

# Household switchboards

**Domae**

*The right solution for every home*

Household guide

# 2002



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# Domae

## A manufacturer's know-how...

*Safety of people and equipment is top on the list of priorities for electrical installation professionals who must demand products designed and produced by a manufacturer, guaranteeing:*

- *compliance with electrical switchgear manufacturing standards,*
- *a high performance industrial process, producing quality switchgear complete with their quality certificates.*

### *Conform to European and international standards*

**Merlin Gerin guarantees conformity of Domae products to European and international standards for construction of equipment intended for domestic and similar installations:**

- **EN 60898 - IEC 60898:**  
"Overcurrent protection circuit-breakers".
- **EN 61008 - IEC 61008:**  
"Automatic residual current circuit-breakers".
- **EN 61095 - IEC 61095:**  
"Electromechanical contactors".
- **EN 61669-2-2 - IEC 60669-2-2:**  
"Electromagnetic remote control switches (impulse relays)" a specific specification taken from the "Fixed installation switch" standard.
- **IEC 61643-1:**  
"Overvoltage protection devices connected to LV distribution networks".
- **IEC 60670:**  
"General rules concerning switchgear enclosures for fixed electrical installations for household or similar use".

### *Install according to proper practices*

**Standard EN 60364 – IEC 60364**

"Electrical installation in buildings" defines switchgear installation rules.

The installation diagrams and recommendations proposed in this guide conform to this standard.

### *For Domae, ISO 9001/2000 certified production plants*



Benefiting from the international experience of the 26 Merlin Gerin modular switchgear development and production plants, the Domae switchgear are all produced in ISO 9001/2000 certified plants.

From design through to dispatch, ISO certification guarantees professional organisation and consistent quality of products.






# Guaranteed quality

## *Domae: Aenor* approved

The quality marks prove product conformity to their reference standard.

They guarantee:

- safety of installers,
- suitability of products for their use.

**Merlin Gerin guarantees that all Domae switchgear will have the Aenor  quality mark. This approval was awarded on completion of tests performed in an approved laboratory in the presence of independent third parties. This third-party organisation monitors conformity to the quality mark by means of new tests conducted after random sampling.**



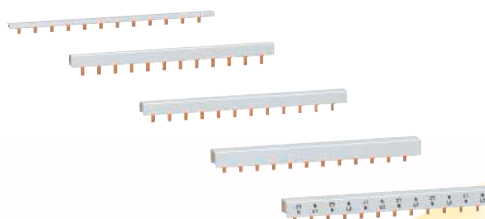
*For electrocution protection:  
Domae residual current circuit-breakers*



*For short-circuit and overload protection:  
Domae circuit-breakers*



*For easy installation:  
Domae enclosures*



*For quick connection:  
Domae comb busbars*



*For lightning protection:  
Surge arrester*



*For remote control:  
Impulse relay and contactor*

## *CE marking*

**An administrative formality for free movement and sales on the European Union territory.**

Made compulsory by European directives, CE marking of Domae products satisfies both administrative and legal requirements: intended for European supervisory authorities (customs), the "CE marking" declarations and files are prepared under the manufacturer's sole responsibility and undergo no conformity checking by a third-party organisation.

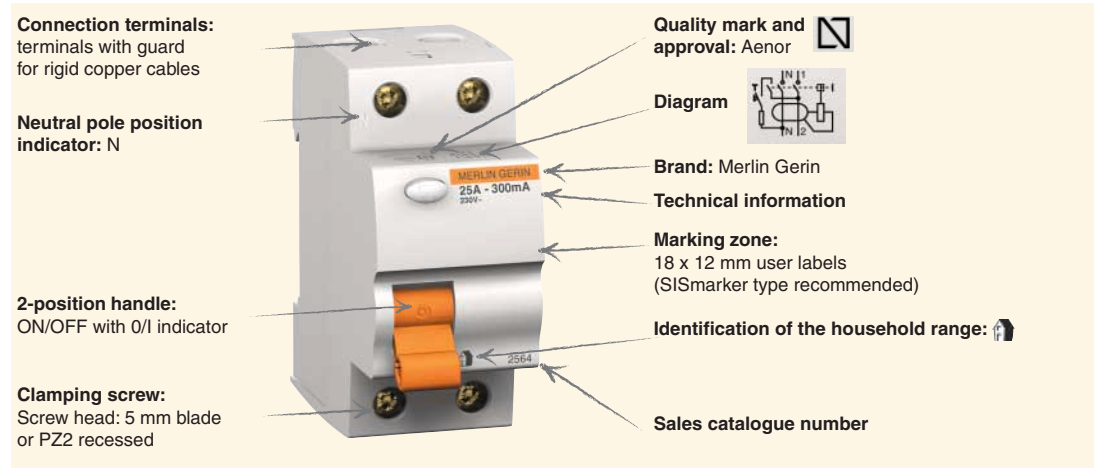
**Only the quality marks, issued and checked by an independent third-party organisation, provide complete guarantee of operation, compatibility and safety according to national and international standards.**



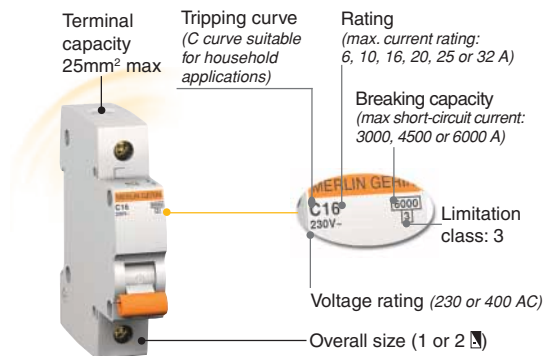
# Domae

## A comprehensive range...

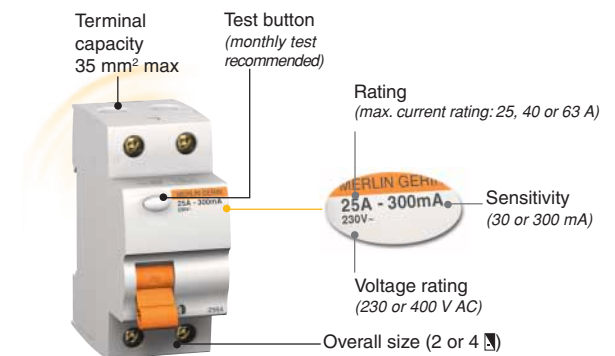
*Domae products can be easily identified by their new design*



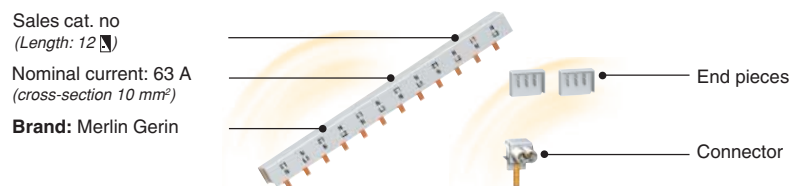
### Domae circuit-breaker



### Domae residual current circuit-breaker



### Domae comb busbar



### Surge arrester, Contactor, Impulse relay



To perform lightning protection and remote control functions, surge arresters, impulse relays and contactors can be incorporated in all Domae switchboards.

Consult the General Catalogue.

# .... adapted solutions

## The *Domae* enclosures



## *Domae* surface-mounted enclosure

### ■ Back:

#### □ Easy to position:

- centred oblong opening (equipped with a class 2 enclosure insulating plug)
- vertical position adjustment oblong holes (equipped with a class 2 enclosure insulating plug)

#### □ Convenient to install:

- Cable insertion by drilling pre-punched out zones

#### □ Quick to connect:

- terminal blocks



### ■ Cover:

#### □ Design:

- curved door
- blanking plate

#### □ Professional:

- circuit identification by self-adhesive strip (enclosure delivered with one strip per row),
- sheets of symbols to be pasted and key-lock for door locking (to be ordered separately).

#### □ Identification of the household range:



## *Domae* flush-mounted enclosure

### ■ Tank:

#### □ Easy to flush mount:

- thin (depth: 7 cm)
- flush-mounting in masonry
- flush-mounting kit for hollow partition

#### □ Convenient to install:

- Tube insertion by drilling pre-punched out zones

#### □ Quick to connect:

- terminal blocks



### ■ Cover:

#### □ Design:

- curved door
- blanking plate

#### □ Professional:

- circuit identification by self-adhesive strip (enclosure delivered with one strip per row),
- sheets of symbols to be pasted and key-lock for door locking (to be ordered separately).

#### □ Identification of the household range:





# Domae

## Electrical hazards in the home

### Choice of protection devices

#### Short-circuit and overload protection



	Cables	Protection
"Power socket circuit": 1 protection device for 8 sockets maximum	2.5 mm <sup>2</sup>	1  C16 circuit-breaker
"Lighting circuit": 1 protection device for 10 lighting points maximum	1.5 mm <sup>2</sup>	1  C10 circuit-breaker
"Specific circuit": 1 protection device by appliance (washing machine, cooker, water heater, etc.)	4 mm <sup>2</sup>	1  C32 circuit-breaker

#### Electrocution protection



1 protection device for the "power socket circuit" and "specific circuit" assembly	1  30 mA residual current circuit-breaker
--	---

#### Fire protection



1 general protection device	1 300 mA ID residual current circuit-breaker
-----------------------------	--

#### Lightning protection



1 general protection device	1 STD surge arrester
-----------------------------	----------------------

### Everyday comfort

#### Multiple control for lighting circuit



	Commande
1 relay by multiple control circuit	1 TL impulse relay

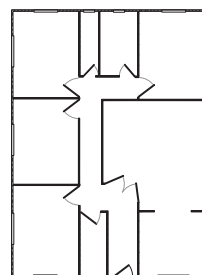
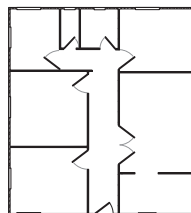
#### Power control


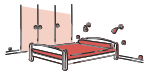
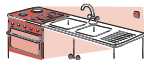

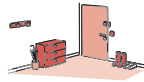



1 relay by specific circuit	1 CT contactor
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# Standard equipment for the home

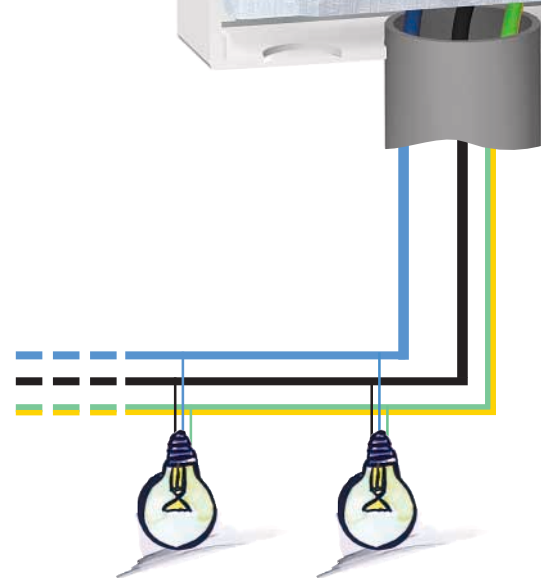
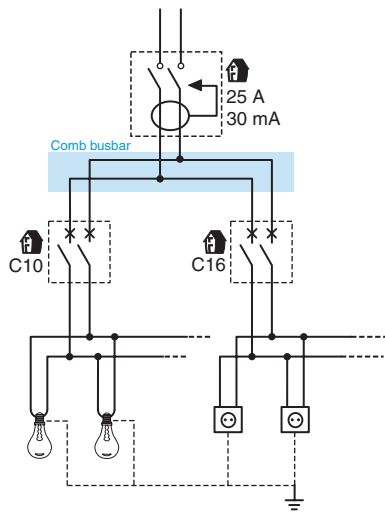
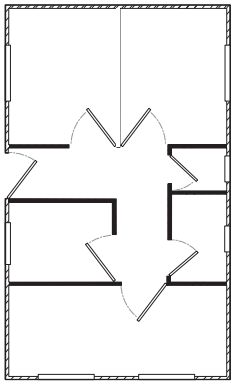


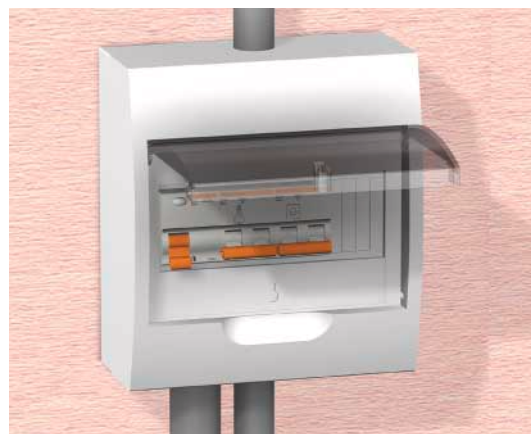
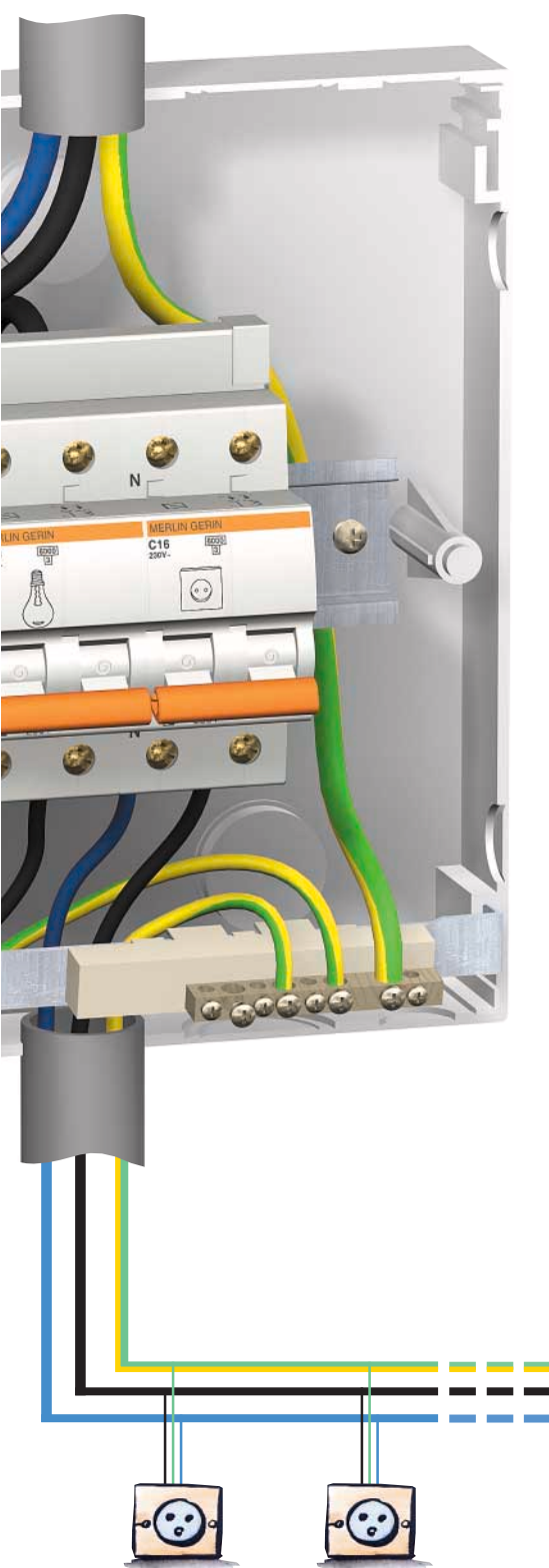
Surface area		60 m <sup>2</sup>	100 m <sup>2</sup>	>100 m <sup>2</sup>
Subscribed demand		3000 VA	6000 VA	>6000 VA
"Household incoming" connection				
Number of "power socket" circuits		1	2	2
Number of "lighting circuits"		1	1	2
Number of "specific circuits"		0	1	2
Distribution	Living room 	1 socket for 6 m <sup>2</sup> 1 lighting for 20 m <sup>2</sup>	1 socket for 6 m <sup>2</sup> 1 lighting for 20 m <sup>2</sup>	1 socket for 6 m <sup>2</sup> 1 lighting for 20 m <sup>2</sup> 1 special purpose socket
	Bedroom 	1 lighting 2 sockets	1 lighting 3 sockets	1 lighting 3 sockets 1 special purpose socket
	Kitchen 	1 lighting 3 sockets	2 lightings 3 sockets 1 socket per electrical household appliance	2 lightings 3 sockets 1 special purpose socket 1 socket per electrical household appliance
	Bathroom 	1 lighting 1 socket	2 lightings 1 socket	2 lightings 3 sockets 1 special purpose socket
	Entrance hall 	1 lighting 1 socket	1 lighting for 12 m <sup>2</sup> 1 socket for 12 m <sup>2</sup>	1 lighting for 12 m <sup>2</sup> 1 socket for 12 m <sup>2</sup> 1 special purpose socket for 12 m <sup>2</sup>
	Garage and outside 	1 lighting	1 lighting for 5 m <sup>2</sup> 1 socket for 5 m <sup>2</sup>	1 lighting for 5 m <sup>2</sup> 1 socket for 5 m <sup>2</sup> 1 special purpose socket for 5 m <sup>2</sup>





## *The switchboard for a 60 m<sup>2</sup> home*



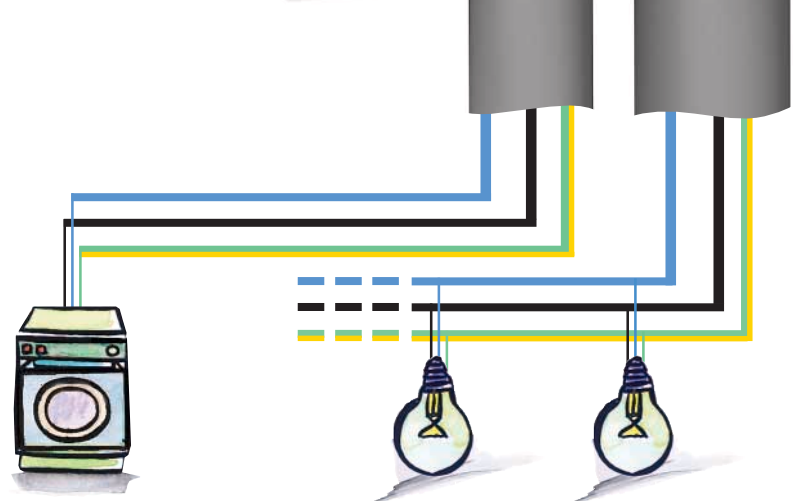
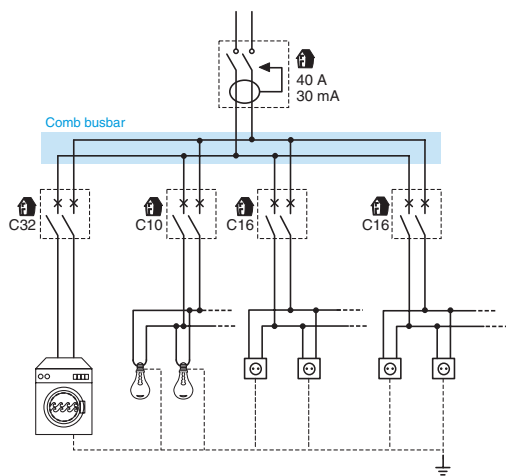
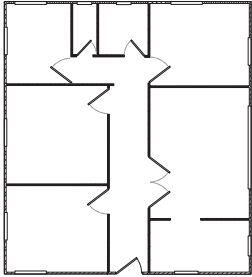


	Cat. no
■ 1 residual current circuit-breaker 2 poles 25A 30mA	16790
■ 1 circuit-breaker 2 poles C10	12992
■ 1 circuit-breaker 2 poles C16	12993
■ 1 surface-mounted enclosure (equipped with a 8-hole earthing terminal block) 8	13648
■ 1 comb busbar for 2-pole distribution	10389

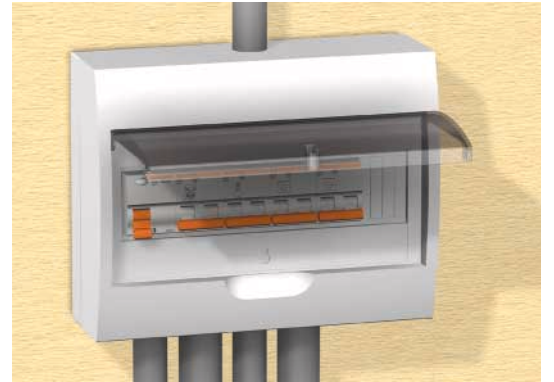
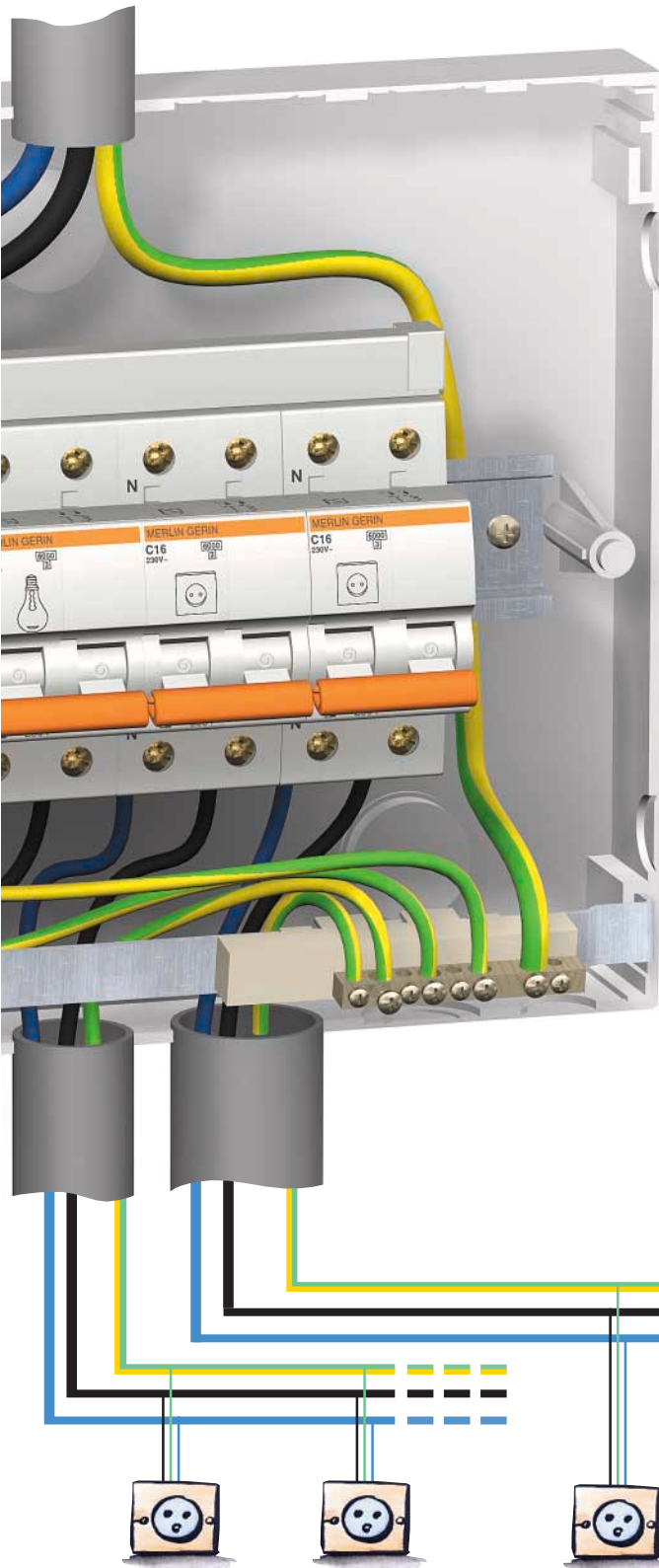




## *The switchboard for a 100 m<sup>2</sup> home*







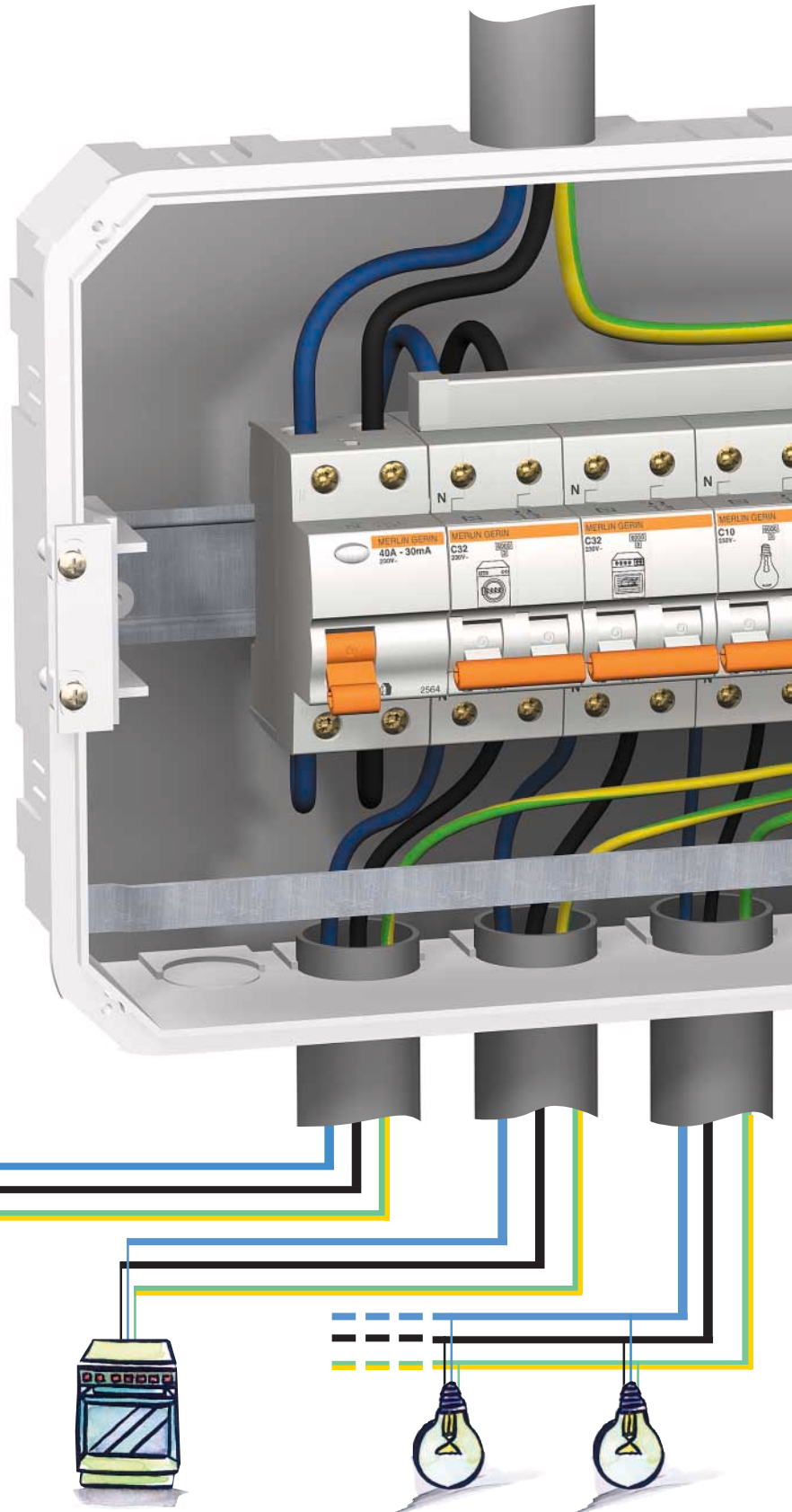
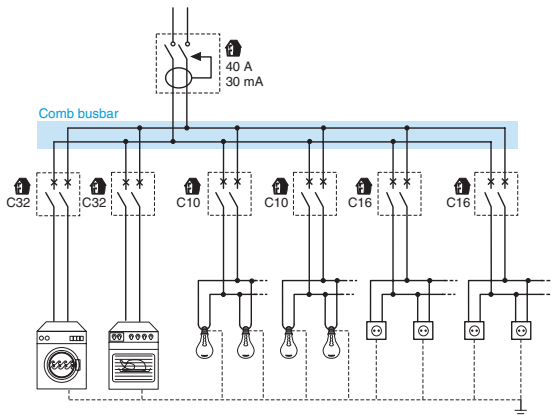
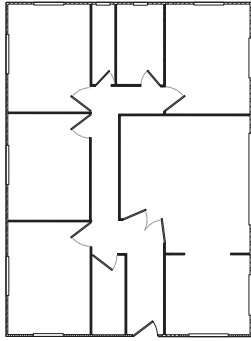
		Cat. no
■ 1 residual current circuit-breaker 2 poles	40A 30mA	16792
■ 1 circuit-breaker 2 poles	C32	12996
■ 1 circuit-breaker 2 poles	C10	12992
■ 2 circuit-breakers 2 poles	C16	12993
■ 1 surface-mounted enclosure (equipped with a 8-hole earthing terminal block)	12	13649
■ 1 comb busbar for 2-pole distribution		10389

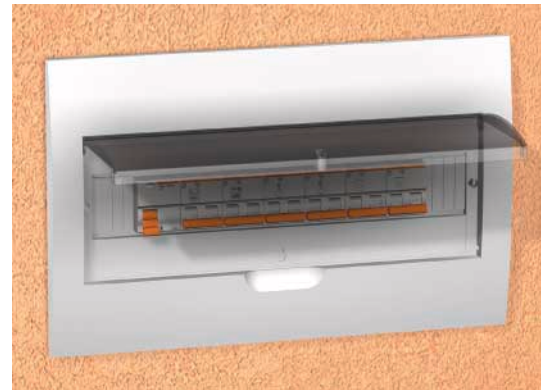
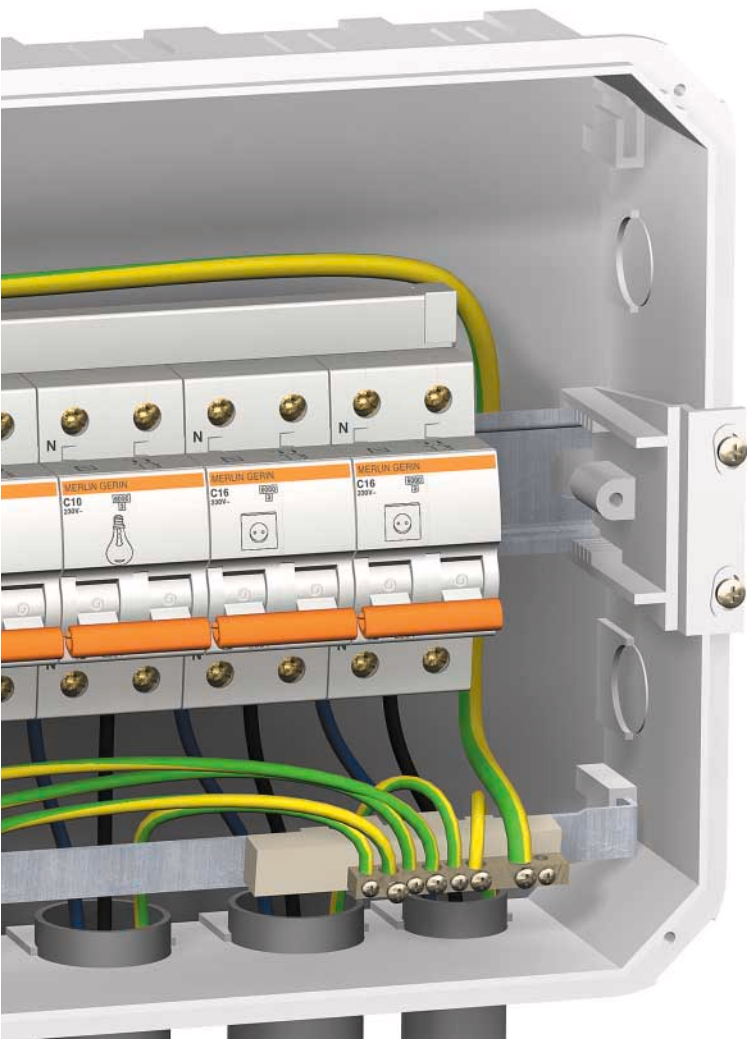




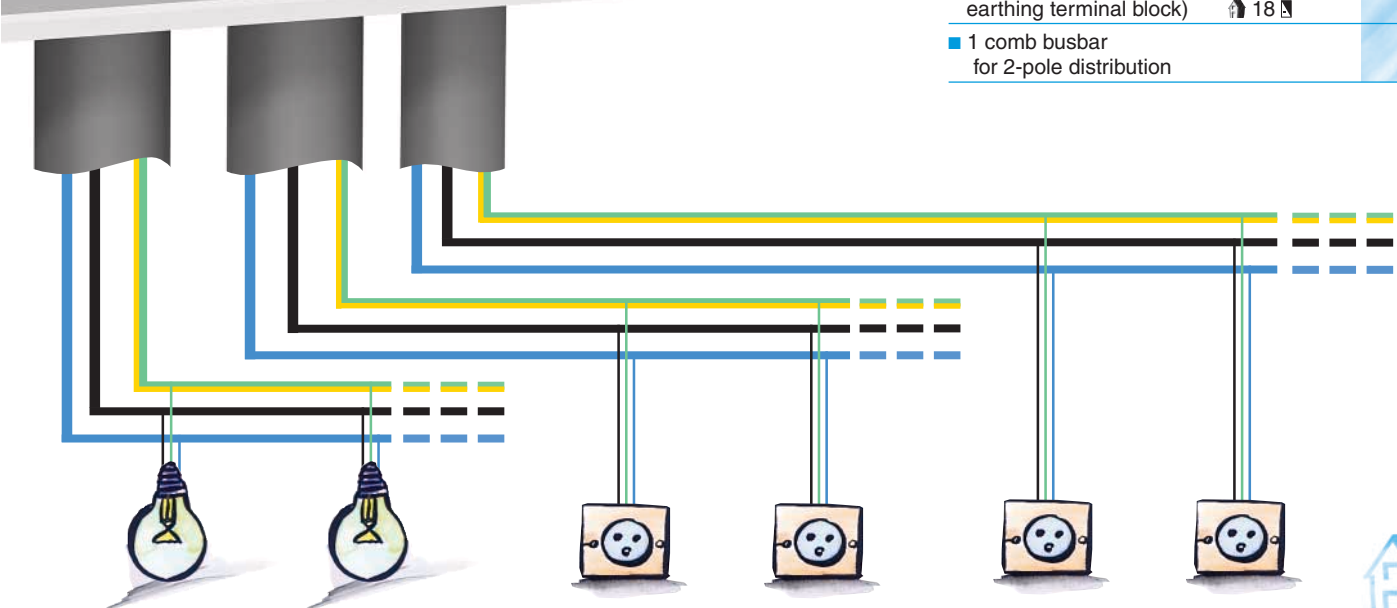
# Domae Applications

*The switchboard for a home of more than 100 m<sup>2</sup>*



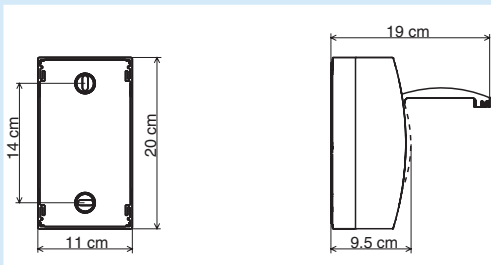


		Cat. no
■ 1 residual current circuit-breaker		
2 poles	40A 30mA	16792
■ 2 circuit-breakers		
2 poles	C32	12996
■ 2 circuit-breakers		
2 poles	C10	12992
■ 2 circuit-breakers		
2 poles	C16	12993
■ 1 surface-mounted enclosure		
(equipped with a 8-hole		
earthing terminal block)	18	13691
■ 1 comb busbar		
for 2-pole distribution		10389

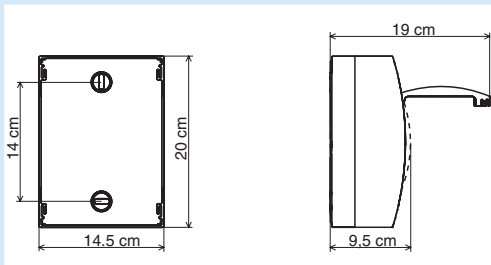




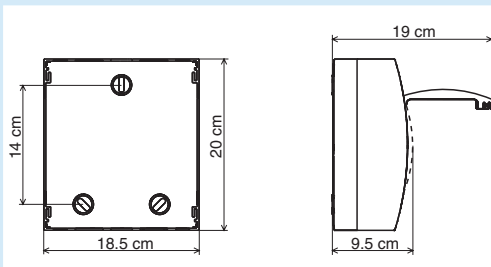
## *Surface-mounted enclosures*



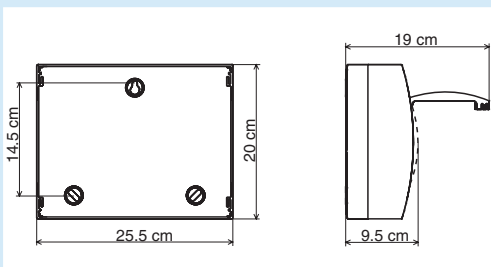
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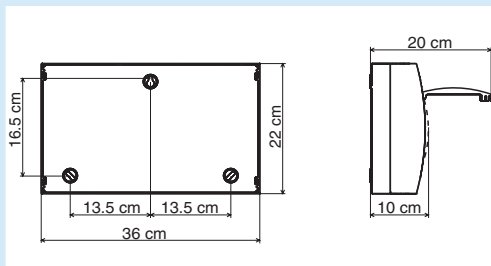
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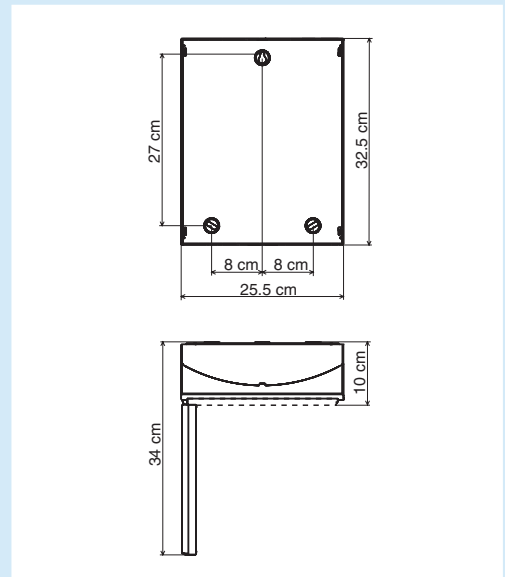
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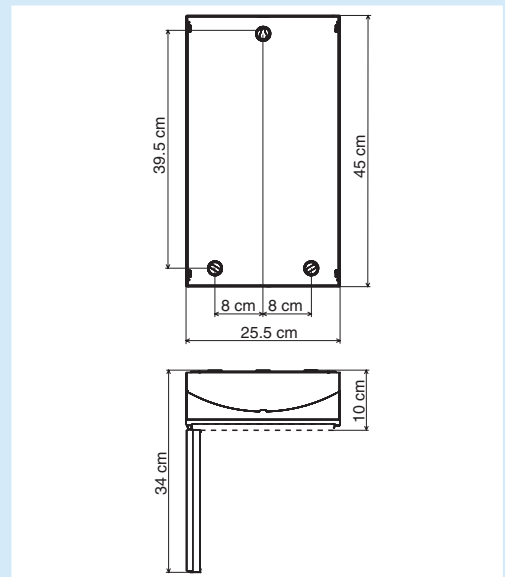
12 



18 



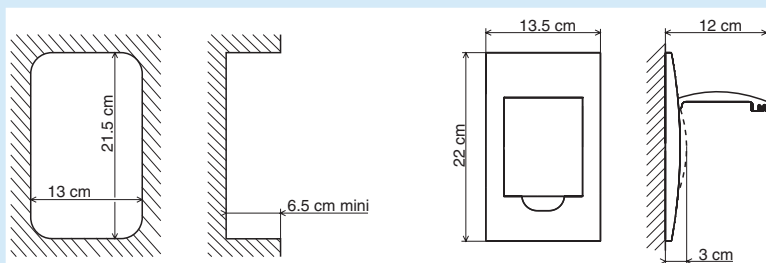
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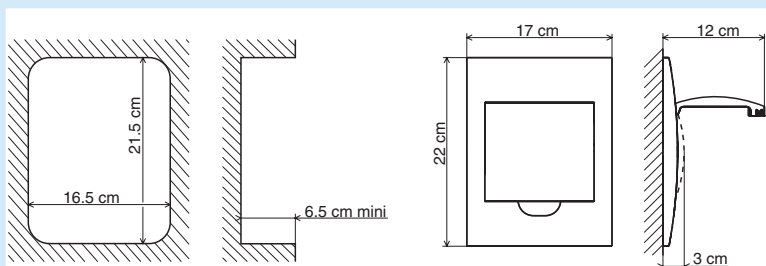
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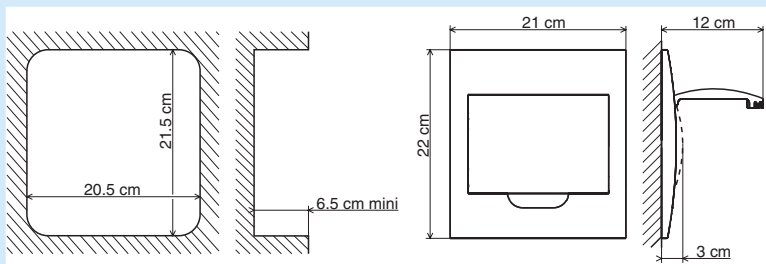
## Flush-mounted enclosures



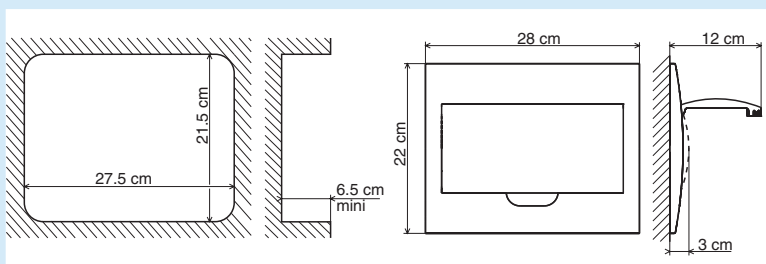
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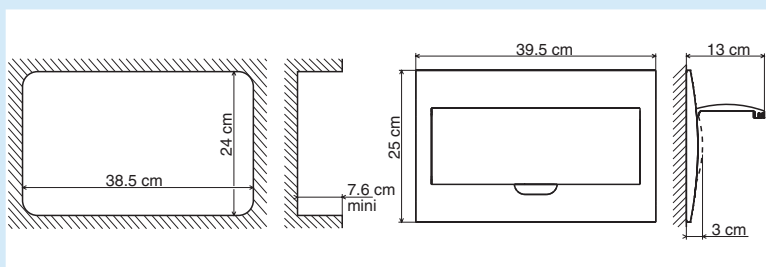
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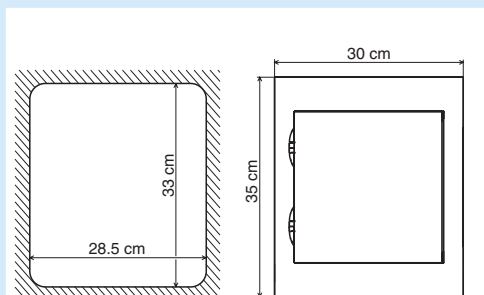
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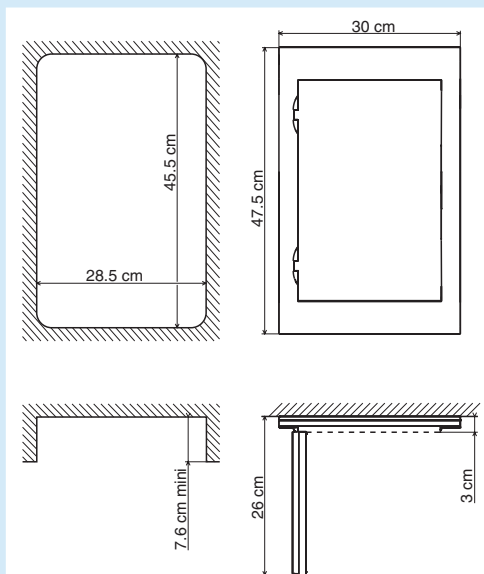
12



18



24



36





# Domae Order form

## 1 Choice of switchgear

### Choice of switchgear for a Domae switchboard

	Rating (A)	Cat. no	Qty	Dimensions
<b>Residual current circuit-breakers</b>				
4P-30 mA	25	16807		
	40	16810		
Sum of residual current circuit-breakers 4P		=	x 4	=
2P-30 mA	25	16790		
	40	16792		
Sum of residual current circuit-breakers 2P		=	x 2	=
<b>Circuit-breakers</b>				
1P	10	12912		
	16	12913		
	20	12914		
	25	12915		
	32	12916		
Sum of circuit-breakers 1P		=	x 1	=
2P	10	12992		
	16	12993		
	20	12994		
	25	12995		
	32	12996		
Sum of circuit-breakers 2P		=	x 2	=
<b>Total dimensions =</b>				

## 2 Choice of enclosure

Type of installat.	Enclosure maximum capacity						Choose your enclosure according to the result
	4	6	8	12	18	24	
Flush-mounted	13356	13357	13358	13359	13691	13692	13693
Surface-mounted	13646	13647	13648	13649	13650	13642	13643
Number of rows			1 row			2 row	3 row

The number of rows determines the quantity of comb busbars to be used

## 3 Choice of comb busbars







Distribution in enclosure	Cat. no	Qty of comb busbars per enclosure		
		1	2	3
1P	10387			
2P	10389			
4P	10393			

## 4 Choice of accessories

Accessories	Cat. no	Qty

List in the table opposite the accessories presented on page 17 that you would like to order.






















## Accessories offer

Accessories			Cat. no	
Accessories for comb busbar	10 end pieces	2P	10398	
		4P	10405	
	4 connectors 35 mm <sup>2</sup>		10397	
	10 tooth shields		10396	
Terminal block brackets for enclosure 	4 		13361	
	6 		13362	
	8 		13363	
	18 		13381	
	12, 24, 36 		13364	
Terminal blocks	Width (mm)	holes 10 mm <sup>2</sup>	holes 16 mm <sup>2</sup>	
	85	2	2	13575
	85	4	4	13576
	202	8	8	13577
	202	11	11	13578
	202	16	16	13579
Blanking plate	batch of 10		13229	
Key-lock	for 1 row enclosure		14180	
	for 2 and 3 row enclosure		13315	
Flush-mounting kit in hollow partition			13360	
Symbol sheets			13735	

## Exemple

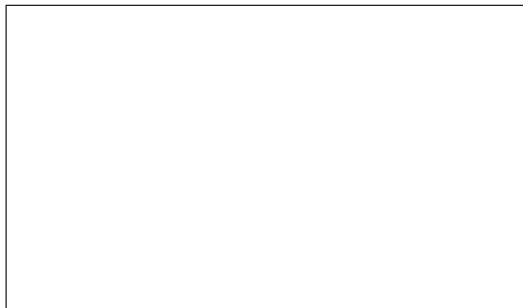
Ordering Domae products for the switchboard of a home of more than 100 m<sup>2</sup> (see pages 12 and 13).

## Using the order form

	Rating (A)	Cat. no	Qty	Dimensions							
<i>Residual current circuit-breakers</i> 											
4P	25	16807									
	40	16810									
Sum of residual current circuit-breakers  4P			=	x 4  =							
2P	25	16790									
	40	16792	1								
Sum of residual current circuit-breakers  2P			= 1	x 2  = 2 							
<i>Circuit-breakers</i> 											
1P	10	12912									
	16	12913									
	20	12914									
	25	12915									
	32	12916									
Sum of circuit-breakers  1P			=	x 1  =							
2P	10	12992	2								
	16	12993	2								
	20	12994									
	25	12995									
	32	12996	2								
Sum of circuit-breakers  2P			= 6	x 2  = 12 							
				<b>Total dimensions =</b>							
				<b>14 </b>							
<b>Type of installat.</b> <b>Enclosure capacity</b>											
	4 	6 	8 	12 	18 	24 	36 				
Flush-mounted	13356 <input type="checkbox"/>	13357 <input type="checkbox"/>	13358 <input type="checkbox"/>	13359 <input type="checkbox"/>	13691 <input checked="" type="checkbox"/>	13692 <input type="checkbox"/>	13693 <input type="checkbox"/>				
Surface-mounted	13646 <input type="checkbox"/>	13647 <input type="checkbox"/>	13648 <input type="checkbox"/>	13649 <input type="checkbox"/>	13650 <input type="checkbox"/>	13642 <input type="checkbox"/>	13643 <input type="checkbox"/>				
Number of rows	1 row		2 rows		3 rows						
<b>Distribution in enclosure</b>					<b>Cat. no</b>						
					<b>Qty of comb busbars by enclosure</b>						
					1	2	3				
1P	10387	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
2P	10389	1 			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
4P	10393	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				



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