joints. The boards have been designed and

independently tested to the relevant parts of BSEN 60439-1 & 3.





## Invicta - TP&N distribution board IP41

**Description:**

Three Phase and Neutral Type B Distribution Boards are available in 4, 6, 8, 10, 12, 16, 18 or 24 triple pole outgoing ways. The 100A version is supplied complete with a 10 module din rail opening to mount the 100A incoming devices and other hager modular products. The 200A version comes with the opening to mount a 200A switch disconnecter only. All boards are delivered with both Neutral & Earth Bars and can be extended using din rail type extension boxes. All Phase Neutral & Earth bars are fully tinned. The split load version is delivered with

cable and links for internal connection and has a front cut out slot 12 modules wide. All boards are delivered with circuit identification labels.

**Electrical Specification:**

Tested and complies to the relevant parts of BSEN 60439-1 & 3: Electrical Supply: 415V ~ Maximum Continuous Rating: 225A The rating of the board is in accord with the incoming device.  
Unconditional Withstand: 20kA for 0.2s.

**Mechanical Specification:**

Protection Category IP 41  
Material 1.25mm CR4 Steel  
Powder Coated RAL 9010

**Devices**

Incoming:  
100A Switch Disconnecter (50mm<sup>2</sup>)  
125A Switch Disconnecter (M8 bolts)  
160A Switch Disconnecter (M8 bolts)  
200A Switch Disconnecter (M8 bolts)  
Direct Connection (M8 bolts)  
63 or 100 A RCCB (35mm<sup>2</sup>)

**Outgoing:**

SP MCB's  
TP MCB's  
SP RCBO's (with flying lead)  
DP RCBO's (with flying lead)

□ For technical information, see page 76



*Fixed load 160A  
Number of  
TP Ways*

*Surface \*  
Cat. Ref.*

*Flush \*  
Cat. Ref.*

4	JK 04SM	JK 04FM
6	JK 06SM	JK 06FM
8	JK 08SM	JK 08FM
10	JK 10SM	JK 10FM
12	JK 12SM	JK 12FM
16	JK 16SM	JK 16FM
18	JK 18SM	JK 18FM
24	JK 24SM	JK 24FM

\* Delivered with 100A connecting links + protective shrouds.

\* An incoming device must be separately ordered, see page 26.

\* When used with 160A or 125A incoming switch disconnecter or RCCB separate links must be ordered see page 26

\* For 200A version replace suffix 'M' with 'S' i.e. JK 04SS or JK 04FS order 200A switch disconnecter and links from page 26

*Number of  
TP Ways*

*Surface \*  
Cat. Ref.*

*Flush \*  
Cat. Ref.*

**Split load**

4+2	JK 42SM	JK 42FM
4+4	JK 44SM	JK 44FM
6+4	JK 64SM	JK 64FM
6+6	JK 66SM	JK 66FM
8+4	JK 84SM	JK 84FM
8+8	JK 88SM	JK 88FM

\* Delivered with 100A connecting links + protective shrouds

\* An incoming device must be separately ordered, see reference page 26

## Invicta accessories



SB 399



CD 264Z



JK 06SB399 with JK16SD

<i>Designation</i>	<i>Characteristics</i>	<i>No of poles</i>	<i>Pack qty.</i>	<i>Cat. ref.</i>
<b>Incoming devices</b>				
63A switch disconnecter		3	4	<b>SB 363</b>
63A switch disconnecter		4	3	<b>SB 463</b>
100A switch disconnecter		3	4	<b>SB 399</b>
100A switch disconnecter		4	3	<b>SB 499</b>
125A switch disconnecter		3	1	<b>JK 125S</b>
160A switch disconnecter		3	1	<b>JK 160S</b>
200A switch disconnecter		3	1	<b>JK 200S</b>
<b>RCCB's</b>				
30mA 100A RCCB		4	1	<b>CD 485Z</b>
100mA 100A RCCB		4	1	<b>CE 485Z</b>
30mA 63A RCCB		4	1	<b>CD 464Z</b>
100mA 63A RCCB		4	1	<b>CE 464Z</b>
300mA 63A RCCB		4	1	<b>CF 464Z</b>
<b>Incoming link kits</b>				
For SB 499	current : 100A		1	<b>JK 100L</b>
For RCD's	-		1	<b>JK 100R</b>
For 125A switch disconnecter	current : 125A		1	<b>JK 125L</b>
For 160A switch disconnecter	current : 160A		1	<b>JK 160L</b>
For 200A switch disconnecter	current : 200A		1	<b>JK 200L</b>
<b>Extension box for modular devices (for all Invicta TP&amp;N)</b>				
16 mod surface extension box				<b>JK 16SX</b>
16 mod flush extension box				<b>JK 16FX</b>
joint kit for surface extension box				<b>JK 01SK</b>
joint kit for flush extension box				<b>JK 01FK</b>
cable spreader box surface				<b>JK 02SK</b>
cable spreader box flush				<b>JK 02FK</b>

# LFR trunking

**S**imply  
unroll it !

- save space
- save time
- save money



**TEHALIT**

The highways for electricity

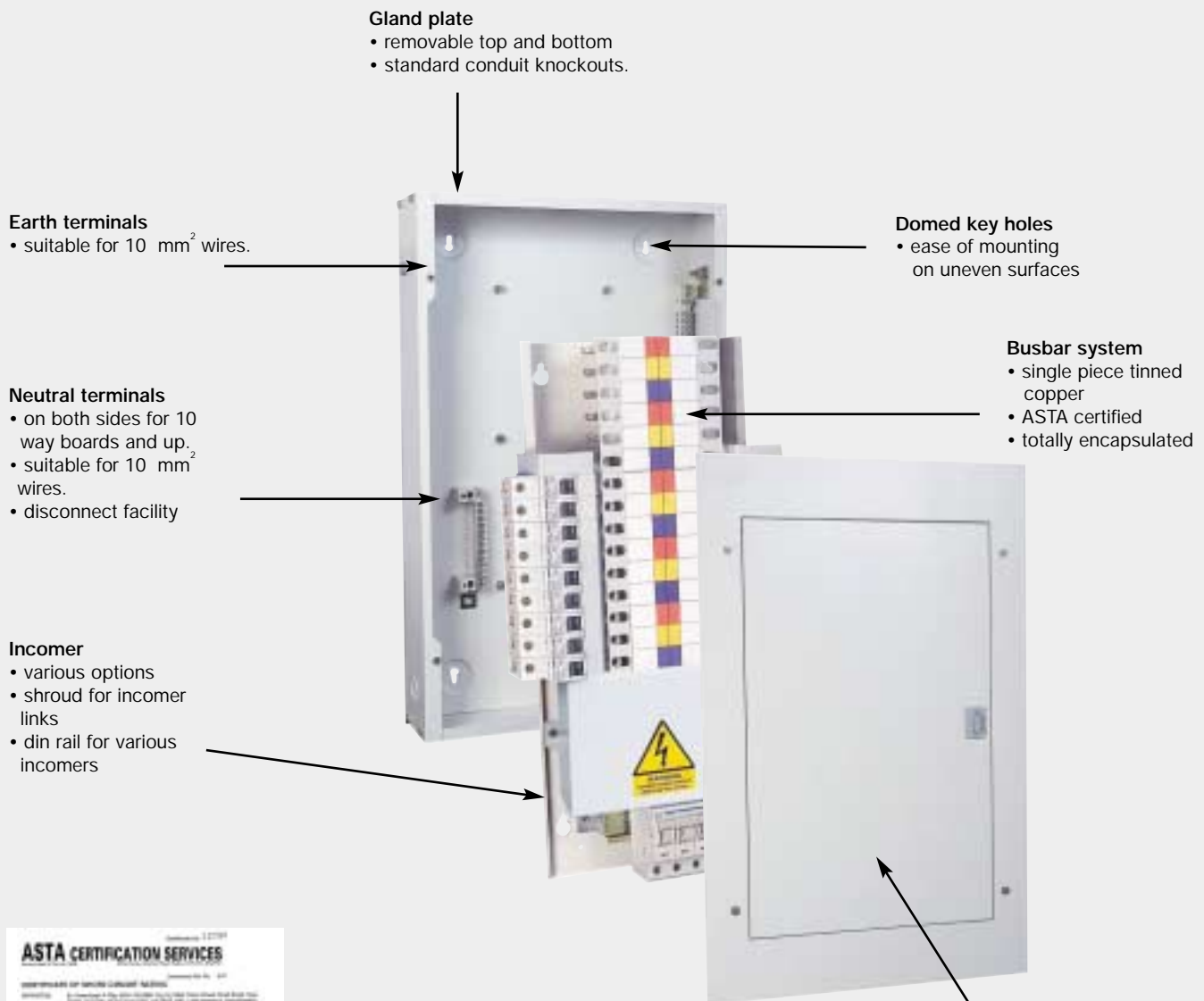
## Invicta TP& distribution boards IP41 with modular devices

Invicta Type 'B' distribution boards are available in eight basic sizes from 4 to 24 TP ways. The units feature a metal back box, ASTA certified encapsulated TP tinned copper busbar pan assembly, metal cover with hinged doors. The doors can be hinged for right or left opening. The busbar pan assembly is removable to

facilitate wiring of the boards and installation on sites. Neutral and earth terminals are provided as standard. The boards come fitted with various hager modular devices as incomer options. All hager MCB's and 1 module RCBO's can be fitted as outgoing. Invicta Type 'B' are available for flush and surface mounting.

Even with all devices fitted the boards have adequate space for ease of wiring. Unused ways can be blanked off for subsequent use. Gland plates are removable and have pre-punched knockouts. The boards can be horizontally and vertically combined with DIN rail boards to form a complete system for installation

of other modular devices like contactors, time switches etc. Invicta Type 'B' boards comply to BS EN 60 439 Pts 1 & 3.



**Gland plate**  
 • removable top and bottom  
 • standard conduit knockouts.

**Earth terminals**  
 • suitable for 10 mm<sup>2</sup> wires.

**Domed key holes**  
 • ease of mounting on uneven surfaces

**Neutral terminals**  
 • on both sides for 10 way boards and up<sub>2</sub>  
 • suitable for 10 mm<sup>2</sup> wires.  
 • disconnect facility

**Busbar system**  
 • single piece tinned copper  
 • ASTA certified  
 • totally encapsulated

**Incomer**  
 • various options  
 • shroud for incomer links  
 • din rail for various incomers

**Metal covers**  
 • protection category IP41  
 • flush and surface versions  
 • doors can be right or left hinged



## Invicta - TP&N distribution board IP41 with isolating switch incomer

Invicta Type 'B' distribution boards feature a metal back box, encapsulated tinned copper busbar pan assembly, metal cover with hinged door. The boards are available in eight sizes from 4 to 24 TP ways with various incomer options. The 225A three phase integrated busbar accepts all hager MCB's and 1 module RCBO's as outgoing devices. Earth and neutral terminals are supplied as standard.

Popular versions are shown below.

For other versions please contact us.

**Technical Characteristics:**  
 Material: Sheet steel  
 1.25mm CR4  
 Colour: Powder coated  
 RAL 9010.  
 Protection Category: IP41  
 Busbar Rating: 225A  
 ASTA Certified  
 Unconditional withstand :  
 20kA for 0.25

For technical information, see page 76

*Order codes for Invicta - TP&N type "B" boards with fitted incomer*

**Surface  
Cat. Ref.**

**Flush  
Cat. Ref.**



JK 10SB399

### Isolating switches

#### SB 399 - 100A TP

4 way  
6 way  
8 way  
10 way  
12 way  
16 way  
18 way  
4 way

<b>JK 04SB399</b>	<b>JK 04FB399</b>
<b>JK 06SB399</b>	<b>JK 06FB399</b>
<b>JK 08SB399</b>	<b>JK 08FB399</b>
<b>JK 10SB399</b>	<b>JK 10FB399</b>
<b>JK 12SB399</b>	<b>JK 12FB399</b>
<b>JK 16SB399</b>	<b>JK 16FB399</b>
<b>JK 18SB399</b>	<b>JK 18FB399</b>
<b>JK 24SB399</b>	<b>JK 24FB399</b>

### Isolating switches

#### JK 125S - 125A TP

4 way  
6 way  
8 way  
10 way  
12 way  
16 way  
18 way  
4 way

<b>JK 04SS125</b>	<b>JK 04FS125</b>
<b>JK 06SS125</b>	<b>JK 06FS125</b>
<b>JK 08SS125</b>	<b>JK 08FS125</b>
<b>JK 10SS125</b>	<b>JK 10FS125</b>
<b>JK 12SS125</b>	<b>JK 12FS125</b>
<b>JK 16SS125</b>	<b>JK 16FS125</b>
<b>JK 18SS125</b>	<b>JK 18FS125</b>
<b>JK 24SS125</b>	<b>JK 24FS125</b>

### Isolating switches

#### JK 160S - 160A TP

4 way  
6 way  
8 way  
10 way  
12 way  
16 way  
18 way  
4 way

<b>JK 04SS160</b>	<b>JK 04FS160</b>
<b>JK 06SS160</b>	<b>JK 06FS160</b>
<b>JK 08SS160</b>	<b>JK 08FS160</b>
<b>JK 10SS160</b>	<b>JK 10FS160</b>
<b>JK 12SS160</b>	<b>JK 12FS160</b>
<b>JK 16SS160</b>	<b>JK 16FS160</b>
<b>JK 18SS160</b>	<b>JK 18FS160</b>
<b>JK 24SS160</b>	<b>JK 24FS160</b>

### Isolating switches

#### JK 200S - 200A TP

4 way  
6 way  
8 way  
10 way  
12 way  
16 way  
18 way  
4 way

<b>JK 04SS200</b>	<b>JK 04FS200</b>
<b>JK 06SS200</b>	<b>JK 06FS200</b>
<b>JK 08SS200</b>	<b>JK 08FS200</b>
<b>JK 10SS200</b>	<b>JK 10FS200</b>
<b>JK 12SS200</b>	<b>JK 12FS200</b>
<b>JK 16SS200</b>	<b>JK 16FS200</b>
<b>JK 18SS200</b>	<b>JK 18FS200</b>
<b>JK 24SS200</b>	<b>JK 24FS200</b>

## Invicta - TP&N distribution board IP41 with MCB incomer

*Order codes for Invicta -  
TP&N type "B" boards with  
fitted incomer*

*Surface  
Cat. Ref.*

*Flush  
Cat. Ref.*

**MCB  
NM 384 - 100A TP 10kA**



JK 08SN384

	<i>Surface Cat. Ref.</i>	<i>Flush Cat. Ref.</i>
4 way	JK 04SN384	JK 04FN384
6 way	JK 06SN384	JK 06FN384
8 way	JK 08SN384	JK 08FN384
10 way	JK 10SN384	JK 10FN384
12 way	JK 12SN384	JK 12FN384
16 way	JK 16SN384	JK 16FN384
18 way	JK 18SN384	JK 18FN384
24 way	JK 24SN384	JK 24FN384

## Invicta - TP&N distribution board IP41 with isolating switch incomer



1 module RCBO's can be installed as outgoing devices

*Order codes for Invicta -  
TP&N type "B" boards with  
fitted incomer*

*Surface  
Cat. Ref.*

*Flush  
Cat. Ref.*

### Residual Current Circuit Breaker

#### CD 441Z - 40A 4P 30mA

4 way  
6 way  
8 way  
10 way  
12 way  
16 way

JK 04SD441	JK 04FD441
JK 06SD441	JK 06FD441
JK 08SD441	JK 08FD441
JK 10SD441	JK 10FD441
JK 12SD441	JK 12FD441
JK 16SD441	JK 16FD441

### Residual Current Circuit Breaker

#### CD 464Z - 63A 4P 30mA

4 way  
6 way  
8 way  
10 way  
12 way  
16 way  
18 way  
24 way

JK 04SD464	JK 04FD464
JK 06SD464	JK 06FD464
JK 08SD464	JK 08FD464
JK 10SD464	JK 10FD464
JK 12SD464	JK 12FD464
JK 16SD464	JK 16FD464
JK 18SD464	JK 18FD464
JK 24SD464	JK 24FD464

### Residual Current Circuit Breaker

#### CE 464Z - 63A 4P 100mA

4 way  
6 way  
8 way  
10 way  
12 way  
16 way  
18 way  
24 way

JK 04SE464	JK 04FE464
JK 06SE464	JK 06FE464
JK 08SE464	JK 08FE464
JK 10SE464	JK 10FE464
JK 12SE464	JK 12FE464
JK 16SE464	JK 16FE464
JK 18SE464	JK 18FE464
JK 24SE464	JK 24FE464

### Residual Current Circuit Breaker

#### CE 485Z - 100A 4P 30mA

4 way  
6 way  
8 way  
10 way  
12 way  
16 way  
18 way  
4 way

JK 04SD485	JK 04FD485
JK 06SD485	JK 06FD485
JK 08SD485	JK 08FD485
JK 10SD485	JK 10FD485
JK 12SD485	JK 12FD485
JK 16SD485	JK 16FD485
JK 18SD485	JK 18FD485
JK 24SD485	JK 24FD485

## Invicta TP& distribution boards IP41 split load with incomers

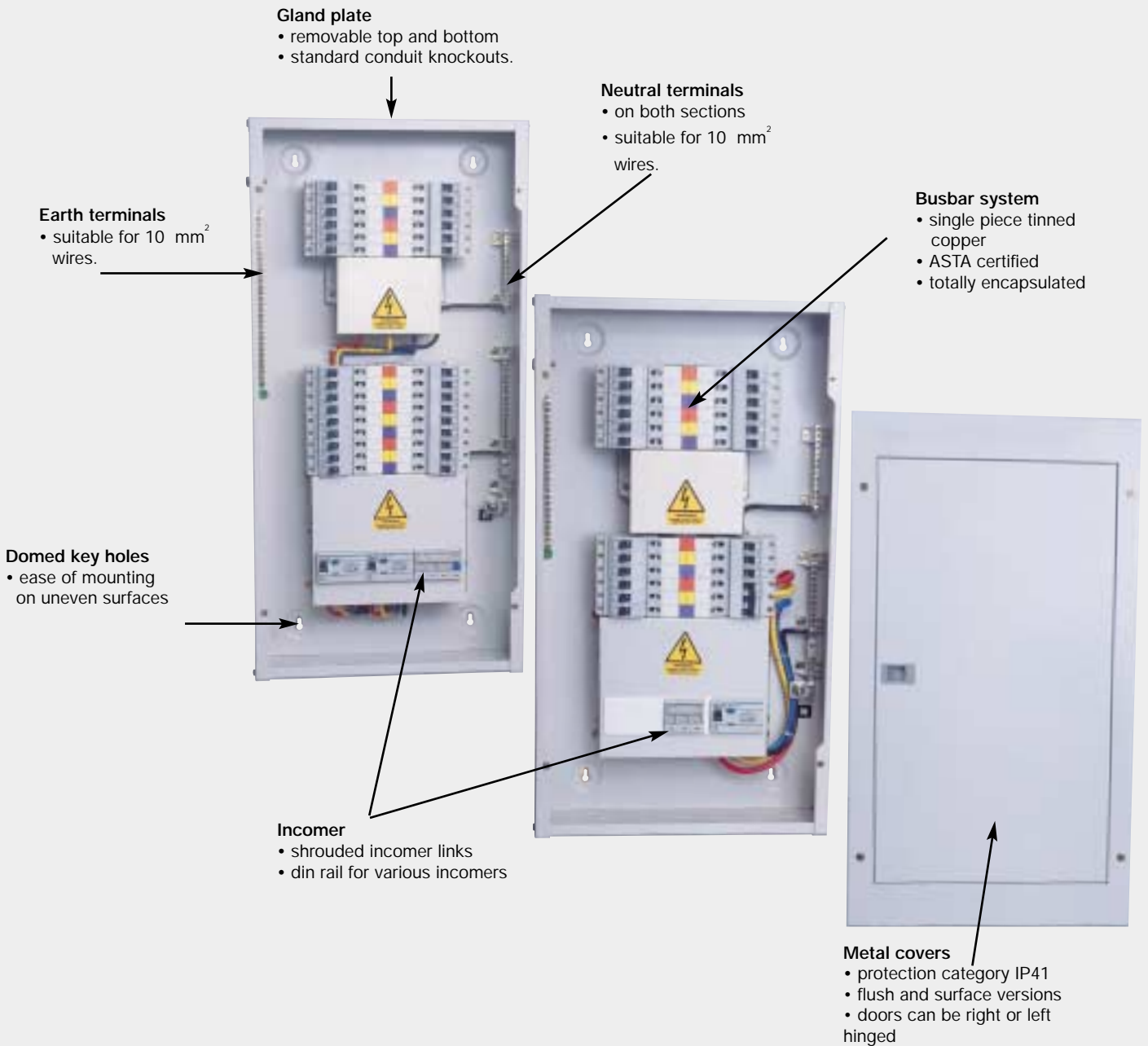
Invicta split busbar distribution boards are available in five sizes. The units feature a metal back box, ASTA certified encapsulated TP tinned copper busbar pan assemblies, metal cover with hinged doors. The doors can be hinged for right or left opening. Standard sizes available are 4+2 TP, 4+4 TP, 6+4 TP, 6+6 TP, 8+4 TP and 8+8TP. Two neutral and one earth terminals are provided as standard. The boards can be equipped with 1 Isolating

Switch and 1 RCCB or 1 Isolating Switch and 2 RCCB's to offer different protection levels. The incomers are shrouded with a specially designed shroud. Hager MCB's can be fitted as outgoing.

Even with all the devices fitted the boards have adequate space for ease of installation and wiring on site. Unused outgoing ways can be blanked off for subsequent use. Gland plates are removable and have

pre-punched knockouts.

The boards can be horizontally suited with DIN rail boards to form a complete system for installation of modular devices like contactors, timers etc. Alternatively, a top extension box with DIN rail can be installed. Invicta split boards comply to BS EN 60 439 Pts 1 & 3.





## Invicta TP& distribution boards IP41 with MCCB incomer

Invicta MCCB incomer distribution boards are available in 6 sizes with 125A frame MCCB's and 4 sizes with 225A frame MCCB's. The units feature a metal back box, ASTA certified encapsulated TP tinned copper busbar (225A) pan assemblies and metal cover with hinged doors. The doors can be hinged for right or left opening. Neutral and earth terminals are provided as standard. The boards can be equipped with MCCB's of different breaking

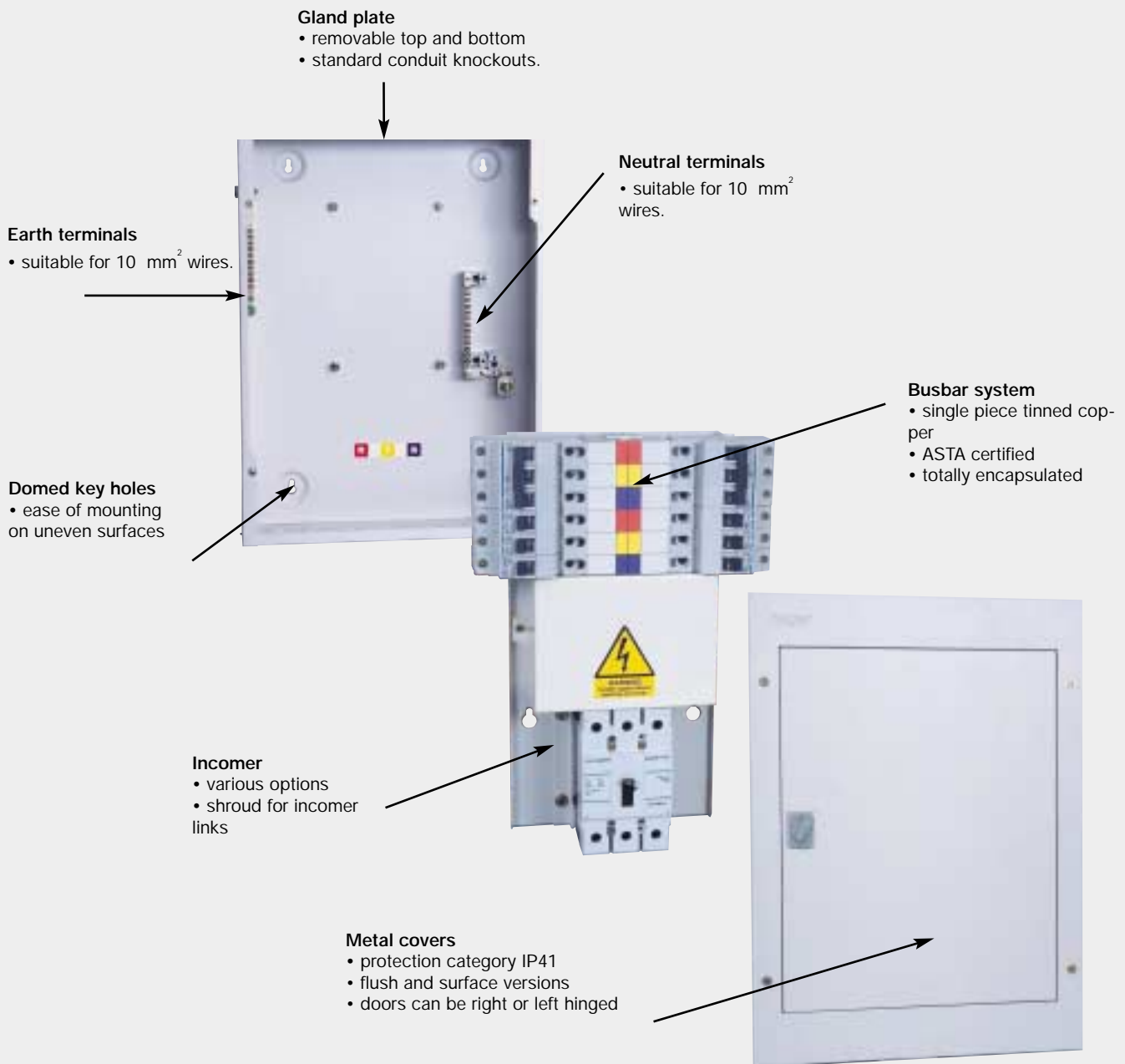
capacities and ratings (same frame) to offer various incomer options to match the site requirements. The incomers are shrouded with a specially designed shroud. All hager MCB's and RCBO's can be fitted as outgoing.

Even with all the devices fitted the boards have adequate space for ease of installation and wiring on site. Gland plates are removable and have pre-punched knockouts.

The boards can be horizontally combined with DIN rail boards to form a complete system for installation of modular devices like contactors, timers etc.

Alternatively, a top extension box with DIN rail can be installed.

Invicta MCCB Incomer boards comply with BS EN 60 439 Pts 1 & 3.



## Invicta - TP&N distribution board IP41 split load with incomers

Invicta split busbar distribution boards are installed in areas where RCCB protection for selective circuits is necessary. They are available in five sizes. The design of Invicta split busbar boards allows many arrangement of the incoming devices to be produced to meet specific customer requirements. Two of the most specified versions are shown below with unique order codes. For other versions please contact us.

**Technical Characteristics:**  
Material: Sheet Steel 1.25mm CR4  
Colour: Epoxy Powder Coated RAL 9010.  
Protection Category: IP41  
Busbar Rating 225A ASTA Certified.  
Unconditional withstand : 20kA for 0.25

□ For technical information, see page 77



JK 06SD450



JK 16SH558

Designation	Number of TP ways	Surface Cat. Ref.	Flush Cat. ref.
<b>125A frame MCCB incomer</b>	Incomer 125A 18kA TP MCCB HD 450	4	JK 04SD450 JK 04FD450
		6	JK 06SD450 JK 06FD450
		8	JK 08SD450 JK 08FD450
		10	JK 10SD450 JK 10FD450
		12	JK 12SD450 JK 12FD450
		16	JK 16SD450 JK 16FD450
	Incomer 100A 25kA TP MCCB HD 449	4	JK 04SH449 JK 04FH449
		6	JK 06SH449 JK 06FH449
		8	JK 08SH449 JK 08FH449
		10	JK 10SH449 JK 10FH449
12		JK 12SH449 JK 12FH449	
16		JK 16SH449 JK 16FH449	
<b>225A frame MCCB incomer</b>	Incomer 160A 25kA TP MCCB HH 551	8	JK 08SH551 JK 08FH551
		10	JK 10SH551 JK 10FH551
		12	JK 12SH551 JK 12FH551
		16	JK 16SH551 JK 16FH551
	Incomer 200A 25kA TP MCCB HH 552	8	JK 08SH552 JK 08FH552
		10	JK 10SH552 JK 10FH552
		12	JK 12SH552 JK 12FH552
		16	JK 16SH552 JK 16FH552
	Incomer 225A 25kA TP MCCB HH 558	8	JK 08SH558 JK 08FH558
		10	JK 10SH558 JK 10FH558
		12	JK 12SH558 JK 12FH558
		16	JK 16SH558 JK 16FH558

**Metal enclosures  
Orion IP65**



**Choices of equipment :**



Plain mounting plate



Perforated mounting plate



Chassis kits for modular devices



**Polyester enclosures  
Orion IP65**



**The IP 65 Orion enclosures**

These Orion enclosures are of monobloc construction available in metal or glass fibre reinforced polyester ( GRP).

They constitute a range of over 50 enclosures of heights 300 to 2050 mm and up to 850 mm wide.

These enclosures are flexible and can be used for different types of equipment with a choice of :

- plain or perforated mounting plates
- DIN rail modular chassis kits

These enclosures allow :

- installation of automation products for the control of machines or small processes
- installation of non modular products such as contactors, transformers, etc...
- cable termination and distribution

**Mounting plates**

Available in various sizes for installation of non modular equipment.

They can be fixed directly to the back of the enclosure or the depth can be adjusted depending on the equipment.

**Modular chassis**

Available in 8 sizes from 2 to 6 row making up to 228 I.

Designed for easy mounting of modular equipment. The chassis can be both demounted and tilted.

Are supplied complete with front cover and must be used with depth adjustment slides.

# Orion general purpose enclosures IP65

## Selection chart

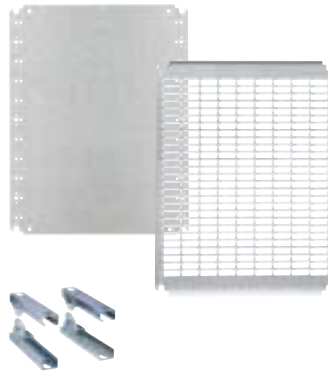
Orion metal enclosures



Orion polyester enclosures



mounting plates plain or perforated



Equipment kits for modular devices



dimensions of enclosures in mm			Orion metal enclosures	Orion polyester enclosures	plain mounting plates	perforated mounting plates	depth adjustment slides	equipment kit for modular devices	capacity		blank front cover
height	width	depth	IP 65, $\pm$	IP 65, $\square$					in	row	
300	250	160	FL 01A	FL 01B	FL 41G	FL 41P	FL 51Z	-	-	-	-
350	300	160	FL 02A	FL 02B	FL 42G	FL 42P	FL 52Z	FL 02M	20	2	FL 02Z
		200	FL 03A	-							
500	300	200	FL 04A	FL 04B	FL 44G	FL 44P	FL 53Z	FL 04M	30	3	FL 03Z
		400	FL 05A	FL 05B	FL 45G	FL 45P					
650	400	200	FL 06A	FL 06B	FL 46G	FL 46P	FL 53Z	FL 06M	64	4	FL 04Z
		250	FL 07A	-							
650	500	250	FL 08A	FL 08B	FL 48G	FL 48P		FL 08M	88		FL 04Z
800	600	300	FL 09A	FL 09B	FL 49G	FL 49P	FL 54Z	FL 09M	130	5	FL 05Z
950	600	300	FL 10A	-	FL 50G	FL 50P	FL 54Z	FL 10M	156	6	FL 06Z
		800	FL 11A	-	FL 51G	FL 51P					
1150	850	300	-	FL 12B	FL 56G	-	FL 55Z	-	-	-	-
1450	850	300	-	FL 14B (1)	FL 54G (upper part) + FL 55G (bottom part)	-		-	-	-	-
1750	850	300	-	FL 15B (1)	FL 54G (upper part) + FL 56G (bottom part)	-		-	-	-	-
2050	850	300	-	FL 16B (1)	FL 55G (upper part) + FL 56G (bottom part)	-		-	-	-	-

(1) enclosure equipped with 2 superposed doors

## Orion metal enclosures IP65



FL 05A

Orion steel enclosures IP rating IP65 according to IEC529. - IK10 earthed, isolation class I. Earthing bolts on both body and door. Removable gland plate at the bottom, made out of metal. gasket directly molded on the door.

Plain door equipped with one or two locks with triangular or double bit centres, located out of the sealed area. Reversible door, easily removable for drilling. 4 studs in the back of the body for mounting plate fastening.

colour RAL 7032

For technical information, see page 78

<i>Designation</i>	<i>Dimensions (H x W x D)</i>	<i>Pack qty</i>	<i>Cat. Ref.</i>
<b>Orion steel enclosure with plain door &amp; triangular centres</b>	300 x 250 x 160	1	FL 01A
	350 x 300 x 160	1	FL 02A
	350 x 300 x 200	1	FL 03A
	500 x 300 x 200	1	FL 04A
	500 x 400 x 200	1	FL 05A
	650 x 400 x 200	1	FL 06A
	650 x 400 x 250	1	FL 07A
	650 x 500 x 250	1	FL 08A
	800 x 600 x 300	1	FL 09A
	950 x 600 x 300	1	FL 10A
	950 x 800 x 300	1	FL 11A
<b>Orion steel enclosure with plain door &amp; mounting plate &amp; double bit centres</b>	300 x 250 x 160	1	FL 31A
	350 x 300 x 160	1	FL 32A
	350 x 300 x 200	1	FL 33A
	500 x 300 x 200	1	FL 34A
	500 x 400 x 200	1	FL 35A
	650 x 400 x 200	1	FL 36A
	650 x 400 x 250	1	FL 37A
	650 x 500 x 250	1	FL 38A
	800 x 600 x 300	1	FL 39A
	950 x 600 x 300	1	FL 40A
	950 x 800 x 300	1	FL 41A
<b>Orion steel enclosure with glazed door &amp; triangular centres</b>	350 x 300 x 160	1	FL 52A
	350 x 300 x 200	1	FL 53A
	500 x 300 x 200	1	FL 54A
	500 x 400 x 200	1	FL 55A
	650 x 400 x 200	1	FL 56A
	650 x 400 x 250	1	FL 57A
	650 x 500 x 250	1	FL 58A
	800 x 600 x 300	1	FL 59A
	950 x 600 x 300	1	FL 60A
	950 x 800 x 300	1	FL 61A



FL 05A



FL 08A



FL 92Z



FL 80Z

FL 95Z



FL 85Z

### Accessories

key lock, all metal enclosures and GRP h ≤ 800	1	FL 92Z
key lock GRP enclosures h ≥ 1150	1	FL 98Z
square 8mm centre lock	2	FL 80Z
double bit 3mm centre lock	2	FL 95Z
spray paint - RAL7032		FZ 793
set of four metallic wall fixing brackets	1 set	FL 85Z

## Orion polyester enclosures IP65



FL 08B

Orion polyester enclosure IP65 made of glass reinforced polyester (GRP) except enclosure (300 x 250 x 160) made of polycarbonate IP65 according to IEC 529 isolation class II according to IEC 536. IK10 Body made out of one piece (up to height 800mm)

Canopies on top and bottom plain or glazed door equipped with one or two locks

2 doors one on top the other beginning at height 1450mm Door easily removable for drilling. Gasket directly molded on the doors. 4 fixing bolts in the back of the enclosure for mounting plate

fastening colour RAL 7032

□ For technical information, see page 79

Designation	Dimensions (H x W x D)	Pack qty	Cat. Ref.
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FL 08B

<b>Orion polyester enclosure with plain door &amp; triangular centres</b>	300 x 250 x 160	1	FL 01B
	350 x 300 x 160	1	FL 02B
	500 x 300 x 200	1	FL 04B
	500 x 400 x 200	1	FL 05B
	650 x 400 x 200	1	FL 06B
	650 x 500 x 250	1	FL 08B
	800 x 600 x 300	1	FL 09B
	1150 x 850 x 300	1	FL 12B
	1450 x 850 x 300*	1	FL 14B
	1750 x 850 x 300*	1	FL 15B
2050 x 850 x 300*	1	FL 16B	



FL 14B

<b>Orion polyester enclosure with plain door &amp; mounting plate &amp; double bit centres</b>	300 x 250 x 160	1	FL 31B
	350 x 300 x 160	1	FL 32B
	500 x 300 x 200	1	FL 34B
	500 x 400 x 200	1	FL 35B
	650 x 400 x 200	1	FL 36B
	650 x 500 x 250	1	FL 38B
800 x 600 x 300	1	FL 39B	

<b>Orion polyester enclosure with glazed door &amp; triangular centres</b>	350 x 300 x 160	1	FL 52B
	500 x 300 x 200	1	FL 54B
	500 x 400 x 200	1	FL 55B
	650 x 400 x 200	1	FL 56B
	650 x 500 x 250	1	FL 58B
	800 x 600 x 300	1	FL 59B
1150 x 850 x 300	1	FL 60B	

### Accessories



FL 92Z

key lock, all metal enclosures and GRP h ≤ 800	1	FL 92Z
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key lock GRP enclosures h ≥ 1150	1	FL 98Z
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square 8mm centre lock	2	FL 81Z
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double bit 3mm centre lock	2	FL 97Z
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spray paint - RAL7032		FZ 793
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FL 81Z




FL 97Z

set of four polyester wall fixing brackets	1 set	FL 86Z
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FL 86Z

\* enclosures with 2 doors

	<i>Designation</i>		<i>Pack qty</i>	<i>Cat. Ref.</i>		
 <p>FL 45G</p>	<b>Plain mouting plate, steel sheet 2mm thickness, alu zincked for enclosure...</b>	height 300 and width 250mm	1	FL 41G		
		height 350 and width 300mm	1	FL 42G		
		height 500 and width 300mm	1	FL 44G		
		height 500 and width 400mm	1	FL 45G		
		height 650 and width 400mm	1	FL 46G		
		height 650 and width 500mm	1	FL 48G		
		height 800 and width 600mm	1	FL 49G		
		height 950 and width 600mm	1	FL 50G		
		height 950 and width 800mm	1	FL 51G		
		height 1150 and width 850mm	1	FL 56G		
		height 1450 and width 850mm, upper part				
		height 1450 and width 850mm, bottom part	1	FL 55G		
		height 1750 and width 850mm, bottom part	1	FL 56G		
		 <p>FL 45P</p>	<b>Perforated mouting plate, metallic zincked 2mm thickness for enclosure...</b>	height 300 and width 250mm	1	FL 41P
height 350 and width 300mm	1			FL 42P		
height 500 and width 300mm	1			FL 44P		
height 500 and width 400mm	1			FL 45P		
height 650 and width 400mm	1			FL 46P		
height 650 and width 500mm	1			FL 48P		
height 800 and width 600mm	1			FL 49P		
height 950 and width 600mm	1			FL 50P		
height 950 and width 800mm	1			FL 51P		
M5 clip nut for perforated plate	25			UC 969		
 <p>FL 05M</p>	<b>Chassis for modular devices*</b>			height 350 and width 300mm 2 row of 10 modules	1	FL 02M
		height 500 and width 300mm 3 row of 10 modules	1	FL 04M		
		height 500 and width 400mm 3 row of 16 modules	1	FL 05M		
		height 650 and width 400mm 4 row of 16 modules	1	FL 06M		
		height 650 and width 500mm 4 row of 22 modules	1	FL 08M		
		height 800 and width 600mm 5 row of 26 modules	1	FL 09M		
		height 950 and width 600mm 6 row of 26 modules	1	FL 10M		
		height 950 and width 800mm 6 row of 38 modules	1	FL 11M		
		* must be used with depth adjustment slides				
		 <p>FL 04Z</p>	<b>Blank front cover for modular chassis</b>	for enclosure width 300mm	4	FL 02Z
				for enclosure width 400mm	4	FL 03Z
for enclosure width 500mm	4			FL 04Z		
for enclosure width 600mm	4			FL 05Z		
for enclosure width 800mm	4			FL 06Z		
 <p>FL 52Z</p>	<b>Depth adjustment slides for Orion enclosures</b>	for enclosure depth 160mm (set of 4 pieces)	1	FL 51Z		
		for enclosure depth 200mm (set of 4 pieces)	1	FL 52Z		
		for enclosure depth 250mm (set of 4 pieces)	1	FL 53Z		
		for enclosure depth 300mm (set of 4 pieces)	1	FL 54Z		
		for polyester enclosure, height Δ 1150mm (set of 4 pieces)	1	FL 55Z		

## Metal enclosure IP65 Monaco plus

- IP65
- colour grey RAL 7032
- monobloc enclosure
- versions:
  - wall mounting
  - floor standing
  - electro-zinc coated sheet metal thickness 15/10
  - inside fittings for mounting plates, tiltable chassis, internal door
  - door with continuous expanded polyurethane seal, watertight lock, four closure points
- cable entrances on top and bottom
- wall fixing by means of brackets (ref. 17499 )
- epoxy polyester textured powder paint thickness 80 micron
- installation in harsh or risky environments in case of fire acc. to IEC 64-8/7 and AD-FT environments to IEC 64-2 IV edition

□ For technical information, see page 71







## Equipment examples Monaco plus

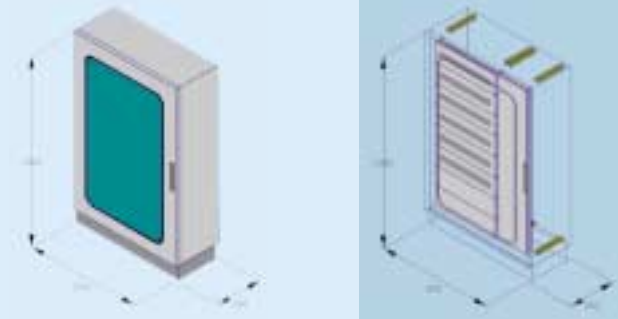
After having identified the field of application and the type of installation for the enclosure the choice of the size will be made according to the equipment which will be installed.

The references can be easily chosen from the selection chart pages 36 - 37

### Example of distribution enclosure with Monaco plus IP65 :

	<i>Reference</i>	<i>Quantity</i>	<i>Description</i>	
<b>Phase 1:</b> choice of the enclosure	<b>17475</b>	1	Monaco plus with transp.door	
	<b>17491</b>	1	plinth for Monaco plus	
<b>Phase 2 :</b> choice of the equipment	<b>17644</b>	1	internal chassis frame	
	<b>17584</b>	1	internal door	
	<b>16367</b>	6	modular kit	
	<b>16377</b>	2	plain plastic cover	
	<b>17674</b>	2	depth adjustment slides	

View of the completed enclosure :





## Equipment examples Monaco plus

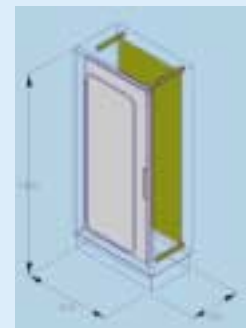
After having identified the field of application and the type of installation for the enclosure the choice of the size will be made according to the equipment which will be installed.

The references can be easily chosen from the selection chart pages 36 - 37

### Example of automation application with Monaco plus IP65 :

	<i>Reference</i>	<i>Quantity</i>	<i>Description</i>	
<b>Phase 1:</b> choice of the enclosure	<b>17470</b>	1	Monaco plus with transp.door	
	<b>17490</b>	1	plinth for Monaco plus	
<b>Phase 2 :</b> choice of the equipment	<b>17514</b>	1	plain metal mounting plate	
	<b>17594</b>	1	internal door	
	<b>17674</b>	1	depth adjustment slides	
	<b>17678</b>	1	brackets	

View of the completed enclosure :





## Selection chart General purpose enclosures Monaco plus IP65

Internal dimensions				Plain mounting plates (a)	Internal metal door (b)	Internal chassis frame (b)
Width b mm	Height h mm	Width b mod. 250mm	Height h mod. 150mm			
250	1200	1	8	17504	17584	-
250	1500	1	10	17506	17586	-
250	1800	1	12	17508	17588	-
500	1200	2	8	17514	17594	17644
500	1500	2	10	17516	17596	17646
500	1800	2	12	17518	17598	17648
750	1200	3	8	17524	17604	17654
750	1500	3	10	17526	17606	17656
750	1800	3	12	17528	17608	17658

(a) to be fixed on depth adjustment slides ref. 17674 together with brackets ref. 17678

(b) to be fixed on depth adjustment slides ref. 17674 with specific supplied brackets

Plastic front covers with cutout & Din rails		Plastic front cover plain	Metal front cover plain	Metal plates for equipment mounting	Din rails for equipment mounting	
Height 1 mod. 150	Number of modules	Height 1 mod. 150	Height 2 mod. 150	Height 2 mod. 150		
-	-	-	-	-	16500	16505
-	-	-	-	-	16500	16505
-	-	-	-	-	16500	16505
16367	24+1	16377	16387	16397	16542	16546
16367	24+1	16377	16387	16397	16542	16546
16367	24+1	16377	16387	16397	16542	16546
16365	36+2	16375	16385	16395	16504	16509
16365	36+2	16375	16385	16395	16504	16509
16365	36+2	16375	16385	16395	16504	16509

## Monaco plus IP65 metal enclosure



17450






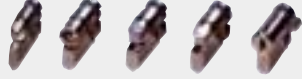
<i>Height</i>	<i>Width x Depth</i>	<i>Pack qty</i>	<i>Cat. Ref.</i>
<b>Enclosure with plain door height 1300mm 8 mod 150mm</b>	600 x 350mm 2 mod. 250mm	1	<b>17450</b>
	850 x 350mm 3 mod. 250mm	1	<b>17455</b>
<b>Enclosure with plain door height 1600mm 10 mod 150mm</b>	600 x 350mm 2 mod. 250mm	1	<b>17452</b>
	850 x 350mm 3 mod. 250mm	1	<b>17456</b>
<b>Enclosure with plain door height 1900mm 12 mod 150mm</b>	600 x 350mm 2 mod. 250mm	1	<b>17454</b>
	850 x 350mm 3 mod. 250mm	1	<b>17458</b>



17470

<b>Enclosure with transparent door height 1300mm 8 mod 150mm</b>	600 x 350mm 2 mod. 250mm	1	<b>17470</b>
	850 x 350mm 3 mod. 250mm	1	<b>17475</b>
<b>Enclosure with transparent door height 1600mm 10 mod 150mm</b>	600 x 350mm 2 mod. 250mm	1	<b>17472</b>
	850 x 350mm 3 mod. 250mm	1	<b>17476</b>
<b>Enclosure with transparent door height 1900mm 12 mod 150mm</b>	600 x 350mm 2 mod. 250mm	1	<b>17474</b>
	850 x 350mm 3 mod. 250mm	1	<b>17478</b>

For technical information,  
see page 80

	<i>Height</i>	<i>Designation</i>	<i>Pack qty.</i>	<i>Cat. Ref.</i>	
 <p>17490</p>	height : 100mm	<b>Plinth</b> for enclosures width 600mm	1	<b>17490</b>	
		850mm	1	<b>17491</b>	
 <p>17674</p>		<b>Depth adjustment slides</b> 4 slides	5	<b>17674</b>	
		in galvanised metal to be fixed on sides and bottom of the enclosure to fix internal door, mounting plates, tiltable chassis			
 <p>17678</p>		<b>Brackets</b> set of 4	10	<b>17678</b>	
		to fix plain mounting plates on depth adjustment slides			
 <p>17499</p>		<b>Wall fixing brackets</b> set of 4 brackets	10	<b>17499</b>	
		in galvanised metal			
 <p>17680</p>		<b>Door handle</b>	5	<b>17680</b>	
		without lock insert			
 <p>17684 - 17685 - 17686 17687 - 17688</p>		<b>Lock inserts</b> triangular 8mm	5	<b>17684</b>	
		for door handle	double bit 3mm centre lock	5	<b>17685</b>
		square 8 x 8mm	5	<b>17686</b>	
		square 6x 6mm	5	<b>17687</b>	
		key lock	5	<b>17688</b>	

For technical information, see page 81-83

**FW metal enclosures IP43**



FW 52

**distribution enclosures**  
 - extra slim depth 140 mm  
 - insulation class : II - IP43

3 to 6 rows, 1 to 4 sections,  
 from 36 to 288 I  
 for distribution < 125A in  
 commercial installations  
 for modular devices on DIN rails,  
 max. depth 96mm, shoulder  
 measur. 47mm

**ingress protection :**  
 IP43 to IEC 529

class II , additional internal  
 insulation by polystyrene plates  
 (P.S.), glow wire test 960°C  
 extinguishing = 5 sec.

rated insulated voltage :  
 Ui : 400 V ~  
 In : 125A – three phase 380V ~

- enclosure manufactured from sheet metal
- colour RAL 9002
- polyester front covers width 1 section
- 12 modules per row
- 125 mm between DIN rails
- 63 A connection assembly with earth and neutral bar in each section

- options :**
- trimming frame
  - lock with key
  - separators
  - connection assembly TP+N 63A
  - sealing kit

For technical information, see page 84



FW 51

Designation	width x depth	Number of sections	Pack qty.	Cat. Ref.
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**Height 500mm**

1 x 3 rows, 36 I	300 x 140mm	1	1	FW 31
2 x 3 rows, 72 I	550 x 140mm	2	1	FW 32
3 x 3 rows, 108 I	800 x 140mm	3	1	FW 33
4 X 3 rows, 144 I	1050 x 140mm	4	1	FW 34

**Height 650mm**

1 x 4 rows, 48 I	300 x 140mm	1	1	FW 41
2 x 4 rows, 96 I	550 x 140mm	2	1	FW 42
3 x 4 rows, 144 I	800 x 140mm	3	1	FW 43
4 X 4 rows, 192 I	1050 x 140mm	4	1	FW 44



FW 52







**Height 800mm**

1 x 5 rows, 60 I	300 x 140mm	1	1	FW 51
2 x 5 rows, 120 I	550 x 140mm	2	1	FW 52
3 x 5 rows, 180 I	800 x 140mm	3	1	FW 53
4 X 5 rows, 240 I	1050 x 140mm	4	1	FW 54

**Height 950mm**

1 x 6 rows, 72 I	300 x 140mm	1	1	FW 61
2 x 6 rows, 144 I	550 x 140mm	2	1	FW 62
3 x 6 rows, 216 I	800 x 140mm	3	1	FW 63
4 X 6 rows, 288 I	1050 x 140mm	4	1	FW 64

## Accessories - FW metal enclosures

	<i>Designation</i>	<i>Characteristics</i>	<i>Pack qty</i>	<i>Cat. Ref.</i>
 F 010	<b>Connection assembly TP + N 63A</b>	3 x (1 x 25 + 2 x 16 + 3 x 10) N : 1 X 25 + 3 X 16 + 7 X 10	1	<b>F 010</b>
		to be fitted on the uprights of the 1 section wide chassis		
 UT 22B	<b>Lowered DIN rail</b>	width 1 section of 12I	1	<b>UT 22B</b>
		lowered by 21 mm for terminals or devices bigger than 47 mm with a shoulder measurement = 68 mm		
 FZ 403	<b>Cable entry plate replacement</b>		1	<b>FZ 403</b>
	<b>Lock</b>	with 2 key, for retrofitting	1	<b>FZ 597</b>
 FZ 597	<b>Plastic lock replacement</b>		1	<b>FZ 598</b>
	<b>Transparent door</b>	for enclosures FW 42N only for 2 sections enclosures FW 52N width 550 mm	1 1	<b>FZ 104</b> <b>FZ 106</b>
 FZ 598	<b>Blanking</b>	strip of 12I with fi modules premarked	10	<b>P 012</b>
		strip of 18I ,lockable premarked for 10, 12 and 18I	10	<b>JP 015</b>
 FZ 104	<b>Separators</b>	vertical, for enclosure height :	500mm 1 650mm 1 800mm 1 950mm 1	<b>UT 44A</b> <b>UT 44B</b> <b>UT 44C</b> <b>UT 44D</b>
		to separate internally either sections (vertical) or rows (horizontal )	horizontal, width 1 section 1	<b>UT 44E</b>

	<i>Designation</i>	<i>Height</i>	<i>Width</i>	<i>Section</i>	<i>Cat. Ref.</i>
 FZ 307	<b>Trimming frame for flush mounting</b>	adjustment to level of plaster surface : 45mm max.		300	FW 31 <b>FZ 301</b>
				550	FW 32 <b>FZ 302</b>
				800	FW 33 <b>FZ 303</b>
				1050	FW 34 <b>FZ 304</b>
				300	FW 41 <b>FZ 306</b>
				550	FW 42 <b>FZ 307</b>
				800	FW 43 <b>FZ 308</b>
				1050	FW 44 <b>FZ 309</b>
				300	FW 51 <b>FZ 311</b>
				550	FW 52 <b>FZ 312</b>
				800	FW 53 <b>FZ 313</b>
				1050	FW 54 <b>FZ 314</b>
				300	FW 61 <b>FZ 316</b>
				550	FW 62 <b>FZ 317</b>
800	FW 63 <b>FZ 318</b>				
1050	FW 64 <b>FZ 319</b>				



## The Vega D system of enclosures

The Vega D enclosures are made for electrical installation up to 160A.

3 types of enclosures are available :

- surface mounting IP4,
- surface mounting IP5.
- flush mounting IP4,

The surface and flush mounting enclosures are available in two configurations :

- modular distribution enclosure
- enclosure to be completed

The IP5 enclosures are only available in the configuration to be completed

These enclosures are factory assembled.

### Modular distribution enclosures

equipped with units for modular devices from 2 to 7 rows ( 48 to 168 ).

### Enclosures to be completed

- equipped with :
- units for modular devices 1 to 5 rows (24 to 120)
  - space for an internal module :
    - for main switch
    - for mccb
    - for electronic meter
    - for modular devices
    - with perforated plate

The Vega D enclosures combine sheet metal and injected plastic so as to get a light and strong enclosure.

An additional internal insulation guarantees class II without specific constraints when wiring.

Colour RAL 9002

### Options :

- internal module
- plain or transparent door
- connection assembly
- locks
- stepped terminals



IEC 60 695-2-1/0 and 60 695-2-1/1

### Modular distribution enclosures surface

2 to 7 rows  
72 to 168



### flush

2 to 7 rows  
48 to 168



### Enclosures to be completed surface

0 to 5 rows  
24 to 120



### flush

0 to 5 rows  
24 to 120



### weatherproof

0 to 5 rows  
24 to 168



### Accessories



plain or transparent door




equipment units

## Vega D surface mounting IP41

The Vega D surface mounting enclosures is made of 3 distinctive parts :

- a **U shaped bottom** with removable cable entries on top and bottom allowing an easier access to fixing points and wire circulation. Cable of larger section can be fixed on it with cable ties.

- a **removable chassis** with uprights and units for modular devices (24  per row), the front plates being fixed directly on the chassis
- a **finishing frame**, fixed on the U shaped bottom, which will accept a plain or transparent door

Additional brass terminals without base can be added on the connection assemblies fitted in the enclosures.



IEC 60 695-2-1/0 and 60 695-2-1/1













**IP30 / IK 07** without door  
**IP41 / IK07** with door  
**class II**

For technical information see page 85




FD 52D

FD 52A

Designation	Characteristics + 	Height	Pack. qty.	Cat. ref.
<b>Modular distribution enclosure</b> without door  w. 550 x d. 185 mm	2 rows (48  ) 2 (1x25+7x16+9x10 <sup>□</sup> )	400 mm	1	<b>FD 22D</b>
	3 rows (72  ) 2 (1x25+7x16+9x10 <sup>□</sup> )	550 mm	1	<b>FD 32D</b>
	4 rows (96  ) (1x25+7x16+9x10 + 1x25+11x16+13x10 <sup>□</sup> )	700 mm	1	<b>FD 42D</b>
	5 rows (120  ) (1x25+7x16+9x10 + 1x25+11x16+13x10 <sup>□</sup> )	850 mm	1	<b>FD 52D</b>
	6 rows (144  ) (1x25+11x16+13x10 <sup>□</sup> )	1000 mm	1	<b>FD 62D</b>
	7 rows (168  ) (1x25+7x16+9x10 <sup>□</sup> )	1150 mm	1	<b>FD 72D</b>
	1 (1x25+11x16+13x10 <sup>□</sup> )			
<b>Enclosure to be completed</b> without door  w. 550 x d. 185 mm	with an empty space for internal module (1x25+7x16+9x10 <sup>□</sup> )	400 mm	1	<b>FD 22A</b>
	+ 1 row (24  ) 2 (1x25+7x16+9x10 <sup>□</sup> )	550 mm	1	<b>FD 32A</b>
	+ 2 rows (48  ) (1x25+7x16+9x10 + 1x25+11x16+13x10 <sup>□</sup> )	700 mm	1	<b>FD 42A</b>
	+ 3 rows (72  ) (1x25+7x16+9x10 + 1x25+11x16+13x10 <sup>□</sup> )	850 mm	1	<b>FD 52A</b>
	+ 4 rows (96  ) (1x25+11x16+13x10 <sup>□</sup> )	1000 mm	1	<b>FD 62A</b>
	+ 5 rows (120  ) 2(1x25+11x16+13x10 <sup>□</sup> )	1150 mm	1	<b>FD 72A</b>
1 (1x25+7x16+9x10 <sup>□</sup> )				

## Vega D surface mounting IP54

The weatherproof IP54 Vega D enclosure is made of 2 distinctive parts :

- an **enclosure body** with a door, made of 15/10 galvanised sheet steel, powder coated
- a **removable chassis** with uprights and units for modular devices (24  per row), the front plates being fixed directly on the chassis.

Delivered with :

- 1 door
- 4 external wall fixing brackets
- 4 weatherproof cable entries

**IP54 / IK10** with door  
**class II**



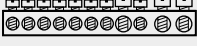





IEC 60 695-2-1/0 and 60 695-2-1/1

Additional brass terminals without base can be added on the connection assemblies fitted in the enclosures.

For technical information see page



FV 62A

Designation	Characteristics + 	Height	Pack. qty.	Cat. ref.
<b>Enclosures to be completed</b> with door  w. 550 x d. 218 mm	(1x25+8x16+8x10 <sup>□</sup> )	500 mm	1	<b>FV 22A</b>
	+ 1 rgs (24  ) 2(1x25+8x16+8x10 <sup>□</sup> )	650 mm	1	<b>FV 32A</b>
	+ 2 rgs (48  ) (1x25+8x16+8x10 <sup>□</sup> )	800 mm	1	<b>FV 42A</b>
	(1x25+11x16+13x10 <sup>□</sup> )			
	+ 3 rgs (72  ) (1x25+8x16+8x10 <sup>□</sup> )	950 mm	1	<b>FV 52A</b>
	(1x25+11x16+13x10 <sup>□</sup> )			
+ 4 rgs (96  ) 2(1x25+11x16+13x10 <sup>□</sup> )	1100 mm	1	<b>FV 62A</b>	
1 (1x25+8x16+8x10 <sup>□</sup> )				
+ 5 rgs (120  ) 2(1x25+11x16+13x10 <sup>□</sup> )	1250 mm	1	<b>FV 72A</b>	
1 (1x25+8x16+8x10 <sup>□</sup> )				

## Vega D flush mounting IP41

The flush mounting Vega D enclosures can be installed in brick or partition walls (with a specific kit available as an option) and is made of 3 distinctive parts :

- a **metallic flush mounting box** depth 110 mm with insulated cable entries on top and bottom

- a **removable chassis** with uprights and units for modular devices (24 ■ per row), the front plates being fixed directly on the chassis.

The modular distribution enclosures are fitted with specific internal modules.

- a **metallic finishing frame** of 40mm (modular distribution enclosures) or 70mm (enclosures

to be completed) fixed on the flush box by means of 4 screws. This frame will accept a plain or transparent door.

Additional brass terminals without base can be added on the connection assemblies fitted in the enclosures.



IEC 60 695-2-1/0 and 60 695-2-1/1

**IP 30 / IK 07** without door  
**IP 41 / IK 07** without door  
**class II**

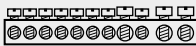
For technical information see page 85









FU 62D



FU 62A

Designation	Characteristics + 	Height	Pack. qty.	Cat. ref.
<b>Modular distribution enclosure</b> without door  w. 600 x d. 152 mm frame height 40 mm  these enclosures will not accept the internal modules from page 49	2 rows (48 ■) (1x25+7x16+9x10 <sup>□</sup> )	500 mm	1	<b>FU 22D</b>
	3 rows (72 ■) 2 (1x25+7x16+9x10 <sup>□</sup> )	650 mm	1	<b>FU 32D</b>
	4 rows (96 ■) (1x25+7x16+9x10 + 1x25+11x16+13x10 <sup>□</sup> )	800 mm	1	<b>FU 42D</b>
	5 rows (120 ■) (1x25+7x16+9x10 + 1x25+11x16+13x10 <sup>□</sup> )	950 mm	1	<b>FU 52D</b>
	6 rows (144 ■) 2(1x25+11x16+13x10 <sup>□</sup> ) 1(1x25+7x16+9x10 <sup>□</sup> )	1100 mm	1	<b>FU 62D</b>
	7 rows (168 ■) 2(1x25+11x16+13x10 <sup>□</sup> ) 1(1x25+7x16+9x10 <sup>□</sup> )	1350 mm	1	<b>FU 72D</b>
	<b>Enclosure to be completed</b> without door  w. 600 x d. 182 mm frame height 70 mm		500 mm	1
+ 1 row (24 ■) 2 (1x25+7x16+9x10 <sup>□</sup> )		650 mm	1	<b>FU 32A</b>
+ 2 rows (48 ■) (1x25+7x16+9x10 + 1x25+11x16+13x10 <sup>□</sup> )		800 mm	1	<b>FU 42A</b>
+ 3 rows (72 ■) (1x25+7x16+9x10 + 1x25+11x16+13x10 <sup>□</sup> )		950 mm	1	<b>FU 52A</b>
+ 4 rows (96 ■) 2(1x25+11x16+13x10 <sup>□</sup> ) 1(1x25+7x16+9x10 <sup>□</sup> )		1100 mm	1	<b>FU 62A</b>
+ 5 rows (120 ■) 2(1x25+11x16+13x10 <sup>□</sup> ) 1(1x25+7x16+9x10 <sup>□</sup> )		1350 mm	1	<b>FU 72A</b>

## Vega D accessories

	<i>Designation</i>	<i>Characteristics</i>	<i>Height</i>	<i>Pack. qty.</i>	<i>Cat. ref.</i>		
 <p>UG 22F1</p>	<b>Internal module</b> for enclosures to be completed (except FU—D serie)	for h125 n/e mccb, switches with visible contact indication + elevation for modular devices		1	<b>UK 22A1</b>		
		for h160n/e mccb-horizontal		1	<b>UK 22B2</b>		
 <p>UK 22A1</p>	<b>Internal module</b> for modular devices	2 rows : 2 x 24 ■ sans goulotte de câblage		1	<b>UJ 22A</b>		
		width 500 mm		1	<b>UD 22B3</b>		
delivered with identification strip							
 <p>UJ 22A</p>	<b>Internal module with perforated plate</b> for enclosures to be completed (except FU—D serie)	width 500 mm		1	<b>UJ 22E</b>		
		plate dimensions : l. 415 x h. 235		1	<b>UD 22C2</b>		
- 1 perforated plate - clip-nuts and screws							
 <p>UJ 22E</p>	<b>Internal module for terminals</b>	2 sections width 500 mm 2 rows 2 x 22 ■	300 mm	1	<b>UJ 22D</b>		
		module includes 2 horizontal DIN rails, depth adjustable		1	<b>UD 22A5</b>		
 <p>FD 52T</p>	<b>Transparent doors</b> reversible for surface and flush enclosures  sheet metal, powder coated, 3mm hardened glass, lock  to grant IP41	for enclosures: FD 22D, FD 22A FU 22D, FU 22A	350 mm	1	<b>FD 22T</b>		
		FD 32D, FD 32A FU 32D, FU 32A	500 mm	1	<b>FD 32T</b>		
		FD 42D, FD 42A FU 42D, FU 42A	650 mm	1	<b>FD 42T</b>		
		FD 52D, FD 52A FU 52D, FU 52A	800 mm	1	<b>FD 52T</b>		
		FD 62D, FD 62A FU 62D, FU 62A	950 mm	1	<b>FD 62T</b>		
		FD 72D, FD 72A FU 72D, FU 72A	1100 mm	1	<b>FD 72T</b>		
		to grant IP41					
		to grant IP41					
 <p>FD 52P</p>	<b>Plain doors</b> reversible for surface and flush enclosures  sheet metal, powder coated,  to grant IP41	for enclosures : FD 22D, FD 22A FU 22D, FU 22A	350 mm	1	<b>FD 22P</b>		
		FD 32D, FD 32A FU 32D, FU 32A	500 mm	1	<b>FD 32P</b>		
		FD 42D, FD 42A FU 42D, FU 42A	650 mm	1	<b>FD 42P</b>		
		FD 52D, FD 52A FU 52D, FU 52A	800 mm	1	<b>FD 52P</b>		
		FD 62D, FD 62A FU 62D, FU 62A	950 mm	1	<b>FD 62P</b>		
		FD 72D, FD 72A FU 72D, FU 72A	1100 mm	1	<b>FD 72P</b>		
		to grant IP41					
		to grant IP41					

## Vega D accessories

	<i>Designation</i>	<i>Characteristics</i>	<i>Pack. qty.</i>	<i>Cat. ref.</i>	<i>Cat. ref.</i>
 FZ 597	<b>Locks</b>  to replace standard lock	lock with key n° 1242E	1	FZ 497	FZ 507
		lock with key n° 405	1	FZ 452	FZ 526
		lock with key n° 455	1	FZ 453	FZ 527
		male square 7mm centre	1	FZ 451	FZ 503
		male triangular centre 7mm	1	FZ 450	FZ 502
		double bit 3mm centre	1	FZ 449	FZ 501
 FZ 451	<b>Wire guide</b>  to be fixed on the side of the internal module as vertical wire guide	fixing on uprights steps of 75mm delivered with fixing screw	6 sets		<b>UT 50B</b>
		cannot be fixed in enclosures FU 22D to FU 72D		1 set = 8 pieces	
 FZ 450	<b>Wire guide</b>  to be fixed on the side of the internal module as vertical wire guide	fixing on uprights steps of 75mm delivered with fixing screw	6 sets		<b>UT 50B</b>
		cannot be fixed in enclosures FU 22D to FU 72D		1 set = 8 pieces	
 UT 50B	<b>Wire guide</b>  to be fixed on the side of the internal module as vertical wire guide	fixing on uprights steps of 75mm delivered with fixing screw	6 sets		<b>UT 50B</b>
		cannot be fixed in enclosures FU 22D to FU 72D		1 set = 8 pieces	
 UT 50C	<b>Cover for wire guide</b>  for wire guide UT 50B	length 2m	20		<b>UT 50C</b>
		delivered with cover.			
 UT 52A	<b>Horizontal wire duct</b>  delivered with cover.  cannot be fixed in enclosures FU 22D to FU 72D	length 2 sections (500 mm)	10		<b>UT 52A</b>
		width 31 mm height 85 mm			
 VZ 405	<b>Supports for fixing</b> horizontal wire duct on enclosures uprights at different levels	1 set = 4 screws + 4 fixing brackets	10 sets		<b>UT 50A</b>
		allows quick fixing of the flush box in a partition wall		1 set = 2 pieces	
 VZ 708	<b>Partition wall mounting kit</b> for flush mounting enclosures	1 set = 4 screws + 4 fixing brackets	1 set		<b>VZ 405</b>
		allows quick fixing of the flush box in a partition wall			
 VZ 709	<b>Connection assemblies</b> for IP4 enclosures	1 Ph + N 63 A	2 x (3 x 16 + 4 x 10 $\square$ )	1	<b>VZ 708</b>
		3 Ph + N 63 A	3 x (3 x 16 + 2 x 10 $\square$ ) 1 x (5 x 16 + 6 x 10 $\square$ )	1	<b>VZ 709</b>
 VZ 709	<b>Connection assemblies</b> for IP4 enclosures	1 Ph + N 90 A	supply : 1 x 25 $\square$ , 90 A derivation : 4 x 16 $\square$ , 63 A	1	<b>VZ 712</b>












	Designation	Characteristics	Pack. qty.	Cat. ref.
 <p>KJ 01B</p>	<p><b>Terminal blocks</b> fixing by clip on DIN rail</p> <p>delivered with :  <input type="checkbox"/> insulated back plate  <input type="checkbox"/> transparent protection front cover</p> <p>In : by 40°C</p>	<p><b>In 100A – two poles</b> Icc : 29KA connectors on each terminal : incoming : 1x35□ flexible, outgoing : 1x25 + 10x16□ flexible</p> <p>w. 129 (7,5 ■) x h. 86 x d. 44 mm</p>	1	<b>KJ 01A</b>
 <p>KJ 01C</p>		<p><b>In 80A – four poles</b> Icc : 21KA connectors on each terminal : incoming : 1x16□ flexible, outgoing : 8x10□ flexible</p> <p>w. 88 (5 ■) x h. 86 x d. 44 mm</p>	1	<b>KJ 01B</b>
 <p>KJ 01D</p>	<p><b>modular shape</b> monobloc, insulated protection for each phase terminal. Cover removable with a tool.</p>	<p><b>In 125A – four pole</b> Icc : 29KA connectors on each terminal : incoming : 1x35□ flexible, outgoing : 1x25 + 10x16□ flexible</p> <p>w. 129 (7,5 ■) x h. 86 x d. 44 mm</p>	1	<b>KJ 01C</b>
 <p>4 x KJ 02A</p>	<p><b>Distribution blocks single pole</b> monobloc, insulated, grey colour</p> <p>fixing by clip on DIN rail</p>	<p><b>In 160A – four poles</b> Icc : 20KA connectors on each terminal : incoming : 4x50□ flexible, outgoing : 3x35□, 8x16□ flexible w. 162 (9,5 ■) x h. 87 x d. 60 mm (modular shoulder measurement 45mm)</p>	1	<b>KJ 01D</b>
 <p>VZ 706</p>	<p><b>Cable entries replacement</b></p> <p>for IP4 enclosures</p> <p>top or bottom</p>	<p>connection capacity per block - <b>160A</b> (width 35mm) incoming : 1x70□, outgoing 6x16□</p>	4	<b>KJ 02C</b>
 <p>P 032 P 031</p>		<p>with round marks for cables and tubes</p> <p>with rectangular marks for trunking</p>	10	<b>VZ 706</b>
 <p>JP 002</p>		<p>clip width 1/2 ■ (8,7 mm)</p> <p>1 ■ (17,5 mm)</p>	50	<b>P 031</b>
 <p>FZ 794</p>		<p>strip length 24 ■</p>	10	<b>P 032</b>
	<p><b>Transparent pocket for wiring diagramme</b> size A4 - self adhesive</p>	<p>to be fixed inside the plain door</p>	10	<b>JP 002</b>
	<p><b>Spray paint</b> for the metallic parts of the Vega D enclosures</p>	<p>colour RAL9002</p>	1	<b>FZ 794</b>

## Connection systems

- 58 Insulated busbars - prong
- 59 Insulated busbars - fork
- 60 Brass terminals  $\leq 60A$
- 61 Connection blocks
- 62 Distribution and terminals blocks
- 63 Rail mounted terminals  $I_n \leq 80A$
- 64 Rail mounted terminals - accessories



## Insulated busbars - prong

	<i>Designation</i>	<i>Section</i>	<i>In</i>	<i>Width in I</i>	<i>Pack qty</i>	<i>Cat. Ref.</i>
<b>1 pole, 1I step</b>						
 KB 163N	brown insulation (phase)	10	63A	13I	50	<b>KB 163P</b>
	blue insulation (neutral)	10	63A	13I	50	<b>KB 163N</b>
 KB 163P	without insulation	10	63A	13I	50	<b>KB 163I</b>
	insulated	20	100A	57I	10	<b>KB 190B</b>
		20	100A	24I	10	<b>KB 190C</b>
<b>2 poles, 2I step</b>						
 KB 190C	insulated	10	63A	12I	10	<b>KB 263A</b>
		10	63A	24I	10	<b>KB 263C</b>
 KB 263A		16	80A	56I	10	<b>KB 280B</b>
<b>3 poles, 3I step</b>						
 KB 363A	insulated	10	63A	12I	10	<b>KB 363A</b>
		10	63A	57I	20	<b>KB 363B</b>
		10	63A	24I	10	<b>KB 363C</b>
		16	80A	12I	25	<b>KB 380A</b>
		16	80A	57I	10	<b>KB 380B</b>
<b>4 poles, 4I step</b>						
 KB 463A	insulated	10	63A	12I	10	<b>KB 463A</b>
		10	63A	24I	10	<b>KB 463C</b>
		16	80A	12I	25	<b>KB 480A</b>
		16	80A	56I	10	<b>KB 480B</b>
<b>Cable connectors</b>						
 KF 81A	connection from top In 63A			for cables : 25 mm≈	10	<b>KF 81A</b>
				for cables : 2 x 16 mm≈	10	<b>KF 82A</b>
 KF 82A						
 KF 83A	connection from side In 63A			for cables : 25 mm≈	10	<b>KF 83A</b>
<b>End cap cover</b>						
 KZ 021	for single pole busbars KB 163P and KB 163N				1 set	<b>KZ 021</b>
	for double pole busbars, 10mm≈				1 set	<b>KZ 022</b>
 KZ 023	for triple pole busbars 10 or 16mm≈				1 set	<b>KZ 023</b>
	for four pole busbars 10 or 16mm≈				1 set	<b>KZ 024</b>



## Insulated busbars - fork

	Designation	Section	In	Width in I	Pack qty	Cat. Ref.	
 KD 190B	<b>1 pole, 1 I step</b>	10	63A	12I	100	<b>KD 163A</b>	
		10	63A	56I	50	<b>KD 163B</b>	
		16	80A	12I	100	<b>KD 180A</b>	
		16	80A	56I	50	<b>KD 180B</b>	
		20	100A	56I	10	<b>KD 190B</b>	
 KD 263A	<b>2 poles, 2 I step</b>	insulated	10	63A	12I	10	<b>KB 263A</b>
			10	63A	24I	10	<b>KB 263C</b>
			16	80A	56I	10	<b>KB 280B</b>
 KD 363A	<b>3 poles, 3 I step</b>	insulated	10	63A	12I	10	<b>KB 363A</b>
			10	63A	57I	20	<b>KB 363B</b>
			10	63A	24I	10	<b>KB 363C</b>
			16	80A	12I	25	<b>KB 380A</b>
			16	80A	57I	10	<b>KB 380B</b>
 KD 463A	<b>4 poles, 4 I step</b>	insulated	10	63A	12I	10	<b>KB 463A</b>
			10	63A	24I	10	<b>KB 463C</b>
			16	80A	12I	25	<b>KB 480A</b>
			16	80A	56I	10	<b>KB 480B</b>
 KF 81A      KF 82A	<b>Cable connectors</b>						
	connection from top In 63A	for cables : 25 mm≈		10	<b>KF 81A</b>		
		for cables : 2 x 16 mm≈		10	<b>KF 82A</b>		
connection from side In 63A	for cables : 25 mm≈		10	<b>KF 83A</b>			
 KZ 023	<b>End cap cover</b>						
	for double pole busbars, 10mm≈			1 set	<b>KZ 022</b>		
	for triple pole busbars 10 or 16mm≈			1 set	<b>KZ 023</b>		
	for four pole busbars 10 or 16mm≈			1 set	<b>KZ 024</b>		

## Brass terminals ≤ 60A

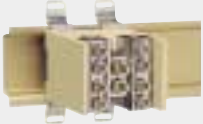
		<b>Description</b> Insulated support can be fitted support for neutral / phase connections	earth = green / yellow support phase = beige support neutral = blue support					
		<b>Technical data</b> brass terminals with / without	in DIN rail with A 045 rail clip or flat bar 12x12mm					
		<i>Connections number + section</i>	<i>Terminals with support</i>			<i>without support</i>		
			<i>pack qty.</i>	<i>neutral cat.ref.</i>	<i>earth cat.ref.</i>	<i>phase cat.ref.</i>	<i>Pack qty.</i>	<i>Cat. ref.</i>
	KM 04L	<b>2x16 + 2x10</b> □ 4 connections length 30mm	50	-	-	<b>KM 04L</b>	10	<b>K 140</b>
	KM 08L	<b>4x16 + 4x10</b> □ 8 connections length 30mm	20	-	-	<b>KM 08L</b>	-	-
	KM 08L	<b>3x16 + 4x10</b> □ 7 connections length 49mm	50	<b>KM 07N</b>	<b>KM 07E</b>	<b>KM 07L</b>	10	<b>K 142</b>
	KM 07N	<b>5x16 + 5x10</b> □ 10 connections length 67mm	20	<b>KM 10A</b>	<b>KM 10B</b>	<b>KM 10C</b>	10	<b>K 143</b>
	KM 10E	<b>5x16 + 6x10</b> □ 11 connections length 73mm	20	<b>KM 11N</b>	<b>KM 11E</b>	<b>KM 11L</b>	10	<b>K 144</b>
	KM 10E	<b>2x16 (double drive) + 8x10</b> 10 connections length 69mm	20	<b>KM 10N</b>	<b>KM 10E</b>	<b>KM 10L</b>	10	<b>K 145</b>
	KM 13N	<b>6x16 + 7x10</b> □ 13 connections length 85mm	20	<b>KM 13N</b>	<b>KM 13E</b>	-	10	<b>K 148</b>
	KM 11B	<b>1x25 + 5x16 + 5x10</b> □ 11 connections length 85mm	20	-	<b>KM 11B</b>	-	10	<b>K 151</b>
	KM 25N	<b>1x25 + 8x16 + 8x10</b> □ 17 connections length 121mm	20	<b>KM 17N</b>	<b>KM 17E</b>	-	10	<b>K 156</b>
	KM 25N	<b>1x25 + 11x16 + 13x10</b> □ 25 connections length 169mm	20	<b>KM 25N</b>	<b>KM 25E</b>	-	10	<b>K 158</b>
	KM 25N	<b>1x25 + 8x16 + 29x10</b> □	long length terminals (without support)	length 242mm			10	<b>K 159</b>
	K 151	<b>1x25 + 16x16 + 61x10</b> □	fixing on the flat bar 12 x 2 with supports (see below)	length 482mm			10	<b>K 160</b>
	K 151	<b>1x25 + 3x16 + 129x10</b> □		length 992mm			10	<b>K 162</b>
	K 159	<b>supports</b> for K140 to K162 terminals insulating material M4 x 8 fixing screws	blue support for neutral				10	<b>KZ 012</b>
	KZ 012		green / yellow support for earth				10	<b>KZ 013</b>
	KZ 012		beige supports (see below)				10	<b>KZ 014</b>
	KZ 060	<b>Rail clip</b> for fixing terminals on DIN rail not for : KM 08L, KM 10A, KM 10B, KM 10C, KM 10N, KM 10E, KM 10L	mounting on DIN rail				50	<b>KZ 060</b>
	60		horizontally					

## Connection blocks

**Application :**  
connection blocks 16□ to 35□ to connect incoming cables and continue live feed.

**technical data :**  
connection :  
incoming : 2 x 25□ or 2 x 35□  
outgoing : 16□ or 25□  
mounting : fixing on DIN rail

connection blocks include :  
one insulated support, brass connection blocks with removable antishear plates to enable the incoming cables to be connected without cutting.

<i>Designation</i>	<i>Characteristics</i>	<i>Width in 17.5mm</i>	<i>Pack qty.</i>	<i>Cat. ref.</i>	
 K 018	<b>Connection blocks</b> connection on each pole incoming : 2 x 25□ 4 separate outgoing ways : 16□	<b>1 pole</b> l. 34 x h. 50 x w. 52mm	2 fi	20	<b>K 018</b>
		<b>2 pole</b> l. 64 x h. 50 x w. 52mm	4	10	<b>K 023</b>
		<b>4 pole</b> l. 121 x h. 50 x w. 62mm	7	5	<b>K 024</b>
		<b>5 pole</b> l. 150 x h. 50 x w. 62mm	8 fi	5	<b>K 025</b>
	 K 025	<b>Connection blocks</b> connection : incoming : 2 x 35□ 4 separate outgoing ways : 25□	<b>1 pole</b> l. 37 x h. 30 x w. 47mm	2 fi	10
 K 037					

	<i>Designation</i>	<i>Characteristics</i>	<i>Pack. qty.</i>	<i>Cat. ref.</i>
 <p>KJ 01B</p>	<b>Terminal blocks</b> fixing by clip on DIN rail  delivered with : <input type="checkbox"/> insulated back plate <input type="checkbox"/> transparent protection front cover  In : by 40°C	<b>In 100A – two poles</b> Icc : 29KA connectors on each terminal : incoming : 1x35□ flexible, outgoing : 1x25 + 10x16□ flexible  w. 129 (7,5 ■) x h. 86 x d. 44 mm	1	<b>KJ 01A</b>
	 <p>KJ 01C</p>	<b>In 80A – four poles</b> Icc : 21KA connectors on each terminal : incoming : 1x16□ flexible, outgoing : 8x10□ flexible  w. 88 (5 ■) x h. 86 x d. 44 mm	1	<b>KJ 01B</b>
 <p>KJ 01D</p>	<b>modular shape</b> monobloc, insulated protection for each phase terminal. Cover removable with a tool.	<b>In 125A – four pole</b> Icc : 29KA connectors on each terminal : incoming : 1x35□ flexible, outgoing : 1x25 + 10x16□ flexible  w. 129 (7,5 ■) x h. 86 x d. 44 mm	1	<b>KJ 01C</b>
 <p>4 x KJ 02A</p>	<b>Distribution blocks</b> <b>single pole</b> monobloc, insulated, grey colour  fixing by clip on DIN rail	<b>In 160A – four poles</b> Icc : 20KA connectors on each terminal : incoming : 4x50□ flexible, outgoing : 3x35□, 8x16□ flexible w. 162 (9,5 ■) x h. 87 x d. 60 mm (modular shoulder measurement 45mm)	1	<b>KJ 01D</b>
		connection capacity per block <b>160A</b> (width 35mm) incoming : 1x70□, outgoing 6x16□	4	<b>KJ 02C</b>
		<b>250 A :</b> incoming : 1x95□, outgoing : 2x25□, 5x16□, 4x10□	45 mm 4	<b>KJ 02A</b> 380023
		<b>400 A :</b> incoming : 1 x 150□, outgoing: 2x25□, 5x16□, 4x10□	45 mm 4	<b>KJ 02B</b> 380024
 <p>KR 95P      KR 15P</p>	<b>Distribution blocks</b> fitting on DIN rail	for connections : <b>25 to 95</b> □  <b>35 to 150</b> □	25 mm 31 mm	1 1 <b>KR 95P</b> 388034 <b>KR 15P</b> 388035

## Rail mounted terminals $I_n \leq 80A$

**Dimensions :**

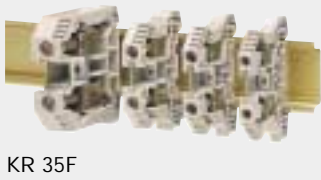
Terminal	A	B
0.5 to 16□	60	39.5
2.5 to 35□	60	55.5

rail mounted terminals with capacity up to 35mm<sup>2</sup>.

mounting and dismantling either by top or bottom.

working temperature : up to 120°C

high tightening capacity : is suitable for use with 2 wires







KR 35F



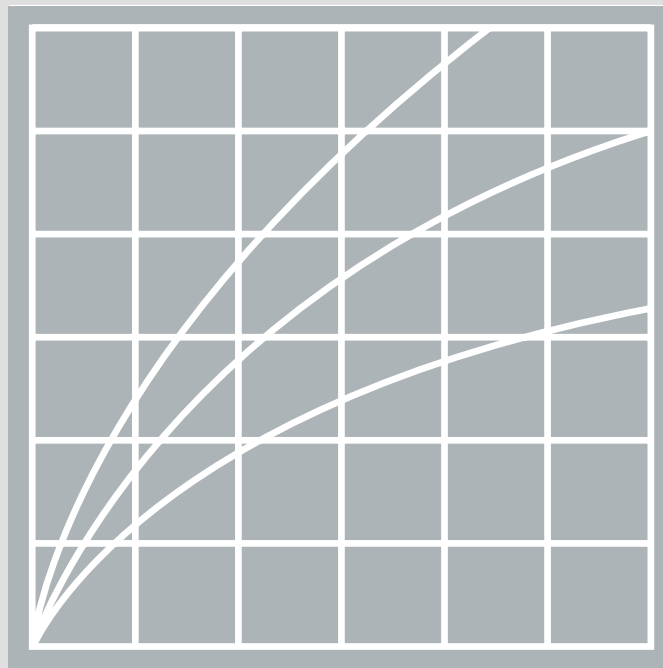
KR 35N

Designation	Size of the conductor	$I_n$ (A)	Width in mm	Pack qty.	Cat. ref.
<b>Phase terminals</b> 750 V~ beige colour	0.5 - 2.5 mm <sup>2</sup>	35A	5	100	<b>KR 02F</b>
	0.5 - 4 mm <sup>2</sup>	35A	6	100	<b>KR 04F</b>
	0.5 - 6 mm <sup>2</sup>	63A	8	50	<b>KR 06F</b>
	1.5 - 16 mm <sup>2</sup>	85A	10	50	<b>KR 16F</b>
	2.5 - 35 mm <sup>2</sup>	168A	16	25	<b>KR 35F</b>
	70mm <sup>2</sup>	202A	22	10	<b>KR 70F</b>
<b>Neutral terminals</b> 750 V~ blue colour	0.5 - 2.5 mm <sup>2</sup>	35A	5	100	<b>KR 02N</b>
	0.5 - 4 mm <sup>2</sup>	35A	6	100	<b>KR 04N</b>
	0.5 - 6 mm <sup>2</sup>	63A	8	50	<b>KR 06N</b>
	1.5 - 16 mm <sup>2</sup>	85A	10	50	<b>KR 16N</b>
	2.5 - 35 mm <sup>2</sup>	168A	16	25	<b>KR 35N</b>
<b>Earth terminals</b> green / yellow colour	0.5 - 2.5 mm <sup>2</sup>		5	100	<b>KR 02H</b>
	0.5 - 4 mm <sup>2</sup>		6	100	<b>KR 04H</b>
	0.5 - 6 mm <sup>2</sup>		8	50	<b>KR 06H</b>
	1.5 - 16 mm <sup>2</sup>		10	50	<b>KR 16H</b>
	2.5 - 35 mm <sup>2</sup>		16	25	<b>KR 35H</b>

	<i>Designation</i>	<i>Characteristics</i>	<i>Width in I</i>	<i>Pack qty</i>	<i>Cat. Ref.</i>
 KZ 025      KZ 031	<b>End plates</b> beige	For : KR 02F, KR 02N KR 06F, KR 16F	1.5	50	<b>KZ 025</b>
		For KR 35F	1.5	20	<b>KZ 031</b>
 KZ 034      KZ 033	<b>End stops</b>	insulated material for terminals $\geq 16\text{mm}^2$		50	<b>KZ 033</b>
		for terminals $\geq 35\text{mm}^2$		50	<b>KZ 034</b>
 KZ 015	<b>Marking labels</b>	10 x 1 - 50		1 set	<b>KZ 015</b>
	enable individual circuit identification	10 x 51 - 100		1 set	<b>KZ 016</b>
		10 x 101 - 150		1 set	<b>KZ 017</b>
		10 x 151 - 200		1 set	<b>KZ 018</b>
		10 x 201 - 250		1 set	<b>KZ 019</b>
 KZ 035	<b>Transversal connector</b> 10 connection points	for 10 terminals KR 02F		50	<b>KZ 035</b>
		KR 04F		50	<b>KZ 036</b>
		KR 06F		50	<b>KZ 037</b>

## Technical information


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Invicta - TP&N Distribution boards IP41 split load
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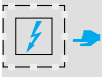
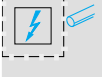
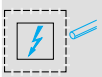
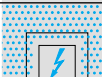
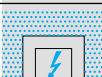


the Ingress Protection (IP) for all low voltage enclosures up to 1000 V a.c. and 1500 V d.c. is defined in identical fashion by the standards BSEN 60529 - IEC 529 it comprises the letters IP followed by two character numerals:


**The first character numeral**

indicates the degree of protection provided by the enclosure with respect to persons, also to the equipment inside the enclosure

 **The first character numeral :**  
protection against solid substances

IP	désignation
0	non-protected
1	protected against solid objects greater than 50mm 
2	protected against solid objects greater than 12,5mm 
3	protected against solid objects greater than 2,5mm 
4	protected against solid objects greater than 1,0mm 
5	dust-protected 
6	dust-tight 


**code IK : protection against mechanical shocks**


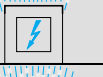
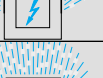
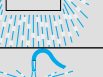

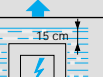
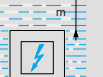
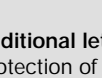
 code IK according to BS EN 50-102 (new designation)


code IK	shock energy
00	non-protected
01	0,15 joule
02	0,2 joule
03	0,35 joule
04	0,5 joule
05	0,7 joule
06	1 joule
07	2 joules
08	5 joules
09	10 joules
10	20 joules

**The second character numeral**


indicates the degree of protection provided by the enclosure with respect to harmful ingress of water; a third character may be used to indicate mechanical strength. An x signifies that no test has been carried out

 **The second character numeral :**  
protection against liquid substances

IP	désignation
0	non-protected
1	protected against dripping water 
2	protected against dripping water when tilted up to 15° 
3	protected against spraying water 
4	protected against splashing water 
5	protected against water jets 
6	protected against heavy seas 
7	protected against the effect of immersion 
8	protected against submersion 

 **additional letter (in option)**  
protection of people against access to dangerous parts

	designation
A	protected against access of the back of the hand
B	protected against access of a finger
C	protected against access of a tool - Ø 2,5 mm
D	protected against access of a tool - Ø 1 mm

 **additional letter (in option)**  
specific information on the product

	designation
H	high voltage material
M	movements during water test
S	stationary during water test
W	bad weather



### Consumer Units & Distribution Boards

As you might expect, consideration has been given to the design of the enclosure to accommodate the range of MCB and RCD devices which are suitable for use in domestic or similar installations, or generally in installations where unskilled persons have access to their use. This, as it happens, describes the British Standard covering the requirements of LV Distribution Boards suitable for this application.

The full title is:

#### BS EN 60439-3

Specification for low voltage switchgear and control switchgear assemblies. Part 3. Particular requirements for low-voltage switchgear and control gear assemblies intended to be installed in places where unskilled persons have access to their use - Distribution boards

This British standard covers the supplementary requirements for enclosure distribution boards suitable for indoor use containing protective devices and intended for use either in domestic applications or in other places where unskilled persons have access for their use, Control and/or signalling devices may also be included.

They are for use on ac, with a nominal voltage to earth not exceeding 300V. The outgoing circuits contain short circuit protection devices, each having a rated current not exceeding 125A with a total incoming load current not exceeding 250A.

Customer Distribution Boards which are generally known in the UK as Consumer Units are also included in this British Standard. The additional test requirements are set out in annex ZA which calls for the assembly to withstand a short-circuit fault of 16kA when protected by a 100A specified fuse.

By definition a customer distribution board or consumer unit is an integrated assembly, for the control and distribution of electrical energy, principally in domestic installations, incorporating manual means of double pole isolation in the incoming circuits, and are designed for use exclusively with one or more of the following outgoing circuit protective devices: fuses, MCB's and RCBO's. The units may also incorporate RCD's. Polarity must be observed throughout and the consumer unit is type tested when energised through a 100A type II fuse complying with BS1361. The rated current of a consumer unit is determined by the rated current of the incoming protective device, usually 63A, 80A or 100A, the rated current of the incoming device(s) is limited to 100A.

As there are no diversity factors applied to consumer units, the incoming circuit and the bus-bar system must be able to carry their full rated current without exceeding the temperature rise limits.

### Panelboards

The idea of group mounting MCCBs or MCBs on to a vertical three phase bus-bar system came from North America during the 1960s, where it had been used very effectively for a number of years. The design takes advantage of the modular dimensions of the circuit breakers which, together with the simple bus-bar system, proved to be very economical and safe. The basic design philosophy behind the panelboard is to provide a three phase distribution board capable of accommodating MCCBs, which is simple to specify, manufacture and install, and can be made available "off the shelf" or on a very short delivery cycle.

Generally installed for commercial and light industrial application the panelboard is, however, used in many different types of applications.

Panelboards are covered by the British Standard for Low-voltage Switchgear and Control Gear Assemblies BS EN 60439 Part 1, which is the specification for type-tested and partially type-tested assemblies (general requirements).

Panelboards are usually type-tested assemblies but, unlike consumer units and distribution boards, they do not, as yet, have their own particular standard, so care must be taken in their selection and application, It is important that the system designer understands, and is able to use, the technical information that the manufacturer is required to publish regarding the panelboard. Most of the information is straightforward and presents little problem, except perhaps for internal separation (Form numbers), degree of protection (IP rating) and short-circuit withstand strength.

#### Internal Separation

The internal separation of assemblies is described in the British Standard BS EN 60439 and is concerned with three requirements which can be met by the suitable arrangement of barriers or partitions.

- Protection against contact with live parts belonging to adjacent functional units.
- Limitation of the possibility of initiating and spreading of arcing faults.
- Prevention of the passage of solid foreign bodies from one unit of an assembly to an adjacent unit.

Form numbers are given to some typical forms of separation -

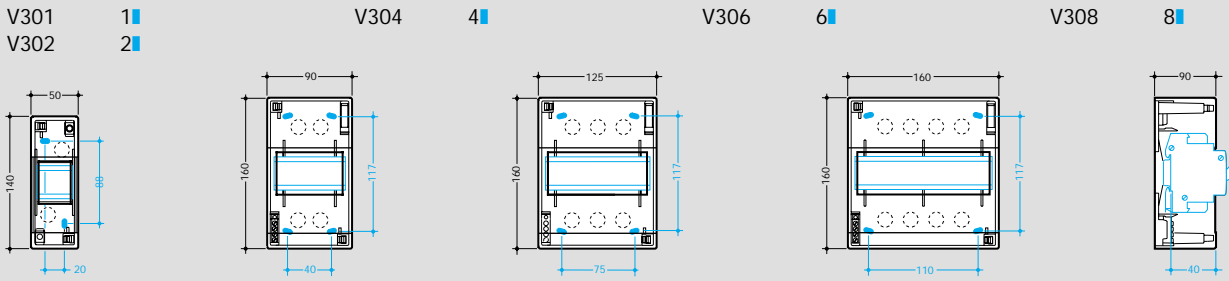
Form 1 - no separation

Form 2 - separation of bus-bars from the functional units

Form 3 - . separation of bus-bars from the functional units and separation of all functional units from one another, but not their outgoing terminals.

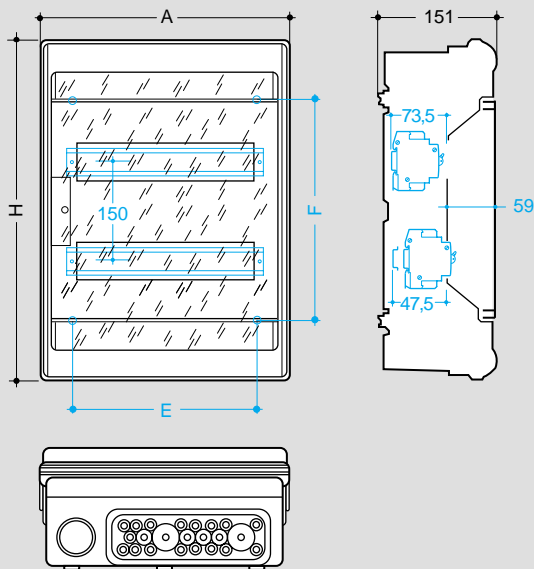
Form 4 - separation of bus-bars from the functional units and separation of all functional units from one another including their outgoing terminals.

30V enclosures, surface mounting : IP30



Vector IP65 enclosures

VE 212F - 2 rows 24



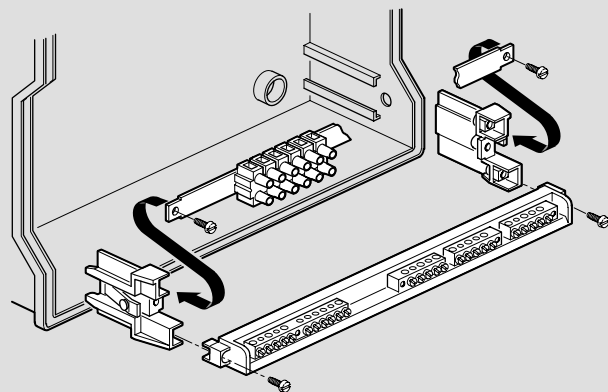
Dimensions

References	Enclosure sizes			Wall box	
	R	A	H	E	F
VE 103F/E 3	1	111	175	-	147
VE 106F/E 6	1	165	190	108	158
VE 110F/E 10	1	237	210	180	173
VE 112F/E 12	1	310	302	230	155
VE 212F/E 24	2	310	427	230	280
VE 312F/E 36	3	310	552	230	405
VE 412F/E 18	4	310	677	230	550
VE 118F/E 18	1	418	302	338	155
VE 218F/E 36	2	418	452	338	305
VE 318F/E 54	3	418	602	338	455

Connection assembly

mounting on insulating support at both end of the chassis

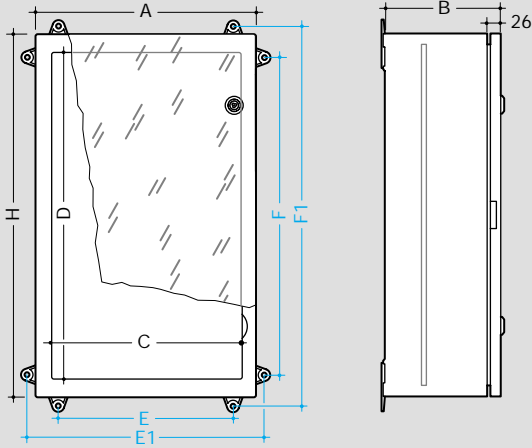
- 1) additional connection assembly : VZ 403 or VZ 428
- 2) insulated terminal VZ 743



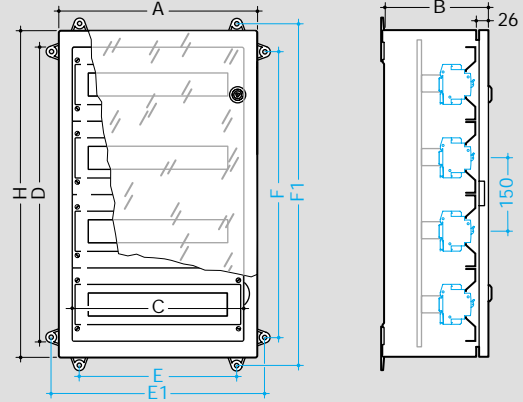
enclosure reference	knock outs	supplied cable bushes
VE 103	2xM20	3xM20
VE 106	1xM20+1xM25+1xM30/32	2xM20+2xM25+1xM32
VE 110	1xM20/32+1xM25+3xM20	4xM20+2xM25+1xM32
VE 112	2xM20/32/40+2xM25/32+3xM25+6xM20	10xM20+2xM25+1xM32
VE 118	1xM20/40/50+2xM20/32+12xM25+2xM20	8xM20+10xM25+1xM32
VE 212	2xM20/32/40+2xM25/32+3xM25+6xM20	14xM20+4xM25+1xM32
VE 218	1xM20/40/50+2xM20/32+12xM25+2xM20	8xM20+14xM25+1xM32
VE 312	2xM20/32/40+2xM25/32+3xM25+6xM20	14xM20+10xM25+2xM32
VE 318	1xM20/40/50+2xM20/32+12xM25+2xM20	8xM20+18xM25+2xM32
VE 412	2xM20/32/40+2xM25/32+3xM25+6xM20	14xM20+10xM25+1xM32

Vector enclosures - IP65

VP 72G - 4 rows

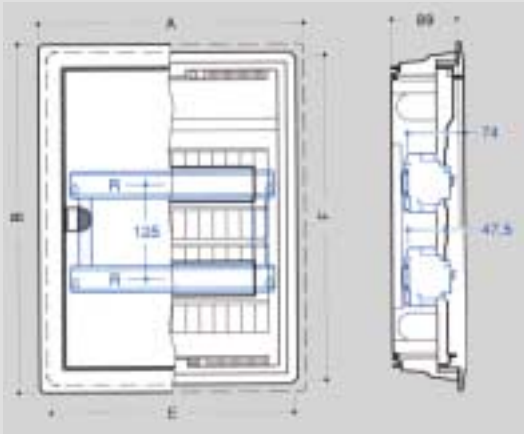


VP 72M - 4 rows



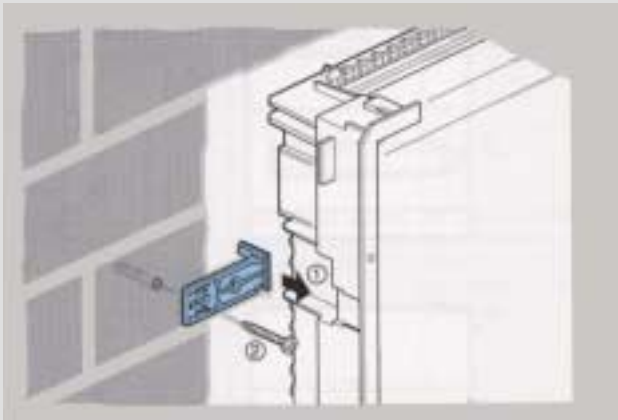
references	number of rows	enclosure dimensions					fixing			
		A	H	B	C	D	E	E1	F	F1
VP 20G	2	250	350	160	200	300	164	280	264	380
VP 20M										
VP 36G	3	300	500	160	250	450	214	330	414	530
VP 36M										
VP 54G	3	400	500	210	350	450	314	430	414	530
VP 54M										
VP 72G	4	400	650	210	350	600	314	430	560	680
VP 72M										

VU 24D

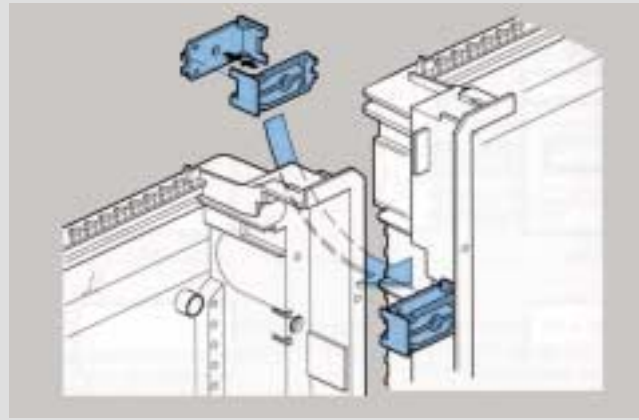


Enclosure	Volta	R	Outside		Inside	
			A	B	E	F
VU 12D	12	1	348	336	330	317
VU 24D	24	2	348	461	330	442
VU 36D	36	3	348	586	330	567
VU 48D	48	4	348	711	330	692

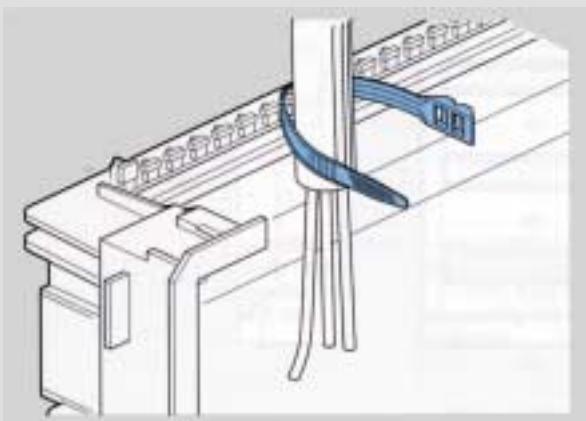
Wall mounting bracket



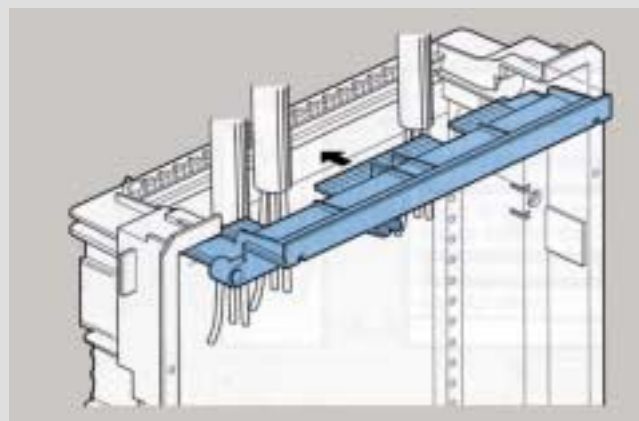
Connecting two enclosures



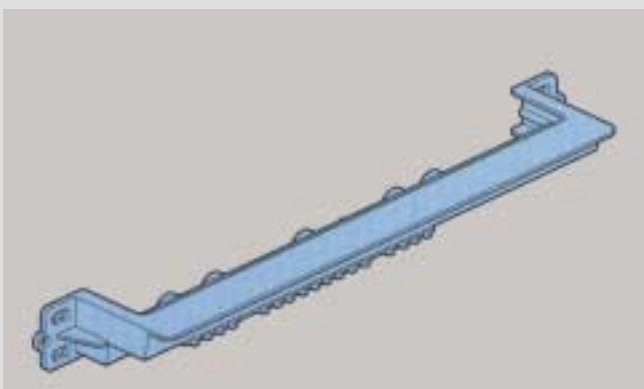
Conduit entry



Cable entry plate

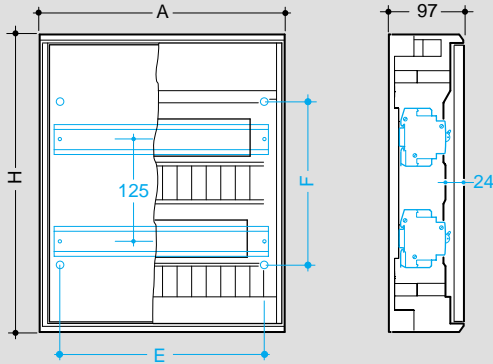


Connection assembly



**Volta surface mounting dimensions**

VA 24D - 2 rows 24

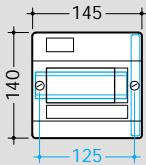


**Dimensions**

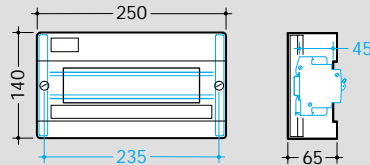
References		R	Enclosure dimension		Wall box	
			A	H	E	F
VA 12D	12	1	305	245	270	91
VA 24D	24	2	305	370	270	216
VA 36D	36	3	305	515	270	361
VA 48D	48	4	305	640	270	486

**Gamma dimensions**

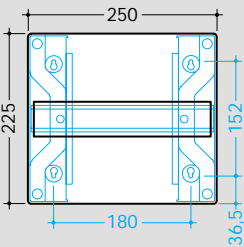
GD 05A - 1 row 5



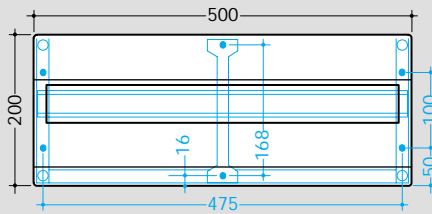
GD 10A - 1 row 10



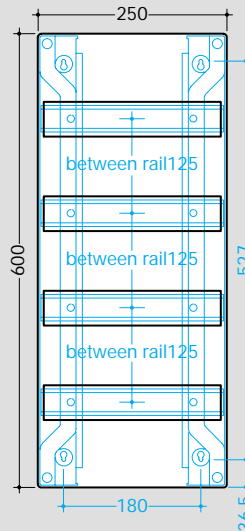
GD 13A - 1 row 13



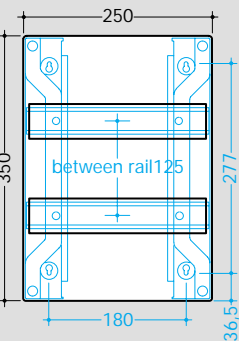
GD 26C - 1 row 26



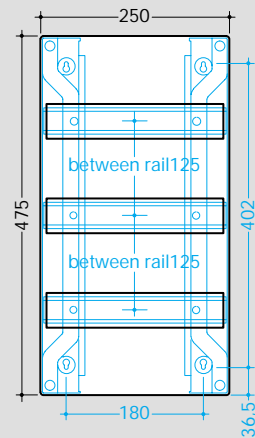
GD 52A - 4 rows 52



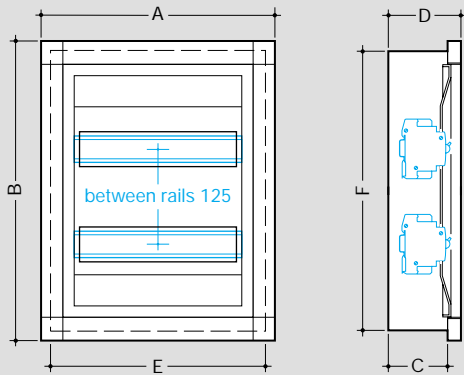
GD 26A - 2 rows 26



GD 39A - 3 rows 39

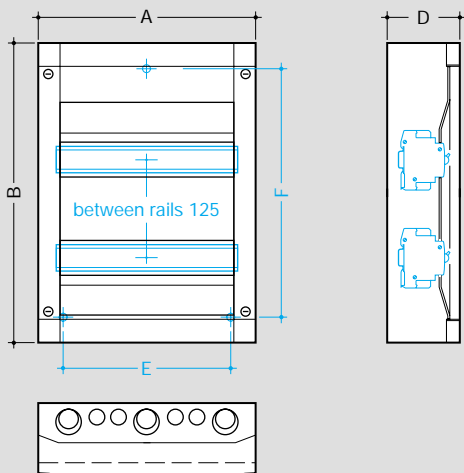


**Flush mounting**



		dimension (mm)				fixing	
		A	B	C	D	E	F
<b>VF 04..</b>	1 row 4	180	220	73	90	140	177
<b>VF 08..</b>	1 row 8	250	230	77	94	209	189
<b>VF 12..</b>	1 row 12	322	265	80	97	281	224
<b>VF 24..</b>	2 rows 24	322	390	80	97	281	349
<b>VF 36..</b>	3 rows 36	322	535	80	97	281	494

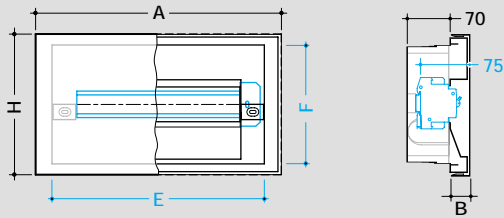
**Surface mounting**



		dimension (mm)			fixing	
		A	B	D	E	F
<b>VS 04..</b>	1 row 4	130	180	86		
<b>VS 08..</b>	1 row 8	200	180	86	120	140
<b>VS 12..</b>	1 row 12	275	225	95	205	160
<b>VS 24..</b>	2 rows 24	275	350	95	205	285
<b>VS 36..</b>	3 rows 36	275	500	95	205	410

**VL enclosure**

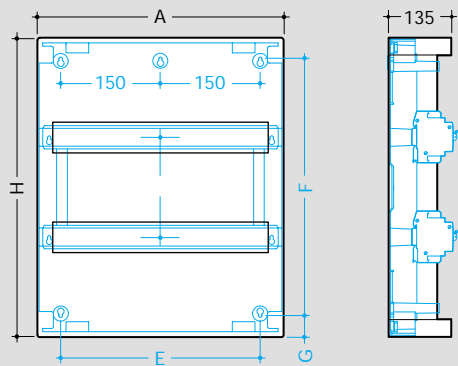
VL 12



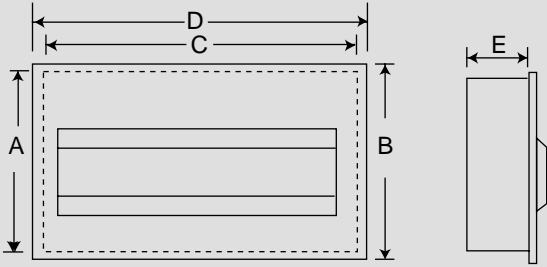
References	Enclosure dimension			Wall box	
	A	H	B	E	F
VL 08.. 12	250	186	27	200	170
VL 12.. 24	324	186	27	272	170
VL 18.. 36	445	208	28	360	170

**Vega enclosure**

VB 36P/T - 2 rows 36



References	Enclosure dimensions		Fixing		
	A	H	E	F	G
VB 18P./T. 18	370	300	300	236	32
VB 36P./T. 36	370	450	300	386	32
VB 54P./T. 54	370	600	300	536	32

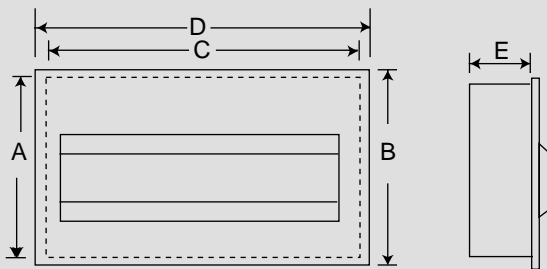


References	Dimensions				
	A	B	C	D	E
<b>Surface mounting</b>					
VT/VP 04SM	226	231	208	214	70
VT/VP 06SM	226	231	244	250	70
VT/VP 08SM	226	231	280	286	70
VT/VP 10SM	226	231	316	322	70
VT/VP 12SM	226	231	352	358	70
VT/VP 16SM	226	231	424	430	70
<b>Flush mounting</b>					
VT/VP 04FM	226	251	208	234	70
VT/VP 06FM	226	251	244	270	70
VT/VP 08FM	226	251	280	306	70
VT/VP 10FM	226	251	316	342	70
VT/VP 12FM	226	251	352	378	70
VT/VP 16FM	226	251	424	450	70

Number of terminals

References	Neutral	Earth
VT/VP 04SM/FM	5	8
VT/VP 06SM/FM	7	10
VT/VP 08SM/FM	9	12
VT/VP 10SM/FM	11	14
VT/VP 12SM/FM	13	16
VT/VP 16SM/FM	17	20

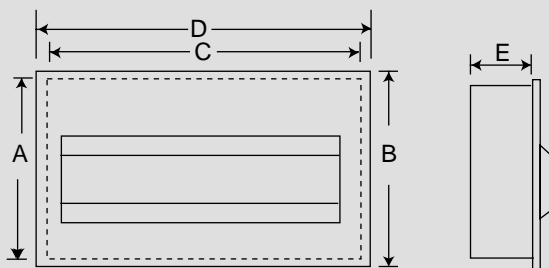
Invicta Consumer Units IP41 split load



References	Dimensions				
	A	B	C	D	E
<b>Surface mounting</b>					
VT/VP 42SM	226	231	298	304	70
VT/VP 53SM	226	231	334	340	70
VT/VP 44SM	226	231	334	340	70
VT/VP 73SM	226	231	370	376	70
VT84SM	226	231	406	412	70
<b>Flush mounting</b>					
VT/VP 42FM	226	251	298	324	70
VT/VP 53FM	226	251	334	360	70
VT/VP 44FM	226	251	334	360	70
VT/VP 73FM	226	251	370	396	70
VT84FM	226	251	406	432	70



## Invicta DIN rail enclosures IP41

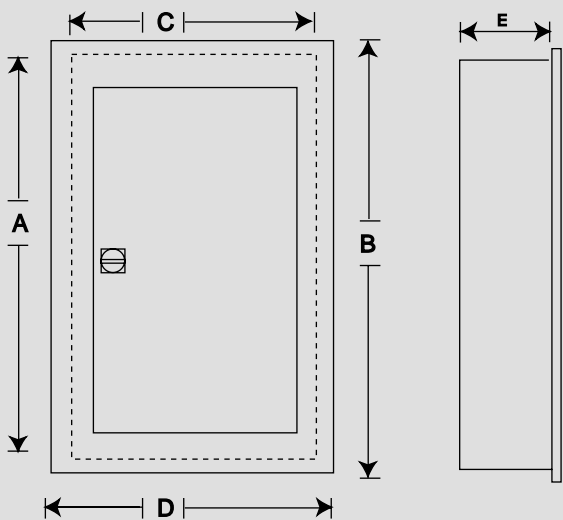


References	Dimensions				
	A	B	C	D	E
<b>Surface mounting</b>					
VT/VP 08SD	226	231	280	286	70
VT/VP 12SD	226	231	352	358	70
VT 18SD / VP 16SD	226	231	460	466	70
<b>Flush mounting</b>					
VT/VP 08FD	226	251	280	306	70
VT/VP 12FD	226	251	352	378	70
VT 18FD / VP 16FD	226	251	460	486	70

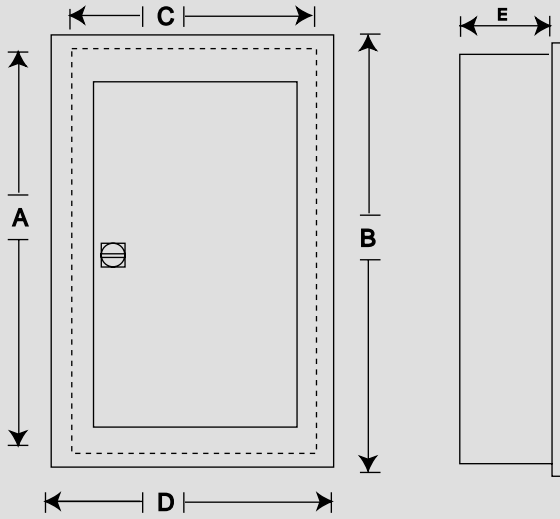
### Number of terminals

References	Neutral	Earth
VT 08SD/FD	8	8
VT 12SD/FD	12	12
VT 18SD/FD	18	18

## Invicta TP & N Distribution Board IP41

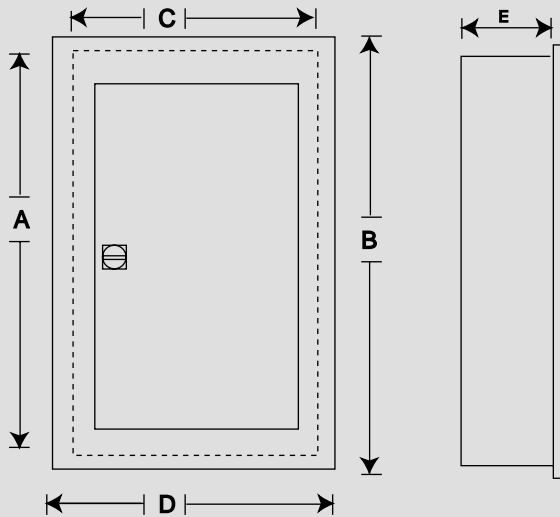


References	Dimensions				
	A	B	C	D	E
<b>Surface mounting</b>					
JK 16SD	270	275	400	405	108
JK 32SD	490	495	400	405	108
JK 48SD	600	605	400	405	108
JK 64SD	720	725	400	405	108
JK 80SD	870	875	400	405	108
<b>Flush mounting</b>					
JK 16FD	270	315	400	445	108
JK 32FD	490	435	400	445	108
JK 48FD	600	645	400	445	108
JK 64FD	720	765	400	445	108
JK 80FD	870	915	400	445	108



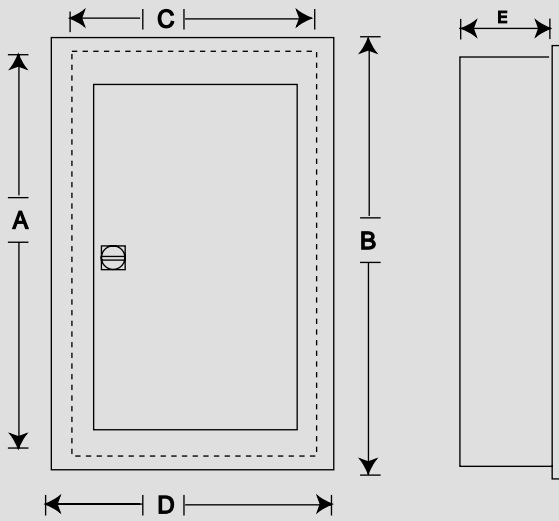
Reference	Dimensions				
	A	B	C	D	E
<b>Surface mounting</b>					
JK 04SM/SS	490	495	400	405	108
JK 06SM/SS	550	555	400	405	108
JK 08SM/SS	600	605	400	405	108
JK 12SM/SS	720	725	400	405	108
JK 16SM/SS	870	875	400	405	108
JK 18SM/SS	930	935	400	405	108
JK 24SM/SS	1095	1100	400	405	108
<b>Flush mounting</b>					
JK 04FM/FS	490	535	400	445	108
JK 06FM/FS	550	595	400	445	108
JK 08FM/FS	600	645	400	445	108
JK 10FM/FS	655	700	400	445	108
JK 12FM/FS	720	765	400	445	108
JK 16FM/FS	870	915	400	445	108
JK 18FM/FS	930	975	400	445	108
JK 24FM/FS	1095	1135	400	445	108

Invicta - TP&N distribution boards IP41 split load



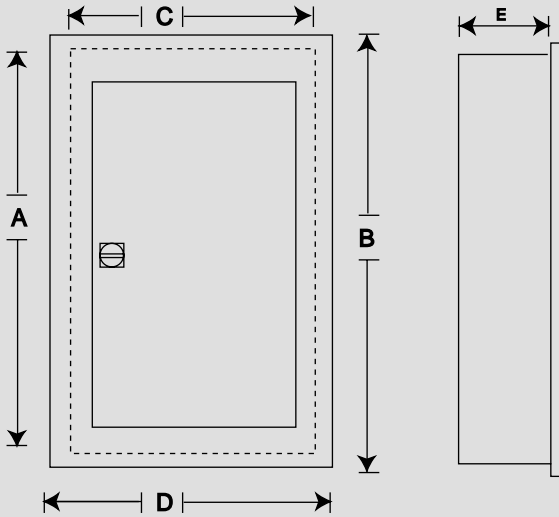
Reference	Dimensions				
	A	B	C	D	E
<b>Surface mounting</b>					
JK 42SM	720	725	400	405	108
JK 44SM	720	725	400	405	108
JK 64SM	815	820	400	405	108
JK 66SM	870	875	400	405	108
JK 84SM	870	875	400	405	108
JK 88SM	965	970	400	405	108
<b>Flush mounting</b>					
JK 42FM	720	765	400	445	108
JK 44FM	720	765	400	445	108
JK 64FM	815	860	400	445	108
JK 66FM	870	915	400	445	108
JK 84FM	870	915	400	445	108
JK 88FM	965	1010	400	445	108

Invicta - TP&N distribution boards with 125A frame MCCB  
Incomer (HD450 & HH449)



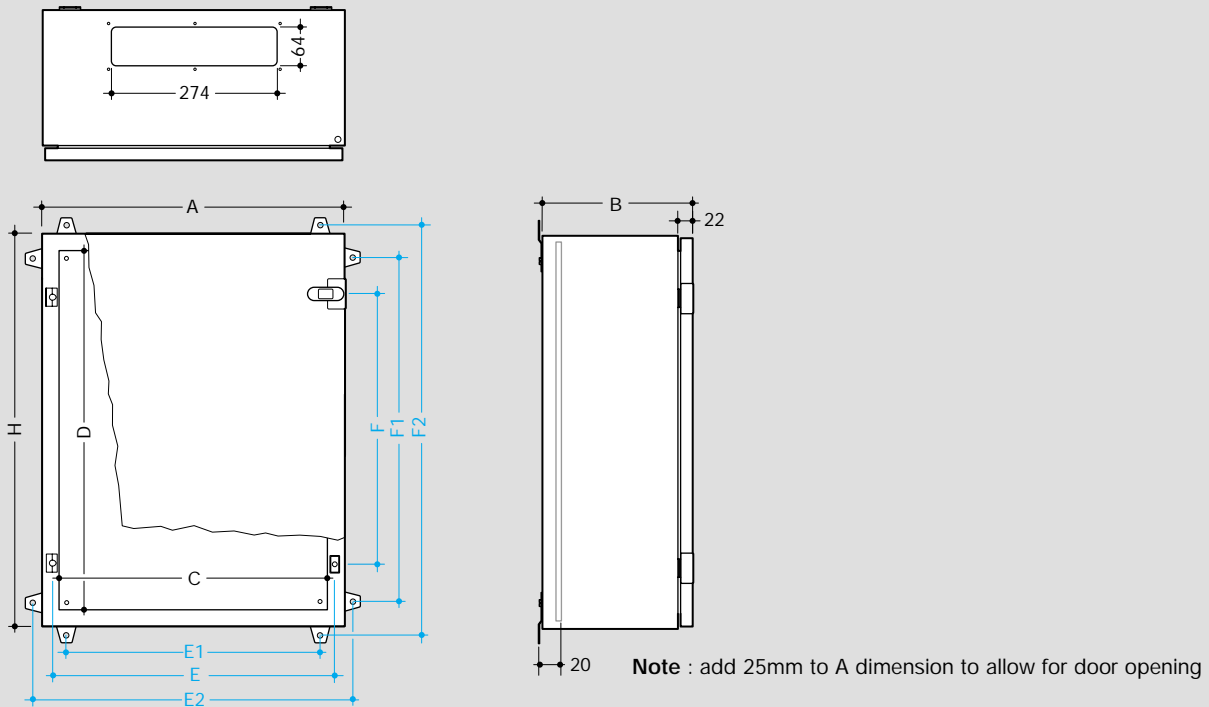
References	Dimensions				
	A	B	C	D	E
<b>Surface mounting</b>					
JK 04S	550	555	400	405	108
JK 06S	600	605	400	405	108
JK 08S	655	660	400	405	108
JK 10S	720	725	400	405	108
JK 12S	815	820	400	405	108
JK 16S	870	875	400	405	108
<b>Flush mounting</b>					
JK 04F	550	595	400	445	108
JK 06F	600	645	400	445	108
JK 08F	655	700	400	445	108
JK 10F	720	765	400	445	108
JK 12F	815	860	400	445	108
JK 16F	870	915	400	445	108

Invicta - TP&N distribution boards with 225A frame MCCB  
Incomer (HH551, HH552 & HH558)



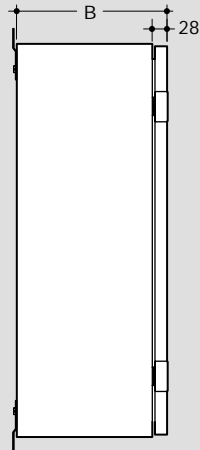
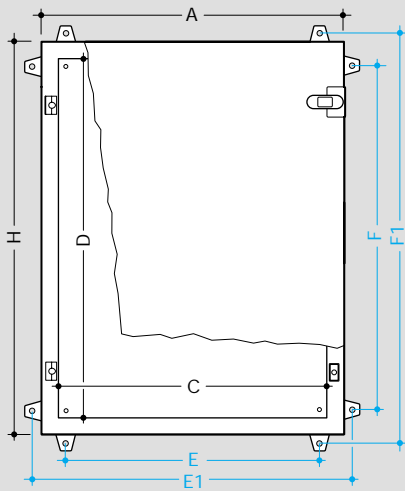
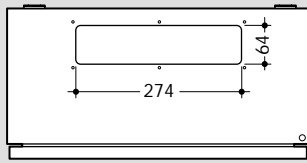
References	Dimensions				
	A	B	C	D	E
<b>Surface mounting</b>					
JK 08S	720	725	400	405	108
JK 10S	815	820	400	405	108
JK 12S	870	875	400	405	108
JK 16S	965	970	400	405	108
<b>Flush mounting</b>					
JK 08F	720	765	400	445	108
JK 10F	815	860	400	445	108
JK 12F	870	915	400	445	108
JK 16F	965	1010	400	445	108

FL 08A



Reference	Nb rows	Enclosure dimensions						Fixing		
		A	H	B	C	D	E	E1	F	F1
FL 01A - FL 31A	-	253	303	160	200	250	169	279	219	329
FL 02A - FL 32A - FL 52A	2	303	353	160	250	300	219	329	269	379
FL 03A - FL 33A - FL 53A	2	303	353	200	250	300	219	329	269	379
FL 04A - FL 34A - FL 54A	3	303	503	200	250	450	219	329	419	529
FL 05A - FL 35A - FL 55A	3	403	503	200	350	450	319	429	419	529
FL 06A - FL 36A - FL 56A	4	403	653	200	350	600	319	429	569	679
FL 07A - FL 37A - FL 57A	4	403	653	250	350	600	319	429	569	679
FL 08A - FL 38A - FL 58A	4	503	653	250	450	600	419	529	569	679
FL 09A - FL 39A - FL 59A	5	603	803	300	550	750	519	629	719	829
FL 10A - FL 40A - FL 60A	6	603	953	300	550	900	519	629	869	829
FL 11A - FL 41A - FL 61A	6	803	853	300	750	900	719	829	869	979

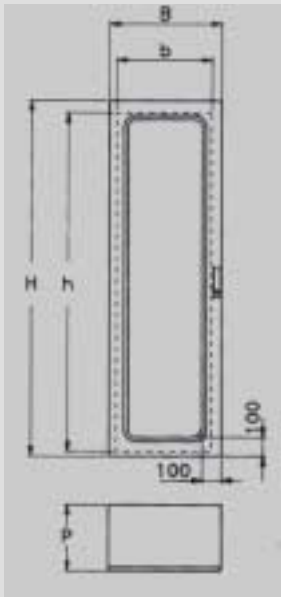
FL 08B



Note : add 25mm to A dimension to allow for door opening

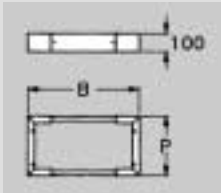
Reference	Nb rows	Enclosure dimensions							Fixing					
		A	H	H1	B	C	D	D1	E	E1	E2	F	F1	F2
FL 01B - FL 31B	-	255	295		150	200	242		152	169	327	223	367	219
FL 02B - FL 32B - FL 52B	2	302	352		160	250	300		145	219	329	312	419	269
FL 04B - FL 34B - FL 54B	3	302	569	502		200	250	450		145	219	329	462	419
FL 05B - FL 35B - FL 55B	3	402	502	569		200	350	450		245	319	429	462	419
FL 06B - FL 36B - FL 56B	4	402	652			200	350	600		245	319	429	612	569
FL 08B - FL 38B - FL 58B	4	502	652		250	450	600		345	419	529	612	679	569
FL 09B - FL 39B - FL 59B	5	602	802		300	550	750		445	519	629	762	829	719
FL 12B - FL 606		850	1150		300	750	1050							
FL 14B		850	1450	850	300	750	750	450						
FL 15B		850	1750	1150	300	750	1050	450						
FL 16B		850	2050	1150	300	750	1050	750						

Enclosure with plain - transparent door



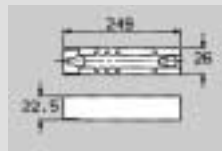
Reference	External dimensions		Internal dimensions		
	B	H	P	b	h
<b>17450 - 17470</b>	600	1300	350	500	1200
<b>17452 - 17472</b>	600	1600	350	500	1500
<b>17454 - 17474</b>	600	1900	350	500	1800
<b>17455 - 17475</b>	850	1300	350	750	1200
<b>17456 - 17476</b>	850	1600	350	750	1500
<b>17458 - 17478</b>	850	1900	350	750	1800

Plinth



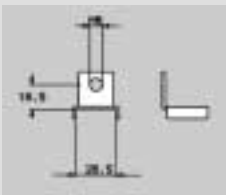
References	Dimensions	
<b>17490</b>	600	300
<b>17491</b>	850	300

Depth adjustment slides



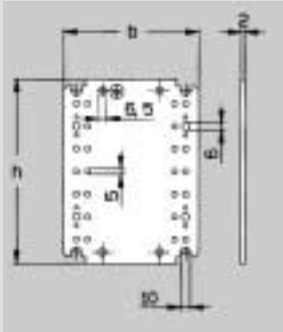
Reference  
**17674**

Brackets



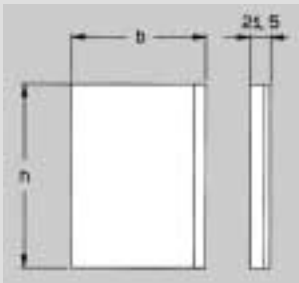
Reference  
**17678**

Plain metal mounting panel



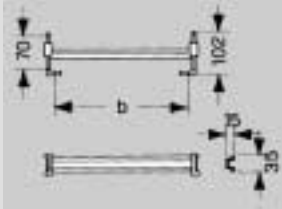
References	Dimensions	
	b	h
<b>17504</b>	245	1195
<b>17506</b>	245	1495
<b>17508</b>	245	1795
<b>17514</b>	495	1195
<b>17516</b>	495	1495
<b>17518</b>	495	1795
<b>17524</b>	745	1195
<b>17526</b>	745	1495
<b>17528</b>	745	1795

Internal metal door



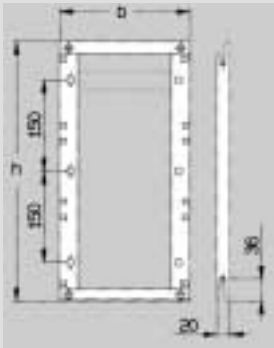
References	Dimensions	
	b	h
<b>17584</b>	248	1197
<b>17586</b>	248	1497
<b>17588</b>	248	1797
<b>17594</b>	498	1197
<b>17596</b>	498	1497
<b>17598</b>	498	1797
<b>17604</b>	748	1197
<b>17606</b>	748	1497
<b>17608</b>	748	1797

**Din rail**



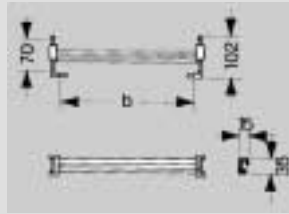
References	Dimensions	
	b	
<b>16500</b>	212	
<b>16542</b>	462	
<b>16504</b>	712	

**Removable chassis frame**



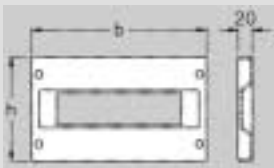
References	Dimensions	
	b	h
<b>17644</b>	496	1195
<b>17646</b>	496	1495
<b>17648</b>	496	1795
<b>17654</b>	746	1195
<b>17656</b>	746	1495
<b>17658</b>	746	1795

**Asimetric Din rail**



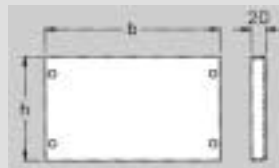
References	Dimensions	
	b	
<b>16505</b>	212	
<b>16546</b>	462	
<b>16509</b>	712	

**Modular cover - height 1 module**



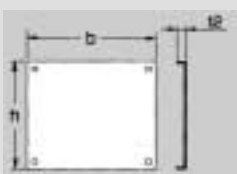
References	Dimensions	
	b	h
<b>16367</b>	498	149
<b>16365</b>	748	149

**Plain plastic cover - height 1 module**



References	Dimensions	
	b	h
<b>16377</b>	498	149
<b>16375</b>	748	149

**Internal panel**



References	Dimensions	
	b	h
<b>16397</b>	466	265
<b>16395</b>	716	265

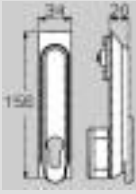
**Plain metal cover - height 2 modules**



References	Dimensions	
	b	h
<b>16387</b>	498	299
<b>16385</b>	748	299








**Door handle**



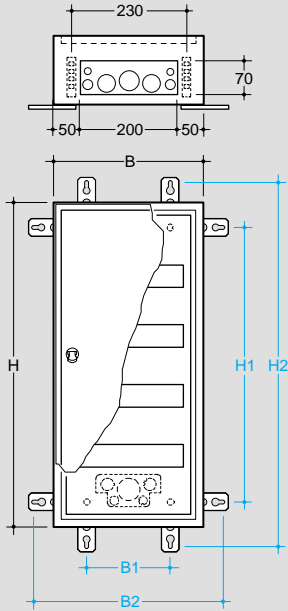
Reference  
17680

**Inserts for door handle**

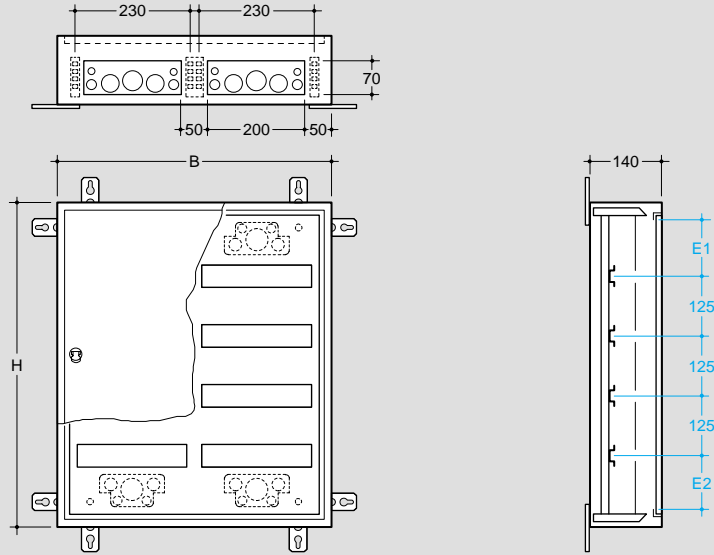
Reference	Reference	Reference	Reference	Reference
<b>17684</b>	<b>17685</b>	<b>17686</b>	<b>17687</b>	<b>17688</b>
				

FW metal enclosures

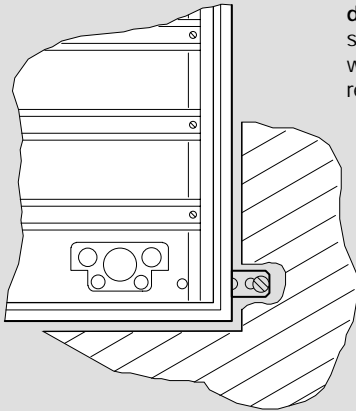
1 section



2 sections

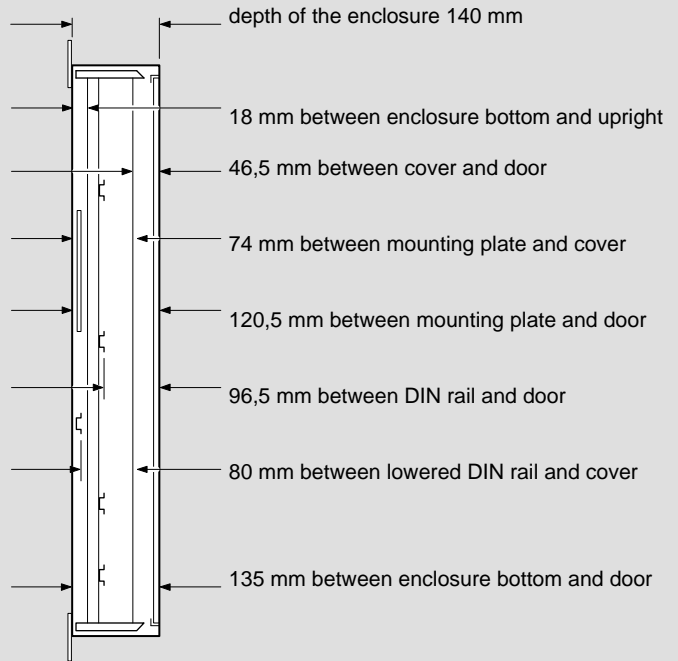


Flush mounting fixing



detail (a)  
side mounting of the brackets  
when flush mounted in a wall  
recess

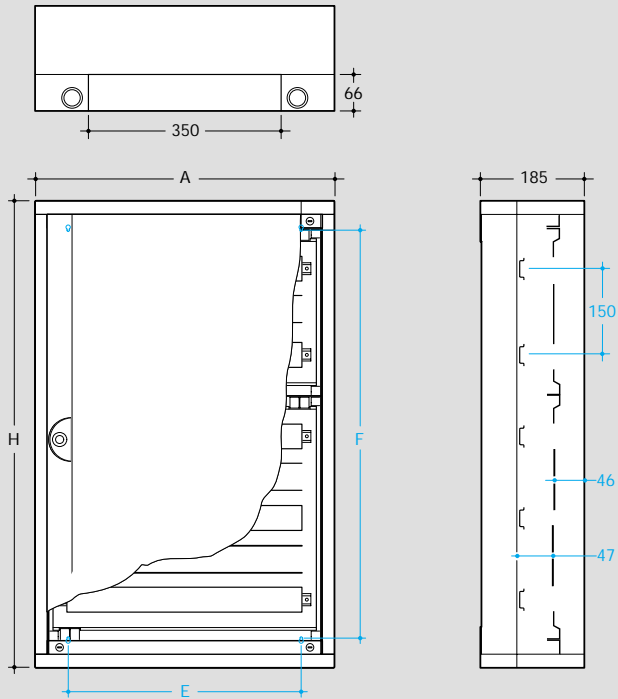
Dimensions



References	enclosure dimensions		inside fixing		fixing kit				spaces		Number of				
	B	H	H1	B1	H2	B1	H1	B2	E1	E2	section	rows	modules	doors	locks
FW 41	300	650	500	165	725	165	550	375	125	100	1	4	48	1	1
FW 42	550	650	500	415	725	415	550	625	125	100	2	8	96	1	1
FW 43	800	650	500	665	725	665	550	875	125	100	3	12	144	2	1
FW 51	300	800	700	165	875	165	700	375	150	100	1	5	60	1	1
FW 52	550	800	700	415	875	415	700	625	150	100	2	10	120	1	1
FW 53	800	800	700	665	875	665	700	875	150	100	3	15	180	2	1
FW 61	300	950	850	165	1025	165	850	375	175	100	1	6	72	1	1
FW 62	550	950	850	415	1025	415	850	625	175	100	2	12	144	1	1
FW 63	800	950	850	665	1025	665	850	875	175	100	3	18	216	2	1

Vega D enclosures  
surface, weatherproof

FD 52D - 5 rows 120 ■



Dimensions

Surface enclosures

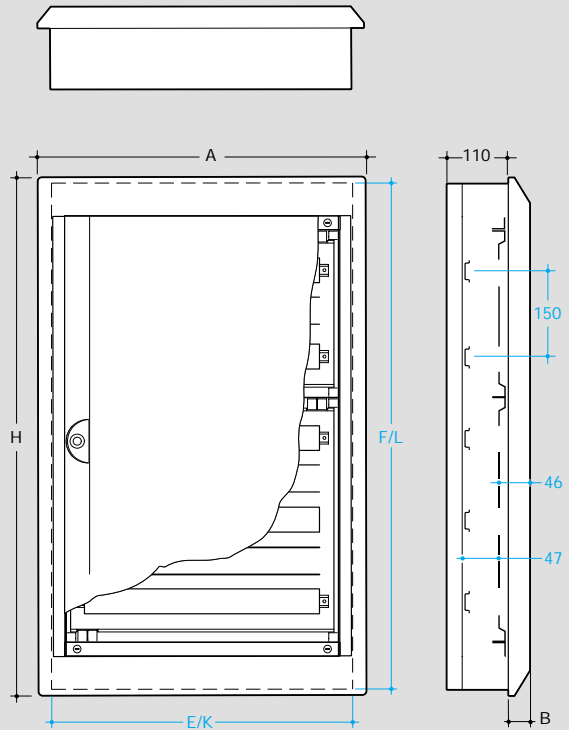
Ref.	enclosure dimensions		Fixing		Number of			
	A	H	E	F	rows	mod.	doors	lock
FD 32D	550	550	428	442	3	72	1	1
FD 42D	550	700	428	592	4	96	1	1
FD 52D	550	850	428	742	5	120	1	1
FD 62D	550	1000	428	892	6	144	1	1
FD 72D	550	1150	428	1042	7	168	1	1
to be completed								
FD 22A	550	400	428	292	-	-	1	1
FD 32A	550	550	428	442	+1	24	1	1
FD 42A	550	700	428	592	+2	48	1	1
FD 52A	550	850	428	742	+3	72	1	1
FD 62A	550	1000	428	892	+4	96	1	1
FD 72A	550	1150	428	1042	+5	120	1	1

Weatherproof enclosures

Ref.	enclosure dimensions		Fixing		to be completed number of			
	A	H	E	F1	rows	mod.	doors	verrou
FV 22A	550	500	405	574	-	-	1	1
FV 32A	550	650	405	724	+1	24	1	1
FV 42A	550	800	405	874	+2	48	1	1
FV 52A	550	950	405	1024	+3	72	1	1
FV 62A	550	1100	405	1174	+4	96	1	1
FV 72A	550	1250	405	1324	+5	120	1	1

flush

FU 52D - 5 rows 120 ■

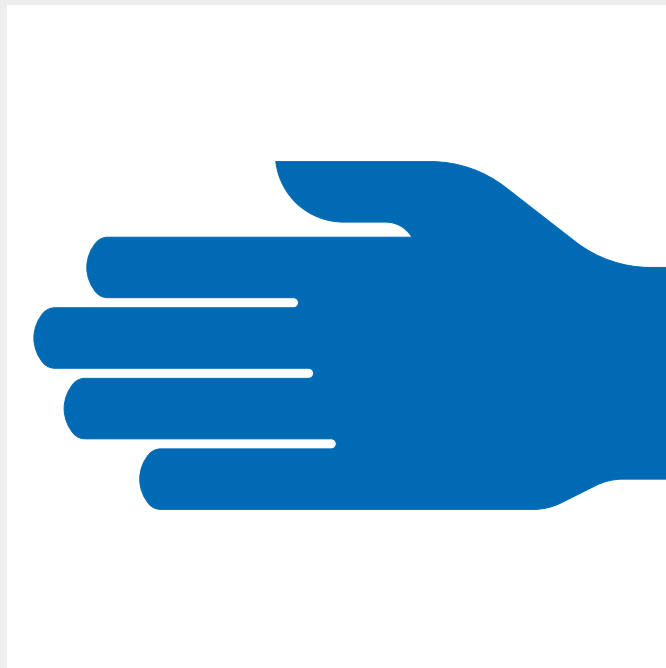


Flush enclosures

Ref.	enclosure dimens°		wall box		Partition wall		Number of			
	A	H	E min	F min	K max	L max	rows	mod.	doors	verrou
FU 22D	600	500	580	500	550	470	2	48	1	1
FU 32D	600	650	580	650	550	620	3	72	1	1
FU 42D	600	800	580	800	550	770	4	96	1	1
FU 52D	600	950	580	950	550	920	5	120	1	1
FU 62D	600	1100	580	1100	550	1070	6	144	1	1
to be completed										
FU 32A	600	650	580	650	550	620	+1	24	1	1
FU 42A	600	800	580	800	550	770	+2	48	1	1
FU 52A	600	950	580	950	550	920	+3	72	1	1
FU 62A	600	1100	580	1100	550	1070	+4	96	1	1

## Services

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- 91 worldwide addresses



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16387	45	CD464Z	26	FL32A	38	FL98Z	38	FZ783	38	JK06FS160	29
16395	45	CD485Z	26	FL32B	39	FU22A	64	FZ792	55	JK06FS200	29
16397	45	CE464Z	26	FL33A	38	FU22D	64	FZ793	38	JK06SB399	29
16500	45	CE485Z	26	FL34A	38	FU32A	64	FZ794	55	JK06SD441	31
16504	45	CF464Z	26	FL34B	39	FU32D	64			JK06SD450	35
16505	45			FL35A	38	FU42A	64	<b>G</b>		JK06SD464	31
16509	45	<b>F</b>		FL36A	38	FU42D	64	GD05A	14	JK06SD485	31
16542	45	F010	49	FL36B	39	FU52A	64	GD10A	14	JK06SE464	31
16546	45	FD22A	51	FL37A	38	FU52D	64	GD13A	14	JK06SH449	35
17450	46	FD22D	51	FL38A	38	FU62A	64	GD26A	14	JK06SM	25
17452	46	FD22P	59	FL38B	39	FU62D	64	GD26C	14	JK06SN384	30
17454	46	FD22T	59	FL39A	38	FU72A	64	GD39A	14	JK06SS125	29
17455	46	FD32A	51	FL39B	39	FU72D	64	GD52A	14	JK06SS160	29
17456	46	FD32D	51	FL40A	38	FV22A	45	GP13P	15	JK06SS200	29
17458	46	FD32P	59	FL41A	38	FV32A	45	GP13T	15	JK08FB399	29
17470	43	FD32T	59	FL41G	40	FV42A	45	GP26P	15	JK08FD441	31
17470	46	FD42A	51	FL41P	40	FV52A	45	GP26T	15	JK08FD450	35
17472	46	FD42D	51	FL42G	40	FV62A	45	GP39P	15	JK08FD464	31
17474	46	FD42P	59	FL42P	40	FV72A	45	GP39T	15	JK08FD485	31
17475	42	FD42T	59	FL43Z	40	FW31	48	GP52P	15	JK08FE464	31
17475	46	FD52A	51	FL44G	40	FW32	48	GP52T	15	JK08FH449	35
17476	46	FD52D	51	FL44P	40	FW33	48	GS13D	15	JK08FH551	35
17478	46	FD52P	59	FL45G	40	FW34	48	GS26C	15	JK08FH552	35
17490	43	FD52T	59	FL45P	40	FW41	48	GS26D	15	JK08FH558	35
17490	47	FD62A	51	FL46G	40	FW42	48	GS39D	15	JK08FM	25
17491	42	FD62D	51	FL46P	40	FW43	48	GS52D	15	JK08FN384	30
17491	47	FD62P	59	FL48G	40	FW44	48	GZ05A	15	JK08FS125	29
17499	47	FD62T	59	FL48P	40	FW51	48	GZ10A	15	JK08FS160	29
17504	44	FD72A	51	FL49G	40	FW52	48	GZ12A	15	JK08FS200	29
17506	44	FD72D	51	FL49P	40	FW53	48			JK08SB399	29
17508	44	FD72P	59	FL50G	40	FW54	48	<b>J</b>		JK08SD441	31
17514	43	FD72T	59	FL50P	40	FW61	48	JK01FK	26	JK08SD450	35
17514	44	FL01A	38	FL51G	40	FW62	48	JK01SK	26	JK08SD464	31
17516	44	FL01B	39	FL51P	40	FW63	48	JK02FK	26	JK08SD485	31
17518	44	FL02A	38	FL51Z	40	FW64	48	JK02SK	26	JK08SE464	31
17524	44	FL02B	39	FL52A	38	FZ104	49	JK04FB399	29	JK08SH449	35
17526	44	FL02M	40	FL52B	39	FZ106	49	JK04FD441	31	JK08SH551	35
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17584	44	FL03A	38	FL52Z	40	FZ302	49	JK04FD464	31	JK08SH558	35
17584	44	FL03Z	40	FL53A	38	FZ303	49	JK04FD485	31	JK08SM	25
17586	44	FL04A	38	FL53Z	40	FZ304	49	JK04FE464	31	JK08SN384	30
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17596	44	FL05A	38	FL54Z	40	FZ308	49	JK04FS125	29	JK100L	26
17598	44	FL05B	39	FL55A	38	FZ309	49	JK04FS160	29	JK100R	26
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17608	44	FL06A	38	FL55Z	40	FZ313	49	JK04SD441	31	JK10FD450	35
17644	42	FL06B	39	FL56A	38	FZ314	49	JK04SD450	35	JK10FD464	31
17644	44	FL06M	40	FL56B	39	FZ316	49	JK04SD464	31	JK10FD485	31
17646	44	FL06Z	40	FL56G	40	FZ317	49	JK04SD485	31	JK10FE464	31
17648	44	FL07A	38	FL56Z	40	FZ318	49	JK04SE464	31	JK10FH449	35
17654	44	FL08A	38	FL57A	38	FZ319	49	JK04SH449	35	JK10FH551	35
17656	44	FL08B	39	FL58A	38	FZ403	49	JK04SM	25	JK10FH552	35
17658	44	FL08M	40	FL58B	39	FZ449	60	JK04SN384	30	JK10FH558	35
17674	47	FL09A	38	FL59A	38	FZ450	60	JK04SS125	29	JK10FM	25
17674	42	FL09B	39	FL59B	39	FZ451	60	JK04SS160	29	JK10FN384	30
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17678	43	FL10A	38	FL60B	39	FZ453	60	JK06FB399	29	JK10FS160	29
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JK12SE464	31	JK200S	26	K156	60	KR02H	63	UT44E	49	VP12SD	23
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JK16FB399	29	JK24SD485	31	KB263C	64	KR35F	63	V308	8	VP44FM	21
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JK16FD450	35	JK24SN384	30	KB280B	59	KR95P	62	VA24D	12	VP53SM	21
JK16FD464	31	JK24SS125	29	KB363A	64	KZ012	60	VA36D	12	VP54G	11
JK16FD485	31	JK24SS160	29	KB363A	59	KZ013	60	VA48D	12	VP54M	11
JK16FE464	31	JK24SS200	29	KB363B	64	KZ014	60	VB18P	18	VP72G	11
JK16FH449	35	JK32FD	23	KB363B	59	KZ015	64	VB18T	18	VP72M	11
JK16FH551	35	JK32SD	23	KB363C	64	KZ016	64	VB36P	18	VP73FM	21
JK16FH552	35	JK42FM	25	KB363C	59	KZ017	64	VB36T	18	VP73SM	21
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VZ727	10				
VZ728	10				
VZ729	10				
VZ744	10				
VZ754	9				
VZ758	10				
VZ764	10				

**AUSTRIA :**

**Hager Electro Ges. m. b. H.**  
Dieselgasse, 3  
2333 Leopoldsdorf  
Tel. (43) 02235 / 44600  
Fax (43) 02235 / 44545

**BELGIUM :**

**S.A. Hager Modulec N.V.**  
Boulevard Industriel 61  
BRUXELLES 1070  
Tel. (32) 2 529 47 11  
Fax (32) 2 527 12 61

**CZECH REPUBLIC :**

**Hager Electro s.r.o.**  
Podebradská 186/56  
18066 Praha 9 - Hloubetin  
Tel. (42) 02 66 10 73 08  
Fax (42) 02 66 10 73 10

**CYPRUS :**

**N.P. Lanitis Ltd**  
P.O. Box 50203  
Limassol 3602 - Cyprus  
Tel. (357) 5 56 77 70  
Fax. (357) 5 56 38 38  
e-mail : [nplanitis@nplanitis.com](mailto:nplanitis@nplanitis.com)

**DENMARK :**

**ELPEFA A/S**  
Postbox 180  
2670 GREVE  
Tel. (45) 43 95 95 95  
Fax (45) 43 95 95 90

**FINLAND :**

**URHO TUOMINEN Oy**  
Palopellonkatu 7 - PL 33  
04250 KERAVA  
Tel. (358) 9 274 6411  
Fax (358) 9 274 641 41

**FRANCE :**

**Hager Electro S.A.**  
132, Bld d'Europe  
B.P. n° 3  
67215 OBERNAI Cedex  
Tel. 03 88 49 50 50  
Fax 03 88 49 50 03

**GERMANY :**

**Hager Electro GmbH**  
Im Hofgarten  
66131 SAARBRÜCKEN  
Tel. (49) 68 93 94 50  
Fax (49) 68 93 94 53 76

**Hager Electro GmbH**

Zum Gunterstal  
66440 BLIESKASTEL  
Tel. (49) 68 42 94 50  
Fax (49) 68 42 94 56 76

**GREAT BRITAIN :**

**Hager Ltd**  
Hortonwood 50  
TELFORD, Shropshire  
TF1 4FT / U.K.  
Tel. (44) 1952 - 677 899  
Fax (44) 1952 - 670 271

**GREECE :**

**Hager Hellas**  
Iapetou Street 33  
11364 ATHENS  
Tel. (30) 1 864 50 90  
Fax (30) 1 865 09 56

**HUNGARY :**

**Burich**  
Villanyszerelesi Rendszerek KFT  
Schweidel u.2  
1047 BUDAPEST  
Tel. (36) 1 169 06 40  
Fax (36) 1 169 57 31

**ICELAND :**

**Johan RÖNNING Hf**  
Sundaborg 15  
104 REYKJAVIK  
Tel. (354) 5 20 08 00  
Fax (354) 5 20 08 88

**IRELAND :**

**Hager Nolan Ltd**  
Techna House  
Terenure Road East  
DUBLIN 6  
Tel. (353) 1 - 490 6611  
Fax (353) 1 - 490 1274

**ITALY :**

**Hager Lume S.p.A.**  
Via Battistotti Sassi n. 11  
20133 MILANO  
Tel. (39) 02 70 10 74 40  
Fax (39) 02 70 10 74 30

**MALTA :**

**International Trading Co.**  
White House Buildings  
Mountbatten Street  
BLATA L-BAJDA  
Tel. (356) 24 02 91  
Fax (356) 24 31 86

**NETHERLANDS :**

**Hager Electro b.v.**  
Larenweg 36  
5234 KA's Hertogenbosch  
Tel. (31) 73 6428 584  
Fax (31) 73 6442 674

**NORWAY :**

**Hager Systemer A/S.**  
Industriveien 8b  
Postboks 391  
1473 SKÅRER  
Tel. (47) 67 97 50 11  
Fax (47) 67 97 20 55

**POLAND :**

**Hager Electro Sp.zo.o.**  
ul. Zytlnia 86  
Duchnice k. Warszawy  
05-850 Ozarów Mazowiecki  
Tel. (48) 22 7 22 44 87  
Fax (48) 22 7 22 44 87

**PORTUGAL :**

**Hager SEM SA**  
**(Sistemas Eléctricos Modulares)**  
Estrada para Polima  
Complexo Meramar  
Armazem C  
Abóboda  
2775 PAREDE  
Tel. (351) 21 445 84 50  
Fax (351) 21 445 84 54

**SPAIN :**

**Hager Sistemas S.A.**  
Paratge Coll-Blanc s/n  
Apartado 39  
08430 LA ROCA DEL VALLES  
Tel. (34) 902 42 2232  
(34) 93 842 4730  
Fax (34) 93 842 2132

**SWEDEN :**

**Hager Elektro AB**  
Box 9040  
400 91 GÖTEBORG  
Tel. (46) 31 706 39 00  
Fax (46) 31 706 39 50

**SWITZERLAND :**

**Hager Tehalit AG**  
Moosweg 8,  
Postfach 431  
8501 FRAUENFELD  
Tel. (41) 052 723 24 00  
Fax (41) 052 723 24 05



**AUSTRALIA :**

**Hager B&R Ltd**  
Unit 14 Riverside Centre  
148 James Ruse Drive  
(cnr River Road West)  
North Paramatta NSW 2150  
AUSTRALIA  
Tel. (61) 2 - 9687 0077  
Fax (61) 2 - 9687 0011 or 22

**BAHRAIN, KUWAIT, OMAN,  
QATAR, SAUDI ARABIA, U.A.E.,  
IRAN, EGYPT, PAKISTAN and  
INDIA**

Hager Tehalit Systems  
M.E. FZE  
POB 61056  
JEBEL ALI  
DUBAI / U.A.E.  
Tel. (971) 4 - 883 63 64  
Fax (971) 4 - 883 79 93  
e-mail : [htsme@emirates.net.ae](mailto:htsme@emirates.net.ae)

**CHINA :**

**Hager Beijing Office**  
N° 308, He Qiao Building  
8A Guang Hua Road  
Chaoyang District  
100026 BEIJING  
Tel. (86) 10-6503 5170  
Fax (86) 10-6503 5173

**HONG KONG :**

**Hager Electro Ltd**  
Suite 310 Chinachem Golden  
Plaza  
77 Mody Road  
Tsimshatsui East, Kowloon  
HONG KONG  
Tel. (852) 2688.0228  
and 0234  
Fax (852) 2688.0336

**JORDAN**

**Dasouki Trading Corp.**  
PO Box 815422  
11180 AMMAN  
Tel. (962) 6 465 27 11  
Fax (962) 6 464 74 72  
e-mail : [dasouki@index.com.jo](mailto:dasouki@index.com.jo)

**LEBANON**

**Cesar Debbas & Fils**  
Imm. Debbas  
Corniche El-Nahr  
BEIRUT 2069 6810  
Tel. (961) 1 58 50 00  
Fax (961) 1 44 95 39  
e-mail : [cdf@debbas.com.lb](mailto:cdf@debbas.com.lb)

**MALAYSIA :**

**Hager Engineering (M)  
SDN BHD**  
N° 12, Jalan 4/91A  
Taman Shamelin Perkasa  
Cheras  
56100 KUALA LUMPUR /  
MALAYSIA  
Tel. (60) 3 - 983 33 53  
Fax (60) 3 - 983 23 35

**MAURITIUS**

**Simelec**  
116 Royal Road, G.R.N.W.  
PO Box 739  
Bell Village, PORT LOUIS  
Tel. (230) 212 10 73  
Fax (230) 212 87 62  
e-mail : [simelec@intnet.mu](mailto:simelec@intnet.mu)

**SINGAPORE :**

**Hager Electro Systems  
PTE Ltd**  
23, New Industrial Road  
01-03/04 Century Industrial  
Building  
SINGAPORE 536209  
Tel. (65) 383 1030  
Fax (65) 383 0230

**SOUTH AFRICA**

**Electromechanica  
(Gauteng)**  
9/11 Data Crescent, Ormonde  
Ext. 8  
PO Box 38980  
BOOYSENS 2016  
Tel. (27) 11 249 5000  
Fax (27) 11 496 2779  
e-mail : [info@em.co.za](mailto:info@em.co.za)

**Electromechanica  
(Cape Province)**

44 Freeway Park  
cnr Upper Camp & Berkley Rd.  
PO Box 267  
MAITLAND  
Tel. (27) 21 510 5030  
Fax (27) 21 510 5050

**Electromechanica  
(Kwazulu Natal)**

17 Mc Donald Road  
PO Box 17317  
CONGELLA 4013  
Tel. (27) 31 205 1571  
Fax (27) 31 205 1625

**SYRIA**

**Constructions Electriques**

**Hanino**  
PO Box 5236  
Abbara Al - Hamra  
ALEPPO  
Tel. (963) 21 22 16 044  
Fax (963) 21 22 47 703

**OTHER COUNTRIES**

**Hager Electro S.A.**  
PO Box 3  
67215 OBERNAI Cedex  
FRANCE  
Tel. (33) 3 88 49 50 50  
Fax (33) 3 88 49 51 44  
e-mail : [hageroverseas@hager.fr](mailto:hageroverseas@hager.fr)





The success is in the system

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Hager Electro S.A.  
132, Boulevard d'Europe  
B.P. 3  
67215 Obernai Cedex  
France  
Tel. (33) 3 88 49 50 50  
Fax (33) 3 88 49 51 44  
e-mail : [hageroverseas@hager.fr](mailto:hageroverseas@hager.fr)  
<http://www.hager.com>

