Dear Friends and Partners,

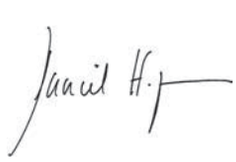
We are pleased to present the new Middle East Shortform catalogue 2012.

Hager stands for sustainability and our E3 Initiative is an excellent example of this. Fully aware of our responsibility to both society and the environment, we are proud to make a contribution to the better use of the limited available resources. It is a belief that plays a vital role in all our new developments. The three Es, by the way, stand for the categories of "ethics, environment and eco-efficiency". And behind each category there is an actual catalogue of measures to which Hager is expressly committed, measures including: Investors in People certification (IIP), an employee development programme; the United Nations Global Compact initiative, which the Hager Group joined in 2007; and the environmental standard ISO 14000, to which most of our sites are already certified to. In this respect, ecological development and production technologies are given as much careful consideration as to the products themselves that make a contribution to make better use of the resource electricity.

Innovation, customer proximity, simplicity and reliability are the very basis of the Hager brand. We keep in close contact with our customers, regularly surveying their wishes and needs before incorporating that feedback into the development of our new systems. The same applies to this catalogue which we have designed for you as a practical tool.

Why not have a browse and find out for yourself?

Best regards,
Daniel Hager




hager

The partner for smart solutions you can trust

Hager is a full range supplier of electrical installation systems for building, residential and commercial properties. For decades, Hager has been synonymous with an extensive and complete offering. Highest quality, cutting edge products, modularity, ease of installation, ease of use, excellent service and sophisticated design are the features that distinguish Hager.

Hager: a brand meeting your expectations

As a specialist in
• power distribution,
• cable management and room connection systems,
• switch programmes and smart building automation as well as safety technology such as alarm systems, smoke detectors and motion detectors.

Hager the supplier for professionals is a synonym for top quality and innovative technology, as well as good customer relations and reliability. All of which make Hager the partner for smart solutions, you can trust.

New ideas for the customers' benefit

Innovations and the systematic enhancement of the products and systems are key features of the Hager brand. It has always been our goal to use new designs and improvements to stay ahead of developments.

The use of innovations and new technologies at Hager is always customer driven. Every year, Hager evaluates thousands of customer contacts, resulting in detailed knowledge of its customers' needs in order to work efficiently and successfully. Based on this knowledge, Hager develops the innovative solutions that are so characteristic for the Hager brand. Ease of installation, ease of use, intuitive user interfaces, modularity and durability are brand values that guarantee highest quality throughout in Hager systems.

65 percent of the products are less than three years old. This high degree of innovation enables the users to meet various new challenges effectively. The strong demand for innovations and enhancements is a good indicator for the customer oriented policy of the Hager brand also resulting in a high turnover at wholesalers.

A flourishing group

Hager belongs to the Hager Group, which is a family owned business with a more than fifty year tradition. As a global player, the company has about 11,400 employees and a turnover of more than 1.55 billion Euro in 2011.

www.hager.ae

Hager regional support
Middle East operations

With an objective of offering technical and commercial support to our customers in the Middle East and Near East regions, Hager group set up its 100% owned subsidary, Hager Tehalit Systems Middle East FZE (HTSME), at Jebel Ali Free Zone in 1997.

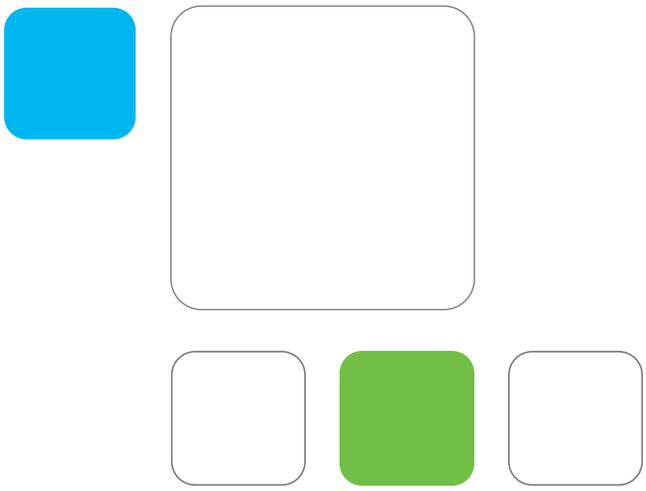
Today Hager Middle East has a strong commercial team with expertise in sales and marketing, product management, logistics, customer service and finance. Hager Middle East has regional representation in Saudi Arabia, Kuwait and Qatar.

With an aim to provide the best solution for your distribution system, Hager Middle East has a dedicated team of qualified and professional engineers to provide advice on any design and technical application.

Hager Middle East gives special emphasis to training of customers and updation of new product launches. The training facility at Jebel Ali office stands testimony to this commitment.

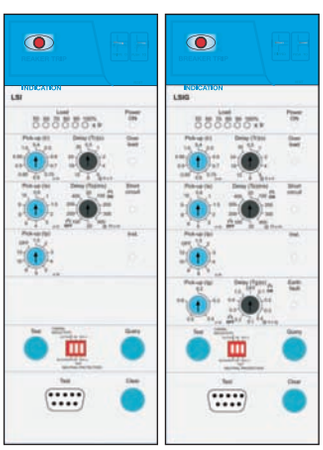
Technical seminars are conducted at various locations to keep customer abreast of various product launches.

Courses are in modular format and are customized to meet individual market requirements. Hager Middle East also conducts special courses on request. These customer oriented programmes are instrumental in reinforcing the trust and quality in the Hager brand.



Air Circuit Breakers are widely used in low voltage power distribution systems of industrial, residential and commercial buildings. As the main incoming device, Hager ACBs has high dynamic and thermal stability. It not only ensures uninterrupted power supply, but also breaks reliably at high short circuit currents.

Hager ACBs are available from 800A to 4000A, in three frame sizes, with breaking capacities of 65KA, 80KA & 100KA and Icu = Ics = Icw.



Microprocessor based protection controller units with LSI & LSIG functions.

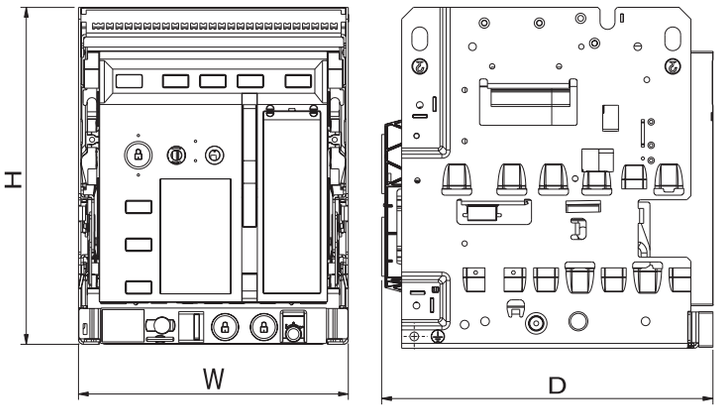
Compact size - same height and depth across all frame sizes.

Clear indications of auxiliaries mounted inside.

Fixed and drawout interchangeability

	Breaking capacity Icu		65kA		80kA		100kA	
Rated current	pole	earth fault protection	draw-out type	fixed type	draw-out type	fixed type	draw-out type	fixed type
800 A	3	No	HWN308A3	HWN308C3	HWS308A3	HWS308C3		
		Yes	HWN308B3	HWN308D3	HWS308B3	HWS308D3		
	4	No	HWN408A3	HWN408C3	HWS408A3	HWS408C3		
		Yes	HWN408B3	HWN408D3	HWS408B3	HWS408D3		
1000 A	3	No	HWN310A3	HWN310C3	HWS310A3	HWS310C3		
		Yes	HWN310B3	HWN310D3	HWS310B3	HWS310D3		
	4	No	HWN410A3	HWN410C3	HWS410A3	HWS410C3		
		Yes	HWN410B3	HWN410D3	HWS410B3	HWS410D3		
1250 A	3	No	HWN312A3	HWN312C3	HWS312A3	HWS312C3		
		Yes	HWN312B3	HWN312D3	HWS312B3	HWS312D3		
	4	No	HWN412A3	HWN412C3	HWS412A3	HWS412C3		
		Yes	HWN412B3	HWN412D3	HWS412B3	HWS412D3		
1600 A	3	No	HWN316A3	HWN316C3	HWS316A3	HWS316C3		
		Yes	HWN316B3	HWN316D3	HWS316B3	HWS316D3		
	4	No	HWN416A3	HWN416C3	HWS416A3	HWS416C3		
		Yes	HWN416B3	HWN416D3	HWS416B3	HWS416D3		
2000 A	3	No	HWN320A3	HWN320C3	HWS320A3	HWS320C3		
		Yes	HWN320B3	HWN320D3	HWS320B3	HWS320D3		
	4	No	HWN420A3	HWN420C3	HWS420A3	HWS420C3		
		Yes	HWN420B3	HWN420D3	HWS420B3	HWS420D3		
2500 A	3	No			HWS325A3	HWS325C3		
		Yes			HWS325B3	HWS325D3		
	4	No			HWS425A3	HWS425C3		
		Yes			HWS425B3	HWS425D3		
3200 A	3	No			HWS332A3	HWS332C3	HWP332A3	HWP332C3
		Yes			HWS332B3	HWS332D3	HWP332B3	HWP332D3
	4	No			HWS432A3	HWS432C3	HWP432A3	HWP432C3
		Yes			HWS432B3	HWS432D3	HWP432B3	HWP332D3
4000 A	3	No					HWP340A3	HWP340C3
		Yes					HWP340B3	HWP340D3
	4	No					HWP440A3	HWP440C3
		Yes					HWP440B3	HWP440D3

Dimensions



H: height
W: width
D: depth with flat terminals

Common parameters

Rated operational voltage at 50/60 Hz	Upto 690 V AC
Rated insulation voltage at 50/60 Hz	1000 V AC
Rated impulse withstand voltage - main circuit	12 KV
Rated impulse withstand voltage - auxiliary circuit	4 KV
Suitability for isolation	Yes
Intrinsic degree of protection of breaker front	IP53
Pollution degree suitability	3
Utilization category	B
Compliance	EN60947-2, IEC60947-2, GB14048-2

Rating specific parameters

Rating specific parameters			Neutral	Unit	Symbol			
Frame						I	II	III
Rated current				A	In	800-2000A	800-3200	3200, 4000
Version						N	S	P
Rated ultimate S.C. breaking capacity	400/415VAC 50/60 Hz			kA	Icu	65	80	100
	500/550VAC 50/60 Hz			kA		55	70	85
	660/690VAC 50/60 Hz			kA		50	55	75
Rated service S.C. breaking capacity	400/415VAC 50/60 Hz			kA	Ics	100% Icu	100% Icu	100% Icu
	500/550VAC 50/60 Hz			kA				
	660/690VAC 50/60 Hz			kA				
Rated short time withstand capacity	0,5 sec			kA	Icw	65	80	100
	1 sec			kA		65	75	100
	3 sec			kA		36	50	57
Rated S.C. making capacity	400/415VAC 50/60 Hz			kA	Icm	143	176	220
	500/550VAC 50/60 Hz			kA		121	154	187
	660/690VAC 50/60 Hz			kA		105	121	165
opening time				ms		40	40	40
closing time				ms		60	60	60
Dimensions	fixed ACB	width 3P		mm	W	347	447	647
		width 4P	100%	mm	W	447	581	847
		depth		mm	D	355	355	355
		height		mm	H	430	430	430
	drawout ACB	width 3P		mm	W	347	447	647
		width 4P	100%	mm	W	447	581	847
		depth		mm	D	421	421	421
		height		mm	H	433	433	433
Mechanical life				no. of cycles		20000	15000	10000
Frequency of operation - mechanical				cycles/hour		60	60	60
Electrical life				no. of cycles		10000	5000	5000
Frequency of operation - electrical				cycles/hour		40	30	20
Pitch I/C - O/G				mm		105	105	105
Pitch	Ph-Ph			mm		100	133,3	200
	Ph-N		100%	mm		80	100	165
Termination width	Phase			mm		80	100	165
	Neutral		100%	mm		80	100	165
Weight	fixed ACB	3P		kg		39	59	86
		4P	100%	kg		48	71	108
	drawout ACB	3P		kg		70	88	124
		4P	100%	kg		84	106	166

Technical characteristics:
- Standards: IEC 60947-2
- Current rating: 800A
1000A / 1250A / 1600A / 2000A
- Protection controller: microprocessor based LSI and LSIG
- Fixed and draw out version
- Breaking and short time withstand capacity
(400 / 415V)
Icu=65kA
Ics = 100% Icu
Icw = 65kA (1s)


HWN312B3

Designation	*Rated current*	*Pole*	*Cat. ref. w/o earth fault 65kA*	*Cat. ref. with earth fault 65kA*
Draw out circuit breaker				
	800A	3	**HWN308A3**	**HWN308B3**
	1000A	3	**HWN310A3**	**HWN310B3**
	1250A	3	**HWN312A3**	**HWN312B3**
	1600A	3	**HWN316A3**	**HWN316B3**
	2000A	3	**HWN320A3**	**HWN320B3**
	800A	4	**HWN408A3**	**HWN408B3**
	1000A	4	**HWN410A3**	**HWN410B3**
	1250A	4	**HWN412A3**	**HWN412B3**
	1600A	4	**HWN416A3**	**HWN416B3**
	2000A	4	**HWN420A3**	**HWN420B3**
Fixed circuit breaker				
	800A	3	**HWN308C3**	**HWN308D3**
	1000A	3	**HWN310C3**	**HWN310D3**
	1250A	3	**HWN312C3**	**HWN312D3**
	1600A	3	**HWN316C3**	**HWN316D3**
	2000A	3	**HWN320C3**	**HWN320D3**
	800A	4	**HWN408C3**	**HWN408D3**
	1000A	4	**HWN410C3**	**HWN410D3**
	1250A	4	**HWN412C3**	**HWN412D3**
	1600A	4	**HWN416C3**	**HWN416D3**
	2000A	4	**HWN420C3**	**HWN420D3**

Air circuit breaker - frame II
800 to 3200 A

Technical characteristics:
- Standards: IEC 60947-2
- Current rating: 800A / 1000A / 1250A / 1600A / 2000A / 2500A / 3200A
- Protection controller: microprocessor based LSI and LSIG
- Fixed and draw out version
- Breaking and short time withstand capacity (400 / 415V)
  Icu = 80kA
  Ics = 100% Icu
  Icw = 75kA (1s) / 50kA (3s)

HWS420B3

Designation	*Rated current*	*Pole*	*Cat. ref. w/o earth fault 80kA*	*Cat. ref. with earth fault 80kA*
Draw out circuit breaker	800A	3	**HWS308A3**	**HWS308B3**
	1000A	3	**HWS310A3**	**HWS310B3**
	1250A	3	**HWS312A3**	**HWS312B3**
	1600A	3	**HWS316A3**	**HWS316B3**
	2000A	3	**HWS320A3**	**HWS320B3**
	2500A	3	**HWS325A3**	**HWS325B3**
	3200A	3	**HWS332A3**	**HWS332B3**
	800A	4	**HWS408A3**	**HWS408B3**
	1000A	4	**HWS410A3**	**HWS410B3**
	1250A	4	**HWS412A3**	**HWS412B3**
	1600A	4	**HWS416A3**	**HWS416B3**
	2000A	4	**HWS420A3**	**HWS420B3**
	2500A	4	**HWS425A3**	**HWS425B3**
	3200A	4	**HWS432A3**	**HWS432B3**
Fixed circuit breaker	800A	3	**HWS308C3**	**HWS308D3**
	1000A	3	**HWS310C3**	**HWS310D3**
	1250A	3	**HWS312C3**	**HWS312D3**
	1600A	3	**HWS316C3**	**HWS316D3**
	2000A	3	**HWS320C3**	**HWS320D3**
	2500A	3	**HWS325C3**	**HWS325D3**
	3200A	3	**HWS332C3**	**HWS332D3**
	800A	4	**HWS408C3**	**HWS408D3**
	1000A	4	**HWS410C3**	**HWS410D3**
	1250A	4	**HWS412C3**	**HWS412D3**
	1600A	4	**HWS416C3**	**HWS416D3**
	2000A	4	**HWS420C3**	**HWS420D3**
	2500A	4	**HWS425C3**	**HWS425D3**
	3200A	4	**HWS432C3**	**HWS432D3**

Air circuit breaker - frame III
3200 to 4000 A

Technical characteristics:
- Standards: IEC 60947-2
- Current rating: 3200A / 4000A
- Protection controller: microprocessor based LSI and LSIG
- Fixed and draw out version
- Breaking and short time withstand capacity (400 / 415V)
  Icu = 100kA
  Ics = 100% Icu
  Icw = 100kA (1s) / 57kA (3s)

HWP440B3

Designation	*Rated current*	*Pole*	*Cat. ref. w/o earth fault 100kA*	*Cat. ref. with earth fault 100kA*
Draw out circuit breaker	3200A	3	**HWP332A3**	**HWP332B3**
	4000A	3	**HWP340A3**	**HWP340B3**
	3200A	4	**HWP432A3**	**HWP432B3**
	4000A	4	**HWP440A3**	**HWP440B3**
Fixed circuit breaker	3200A	3	**HWP332C3**	**HWP332D3**
	4000A	3	**HWP340C3**	**HWP340D3**
	3200A	4	**HWP432C3**	**HWP432D3**
	4000A	4	**HWP440C3**	**HWP440D3**

Accessories description
Hager ACB offer comes with a complete range of accessories. Most of the accessories, especially the electrical ones, are common for all breakers.

The standard breaker is delivered with four auxiliaries contacts 4NO + 4NC.


HWX251


HWX211

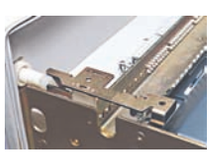

HWX241


HWX313

Designation	*Technical information*	*Rated current (A)/ Voltage (V)*	*Pack qty*	*Cat. ref.*
Additional electrical position indication			1	**HWX113**
Closing release	AC 50/60 Hz	110V	1	**HWX251**
	AC 50/60 Hz	240V	1	**HWX253**
	AC 50/60 Hz	415V	1	**HWX254**
	DC	24/30V	1	**HWX255**
	DC	48/60V	1	**HWX257**
Shunt release	AC 50/60 Hz	110V	1	**HWX211**
	AC 50/60 Hz	240V	1	**HWX213**
	AC 50/60 Hz	415V	1	**HWX214**
	DC	24/30V	1	**HWX215**
	DC	48/60V	1	**HWX217**
Under voltage release (with delay)	AC 50 Hz	110V	1	**HWX241**
	AC 50 Hz	240V	1	**HWX243**
	AC 50 Hz	415V	1	**HWX244**
	DC	48V	1	**HWX247**
Under voltage release (without delay)	AC 50 Hz	110V	1	**HWX231**
	AC 50 Hz	240V	1	**HWX233**
	AC 50 Hz	415V	1	**HWX234**
	DC	24/30V	1	**HWX235**
	DC	48V	1	**HWX237**
Electric charging device (motor)	AC 50/60 Hz	110V	1	**HWX311**
	AC 50/60 Hz	240V	1	**HWX313**
	AC 50/60 Hz	415V	1	**HWX314**
	DC	24/30V	1	**HWX315**
	DC	48/60V	1	**HWX317**

HWY144

HWY151 HWY154



HWY112

HWY211

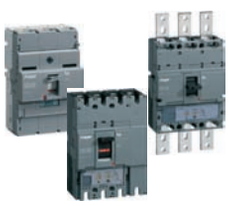
Designation	*Technical information*	*Pack qty*	*Cat. ref.*
Locking arrangement for OFF button	castell lock	1	**HWY141**
	profalux lock	1	**HWY144**
Locking arrangement for all position	castell lock	1	**HWY151**
	profalux lock	1	**HWY154**
Locking arrangement for isolated position	castell lock	1	**HWY131**
	profalux lock	1	**HWY134**
Mechanical interlock (cable type)	two incomers	1	**HWY121**
	three incomers	1	**HWY122**
	Two incomers and one standby	1	**HWY123**
	Two incomers and one bus coupler	1	**HWY124**
External neutral current transformer			
	frame **I** 800A	1	**HWW213**
	frame **I** 1000A	1	**HWW214**
	frame **I** 1250A	1	**HWW215**
	frame **I** 1600A	1	**HWW216**
	frame **I** 2000A	1	**HWW217**
	frame **II** 800A	1	**HWW222**
	frame **II** 1000A	1	**HWW223**
	frame **II**1250A	1	**HWW224**
	frame **II**1600A	1	**HWW225**
	frame **II** 2000A	1	**HWW226**
	frame **II** 2500A	1	**HWW227**
	frame **II** 3200A	1	**HWW228**
	frame **III** 3200A	1	**HWW233**
	frame **III** 4000A	1	**HWW234**
Terminal adaptor	for frame **I** and frame **III**, horizontal, vertical (2 per pole for frame **I**, 4 per pole for frame **III.**)	1	**HWY311**
	for frame **II**, (2 per pole)		
	800A to 2500A, horizontal and vertical	1	**HWY321**
	3200A, horizontal	1	**HWY324**
	3200A, vertical	1	**HWY325**
Door interlock		1	**HWY112**
Operation counter		1	**HWY211**

Design by Hager
In harmony with Hager enclosures and modular products.

Visibility of auxiliaries fitted
Indicates type of auxiliary mounted in breaker.

Electronic trip unit (LSI)
Is permitting total selectivity and generator protection.

Integrated padlocking facility
Nice solution for maintenance.



Breaking capacity
18 to 70kA, Icu 415V AC, covers all applications.

Complete range of accessories
Rotary handles, padlocks, motors, terminal covers.

Easy mounting of auxiliaries
Easy opening of secondary cover, clip-on type auxiliaries.

Flexible connection
Collar terminals, front and rear connections, extended connections, spreaders ...

Frame			x160				x250			h250 TM
Product			Switch	MCCB			Switch	MCCB		MCCB
Reference			HCA	HDA	HHA	HNA	HCB	HHB	HNB	HHG
Number of poles		[No.]	3-4	1-2-3-4	1-2-3-4	3-4	3-4			3-4
Electrical characteristics										
Rated current	In	[A]	160				250			250
Current rated range		[A]	125-160	16-125 (1P), 16-160 (2,3,4P)			250	100-250		20-250
Rated service voltage, (AC)	Ue	[V]	220-440				220-440			220-690
Frequency	f	[Hz]	50/60				50/60			50/60
Rated insulation voltage	Ui	[V]	690				800			800
Rated impulse withstand voltage	Uimp	[kV]	8				8			8
Rated ultimate short-circuit breaking capacity, (Icu)										
(AC) 50-60 Hz 220/230 V	Icu	[kA]	-	25	35	85	-	35	85	35
(AC) 50-60 Hz 380/415 V	**Icu**	**[kA]**	**-**	**18**	**25**	**40**	**-**	**25**	**40**	**25**
(AC) 50-60 Hz 480/500/525 V	Icu	[kA]	-	-	-	-	-	-	-	10
(AC) 50-60 Hz 660/690 V	Icu	[kA]	-	-	-	-	-	-	-	-
(DC) 250 V - 2 poles in series	Icu	[kA]	-	10	10	10	-	9	9	25
Rated service short-circuit breaking capacity, (Ics)										
(AC) 50-60 Hz 220/230 V	Ics	[kA]	-	25	25	40	-	25	40	27
(AC) 50-60 Hz 380/415 V	**Ics**	**[kA]**	**-**	**18**	**20**	**20**	**-**	**20**	**20**	**19**
(AC) 50-60 Hz 480/500/525 V	Ics	[kA]	-							7,5
(AC) 50-60 Hz 660/690 V	Ics	[kA]	-	-			-			-
(DC) 250 V - 2 poles in series	Ics	[kA]	-	5	5	5	-	5	5	19
Rated short-circuit making capacity	Icm	[kA]	2,8	-	-	-	9	-	-	-
Rated short-time withstand current for 1s	Icw	[kA]	2	-	-	-	3,6	-	-	-
Category of utilisation (EN 60947-2)			-	A			-	A		A
Calibration temperature			-	50°C			-	50°C		50°C
Derating	40°C		-	100%			-	100%		100%
	50°C		-	100%			-	100%		100%
	55°C		-	95%			-	94%		94%
	60°C		-	93%			-	91%		91%
	65°C		-	90%			-	88%		88%
Suitability for isolation			ok				ok			ok
Electric endurance in number of cycles			10000				10000			10000
Mechanical endurance in number of operations			20000				20000			30000
Operating temperature			-25 to +70°C				-5 to +70°C			-25 to +70°C
Storage temperature			-35 to +70°C				-35 to +70°C			-35 to +70°C
Power loss (at In for 3P)		[W]	39				60			65
Reference standard			IEC 60947-3	IEC 60947-2			IEC 60947-3	IEC 60947-2		IEC 60947-2
Releases: switch			ok	-			ok	-		-
Releases: TM (thermomagnetic)			-	ok			-	ok		ok
T fixed, M fixed			-	ok			-	ok		-
T adjustable, M fixed			-	ok			-	-		-
T adjustable, M adjustable			-	-			-	ok		ok
Thermal adjustment value			-	0,63 to 1 x In			-	0,63 to 1 x In		0,63 to 1 x In
Magnetic adjustment value			-	-			-	6-8-10-13 x In (200A) 5-7-9-11 In (250A)		6-8-10-13 x In
Releases: LSI (electronic)			-	-			-	-		-
Long delay			-	-			-	-		-
Short delay			-	-			-	-		-
Time delay			-	-			-	-		-
Accessories										
Auxiliary switches			#1				#1			#2
Alarm switches			#1				#1			#2
Shunt release			#1				#1			#2
Undervoltage release			#1				#1			#2
Rotary handle mechanism			ok				ok			ok
Motor operator			-				ok			ok
Padlockable handle			integrated				integrated			ok
Interphase barriers			ok				integrated			integrated
Din rail adapter			ok				-			-
Terminations										
Standard terminal type			cage				lugs			lugs
Maximum terminal capacity			95 mm^2				185 mm^2 (cage)			185 mm^2 (cage)
Terminal width		mm	-				25			25
Terminal shields			ok				ok			ok
Cage terminal			integrated				ok			ok
Extended connections			ok				ok			ok
Rear connections			no				ok			ok
Dimensions										
Height		mm	130				165			165
Width	1P	mm	-	25		-	-			-
	2P	mm	-	50		-	-			-
	3P	mm	75				105			105
	4P	mm	100				140			140
Depth		mm	68				68			68
Weight	1P	kg	-	0,29		-	-			-
	2P	kg	-	0,48		-	-			-
	3P	kg	0,715				1,3			1,5
	4P	kg	0,95				1,6			1,9

			h400		h630			h1000			h1600		
			MCCB		Switch	MCCB		Switch	MCCB		Switch	MCCB	
	HNG	HEG	HHD	HND	HCD	HND	HED	HCE	HNE / HNK	HEE / HEK	HCF	HNF	HEF
			3-4		3-4			3-4			3-4		
			400		630			1000			1600		
			250-400		400-630	250-630		630-800-1000			1250-1600		
			220-690		220-690			220-690			220-690		
			50/60		50/60			50/60			50/60		
			800		800			800			800		
			8		8			8			8		
	85	85	35	85	-	85	100	-	85 (800A) 75 (1000A)	100	-	100	100
	50	**65**	**25**	**50**	**-**	**50**	**70**	**-**	**50**	**70**	**-**	**50**	**70**
	25	25	10	30	-	30	30	-	30	30	-	45	65
	7,5	7,5	7,5	20	-	20	20	-	20	20	-	25	45
	40	40	25	40	-			-	-	-	-	-	-
	65	85	35	85	-	85	85	-	85 (800A) 75 (1000A)	100 (800A) 75 (1000A)	-	75	75
	25	**36**	**25**	**50**	**-**	**50**	**50**	**-**	**50**	**50**	**-**	**50**	**50**
	25	25	10	30	-	30	30	-	30	30	-	45	50
	7,5	7,5	7,5	15	-	15	15	-	20	20	-	25	34
	40	40	25	40	-			-	-	-	-	-	-
			-	-	9	-	-	20	-	-	45	-	-
			-	-	5 (0,3s)	-	-	10KA (0,3s)	-	-	20 (0,3s)	-	-
			A		-	B (400A) - A (630A)		-	B (800A) - A (1000A)		-	B	
			50°C		-	50°C		-	50°C		-	50°C	
			100%		-	100%		-	100%		-	100%	
			100%		-	100%		-	100%		-	100%	
			95%		-	95%		-	95%		-	95%	
			92%		-	90%		-	90%		-	90%	
			89%		-	80%		-	80%		-	80%	
			ok		ok			ok			ok		
			4500		4500			4500			4500		
			15000		15000			15000			15000		
			-25 to +70°C		-25 to +70°C			-25 to +70°C			-25 to +70°C		
			-35 to +70°C		-35 to +70°C			-35 to +70°C			-35 to +70°C		
			75		150			150			170		
			IEC 60947-2		IEC 60947-3	IEC 60947-2		IEC 60947-3	IEC 60947-2		IEC 60947-3	IEC 60947-2	
			-		ok	-		ok	-		ok	-	
			ok		-			-			-		
			-		-			-			-		
			-		-			-			-		
			ok		-			-			-		
			0,63 to 1 x In		-			-			-		
			6-8-10-12 x In		-			-			-		
			-		-	ok		-	ok		-	ok	
			-		-	0,4 to 1 x Ir		-	0,4 to 1 x Ir		-	0,4 to 1 x In	
			-		-	2,5 to 10 x Ir (400A) 2,5 to 8 x Ir (630A)		-	2,5 to 10 x Ir (800A) 2,5 to 8 x Ir (1000A)		-	2,5 to 10 x Ir	
			-		-	0,1 - 0,2s		-	0,1 - 0,2s		-	0,1 - 0,2s	
			#2		#2			#2			#2		
			#2		#2			#2			#2		
			#2		#2			#2			#2		
			#2		#2			#3			#3		
			ok		ok			ok			ok		
			ok		ok			ok			ok		
			ok		ok			ok			ok		
			integrated		integrated			integrated			integrated		
			-		-			-			-		
			lugs		lugs			lugs			lugs		
			240 mm² (cage)		-			-			-		
			30		30			45			45		
			ok		ok			ok			ok		
			ok		-			-			-		
			ok		integrated			integrated			integrated		
			ok		ok			ok			ok		
			260		260			273/433			370/570		
			-		-			-			-		
			-		-			-			-		
			140		140			210			210		
			185		185			280			280		
			97		97			99,5			140		
			-		-			-			-		
			-		-			-			-		
			4,2		4,3			11			27		
			5,6		5,7			14,8					

Moulded case circuit breakers x160
Mechanical test button, lockable settings,
integrated padlocking handle
Ø 4mm.

Connection capacity
95□ rigid cables
70□ flexible cables
Complies with IEC 60947-2

Switch disconnectors
allows tripping using a shunt trip unit (optional)
Complies with IEC 60947-3
AC 22/23A


HDA 125Z


HDA 126U

Designation	*In*	*Cat. ref.* 1P	2P	3P	4P
MCCBs x160 18kA TM breaking capacity Ics : 18 kA (400/415 V AC) fixed thermal 1x In fixed magnetic > 10 x In	16A	**HDA 014Z**	**HDA 015Z**	**HDA 016Z**	**HDA 017Z**
	20A	**HDA 018Z**	**HDA 019Z**	**HDA 020Z**	**HDA 021Z**
	25A	**HDA 023Z**	**HDA 024Z**	**HDA 025Z**	**HDA 026Z**
	32A	**HDA 030Z**	**HDA 031Z**	**HDA 032Z**	**HDA 033Z**
	40A	**HDA 038Z**	**HDA 039Z**	**HDA 040Z**	**HDA 041Z**
	50A	**HDA 048Z**	**HDA 049Z**	**HDA 050Z**	**HDA 051Z**
	63A	**HDA 061Z**	**HDA 062Z**	**HDA 063Z**	**HDA 064Z**
	80A	**HDA 078Z**	**HDA 079Z**	**HDA 080Z**	**HDA 081Z**
	100A	**HDA 098Z**	**HDA 099Z**	**HDA 100Z**	**HDA 101Z**
	125A	**HDA 123Z**	**HDA 124Z**	**HDA 125Z**	**HDA 126Z**
	160A	**-**	**HDA 159Z**	**HDA 160Z**	**HDA 161Z**
	*125A	**HDA 123P**	**HDA 124P**	**HDA 125P**	**HDA 126P**
	*160A	**-**	**HDA 159P**	**HDA 160P**	**HDA 161P**
adjustable thermal 0,63 - 0,8 - 1 x In fixed magnetic > 10 x In	25A	**-**	**-**	**HDA 025U**	**HDA 026U**
	40A	**-**	**-**	**HDA 040U**	**HDA 041U**
	63A	**-**	**-**	**HDA 063U**	**HDA 064U**
	80A	**-**	**-**	**HDA 080U**	**HDA 081U**
	100A	**-**	**-**	**HDA 100U**	**HDA 101U**
	125A	**-**	**-**	**HDA 125U**	**HDA 126U**
	160A	**-**	**-**	**HDA 160U**	**HDA 161U**
	*125A	**-**	**-**	**HDA 125S**	**HDA 126S**
	*160A	**-**	**-**	**HDA 160S**	**HDA 161S**
MCCBs x160 25kA TM breaking capacity Ics : 20 kA (400/415 V AC) fixed thermal 1x In fixed magnetic > 10 x In	16A	**HHA 014Z**	**HHA 015Z**	**HHA 016Z**	**HHA 017Z**
	20A	**HHA 018Z**	**HHA 019Z**	**HHA 020Z**	**HHA 021Z**
	25A	**HHA 023Z**	**HHA 024Z**	**HHA 025Z**	**HHA 026Z**
	32A	**HHA 030Z**	**HHA 031Z**	**HHA 032Z**	**HHA 033Z**
	40A	**HHA 038Z**	**HHA 039Z**	**HHA 040Z**	**HHA 041Z**
	50A	**HHA 048Z**	**HHA 049Z**	**HHA 050Z**	**HHA 051Z**
	63A	**HHA 061Z**	**HHA 062Z**	**HHA 063Z**	**HHA 064Z**
	80A	**HHA 078Z**	**HHA 079Z**	**HHA 080Z**	**HHA 081Z**
	100A	**HHA 098Z**	**HHA 099Z**	**HHA 100Z**	**HHA 101Z**
	125A	**HHA 123Z**	**HHA 124Z**	**HHA 125Z**	**HHA 126Z**
	160A	**-**	**HHA 159Z**	**HHA 160Z**	**HHA 161Z**
	*125A	**HHA 123P**	**HHA 124P**	**HHA 125P**	**HHA 126P**
	*160A	**-**	**HHA 159P**	**HHA 160P**	**HHA 161P**
adjustable thermal 0,63 - 0,8 - 1 x In fixed magnetic > 10 x In	25A	**-**	**-**	**HHA 025U**	**-**
	40A	**-**	**-**	**HHA 040U**	**-**
	63A	**-**	**-**	**HHA 063U**	**-**
	80A	**-**	**-**	**HHA 080U**	**-**
	100A	**-**	**-**	**HHA 100U**	**-**
	125A	**-**	**-**	**HHA 125U**	**-**
	160A	**-**	**-**	**HHA 160U**	**-**
	*125A	**-**	**-**	**HHA 125S**	**-**
	*160A	**-**	**-**	**HHA 160S**	**-**

Note : *The references are without collar terminal


HNA 160Z

Designation	*In*	*Cat. ref.*			
		1P	*2P*	*3P*	*4P*
MCCBs x160 40kA	16A	-	-	**HNA 016Z**	**HNA 017Z**
TM	20A	-	-	**HNA 020Z**	**HNA 021Z**
breaking capacity	25A	-	-	**HNA 025Z**	**HNA 026Z**
Ics : 20 kA	32A	-	-	**HNA 032Z**	**HNA 033Z**
(400/415 V AC)	40A	-	-	**HNA 040Z**	**HNA 041Z**
	50A	-	-	**HNA 050Z**	**HNA 051Z**
fixed thermal	63A	-	-	**HNA 063Z**	**HNA 064Z**
1 x In	80A	-	-	**HNA 080Z**	**HNA 081Z**
fixed magnetic	100A	-	-	**HNA 100Z**	**HNA 101Z**
> 10 x In	125A	-	-	**HNA 125Z**	**HNA 126Z**
	160A	-	-	**HNA 160Z**	**HNA 161Z**
	*125A	-	-	**HNA 125P**	**HNA 126P**
	*160A	-	-	**HNA 160P**	**HNA 161P**
adjustable thermal	25A	-	-	**HNA 025U**	-
0,63 - 0,8 - 1 x In	40A	-	-	**HNA 040U**	-
fixed magnetic	63A	-	-	**HNA 063U**	-
> 10 x In	80A	-	-	**HNA 080U**	-
	100A	-	-	**HNA 100U**	-
	125A	-	-	**HNA 125U**	-
	160A	-	-	**HNA 160U**	-
	*125A	-	-	**HNA 125S**	**HNA 126S**
	*160A	-	-	**HNA 160S**	**HNA 161S**


HJA 063Z

MCCBs x160 25kA	16A	-	-	**HJA 016Z**	**HJA 017Z**
TM	20A	-	-	**HJA 020Z**	**HJA 021Z**
breaking capacity	25A	-	-	**HJA 025Z**	**HJA 026Z**
Ics : 25 kA	32A	-	-	**HJA 032Z**	**HJA 033Z**
(400/415 V AC)	40A	-	-	**HJA 040Z**	**HJA 041Z**
	50A	-	-	**HJA 050Z**	**HJA 051Z**
fixed thermal	63A	-	-	**HJA 063Z**	**HJA 064Z**
1 x In	80A	-	-	**HJA 080Z**	**HJA 081Z**
fixed magnetic	100A	-	-	**HJA 100Z**	**HJA 101Z**
> 10 x In	125A	-	-	**HJA 125Z**	**HJA 126Z**
	160A	-	-	**HJA 160Z**	**HJA 161Z**

Switch disconnectors x160	125A	-	-	**HCA 125Z**	**HCA 126Z**
suitable for	160A	-	-	**HCA 160Z**	**HCA 161Z**
AC22A / AC 23A					
Ue: 415 V AC					
Icw (1s): 2 kA					

Note: * The references are without collar terminal

Technical characteristics
Mechanical test button,
lockable settings,
integrated padlocking handle
Ø 4mm.

Complies with IEC 60947-2

Connection:
directly on copper cable terminal,
with end lug max. width: 25 mm
Connection capacity: 185□ rigid cables
Complies with IEC 60947-2

Switch disconnectors
allows tripping using a shunt trip unit (optional)
Complies with IEC 60947-3
AC 22/23A


HNB 250Z


HNB 100U

Designation	*Characteristics*	*In*	*Cat. ref.* *3P*	*4P*
MCCBs x250 25kA TM breaking capacity Icu : 25 kA (400/415 V AC) Ics: 20kA	fixed thermal: 1 x In fixed magnetic: ≥10 x In	100A	**HHB 100Z**	**HHB 101Z**
		125A	**HHB 125Z**	**HHB 126Z**
		160A	**HHB 160Z**	**HHB 161Z**
		200A	**HHB 200Z**	**HHB 201Z**
		250A	**HHB 250Z**	**HHB 251Z**
	adjustable thermal: 0,63 - 0,8 - 1x In adjustable magnetic: 6 - 8 - 10 - 13 x In (100 - 200A) 5 - 7 - 9 - 11 x In (250A) 3P, 3 trip units - 4P - neutral setting: 0 or 100%	100A	**HHB 100U**	**HHB 101U**
		125A	**HHB 125U**	**HHB 126U**
		160A	**HHB 160U**	**HHB 161U**
		200A	**HHB 200U**	**HHB 201U**
		250A	**HHB 250U**	**HHB 251U**
MCCBs x250 40kA TM breaking capacity Icu : 40 kA (400/415 V AC) Ics: 20 kA	fixed thermal: 1 x In fixed magnetic: ≥10 x In	100A	**HNB 100Z**	**HNB 101Z**
		125A	**HNB 125Z**	**HNB 126Z**
		160A	**HNB 160Z**	**HNB 161Z**
		200A	**HNB 200Z**	**HNB 201Z**
		250A	**HNB 250Z**	**HNB 251Z**
	adjustable thermal: 0,63 - 0,8 - 1x In adjustable magnetic: 6 - 8 - 10 - 13 x In (100 - 200A) 5 - 7 - 9 - 11 x In (250A) 3P, 3 trip units - 4P - neutral setting: 0 or 100%	100A	**HNB 100U**	**HNB 101U**
		125A	**HNB 125U**	**HNB 126U**
		160A	**HNB 160U**	**HNB 161U**
		200A	**HNB 200U**	**HNB 201U**
		250A	**HNB 250U**	**HNB 251U**
Switch disconnectors x250	capacity suitable for AC 22/23A	250A	**HCB 250Z**	**HCB 251Z**

Moulded case circuit breakers h250
Thermal magnetic trip unit:
thermal adjustment: 0.63 to 1 In
magnetic adjustment:
6-8-10-13 x In
3P & 4P (3P only for 25kA)
Mechanical test button,
lockable settings,

Connection:
Directly on copper cable terminal,
with end lug max. width: 25 mm

Comply with IEC 60 947-2.

HHG250U

HNH250U

Designation	*Characteristics*	*In*	*Cat. ref.* 3P	4P
MCCBs h250 25kA TM	breaking capacity Icu : 25 kA (400/415 V AC) Ics: 19 kA adjustable thermal 0.63 to 1 x In adjustable magnetic 6 - 8 - 10 - 13 x In	20A 32A 50A 63A 100A 125A 160A 200A 250A	**HHG020U** **HHG032U** **HHG050U** **HHG063U** **HHG100U** **HHG125U** **HHG160U** **HHG200U** **HHG250U**	- - - - - - - - -
MCCBs h250 50kA TM	breaking capacity Icu : 30 kA (20-32A) Icu : 50 kA (400/415 V AC) Ics: 25 kA adjustable thermal 0.63 to 1 x In adjustable magnetic 6 - 8 - 10 - 13 x In	20A 32A 63A 100A 125A 160A 200A 250A	**HNG020U** **HNG032U** **HNG063U** **HNG100U** **HNG125U** **HNG160U** **HNG200U** **HNG250U**	**HNG021U** **HNG033U** **HNG064U** **HNG101U** **HNG126U** **HNG161U** **HNG201U** **HNG251U**
MCCBs h250 65kA TM	breaking capacity Icu : 65 kA (400/415 V AC) Ics: 36 kA adjustable thermal 0.63 to 1 x In adjustable magnetic 6 - 8 - 10 - 13 x In	50A 63A 100A 125A 160A 200A 250A	**HEG050U** **HEG063U** **HEG100U** **HEG125U** **HEG160U** **HEG200U** **HEG250U**	**HEG051U** **HEG064U** **HEG101U** **HEG126U** **HEG161U** **HEG201U** **HEG251U**
MCCBs h250 50kA TM+	breaking capacity Icu : 50 kA (400/415 V AC) Ics: 50 kA adjustable thermal 0.63 to 1 x In adjustable magnetic 6 - 8 - 10 - 13 x In	20A 32A 50A 63A 100A 125A 160A 250A	**HNH020U** **HNH032U** **HNH050U** **HNH063U** **HNH100U** **HNH125U** **HNH160U** **HNH250U**	**HNH021U** **HNH033U** **HNH051U** **HNH064U** **HNH101U** **HNH126U** **HNH161U** **HNH251U**
MCCBs h250 70kA TM+	breaking capacity Icu : 70 kA (400/415 V AC) Ics: 50 kA adjustable thermal 0.63 to 1 x In adjustable magnetic 6 - 8 - 10 - 13 x In	20A 32A 50A 63A 100A 125A 160A 250A	**HEH020U** **HEH032U** **HEH050U** **HEH063U** **HEH100U** **HEH125U** **HEH160U** **HEH250U**	**HEH021U** **HEH033U** **HEH051U** **HEH064U** **HEH101U** **HEH126U** **HEH161U** **HEH251U**

Technical characteristics
Mechanical test button,
lockable settings

Connection:
directly on copper cable terminal,
with end lug max. width: 30 mm
Complies with IEC 60947-2)

Switch disconnectors
allows tripping using a shunt trip unit (optional)

Complies with IEC 60947-3
AC 23A / DC 22A


HHD 400U


HND 631U

Designation	*Characteristics*	*In*	*Cat. ref.* 3P	4P
MCCBs h400 25kA **TM** breaking capacity Icu : 25 kA (400/415 V AC) Ics: 25 kA	adjustable thermal: 0.63 to 1 x In adjustable magnetic: 6 to 12 x In	250A 400A	**HHD 250U** **HHD 400U**	**-** **-**
MCCBs h400 50kA **TM** breaking capacity Icu : 50 kA (400/415 V AC) Ics: 50 kA	adjustable thermal: 0.63 to 1 x In adjustable magnetic: 6 to 12 x In	250A 400A	**HND 250U** **HND 400U**	**HND 251U** **HND 401U**
MCCBs h630 50kA **LSI** breaking capacity Icu : 50 kA (400/415 V AC) Ics: 50 kA	adjustable thermal: Ir = 0.4 to 1 x In adjustable magnetic: 2.5 to 8 x Ir time delay: 0,1 - 0,2 s	400A 630A	**HND 400H** **HND 630U**	**HND 401H** **HND 631U**
MCCBs h630 70kA **LSI** breaking capacity Icu : 70 kA (400/415 V AC) Ics: 50 kA	adjustable thermal: Ir = 0.4 to 1 x In adjustable magnetic: 2.5 to 10 x Ir (400A) 2.5 to 8 x Ir (630A) time delay: 0,1 - 0,2 s	400A 630A	**HED 400U** **HED 630U**	**HED 401U** **HED 631U**
Switch disconnectors	suitable for AC 22A / AC 23A	400A 630A	**HCD 400U** **HCD 630U**	**HCD 401U** **HCD 631U**

Moulded case circuit breakers h800
Thermal magnetic trip unit TM:
- thermal adjustment:
from 0.63 to 1 x In
- magnetic adjustment:
from 6 to 12 x In

Connection:
Directly on copper cable terminal,
with end lug max. width: 30 mm

Comply with IEC 60 947-2.

Moulded case circuit breakers h1000
Electronic trip unit LSI:
- long delay (thermal equivalent) adjustable:
Ir= 0,4 to 1 x In
- short delay (magnetic equivalent) adjustable:
2,5 to 10 x Ir (630-800A)
and 2,5 to 8 x Ir (1000A)
- time delay: 0,1-0,2 s

3P & 4P (adjustable neutral 0 - 50% - 100%).
Mechanical test button, lockable settings.

Connection:
Directly on copper cable terminal,
with end lug max. width: 50 mm

Comply with IEC 60 947-2.

Switch Disconnectors

Comply with IEC 60 947-3.
AC 23A / DC 22A

Designation	*Characteristics*	*In*	*Cat. ref.* *3P*	*4P*
MCCBs h800 50kA TM	breaking capacity Icu : 50 kA (400/415 V AC) Ics: 50 kA adjustable thermal 0.63 to 1 x In adjustable magnetic 6 to 12 x In	630A	**HNK630U**	**HNK631U**
		800A	**HNK800U**	**HNK801U**
MCCBs h800 70kA TM	breaking capacity Icu : 70 kA (400/415 V AC) Ics: 50 kA adjustable thermal 0.63 to 1 x In adjustable magnetic 6 to 12 x In	630A	**HEK630U**	**HEK631U**
		800A	**HEK800U**	**HEK801U**
MCCBs h1000 50kA LSI	breaking capacity Icu : 50 kA (400/415 V AC) Ics: 50 kA adjustable thermal Ir = 0,4 to 1 x In adjustable magnetic 2,5 to 10 x Ir (630 - 800A) 2,5 to 8 x Ir (1000A) time delay: 0,1-0,2 s neutral setting from 0-50 to 100% * without straight extended connection	800A	**HNE800U**	**HNE801U**
		1000A	**HNE970U**	**HNE971U**
MCCBs h1000 70kA LSI	breaking capacity Icu : 70 kA (400/415 V AC) Ics: 50 kA adjustable thermal Ir = 0,4 to 1 x In adjustable magnetic 2,5 to 10 x Ir (800A) 2,5 to 8 x Ir (1000A) time delay: 0,1-0,2 s neutral setting from 0-50 to 100%	800A	**HEE800U**	**HEE801U**
		1000A	**HEE970U**	**HEE971U**
Switch disconnectors	suitable for AC 22A / AC 23A Ue : 415 V AC Icw (0,3 s) = 10 kA	800A	**HCE800U**	**HCE801U**
		1000A	**HCE970U**	**HCE971U**

HNE970U

Technical characteristics
Mechanical test button, lockable settings.

Connection:
directly on copper cable terminal,
with end lug max. width: 60 mm

Complies with IEC 60947-2

Switch disconnectors
allows tripping using a shunt trip unit (optional)

Complies with IEC 60947-3
AC 23A / DC 22A


HNF 990U

Designation	*Characteristics*	*In*	*Cat. ref.* 3P	4P
MCCBs h1600 50kA LSI breaking capacity Icu : 50 kA (400/415 V AC) Ics: 50 kA	adjustable thermal: Ir = 0,4 to 1 x In adjustable magnetic: 2,5 to 10 x Ir time delay: 0,1-0,2 s neutral setting 0, 50, 100%	1250A 1600A	**HNF 980U** **HNF 990U**	**HNF 981U** **HNF 991U**
MCCBs h1600 70kA LSI breaking capacity Icu : 70 kA (400/415 V AC) Ics: 50 kA	adjustable thermal Ir = 0,4 to 1 x In adjustable magnetic 2,5 to 10 x Ir time delay: 0,1-0,2 s neutral setting from 0, 50, 100%	1250A 1600A	**HEF 980U** **HEF 990U**	**HEF 981U** **HEF 991U**
Switch disconnectors	suitable for AC 22A / AC 23A	1250A 1600A	**HCF 980U** **HCF 990U**	**HCF 981U** **HCF 991U**


HXA004H


HXC004H

HXA014H

HXC014H


HXA021H


HXA024H


HXA030H


HXD030H


HXA039HME


HXC039H


HXD042H


HXD039H

Designation	*Frame*	*In/a* *Ue/V*	*3P* *Cat. ref.*	*4P* *Cat. ref.*
Shunt trip release	x160, x250	24V DC	**HXA001H**	**HXA001H**
		48V DC	**HXA002H**	**HXA002H**
		110V AC	**HXA003H**	**HXA003H**
		230V AC	**HXA004H**	**HXA004H**
		400V AC	**HXA005H**	**HXA005H**
	h250, h400-h630, h1000, h1600	24V DC	**HXC001H**	**HXC001H**
		48V DC	**HXC002H**	**HXC002H**
		110V AC	**HXC003H**	**HXC003H**
		230V AC	**HXC004H**	**HXC004H**
		400V AC	**HXC005H**	**HXC005H**
Undervoltage release	x160, x250	24V DC	**HXA011H**	**HXA011H**
		110V AC	**HXA013H**	**HXA013H**
		230V AC	**HXA014H**	**HXA014H**
		400V AC	**HXA015H**	**HXA015H**
	h250, h400-h630	24V DC	**HXC011H**	**HXC011H**
		110V AC	**HXC013H**	**HXC013H**
		230V AC	**HXC014H**	**HXC014H**
		400V AC	**HXC015H**	**HXC015H**
	h1000, h1600	24V DC	**HXE011H**	**HXE011H**
		110V AC	**HXE013H**	**HXE013H**
		230V AC	**HXE014H**	**HXE014H**
		400V AC	**HXE015H**	**HXE015H**
Auxiliary contact	x160, x250	1NO+1NC	**HXA021H**	**HXA021H**
	h250, h400-h630, h1000, h1600	1NO+1NC	**HXC021H**	**HXC021H**
Alarm contact	x160, x250	1NO+1NC	**HXA024H**	**HXA024H**
	h250, h400-h630, h1000, h1600	1NO+1NC	**HXC024H**	**HXC024H**
Direct rotary handle	x160		**HXA030H**	**HXA030H**
	x250		**HXB030H**	**HXB030H**
	h250		**HXC030H**	**HXC030H**
	h400-h630		**HXD030H**	**HXD030H**
	h1000		**HXE030H**	**HXE030H**
	h1600		**HXF030H**	**HXF030H**
Extended rotary handle	x160		**HXA031H**	**HXA031H**
	x250		**HXB031H**	**HXB031H**
	h250		**HXC031H**	**HXC031H**
	h400-h630		**HXD031H**	**HXD031H**
	h1000		**HXE031H**	**HXE031H**
	h1600		**HXF031H**	**HXF031H**
Padlock	x160, x 250 utility approved		**HXA039HME**	**HXA039HME**
	x160, x250		**HXA039H**	**HXA039H**
	h250		**HXC039H**	**HXC039H**
	h400-h630, h1000		**HXD039H**	**HXD039H**
	h1600		**HXF039H**	**HXF039H**
Motor operator	x250	24V DC	**HXB040H**	**HXB040H**
		220V AC	**HXB042H**	**HXB042H**
	h250	24V DC	**HXC040H**	**HXC040H**
		220V AC	**HXC042H**	**HXC042H**
	h400-h630	24V DC	**HXD040H**	**HXD040H**
		220V AC	**HXD042H**	**HXD042H**
	h1000	24V DC	**HXE040H**	**HXE040H**
		220V AC	**HXE042H**	**HXE042H**
	h1600	24V DC	**HXF040H**	**HXF040H**
		220V AC	**HXF042H**	**HXF042H**
Electrical inter lock for motor operator	x250/h250		**HXB068H**	**HXB068H**
	h400/h639/h1020		**HXD068H**	**HXD068H**
	x250/h250-h400/h630/h1000		**HXB069H**	**HXB069H**


HYD003H


HYA013H


HYB010H


HYC011H


HYD015H


HYB031H


HYA021H


HYA023H


HYB025H

Designation	*Frame*	*In/a Ue/V*	*3P Cat. ref.*	*4P Cat. ref.*
Mechanical interlock (Cable type)	x250		**HXB065H**	**HXB065H**
	h250		**HXC065H**	**HXC065H**
	h400-h630		**HXD065H**	**HXD065H**
	h1000		**HXE065H**	**HXE065H**
Collar terminal	x250		**HYB001H**	**HYB002H**
	h250		**HYC003H**	**HYC004H**
	h400-h630 (400)		**HYD005H**	**HYD006H**
Extended connection straight	x160		**HYA013H**	**HYA013H**
	x250		**HYB010H**	**HYB010H**
	h250		**HYC010H**	**HYC010H**
	h400-h630 (400)		**HYD010H**	**HYD010H**
	h400-h630 (630)		**HYD013H**	**HYD013H**
Extended connection spreaders	**hx160**		**HYA014H**	**HYA015H**
	x250		**HYB011H**	**HYB012H**
	h250		**HYC011H**	**HYC012H**
	h400-h630 (400)		**HYD011H**	**HYD012H**
	h400-h630 (630)		**HYD014H**	**HYD015H**
Interphase barrier	x160		**HYA019H**	**HYA019H**
	x250		**HYB019H**	**HYB019H**
	h250TM+		**HYG019H**	**HYG019H**
	h250 to h1600		**HYD019H**	**HYD019H**
Rear connections	x250		**HYB031H**	**HYB032H**
	h400-h630 (400)		**HYD031H**	**HYD032H**
	h400-h630 (630)		**HYD033H**	**HYD034H**
	h1000 (800)		**HYE031H**	**HYE032H**
	h1000 (1000)		**HYE033H**	**HYE034H**
Terminal cover for extended connections	x160		**HYA021H**	**HYA022H**
	x250		**HYB021H**	**HYB022H**
	h250		**HYG021H**	**HYG022H**
	h400-h630		**HYD021H**	**HYD022H**
	h1000		**HYE021H**	**HYE021H**
Terminal cover for spreaders	x160		**HYA023H**	**HYA024H**
	x250		**HYB023H**	**HYB024H**
	h400-h630		**HYD023H**	**HYD024H**
Terminal cover for rear connections	x250		**HYB025H**	**HYB026H**
	h250		**HYC025H**	**-**
	h400-h630		**HYD025H**	**HYD026H**
	h1000		**HYE025H**	**HYE026H**
Terminal cover for collar terminals	x160		**HYA027H**	**HYA028H**
	x250		**HYB027H**	**HYB028H**
	h250		**HYC027H**	**-**
	h400-h630		**HYD027H**	**HYD028H**
Din rail adaptor	x160		**HYA033H**	**HYA033H**
Compact lugs 120mm² D:10	h400-h630		**HYD093H**	**HYD093H**
Compact lugs 150mm² D:10,5	h400-h630		**HYD095H**	**HYD095H**
Compact lugs 185mm² D:10,5	h400-h630		**HYD096H**	**HYD096H**
Compact lugs 185mm² D:12,8	h400-h630		**HYD097H**	**HYD097H**
Compact lugs 240mm² D:12,8	h400-h630		**HYD098H**	**HYD098H**

Load break switches 20 to 160A

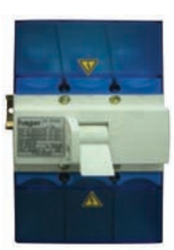
HAB406

Designation	*Characteristics*	*In/A*	*Width in 17.5mm*		*Cat. ref.*	
			3P	*4P*	*3P*	*4P*
Load break switches visible breaking	disconnector modular design IP20 AC23	20A	2,5	3,5	**HAB302**	**HAB402**
		32A	2,5	3,5	**HAB303**	**HAB403**
		40A	2,5	3,5	**HAB304**	**HAB404**
		63A	2,5	3,5	**HAB306**	**HAB406**
		63A	3	4	**HAC306**	**HAC406**
		80A	3	4	**HAC308**	**HAC408**
		100A	3	4	**HAC310**	**HAC410**
		100A	4,5	6	**HAD310**	**HAD410**
		125A	4,5	6	**HAD312**	**HAD412**
Auxiliaries contacts In = 10A	1O + 1F		0,5	0,5	**HZC311**	**HZC311**
	2F		0,5	0,5	**HZC312**	**HZC312**
External handle IP55 locked with 3 padlocks	for LBS 20 to 100A				**HZC010**	**HZC010**
	for LBS 100 to 125A				**HZC011**	**HZC011**
	for LBS 100 to 125A				**HZC014**	**HZC014**
Shaft extension	20 to 100A, 150mm				**HZC111**	**HZC111**
	20 to 100A, 200mm				**HZC112**	**HZC112**
	20 to 100A, 320mm				**HZC113**	**HZC113**
	100 to 125A, 150mm				**HZC114**	**HZC114**
	100 to 125A, 200mm				**HZC115**	**HZC115**
	100 to 125A, 320mm				**HZC116**	**HZC116**
Terminal shrouds top and bottom 2 pieces / packaging	20 to 63A				**HZC211**	**HZC212**
	63 to 100A				**HZC213**	**HZC214**
	100 to 125A				**HZC215**	**HZC216**

HZC014

Load break switches
160A, 200A, 250A for use as distribution board incomer

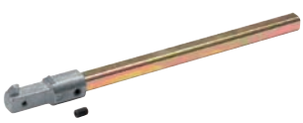
JK160S



JK200S

Designation	*In/A*	*Cat. ref.* *3P*
Load break switches AC22/AC23	160A	**JK160S**
	200A	**JK200S**
	250A	**JK250S**

HA358



HZC101

Designation	*Characteristics*	*In/A*	*Cat. ref. 3P*	*4P*
Load break switches with handle	direct rotary handle AC22 and AC23	125A	**HA351**	**HA451**
		160A	**HA352**	**HA452**
		200A	**HA353M**	**HA453M**
		250A	**HA354**	**HA454**
		315A	**HA355M**	**HA455M**
		400A	**HA357**	**HA457**
		630A	**HA358**	**HA458**
		800A	**HA360**	**HA460**
		1250A	**HA362**	**HA462**
Auxiliaries contacts			**HZ023**	**HZ023**
Rotary handle	for extended shaft			
	- 125 to 630A		**HZC002**	**HZC002**
	- 800 to 1250A		**HZC003**	**HZC003**
	- double hand		**HZA001**	**HZA001**
Shaft extension	125 to 630A, 200mm		**HZC101**	**HZC101**
	125 to 630A, 320mm		**HZC102**	**HZC102**
	800 to 1250A, 200mm		**HZC105**	**HZC105**
	800 to 1250A, 320mm		**HZC106**	**HZC106**

Technical Characteristics

Standards: IEC 60947-4-1
DIN rail / Screw mounted aprevention
Utilisation catageory: AC3
Rated current at 380V / 400V AC
High grade of coil insulation-class F

EW020_K

EW040_J

EW063_M

Rated operational current Ic	*Kw*	*in-built AUX contact*	*Cat.ref.*
9A	4	1 NO	**EW009_■**
12A	5.5	1 NO	**EW012_■**
16A	7.5	1 NO	**EW016_■**
22A	11	1 NO + 1 NC	**EW020_■**
26A	11	1 NO + 1 NC	**EW025_■**
32A	15	1 NO + 1 NC	**EW032_■**
40A	20	1 NO + 1 NC	**EW040_■**
55A	25	2 NO + 2 NC	**EW050_■**
64A	30	2 NO + 2 NC	**EW063_■**
72A	37	2 NO + 2 NC	**EW070_■**
105A	55	2 NO + 2 NC	**EW100_■**
115A	60	2 NO + 2 NC	**EW120_■**
147A	80	2 NO + 2 NC	**EW150_■**
179A	95	2 NO + 2 NC	**EW180_■**
225A	120	2 NO + 2 NC	**EW220_■**
300A	160	2 NO + 2 NC	**EW300_■**

Note: Replace ■ with coil voltages

Coil voltages:

C: 220V AC 50/60 Hz (EW009_C ~ EW300_C)
D: 380V AC 50/60 Hz (EW009_D ~ EW300_D)
H: 110V AC 50/60 Hz (EW009_H ~ EW070_H)
J: 230V AC 50Hz (EW009_J ~ EW300_J)
K: 240V AC 50Hz (EW009_K ~ EW300_K)
L: 400V AC 50Hz (EW009_L ~ EW070_L)
M: 415V AC 50Hz (EW009_M ~ EW070_M)

Technical Characteristics

3pole, 1NO+1NC in-built AUX contact, auto/manual reset, single phase prevention

EWT015B

EWT132C

Relay range	*Direct mounting on contactor*	*Cat ref.*
0.3 - 0.45 A	EW009 - EW025	**EWT004B**
0.45 - 0.67 A	EW009 - EW025	**EWT007B**
0.67 - 0.1 A	EW009 - EW025	**EWT010B**
1.0 - 1.5 A	EW009 - EW025	**EWT015B**
1.4 - 2.1 A	EW009 - EW025	**EWT021B**
1.8 - 2.7 A	EW009 - EW025	**EWT027B**
2.4 - 3.6 A	EW009 - EW025	**EWT036B**
3.5 - 5.0 A	EW009 - EW025	**EWT050B**
4.0 - 6.0 A	EW009 - EW025	**EWT060B**
5.5 - 8.5 A	EW009 - EW025	**EWT085B**
8.5 - 12.5 A	EW009 - EW025	**EWT112B**
12.5 - 18 A	EW009 - EW025	**EWT118B**
17 - 24 A	EW009 - EW025	**EWT124B**
22 - 30 A	EW009 - EW025	**EWT130B**
17-25 A	EW032 - EW040	**EWT125C**
23-32 A	EW 032 - EW040	**EWT132C**
30-40 A	EW 032 - EW040	**EWT140C**
17-25 A	EW 050 - EW070	**EWT125D**
23 - 32 A	EW 050 - EW070	**EWT132D**
30- 40 A	EW 050 - EW070	**EWT140D**
37 - 50 A	EW 050 - EW070	**EWT150D**
48 - 65 A	EW 050 - EW070	**EWT165D**
63 - 80 A	EW 050 - EW070	**EWT180D**

Accessories

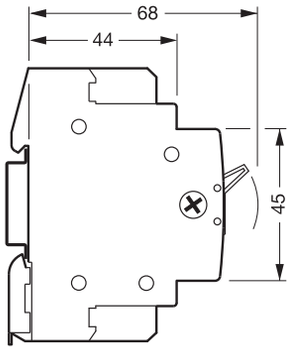
EWA001

EWA007


EWA101


EWA102

Relay range	*Contact configuration*	*Cat ref.*
Auxillary contact		
Top mounting on contactor EW009 to EW070	1 NO + 1 NC	**EWA001**
	2 NO	**EWA002**
	2 NC	**EWA003**
	4 NO	**EWA004**
	4 NC	**EWA005**
	3 NO + 1 NC	**EWA006**
	2 NO + 2 NC	**EWA007**
	1 NO + 3 NC	**EWA008**
Side mounting on contactor EW009 to EW040	1 NO + 1 NC	**EWA009**
Side mounting on contactor EW100 to EW300	1 NO + 1 NC	**EWA010**
Mechanical interlock		
For contactor EW009 - EW025		**EWA101**
For contactor EW032 - EW070		**EWA103**
Mechanical / Electrical interlock		
For contactor EW009 - EW025		**EWA102**



Description
For use as a switch disconnector in all types of circuit.

Complies with : BS EN 60 947-3 all ratings

Technical data
utilisation category
AC 22B
AC 21B for 125A

In : 16, 25, 32A
Shrouded cable clamps connection capacity:
16mm² rigid conductor
10mm² flexible conductor

In : 40, 63A
Cable clamps, connection capacity:
25mm² rigid conductor
16mm² flexible conductor

In : 80A, 125A
Cable clamps connection capacity:
50mm² rigid conductor
35mm² flexible conductor
All switches have a green / red indication on the handle giving positive contact indication.

Use MZN175 as locking device


SB 140


SB 240


SB 363

Designation	*Characteristics*	*Width in 17,5mm*	*Cat ref.*
Single pole	16A	1	**SB 116**
	16A with pilot light	1	**SB 116V**
	25A	1	**SB 125**
	25A with pilot light	1	**SB 125V**
	32A	1	**SB 132**
	32A with pilot light	1	**SB 132V**
	40A	1	**SB 140**
	63A	1	**SB 163**
	80A	1	**SB 180**
	100A	1	**SB 199**
Double pole	16A	1	**SB 216**
	16A with pilot light	1	**SB 216V**
	25A	1	**SB 225**
	25A with pilot light	1	**SB 225V**
	32A	1	**SB 232**
	32A with pilot light	1	**SB 232V**
	40A	2	**SB 240**
	63A	2	**SB 263**
	80A	2	**SB 280**
	100A	2	**SB 299**
	125A	2	**SB 212**
Triple pole	16A	2	**SB 316**
	25A	2	**SB 325**
	32A	2	**SB 332**
	32A large terminals	3	**SB 332Q**
	40A	3	**SB 340**
	63A	3	**SB 363**
	63A large terminals	3	**SB 363Q**
	80A	3	**SB 380**
	100A	3	**SB 399**
	125A	3	**SB 312**

Designation	*Characteristics*	*Width in 17,5mm*	*Cat. ref. neutral left*	*Cat. ref. neutral right*
Four pole	16A	2	**SB 416F**	**SB 416**
	25A	2	**SB 425F**	**SB 425**
	32A	2	**SB 432F**	**SB 432**
	40A	4	**SB 440F**	**SB 440**
	63A	4	**SB 463F**	**SB 463**
	80A	4	**SB 480F**	**SB 480**
	100A	4	**SB 499F**	**SB 499**
	125A	4	**SB 412F**	**SB 412**

Technical characteristics:
- Voltage range -20% to +10%: 230 - 400 V
- Vmax: 254 - 440 V
- Frequency: 50 / 60 Hz
- IP rating: IP 2X

Range	MW	MU	NC	MT	MB	MV
Breaking capacity IEC 898 (kA)	3	6	10	6	6	3
Breaking capacity IEC 947-2 (kA)		10	15	10	10	
Auxiliaries	no	no	yes	no	yes	no
Tripping curve	C	C	C	B	B	B


NC110A


MU220A


MB316A


MB432A

Designation	*In /A*	*cat. ref.*	*cat. ref.*	*cat. ref.*	*cat.ref.*	*cat. ref.*	*cat. ref.*
Single Pole	0,5			**NC100A**			
	1			**NC101A**			
	2			**NC102A**			
	4			**NC104A**			
	6	**MW106**	**MU106A**	**NC106A**	**MT106A**	**MB106A**	**MV106A**
	10	**MW110**	**MU110A**	**NC110A**	**MT110A**	**MB110A**	**MV110A**
	16	**MW116**	**MU116A**	**NC116A**	**MT116A**	**MB116A**	**MV116A**
	20	**MW120**	**MU120A**	**NC120A**	**MT120A**	**MB120A**	**MV120A**
	25	**MW125**	**MU125A**	**NC125A**	**MT125A**	**MB125A**	**MV125A**
	32	**MW132**	**MU132A**	**NC132A**	**MT132A**	**MB132A**	**MV132A**
	40	**MW140**	**MU140A**	**NC140A**	**MT140A**	**MB140A**	**MV140A**
	50		**MU150A**	**NC150A**	**MT150A**	**MB150A**	
	63		**MU163A**	**NC163A**	**MT163A**	**MB163A**	
Double Pole	0,5			**NC200A**			
	1			**NC201A**			
	2			**NC202A**			
	4			**NC204A**			
	6	**MW206**	**MU206A**	**NC206A**	**MT206A**	**MB206A**	**MV206A**
	10	**MW210**	**MU210A**	**NC210A**	**MT210A**	**MB210A**	**MV210A**
	16	**MW216**	**MU216A**	**NC216A**	**MT216A**	**MB216A**	**MV216A**
	20	**MW220**	**MU220A**	**NC220A**	**MT220A**	**MB220A**	**MV220A**
	25	**MW225**	**MU225A**	**NC225A**	**MT225A**	**MB225A**	**MV225A**
	32	**MW232**	**MU232A**	**NC232A**	**MT232A**	**MB232A**	**MV232A**
	40	**MW240**	**MU240A**	**NC240A**	**MT240A**	**MB240A**	**MV240A**
	50		**MU250A**	**NC250A**	**MT250A**	**MB250A**	
	63		**MU263A**	**NC263A**	**MT263A**	**MB263A**	
Triple Pole	0,5			**NC300A**			
	1			**NC301A**			
	2			**NC302A**			
	4			**NC304A**			
	6	**MW306**	**MU306A**	**NC306A**	**MT306A**	**MB306A**	**MV306A**
	10	**MW310**	**MU310A**	**NC310A**	**MT310A**	**MB310A**	**MV310A**
	16	**MW316**	**MU316A**	**NC316A**	**MT316A**	**MB316A**	**MV316A**
	20	**MW320**	**MU320A**	**NC320A**	**MT320A**	**MB320A**	**MV320A**
	25	**MW325**	**MU325A**	**NC325A**	**MT325A**	**MB325A**	**MV325A**
	32	**MW332**	**MU332A**	**NC332A**	**MT332A**	**MB332A**	**MV332A**
	40	**MW340**	**MU340A**	**NC340A**	**MT340A**	**MB340A**	**MV340A**
	50		**MU350A**	**NC350A**	**MT350A**	**MB350A**	
	63		**MU363A**	**NC363A**	**MT363A**	**MB363A**	
Four pole	0,5			**NC400A**			
	1			**NC401A**			
	2			**NC402A**			
	4			**NC404A**			
	6	**MW406**	**MU406A**	**NC406A**	**MT406A**	**MB406A**	**MV406A**
	10	**MW410**	**MU410A**	**NC410A**	**MT410A**	**MB410A**	**MV410A**
	16	**MW416**	**MU416A**	**NC416A**	**MT416A**	**MB416A**	**MV416A**
	20	**MW420**	**MU420A**	**NC420A**	**MT420A**	**MB420A**	**MV420A**
	25	**MW425**	**MU425A**	**NC425A**	**MT425A**	**MB425A**	**MV425A**
	32	**MW432**	**MU432A**	**NC432A**	**MT432A**	**MB432A**	**MV432A**
	40	**MW440**	**MU440A**	**NC440A**	**MT440A**	**MB440A**	**MV440A**
	50		**MU450A**	**NC450A**	**MT450A**	**MB450A**	
	63		**MU463A**	**NC463A**	**MT463A**	**MB463A**	

Technical characteristics:
- Voltage range -20% to +10%:
  - MC/NCN/NDN/NR: 230 - 400V
  - HLF/HMC: 240 - 415 V
- Vmax: 254 - 440 V
- Frequency: 50 / 60 Hz
- IP rating: IP 2X
- Auxiliaries

Range	MC	NCN	NDN	NRN	HLF	HMC
Breaking capacity IEC 898 (kA)	6	10	10			
Breaking capacity IEC 947-2 (kA)	10	15	15	25 (20A) 20 (25-40A) 15 (50-63A)	10	15
Tripping curve	C	C	D	C	C	C


MC106A


NCN220A


NDN320A


HLF399S

* each pole is 1.5 module width

Designation	*In /A*	*cat. ref.*	*cat. ref.*	*cat. ref.*	*cat.ref.*	*cat. ref.*	*cat. ref.*
Single Pole	0,5	**MC100A**	**NCN100A**	**NDN100A**	**NRN100**		
	1	**MC101A**	**NCN101A**	**NDN101A**	**NRN101**		
	2	**MC102A**	**NCN102A**	**NDN102A**	**NRN102**		
	4	**MC104A**	**NCN104A**	**NDN104A**	**NRN104**		
	6	**MC106A**	**NCN106A**	**NDN106A**	**NRN106**		
	10	**MC110A**	**NCN110A**	**NDN110A**	**NRN110**		
	16	**MC116A**	**NCN116A**	**NDN116A**	**NRN116**		
	20	**MC120A**	**NCN120A**	**NDN120A**	**NRN120**		
	25	**MC125A**	**NCN125A**	**NDN125A**	**NRN125**		
	32	**MC132A**	**NCN132A**	**NDN132A**	**NRN132**		
	40	**MC140A**	**NCN140A**	**NDN140A**	**NRN140**		
	50	**MC150A**	**NCN150A**	**NDN150A**	**NRN150**		
	63	**MC163A**	**NCN163A**	**NDN163A**	**NRN163**		
	80*					**HLF180S**	**HMC180**
	100*					**HLF190S**	**HMC190**
	125*					**HLF199S**	**HMC199**
Double Pole	0,5	**MC200A**	**NCN200A**	**NDN200A**	**NRN200**		
	1	**MC201A**	**NCN201A**	**NDN201A**	**NRN201**		
	2	**MC202A**	**NCN202A**	**NDN202A**	**NRN202**		
	4	**MC204A**	**NCN204A**	**NDN204A**	**NRN204**		
	6	**MC206A**	**NCN206A**	**NDN206A**	**NRN206**		
	10	**MC210A**	**NCN210A**	**NDN210A**	**NRN210**		
	16	**MC216A**	**NCN216A**	**NDN216A**	**NRN216**		
	20	**MC220A**	**NCN220A**	**NDN220A**	**NRN220**		
	25	**MC225A**	**NCN225A**	**NDN225A**	**NRN225**		
	32	**MC232A**	**NCN232A**	**NDN232A**	**NRN232**		
	40	**MC240A**	**NCN240A**	**NDN240A**	**NRN240**		
	50	**MC250A**	**NCN250A**	**NDN250A**	**NRN250**		
	63	**MC263A**	**NCN263A**	**NDN263A**	**NRN263**		
	80*					**HLF280S**	**HMC280**
	100*					**HLF290S**	**HMC290**
	125*					**HLF299S**	**HMC299**
Triple Pole	0,5	**MC300A**	**NCN300A**	**NDN300A**	**NRN300**		
	1	**MC301A**	**NCN301A**	**NDN301A**	**NRN301**		
	2	**MC302A**	**NCN302A**	**NDN302A**	**NRN302**		
	4	**MC304A**	**NCN304A**	**NDN304A**	**NRN304**		
	6	**MC306A**	**NCN306A**	**NDN306A**	**NRN306**		
	10	**MC310A**	**NCN310A**	**NDN310A**	**NRN310**		
	16	**MC316A**	**NCN316A**	**NDN316A**	**NRN316**		
	20	**MC320A**	**NCN320A**	**NDN320A**	**NRN320**		
	25	**MC325A**	**NCN325A**	**NDN325A**	**NRN325**		
	32	**MC332A**	**NCN332A**	**NDN332A**	**NRN332**		
	40	**MC340A**	**NCN340A**	**NDN340A**	**NRN340**		
	50	**MC350A**	**NCN350A**	**NDN350A**	**NRN350**		
	63	**MC363A**	**NCN363A**	**NDN363A**	**NRN363**		
	80*					**HLF380S**	**HMC380**
	100*					**HLF390S**	**HMC390**
	125*					**HLF399S**	**HMC399**
Four Pole	0,5	**MC400A**	**NCN400A**	**NDN400A**	**NRN400**		
	1	**MC401A**	**NCN401A**	**NDN401A**	**NRN401**		
	2	**MC402A**	**NCN402A**	**NDN402A**	**NRN402**		
	4	**MC404A**	**NCN404A**	**NDN404A**	**NRN404**		
	6	**MC406A**	**NCN406A**	**NDN406A**	**NRN406**		
	10	**MC410A**	**NCN410A**	**NDN410A**	**NRN410**		
	16	**MC416A**	**NCN416A**	**NDN416A**	**NRN416**		
	20	**MC420A**	**NCN420A**	**NDN420A**	**NRN420**		
	25	**MC425A**	**NCN425A**	**NDN425A**	**NRN425**		
	32	**MC432A**	**NCN432A**	**NDN432A**	**NRN432**		
	40	**MC440A**	**NCN440A**	**NDN440A**	**NRN440**		
	50	**MC450A**	**NCN450A**	**NDN450A**	**NRN450**		
	63	**MC463A**	**NCN463A**	**NDN463A**	**NRN463**		
	80*					**HLF480S**	**HMC480**
	100*					**HLF490S**	**HMC490**
	125*					**HLF499S**	**HMC499**

RCCBs - 2 and 4 poles type AC

Technical characteristics:
- standards: IEC 61008-1
- operational voltage:
127-230V (2 poles)
tolerance -6 / +10%
230-400V (4 poles)
tolerance -6 / +10%
Vmax: 254 / 440V
- current ratings: 16A - 100A
- poles: 2P / 4P
- sensitivity: 10mA / 30mA / 100mA / 300mA / 500mA
- IP rating: IP 2X
- earth fault indication
- On - Off indication
- clip on busbar facility
- selective (S) version (time delayed)
- accessories:
only for CxxxxJ version:


CD241J


CD441J

Designation	*In /A*	*10mA cat. ref.*	*30mA cat. ref.*	*100mA cat. ref.*	*300mA cat.ref.*	*500mA cat. ref.*
2 poles 50 Hz	16	**CC217J**	-	-	-	-
	25	-	**CD226J**	**CE226J**	**CF226J**	-
	40	-	**CD241J**	**CE241J**	**CF241J**	-
	63	-	**CD264J**	**CE264J**	**CF264J**	-
	80	-	**CD281Z**	**CE281Z**	**CF281Z**	-
	100	-	**CD285Z**	**CE285Z**	**CF285Z**	-
	S 63	-	-	-	**CP265F**	-
4 pole 50 Hz	25	-	**CD426J**	**CE426J**	**CF426J**	-
	40	-	**CD441J**	**CE441J**	**CF441J**	-
	63	-	**CD464J**	**CE464J**	**CF464J**	-
	80	-	**CD480Z**	**CE481Z**	**CF481Z**	**CG481Z**
	100	-	**CD485Z**	**CE485Z**	**CF485Z**	**CG485Z**
	S 40A	-	-	-	**CP441J**	-
	S 63A	-	-	-	**CP464J**	-

RCCBs - 60 Hz


CD225S


CD463S

2 pole 60 Hz	25	-	**CD225S**	-	**CF225S**	-
	40	-	**CD240S**	-	**CF240S**	-
	63	-	**CD263S**	-	**CF263S**	-
	80	-	**CD280S**	-	**CF280S**	-
	100	-	**CD284S**	-	**CF284S**	-
4 pole 60 Hz	25	-	**CD425S**	-	**CF425S**	-
	40	-	**CD440S**	-	**CF440S**	-
	63	-	**CD463S**	-	**CF463S**	-
	80	-	**CD480S**	-	**CF480S**	-
	100	-	**CD484S**	-	**CF484S**	-

RCBOs 1 module type AC - C curve

Technical characteristics:
- standards: IEC 61009
- operational voltage:
110-230V (1 pole)
tolerance -6 / +10%
Vmax: 254V
- current ratings: 6A - 50A
- sensitivity: 30mA / 100mA / 300mA
- breaking capacity as per IEC 898: 6kA / 10kA
- Tripping curves as per IEC 61009: C
- frequency: 50 / 60 Hz
- IP rating: IP 2X
- indications:
On - Off indication
- flying neutral lead: 700 mm
- selective (S) version


AD110Z

Designation	*In /A*	*30mA cat. ref.*	*100mA cat. ref.*	*300mA cat. ref.*
6 kA	6	**AD106Z**	**AE106Z**	**-**
	10	**AD110Z**	**AE110Z**	**-**
	16	**AD116Z**	**AE116Z**	**-**
	20	**AD120Z**	**AE120Z**	**AF120Z**
	25	**AD125Z**	**AE125Z**	**AF125Z**
	32	**AD132Z**	**AE132Z**	**AF132Z**
	40	**AD140Z**	**AE140Z**	**AF140Z**
	50	**AD128**	**-**	**-**
	S 50	**-**	**AN150Z**	**AP150Z**
10 kA	6	**AD184**	**-**	**-**
	10	**AD185**	**-**	**-**
	16	**AD187**	**-**	**-**
	20	**AD188**	**-**	**-**
	25	**AD189**	**-**	**-**
	32	**AD190**	**-**	**-**
	40	**AD191**	**-**	**-**

RCBOs 2 module type AC - C curve

Technical characteristics:
- standards: IEC 61009
- operational voltage:
110-230V
tolerance -6 / +10%
Vmax: 254V
- current ratings: 6A - 40A
- sensitivity: 30mA / 300mA
- IP rating: IP 2X
- indications of earth fault
- breaking capacity: 4,5kA / 6kA
- 60HZ RCBO
breaking capacity
4.5 KA (IEC 898)
6KA (IEC 947)


AD866J

Designation	*In /A*	*30mA, 4.5kA cat. ref.*	*30mA, 6kA cat. ref.*	*300mA, 6kA cat. ref.*
RCBO type AC 50HZ	6	**AD856J**	**AD956B**	**AF956B**
	10	**AD860J**	**AD960B**	**AF960B**
	16	**AD866J**	**AD966B**	**AF966B**
	20	**AD870J**	**AD970B**	**AF970B**
	25	**AD875J**	**AD975B**	**AF975B**
	32	**AD882J**	**AD982B**	**AF982B**
	40	**AD890J**	**AD990B**	**AF990B**
RCBO type AC 60HZ	6	**ADC813F**		
	10	**ADC817F**		
	16	**ACD823F**		
	20	**ACD827F**		
	25	**ADC833F**		
	32	**ADC839F**		
	40	**ADC847F**		

RCD add-on blocks - type AC
for MB, MC, NC, NCN, NDN, and NRN ranges


BD264


BF364


BD464

Designation	*Sensitivity*	*In/A*	*Width in 17,5mm*	*C curve cat.ref.*
2 poles add-on blocks	10mA	25A	2	**BC226**
	30mA	25A	2	**BD226**
		40A	2	**BD241**
		63A	2	**BD264**
	100mA	63A	2	**BE264**
	300mA	25A	2	**BF226**
		40A	2	**BF241**
		63A	2	**BF264**
	S 100mA	63A	2	**BN264**
	S 300mA	63A	2	**BP264**
	S 1A	63A	2	**BS264**
3 poles add-on blocks	30mA	25A	2	**BD326**
		40A	3	**BD341**
		63A	3	**BD364**
	300mA	25A	2	**BF326**
		40A	3	**BF341**
		63A	3	**BF364**
	S 300mA	63A	3	**BP364**
	S 1A	63A	3	**BS364**
4 poles add-on blocks	30mA	25A	2	**BD426**
		40A	3	**BD441**
		63A	3	**BD464**
	100mA	63A	3	**BE464**
	300mA	25A	2	**BF426**
		40A	3	**BF441**
		63A	3	**BF464**
	S 100mA	63A	3	**BN464**
	S 300mA	63A	3	**BP464**
	S 1A	63A	3	**BS464**

Auxiliaries and accessories
for MCBs and RCCBs


MZ201


MZ204

Designation	*Characteristics*	*Width in 17,5mm*	*Cat.ref.*
Auxiliary contact 6A 230V	1NO +1NC aux. contact for indication of the main contact status	1/2	**MZ201**
Alarm contact 6A 230V	SD contact indicates tripping on fault	1/2	**MZ202**
Shunt trip	allows remote tripping of the device		
	- 230 - 415V AC 110 - 130V DC	1	**MZ203**
	- 24 - 48V AC 12 - 48V DC	1	**MZ204**
Under voltage release	allows MCB to be closed only when voltage is above 70% Un MCB will automatically trip when voltage falls below 35% Un		
	- 48V DC	1	**MZ205**
	- 230V AC	1	**MZ206**
Aux. and alarm contact	dedicated to RCCBs also acts as RCCB interface with standard MCB auxiliaries MZ203 - MZ206	1	**CZ001**
Locking kit	allows padlocking of the device		**MZN175**

For selection of auxiliaries combinations, please refer to the main catalogue.

Fuse carriers

LS401

LS703

Designation	*L31 8,5x31,5mm*	*L38 10,3x38mm*	*L51 14x51mm*	*L51 14x51mm*	*L58 22x58mm*	*L58 22x58mm*
Single pole						
1 Phase	**LS401**	**LS501**	**LS601***	**LR601**	**LS701***	**LR701**
1 Phase + ind. light	**LS431**	**LS531**	**LS601*+LS672**		**LS701*+LS672**	
Double pole						
1 Phase + Neutral	**LS412**	**LS512**	**LS612***	**LR612**	**LS712***	**LR712**
1 Phase + Neutral + ind. light (1 module)	**L43201**	**L53201**				
1 Phase + Neutral + ind. light			**LS612*+LS672**		**LS712*+LS672**	
1 Phase + Neutral (1 module)	**L40600**	**L50600**				
2 Phases	**LS402**	**LS502**	**LS602***	**LR602**	**LS702***	**LR702**
Triple pole						
3 Phases	**LS403**	**LS503**	**LS603***	**LR603**	**LS703***	**LR703**
Four poles						
3 Phases + Neutral	**LS404**	**LS504**	**LS604***	**LR604**	**LS704***	**LR704**

* Possibility to mount accessories

Fuse links

Cylindrical fuses type aM
protection for motor application against short circuits
L38, L51, L58

Cylindrical fuses type gG
protection for general purpose application against overload & short circuits
L38, L51, L58

Standard:
EN/IEC 60269-1,
EN/IEC 60269-2

LF302M

LF302G

LF432M

LF432G

LF563M

LF563G

Designation	*In /A*	*Cat. Ref. Type aM*	*Cat. Ref. Type gG*
Cylindrical fuses	0.5 A	**LF300M**	**LF300G**
	1 A	**LF301M**	**LF301G**
type aM	2 A	**LF302M**	**LF302G**
10 x 38 mm (L38)	4 A	**LF304M**	**LF304G**
500V~ (from 0.5A to 16A)	6 A	**LF306M**	**LF306G**
400V~ (from 20A to 32A)	8 A	**LF308M**	**LF308G**
	10 A	**LF310M**	**LF310G**
type gG	12 A	**LF312M**	**LF312G**
10 x 38 mm (L38)	16 A	**LF316M**	**LF316G**
500V~ (from 0.5A to 25A)	20 A	**LF320M**	**LF320G**
400V~ (32A)	25 A	**LF325M**	**LF325G**
	32 A	**LF332M**	**LF332G**
Cylindrical fuses	2 A	**LF402M**	**LF402G**
type aM	4 A	**LF404M**	**LF404G**
14 x 51 mm (L51)	6 A	**LF406M**	**LF406G**
type gG	8 A	**LF408M**	**LF408G**
14 x 51 mm (L51)	10 A	**LF410M**	**LF410G**
	12 A	**LF412M**	**LF412G**
	16 A	**LF416M**	**LF416G**
	20 A	**LF420M**	**LF420G**
690V~ (from 2A to 25A)	25 A	**LF425M**	**LF425G**
500V~ (from 32A to 45A)	32 A	**LF432M**	**LF432G**
400V~ (50A)	40 A	**LF440M**	**LF440G**
	45 A	**LF445M**	**LF445G**
	50 A	**LF450M**	**LF450G**
Cylindrical fuses	16 A	**LF516M**	**LF516G**
type aM	20 A	**LF520M**	**LF520G**
22 x 58 mm (L58)	25 A	**LF525M**	**LF525G**
type gG	32 A	**LF532M**	**LF532G**
22 x 58 mm (L58)	40 A	**LF540M**	**LF540G**
	50 A	**LF550M**	**LF550G**
	63 A	**LF563M**	**LF563G**
690V~ (from 16A to 63A)	80 A	**LF580M**	**LF580G**
500V~ (from 80A to 100A)	100 A	**LF590M**	**LF590G**
400V~ (125A)	125 A	**LF599M**	**LF599G**

Technical characteristics:
- Voltage range : 230V +/- 20%
- Network voltage: 50 to 700 V
- Frequency: 50 / 60 Hz
- Working temperarture: -10 to +55°C
- Storage temperarture: -25 to +70°C
- Max. cable lenght to torroids: 25m non-twisted cable 0,5 to 1,5mm2
  50m twisted cable
- Standards: IEC 60755, IEC 947-2 annex B, IEC 61543, IEC 61008-1

HR 520

HR525

HR440

Designation	*Characteristics*	*Power absorbed*	*Positive safety contact*	*Cat. ref.*
Earth leakage relays non adjustable	fixed:0,03A instantaneous tripping	3VA		**HR500**
	fixed:0,3A instantaneous tripping	3VA		**HR502**
Earth leakage relays adjustable	adjustable: 0,03-0,1-0,3-0,5-1-3-10A adjustable delay: 0-0,1-0,3-0,4-0,5-1-3 50% pre alarm output	5VA	1 C/O	**HR510**
	adjustable: 0,03-0,1-0,3-0,5-1-3-10A adjustable delay: 0-0,1-0,3-0,4-0,5 s-1-3 s 50% pre alarm output bargraph	5VA	1 C/O	**HR520**
	adjustable: 0,5-1-3-5-10-20-30A adjustable delay: 0-0,1-0,2-0,25-0,3-0,4-0,5 s 50% pre alarm output bargraph	5VA	1 C/O	**HR523**
Earth leakage relays adjustable LCD type	adjustable: 0,03-0,1-0,3-0,5-1-3-5-10-30A adjustable delay: 0-0,1-0,3-0,4-0,5-1-3-5-10 s 1 channel	6VA	1 C/O	**HR525**
	adjustable: 0,03-0,1-0,3-0,5-1-3-10-30A adjustable delay: 0-0,1-0,3-0,4-0,5-1-3 s 4 channel	6VA	1 C/O	**HR534**
Earth leakage relays with integrated torroids	adjustable: 0,03-0,1-0,3-0,5-1-3A adjustable delay: 0-0,1-0,3-0,4-0,5-0,75-1 s			
	with integrated torroid Ø 25mm	5VA		**HR440**
	with integrated torroid Ø 35mm	5VA		**HR441**

Technical characteristics:
- Frequency: 50 / 60 Hz
- Working temperarture: -10 to +55°C
- Storage temperarture: -25 to +70°C
- IP rating: IP 41

HR742

Designation	*Characteristics*	*Cat. ref.*
Circular torroids	Internal Ø35 mm	**HR741**
	Internal Ø70 mm	**HR742**
	Internal Ø105 mm	**HR743**
	Internal Ø140 mm	**HR744**
	Internal Ø210 mm	**HR745**

HR820

Open rectangular torroids	20 x 30 mm	**HR820**
	50 x 80 mm	**HR821**
	80 x 80 mm	**HR822**
	80 x 120 mm	**HR823**
	80 x 160 mm	**HR824**

HR831

Rectangular torroids	75 x 175 mm	**HR830**
	115 x 305 mm	**HR831**
	150 x 350 mm	**HR832**

Contactors
Contactors are essential switching devices to control heating, lighting & ventilation systems. They are recommended in association with control and energy management devices like thermostats, Time switches, PIRs sensors etc.

Humfree contactors
The humfree versions are recommended for application where silent operating is required.

Override contactors
The override contactors are equipped with 3 position manual control button
- permanent ON
- automatic mode
- permanent OFF

Complies with IEC 61095

Auxiliary contact
1NO+1NC for remote signaling not compatible with ESC225S.

Heat dissipation insert LZ060
- Recommended to use heat dissipation insert LZ060 between group of 3 contactors.

ESC425

Designation	Rated Current AC1	AC3	Main contacts	Coil	Width in 17.5mm	Cat. ref.
Contactors	25A-250V	8.5A	**1NO**	230VAC 50/60Hz	1	**ESC125**
	25A-250V	8.5A	**1NC**	230VAC 50/60Hz	1	**ESC126**
	25A-250V	8.5A	**2NO**	230VAC 50/60Hz	1	**ESC225**
	25A-250V	8.5A	**2NC**	230VAC 50/60Hz	1	**ESC226**
	25A-250V	8.5A	**1NO+1NC**	230VAC 50/60Hz	1	**ESC227**
	25A-440V	8.5A	**3NO**	230VAC 50/60Hz	2	**ESC325**
	25A-440V	8.5A	**4NO**	230VAC 50/60Hz	2	**ESC425**
	25A-440V	8.5A	**4NC**	230VAC 50/60Hz	2	**ESC426**
	25A-440V	8.5A	**2NO+2NC**	230VAC 50/60Hz	2	**ESC427**
	40A-440V	25A	**2NO**	230VAC 50Hz	3	**ESC240**
	40A-440V	25A	**2NC**	230VAC 50Hz	3	**ESC241**
	40A-440V	25A	**3NO**	230VAC 50Hz	3	**ESC340**
	40A-440V	25A	**4NO**	230VAC 50Hz	3	**ESC440**
	40A-440V	25A	**4NC**	230VAC 50Hz	3	**ESC441**
	40A-440V	25A	**2NO+2NC**	230VAC 50Hz	3	**ESC442**
	63A-440V	32A	**2NO**	230VAC 50Hz	3	**ESC263**
	63A-440V	32A	**2NC**	230VAC 50Hz	3	**ESC264**
	63A-440V	32A	**3NO**	230VAC 50Hz	3	**ESC363**
	63A-440V	32A	**4NO**	230VAC 50Hz	3	**ESC463**
	63A-440V	32A	**4NC**	230VAC 50Hz	3	**ESC464**
	63A-440V	32A	**2NO+2NC**	230VAC 50Hz	3	**ESC465**

ESC463S

Hum-free contactors	25A-250V	8.5A	**2NO**	220VDC, 230VAC 50/60Hz	1	**ESC225S**
	25A-440V	8.5A	**3NO**	220VDC, 230VAC 50/60Hz	2	**ESC325S**
	25A-440V	8.5A	**4NO**	220VDC, 230VAC 50/60Hz	2	**ESC425S**
	25A-440V	8.5A	**4NC**	220VDC, 230VAC 50/60Hz	3	**ESC426S**
	25A-440V	8.5A	**2NO+2NC**	220VDC, 230VAC 50/60Hz	2	**ESC427S**
	40A-440V	25A	**2NO**	220VDC, 230VAC 50/60Hz	3	**ESC240S**
	40A-440V	25A	**3NO**	220VDC, 230VAC 50/60Hz	3	**ESC340S**
	40A-440V	25A	**4NO**	220VDC, 230VAC 50/60Hz	3	**ESC440S**
	63A-440V	32A	**2NO**	220VDC, 230VAC 50/60Hz	3	**ESC263S**
	63A-440V	32A	**3NO**	220VDC, 230VAC 50/60Hz	3	**ESC363S**
	63A-440V	32A	**4NO**	220VDC, 230VAC 50/60Hz	3	**ESC463S**

Accessories	Auxiliary contact **(1NO + 1NC)**	**ESC080***
	Heat dissipation insert	**LZ060**

Note : A. Override contactors are available on request
B. Other coil voltages like 8/12V, 24V, 110/127V available on request
* Not compatible with ESC 225S

Time switches analogue version

Technical characteristics
- Standards: EN 60730
- Operating voltage:
230V AC (+10/-15%), 50/60 Hz
*110-230V AC - 48V DC,
50/60 Hz for EH715 and EH716
- Contact rating: 16A 230V AC1
- Programming configuration:
daily / weekly / daily + weekly
- Versions with power reserve
- DIN mountable

EH010

EH111

Designation	*Operating cycle*	*Power fail reserve*	*No. of channels*	*Width in 17,5 mm*	*Cat. ref.*
Analog time switches (din rail)					
Daily dial without reserve	24hrs		1	1	**EH010**
Daily dial with reserve: 200h	24hrs	200hrs	1	1	**EH011**
Daily dial without reserve	24hrs		1	3	**EH110**
Daily dial with reserve: 200h	24hrs	200hrs	1	3	**EH111**
Weekly dial with reserve	7 d	200hrs	1	3	**EH171**
Daily+weekly dial with reserve	7d/24hrs	200hrs	1	5	**EH191**
Analog time switches (72x72mm)					
Daily dial without reserve	24hrs		1		**EH710**
Daily dial with reserve	24hrs	200hrs	1		**EH711**
Weekly dial without reserve	7d		1		**EH770**
Weekly dial with reserve	7d	200hrs	1		**EH771**
Daily dial without reserve (eco. version)	24hrs		1		**EH712**
Daily dial without reserve	24hrs		1		**EH715***
Daily dial with reserve	24hrs	200hrs	1		**EH716***

Time switches digital version

Technical characteristics
- Standards: EN 60730
- Operating voltage:
230V AC 50/60 Hz
**12/24V AC/DC for EG103V,
- Contact rating: 16A 250V AC1
changeover contact
- Programming configuration:
daily / weekly / daily + weekly
- Versions with power reserve
- Versions with PC
programmable key
- PC interface for key and soft-
ware available
- DIN mountable

EG203E

EG005

Designation	*Operating cycle*	*Power fail reserve*	*No. of channels*	*Width in 17,5mm*	*Cat. ref.*
Digital time switches (din rail)					
Daily cycle	24hrs	3years	1	1	**EG010**
Weekly cycle	7d	3years	1	1	**EG071**
Key programmable digital time switches (din rail)					
Weekly 1 Channel, 3 module	7d	3years	1	3	**EG170**
Basic version w/o key	7d	5years	1	2	**EG103B**
Evolution version with EG005	7d	5years	1	2	**EG103E**
Evolution version with EG005	7d	5years	1	2	**EG103V****
Weekly 2 Channel, 3 module	7d	3years	2	3	**EG270**
Basic version w/o key	7d	5years	2	2	**EG203B**
Evolution version with EG005	7d	5years	2	2	**EG203E**
Weekly 4 Channel, 4 module	7d	3years	4	4	**EG403E**
USB interface with software					**EG003U**
Locking Key					**EG004**
Programming key for EG103x, EG203x					**EG005**
Programming key for, EG403E					**EG007**

Twilight switches

Technical characteristics
- Voltage: 230V (+10/-15%),
- Frequency: 50 Hz
- Contact rating:
16A AC1 230V
8A AC1 230V (EE701)
- Loads: incandescent, halogen and fluorescent lamps
- Functional: lighting level:
50 to 100 lux and 50 to 2000 lux

ON-OFF delay: 15 to 60 sec

Mounting: surface/ flush

Programmable version available


EE110


EE702

Designation	*Operating cycle*	*Power fail reserve*	*Width in 17,5 mm*	*Cat. ref.*
Compact-basic (fixed lux/delay) IP55				**EE701**
Compact-enhanced (adjustable) IP55				**EE702**
Modular - with surface cell			3	**EE100**
Modular - with flush cell			3	**EE101**
Modular programmable electromechanical clock with surface cell	24hrs	200hrs	5	**EE110**
Modular programmable electronic clock with surface cell, 8 preset programs	7d	3years	3	**EE170**
Modular programmable electronic clock with surface cell, freely programmable	7d	3years	3	**EE171**

Astronomical time switches

Technical characteristics
- Supply Voltage: 230V AC ± 15%
- Frequency: 50/60 Hz
- Maximum load: 16A AC 1
- Loads: incandescent, halogen and fluorescent lamps

Functional characteristics
- Running accuracy: ± 1.5 sec/24 hr
- Astronomical time accuracy: ±10 minutes
- Operating reserve: lithium battery 5 years back up

Environment
- Operating temperature: -10^{0}C to +55^{0}C
- Storage temperature: -20^{0}C to +60^{0}C
- Connection: 1- 6mm^2 flexible 1.5-10mm^2 rigid


EE180


EG005

Designation	*Operating cycle*	*Power fail reserve*	*Width in 17,5mm*	*Cat ref.*
Modular astronomical time switch 1 channel	7d	5years	2	**EE180**
Modular astronomical time switch 2 channels	7d	5years	2	**EE181**
Programming key for EE180/181				**EG005**
PC interface & programming software				**EG003**

Time lag switches

Technical characteristics
- Voltage: 230V (+10/-15%),
- Frequency: 50/60 Hz
- Contact rating:
16A AC1 230V
250V - 2300W incandescent, halogen and fluorescent lamps
- Function:
EMN001 - standard time lag switch with adjustable delay from 30s to 10 min

EMN005 - multifunctional time lag switch with pre-warning mode and double delay mode: 30s to 10 min or 1 hour


EMN001

Designation	***Cat. ref.***
Stair case time lag switch	**EMN001**
Multifunction stair case time lag switch	**EMN005**

Description
To provide all types of automatic control i.e. lighting, ventilation, watering, machine pre-heating, automatic door and visual audible indication, cycle control etc.

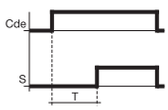
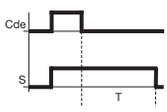
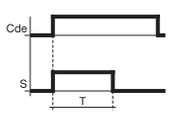
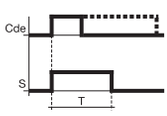
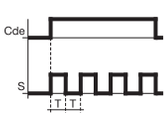
Applications
For timing and automation in domestic and commercial premises. The input signal can be via various switching devices (pushbutton, latching switch, timeclock etc.) and the timed output used to control the application.

Technical data
Voltage range :
12 & 24 to 48V DC
12 & 24 to 230V AC
Adjustable: time delay from 0.1s to 10 hours.
LED indicator
complies with EN 60669-2-1

Connection capacity :
6mm² max flexible
1.5 - 10mm² rigid


EZN 001


EZN 006

Designation	*Characteristics*	*Width in 17.5mm*	*Pack qty.*	*Cat ref.*
Delay ON 	1 c/o contact 8A / 230V~ AC1 time delay T : 0.1s to 10hr	1	1	**EZN 001**
1 Delay OFF 	1 c/o contact 8A / 230V~ AC1 time delay T : 0.1s to 10hr	1	1	**EZN 002**
Adjustable time ON 	1 c/o contact 8A / 230V~ AC1 time delay T : 0.1s to 10hr	1	1	**EZN 003**
Timer 	1 c/o contact 8A / 230V~ AC1 time delay T : 0.1s to 10hr	1	1	**EZN 004**
Symmetrical flasher 	1 c/o contact 8A / 230V~ AC1 time delay T : 0.1s to 10hr	1	1	**EZN 005**
Multifunction 6 individual functions including : D - delay on C - delay off E - adjustable time ON B - adjustalbe time OFF A - timer F - symmetrical flasher - ON - OFF	1 c/o contact 8A / 230V~ AC1 time delay T : 0.1s to 10hr	1	1	**EZN 006**

Latching relays

Description
For the control of lighting circuits in private buildings, small industry buildings and administration buildings.
Latching relays - operate when impulsed by a signal voltage.
The impulse can be provided via a pushbutton or switch. The first pulse operates the relay and latches it into its set (opposite) state, the next operation of the pushbutton returns the relay into its reset (original) state.

The latching relays are built to add on optionally the following auxiliaries :

- an auxiliary for centralised ON/OFF control EPN 050
- an auxiliary contact for remote signalling EPN 051
- an auxiliary for multi levelled centralised control EPN 052
- an auxiliary for control by maintained contact EPN 053.

Connection capacity
10 mm² rigid cables
6 mm² flexible cables

Conform to standard EN669-1 and EN669-2-2

EPN 510

EPN 540

Designation	*Type*	*Coil VAC 50/60Hz*	*Coil VDC*	*Power Circuit AC1*	*Width in 17.5mm*	*Pack qty.*	*Cat. ref.*
Latching relays	**1NO**	230	110	16A-250V	1	12	**EPN 510**
		48	24	16A-250V	1	1	**EPN 501**
		24	12	16A-250V	1	1	**EPN 513**
		12	-	16A-250V	1	1	**EPN 511**
	2NO	230	110	16A-250V	1	1	**EPN 520**
		110	48	16A-250V	1	1	**EPN 523**
		48	24	16A-250V	1	1	**EPN 526**
		24	12	16A-250V	1	1	**EPN 524**
		12	-	16A-250V	1	1	**EPN 521**
	1NC+1NO	230	110	16A-250V	1	1	**EPN 515**
		110	48	16A-250V	1	1	**EPN 516**
		48	24	16A-250V	1	1	**EPN 503**
		24	12	16A-250V	1	1	**EPN 518**
		12	-	16A-250V	1	1	**EPN 519**
	4NO	230	110	16A-400V	2	1	**EPN 540**
		48	24	16A-400V	2	1	**EPN 548**
		24	12	16A-400V	2	1	**EPN 541**
	2NC+2NO	230	110	16A-250V	2	1	**EPN 525**
		24	12	16A-250V	2	1	**EPN 528**
	3NO+1NC	230	110	16A-400V	2	1	**EPN 546**

Latching relays auxiliaries

EPN 052

Designation	*Voltage supply*	*Width in 17.5mm*	*Pack qty.*	*Cat. ref.*
Auxiliary for centralised control	24 to 230V AC	1/2	1	**EPN 050**
Auxiliary contact	2A - 250 V AC	1/2	1	**EPN 051**
Auxiliary for multi levelled centralised control	24 to 230V AC	1/2	1	**EPN 052**
Auxiliary for control by maintained contact	24 to 230V AC	1/2	1	**EPN 053**

Push buttons:
2 versions :
impulse push buttons
latching push buttons

These versions with indicator lights are equipped with green or red diffuser. (led technology)

Connection capacity :
- 10mm² rigid,
- 6mm² flexible.

Standard conformity :
IEC 60947-5-1 for push buttons
IEC 62094-1 for indicator lights


SVN 311


SVN 391


SVN 411


SVN 422

Designation		*Characteristics*		*Width in 17,5 mm*	*Pack qty.*	*Cat. ref.*
Impulse push button		16 A - 250 V ~ **without indicator light**				
		contact: 1NO		1	12	**SVN 311**
		contact: 1NC		1	12	**SVN 321**
		contacts: 2NO		1	12	**SVN 331**
		contacts: 2NC		1	12	**SVN 341**
		contacts: 1NO+1NC		1	12	**SVN 351**
		contacts: 2NO		1	12	**SVN 371**
		contacts: 1NO+1NC		1	12	**SVN 391**
		with indicator light :				
		contact: 1NO	green	1	12	**SVN 411**
		contact: 1NC	red	1	12	**SVN 422**
		contacts: 2NO	red	1	12	**SVN 432**
		contacts: 2NC	green	1	12	**SVN 441**
		contacts: 1NO+1NC	red	1	12	**SVN 452**
		16 A - 12/48 V AC/DC **with indicator light**				
		contacts: 2NO	green	1	12	**SVN461**
		contacts: 2 NO	red	1	12	**SVN 462**
		with indicator light				
		contacts: 2NO	green	1	12	**SVN 463**
		contacts: 2 NO	red	1	12	**SVN 464**
Latching push buttons		16 A - 250 V ~ **without indicator light**				
		contact: 1NO		1	12	**SVN 312**
		contact: 1NC		1	12	**SVN 322**
		contacts: 2NO		1	12	**SVN 332**
		contacts: 2NC		1	12	**SVN 342**
		contacts: 1NO+1NC		1	12	**SVN 352**
		with indicator light :				
		contact: 1 NO	green	1	12	**SVN 413**
		contacts: 2 NO	green	1	12	**SVN 433**

Indicator lights and push buttons
These produts are used for remote controlling signalisation of any event in any electric installation (domestic, tertiary & industrial)
LED technology providing longer life, new design, integrated label holder

Connection capacity :
- 10 mm^2 rigid
- 6 mm^2 flexible

Standard conformity :
IEC 62094-1 for indicator lights

SVN 122 SVN 125 SVN 121
SVN 123 SVN 124

SVN 126

SVN 127

Designation	*Characteristics*		*Width in 17,5 mm*	*Pack qty.*	*Cat. ref.*
Single indicator light 230 V ~	with light :	green	1	12	**SVN 121**
		red	1	12	**SVN 122**
		orange	1	12	**SVN 123**
		blue	1	12	**SVN 124**
		color less	1	12	**SVN 125**
Double indicator light 230 V ~	with light:	green and red	1	12	**SVN 126**
		color less 2x	1	12	**SVN 128**
Triple indicator light	with light:	red	1	12	**SVN 127**
		red/orange/green	1	12	**SVN129**
		green	1	12	**SVN 221**
Low voltage indicator lights 12 to 48 V AC/DC	with light	green	1	12	**SVN 131**
		red	1	12	**SVN 132**
		orange	1	12	**SVN 133**
		blue	1	12	**SVN 134**
		color less	1	12	**SVN 135**

Hour counters

Technical characteristics

- Voltage: 230V 50Hz
- Connection: in parallel to the load

EC 100

Designation	*Characteristics*	*Width in 17.5mm*	*Pack qty.*	*Cat. ref.*
Hours counter	230V 50Hz	2	1	**EC 100**

Energymeters are aimed to measure the active energy consumed by an installation. They permit to have under control the real cost of an installation and to divide the consumption between the different appliances.

Characteristics :
- fully compliant with the european standard EN50470-3.
- class B.
- accuracy 1%
- energy readout : 7 digits.
- Backlighted display
- Indication of instantaneous power consumption
- Total / partial counter (excepted MID references)
- Pulsed ouput
- unlimited saving of measures.
- LED flashing according to consumption.
- Option : tarif 1 / tarif 2.
- Three phases energymeters are adapted to all kind of networks.
- Display indication in case of bad wiring.

EC 051

EC 150

EC 364M

EC370

Designation	*Characteristics*	*Width in 17.5mm*	*Pack qty.*	*Cat. ref.*
Single phase	230V +/- 20% 50/60Hz			
- direct reading 32A	single tariff without pulsed output	1	1	**EC 050**
	single tariff with pulsed output	1	1	**EC 051**
Single phase energymeters direct 63A	230V~ 50/60 Hz starting current = 40mA base current = 10A max current = 63A			
	energymeter with pulsed output and total/partial	3	1	**EC150**
	energymeter with pulsed output total/partial counter and 2 tariffs	3	1	**EC152**
	energymeter with pulsed output with MID approval	3	1	**EC154M**
Three phase energymeters direct 63A	230/400V~ 50/60 Hz starting current = 40mA base current = 10A max current = 63A			
	energymeter with pulsed output and total/partial	4	1	**EC350**
	energymeter with pulsed output total/partial counter and 2 tariffs	4	1	**EC352**
Three phase energymeters direct 100A	230/400V~ 50/60 Hz starting current = 80mA base current = 20A max current = 100A			
	energymeter with pulsed output and total/partial	7	1	**EC360**
	energymeter with pulsed output total/partial counter and 2 tariffs	7	1	**EC362**
	energymeter with pulsed output with MID approval	7	1	**EC364M**
	energymeter with bi-directionnal counter	7	1	**EC365B**
Three phase energymeters connection via current transformers to be connected with CT with 5A on the secondary.	230/400V~ 50/60 Hz starting current = 10mA max current on CT secondary=6A			
	energymeter with pulsed output and total/partial	4	1	**EC370**
	energymeter with pulsed output total/partial counter and 2 tariffs	4	1	**EC372**

The Hager products are suitable for all light sources : incandescent, LV and VLV halogen, fluorescent with electronic ballast.

Dimming controlled by push button :
- start/stop by short press
- increasing/decreasing by maintaining pressure

Common characteristics :
- Softstart (progressive start) to increase the working live of lamps
- memorisation of last dimming level
- protection against overheating
- control possible by illuminated pushbutton until 5mA.

Dimmers 600 and 1000 W :
- universal products with automatic recognition of the load type (inductive/capacitive)
- electronic protection against overheating and overload
- Indicators : 230 V / overheating / overload

	Designation	*Characteristics*	*Width in 17,5 mm*	*Pack qty*	*Cat. Ref.*
 EV 004	**Universal remote control dimmer 600 W** - incandescent 230 V - halogen 230 V - VLV halogen lamps supplied by ferromagnetic or dimmable electronic transformer (cos ⍰ ≥ 0,95)	20 ... 600 W / VA 230 V / 50 Hz - products with automatic load recognition - dimming function	4	1	**EV 002**
 EV 100	**Universal dimmer 1000 W for :** • Functional mode selection via local switch : - control via pushbutton (local) - remote control via 1/10V (slave) • Min/Max setting via potentiometer • LED indication : - 230V power supply/load error - overload / overheating **Load type :** - incandescent - 230V halogen lamps - VLV halogen lamps associated to ferromagnetic transformer (inductive) - VLV halogen lamps associated to electronic transformer (capacitive)	230 V ∼ / 50 Hz 20 ...1 000W 1/10V-input	5	1	**EV 100**
 EV 102	**Universal dimmer 1000 W with scene inputs** • Functional mode selection via local switch : - control via pushbutton (local) - remote control via 1/10V (slave) - control of the other dimmers via 1/10V (master) • Display to show the dim level and to set the parameters: - dimming rise time (4s ..99s) - min dim level (0...49%) - max dim level (51..99%) - rise time when switching ON (1s..99s) - fall time when switching OFF (1s..99s) - scene level - dimming rise time for each scene - scene working mode : recall or override mode • Output contact to display the dim state (load is OFF, contact is opened, if load is dimmed the contact is closed) • LED indication : - 230V power supply / load error - overload / overheating **Load type :** - incandescent - 230V halogen lamps - VLV halogen lamps associated to ferromagnetic transformer (inductive) - VLV halogen lamps associated to electronic transformer (capacitive)	230 V ∼ / 50 Hz 20 ...1 000W 1/10V-input/output (max. 50mA, 30 EV100 / EV102) defined via the local switch Contact output : 1 NO, 250V ∼, μ 5A	5	1	**EV 102**

These devices are made for automatic control of lighting in both the residential and private/public industry sectors.
They automatically switch on lighting in case a person in movement is detected and light is needed.
They turn off the light after a preset duration.

EE 820, EE 830, EE 840, EE825, EE 827
• That waterproof detector range (IP55) is mainly dedicated to outdoor applications.
• They are equipped with Fresnel lenses that permit to get a high detection performance.
• Detector 140° for access control and perimeter lighting
• 200° models to survey a house facade
• 360° to cover a house corner

• The fixing accessories allow ceiling and corner mounting.
• Settings
The timer and the lux level are set locally, via potentiometer.

EE 804, EE 805
• Movement detector for the automatic control of lighting in indoor circulating zones.
Surface mounted (EE 804) or flush fitting (EE 805).
• Setting
The timer and the lux level are defined via potentiometers
• Mounting of EE805
Connecting system
conform to false ceiling installation standards (cable clamp, fixing spring and protection cover)
• Surface mounting of EE804
Connecting on a ceiling box or on mouldings thanks to side pre-cut outs
compatible with Tehalit
ATA 63000 (6 x 30) or ATA 12200 (12x20)
• Output
Potential free relay contact 10A


EE 820


EE 825

Designation	*Characteristics*	*Pack qty.*	*Cat. ref.*
Detector surface IP55 230 V ∼ 50/60 Hz Lux: 5 to 1000 lux Timer: pulse, 5s to 15 min Contact 10A AC1	140° white	1	**EE 820**
	200° white	1	**EE 830**
	360° white	1	**EE 840**
Corner mounting accessory	white	1	**EE 825**
Ceiling mounting accessory	white	1	**EE 827**


EE 804


EE 805

Detector 360° surface IP21 diam. 105,5 white*	230 V ∼ ± 10%, 50 Hz Functions : - 1 open contact 10 A - detection angle 360° Lux: 5 to 1000 lux Timer: 5 s. to 15 min.	1	**EE 804**
Detector 360° flush IP21 diam. 105,5 white*	230 V ∼ ± 10%, 50 Hz Functions : - 1 open contact 10 A - detection angle 360° Lux: 5 to 1000 lux Timer: 5 s. to 15 min.	1	**EE 805**

Description
High performance presence detector that will be used in premises or in passage areas, where they increase comfort and reduce drastically the energy costs.
Settings via potentiometers or via remote control EE807

EE815 - presence detector
ON/OFF
Direct control of a light load
Lux level and ON delay settings

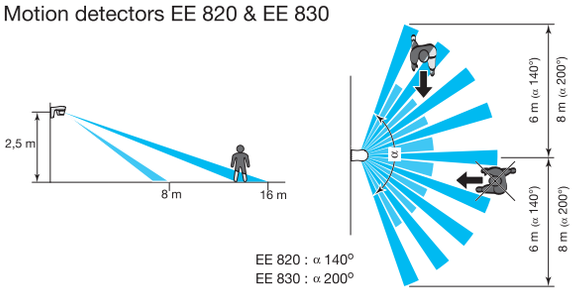
EE816 - presence detector for light regulation
3 functional modes
DALI/DSI bus output

Customer remote control EE808 for override operation.

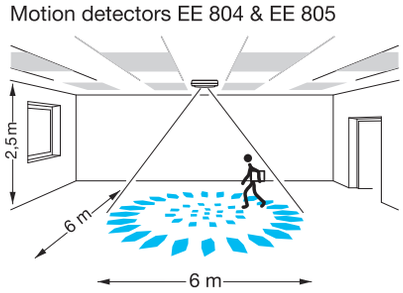
	Designation	*Characteristics*	*Pack qty.*	*Cat. ref.*
 EE 816	**Presence detector Monobloc ON/OFF (IP41)** Timer: 1min to 1 hour Brightness: 5 to 1000 lux	Switched phase 16A AC1 230 V AC ~ 50/60 Hz 360° white	1	**EE 815**
	Monobloc DALI/DSI (IP41) For lighting regulation Timer: 1min to 1 hour Brightness: 5 to 1000 lux	DALI/DSI bus (24 ballasts) 230 V AC ~ 50/60 Hz 360° white	1	**EE 816**
 EE 807 EE 808	**Remote control** (for EE815 & EE816)			
	For settings	Infra red remote control	1	**EE 807**
	For customer	Infra red remote control override operation	1	**EE 808**

PIR detection - Range

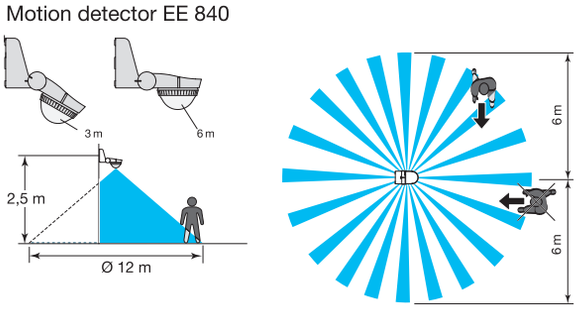
Motion detectors EE 820 & EE 830



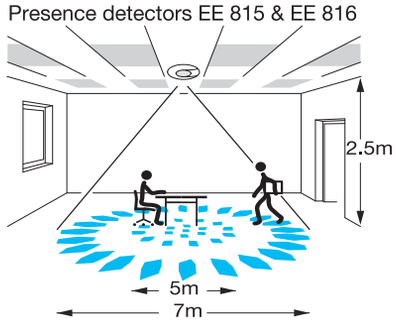
Motion detectors EE 804 & EE 805



Motion detector EE 840



Presence detectors EE 815 & EE 816



Note: The optimum height of installation is 2.5m. The detection field must remain free.

Technical characteristics

Base pre-drilled with lid.

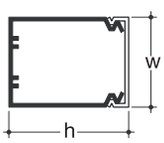
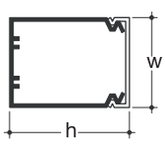
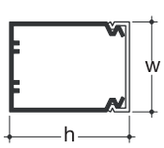
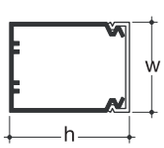
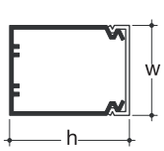
Material: Rigid PVC

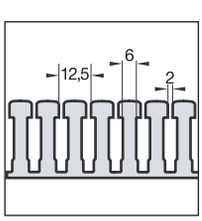
Fire classification : UL 94VO.

Standard length: 2 Mtr.

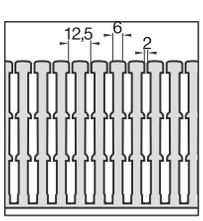
Colour: Grey (RAL 7030)

Base and lid

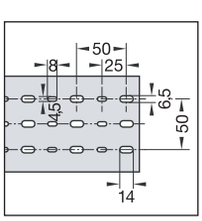
	Dimensions (Height x Width) in mm	*Qty. per pack in Mtrs.*	*Cat. ref.*
 Height 25 mm	25 x 25	50m	**BA725025**
	25 x 40	48m	**BA725040**
 Height 40 mm	40 x 25	48m	**BA740025**
	40 x 40	50m	**BA740040**
	40 x 60	40m	**BA740060**
	40 x 80	30m	**BA740080**
	40 x 100	20m	**BA740100**
 Height 60 mm	60 x 25	60m	**BA760025**
	60 x 40	40m	**BA760040**
	60 x 60	24m	**BA760060**
	60 x 80	20m	**BA760080**
	60 x 100	16m	**BA760100**
	60 x 120	12m	**BA760120**
 Height 80 mm	80 x 25	20m	**BA780025**
	80 x 40	20m	**BA780040**
	80 x 60	20m	**BA780060**
	80 x 80	16m	**BA780080**
	80 x 100	12m	**BA780100**
	80 x 120	16m	**BA780120**
 Height 100 mm	100 x 60	16m	**BA7100060**
	100 x 80	16m	**BA7100080**
	100 x 100	12m	**BA7100100**



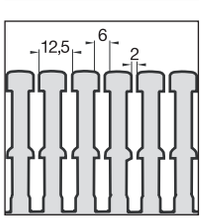
Dimensions
height 25 mm
ducting 25 x 40



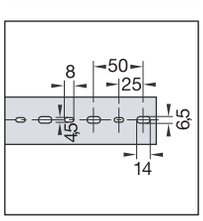
Dimensions
height 100 mm



Perforation details
DIN 43659
EN 50 085-2-3
width 80, 100 and
120 mm



Dimensions
height 60 and
80 mm



Perforation details
DIN 43659
EN 50 085-2-3
width 25, 40 and
60 mm

New invicta type B
distribution boards & panel boards

Hager has developed the new invicta Type B distribution boards as a solution for modern residential, commercial and industrial installations. The key features like the state of the art PAN assembly, incomer shrouds adds value to the installation system in terms of safety, elegance and flexibility.

The new Panel boards with the feature loaded H3 MCCBs makes the best combination in terms of value for money for the users in terms of flexibility, choice & performance. The solution is versatile with Meter boxes, DIN rail extension boxes and cable spreader boxes.

The whole range offer the best performance and ASTA certified.

.

Invicta consumer units

VT04SM-T

Designation	*No. of outgoing ways*	*Cat. Ref.* **Surface mounted**	*Cat. Ref.* **Flush mounted**
Consumer unit with 100A SP busbar			
	4	**VT04SM**	**VT04FM**
	6	**VT06SM**	**VT06FM**
	8	**VT08SM**	**VT08FM**
	10	**VT10SM**	**VT10FM**
	12	**VT12SM**	**VT12FM**
	16	**VT16SM**	**VT16FM**

VT08MF

VT08TF

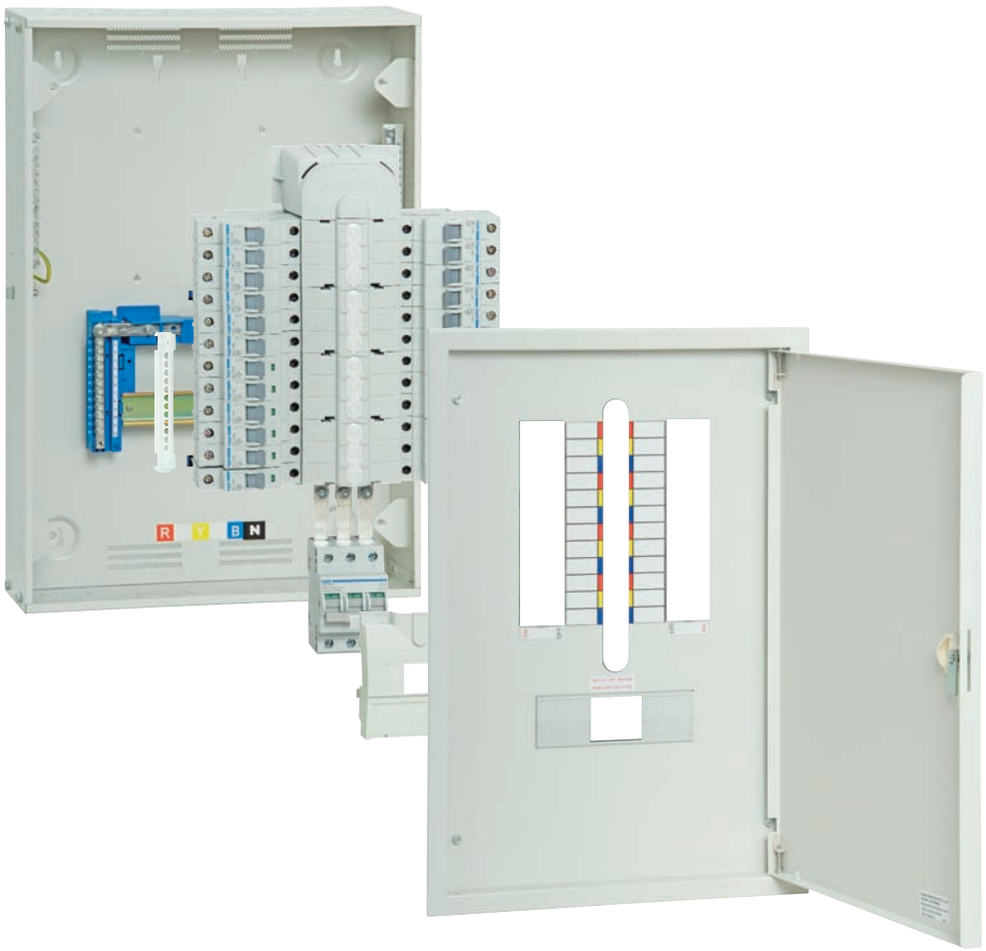
No. of modules	*Door*	*Cat. Ref.* **Surface mounted**	*Cat. Ref.* **Flush mounted**
Consumer unit without busbar			
4	Metal (non transparent)	**VT04MS**	**VT04MF**
	Opaque plastic	**VT04PNS**	**VT04PNF**
	Transparent	**VT04TS**	**VT04TF**
8	Metal (non transparent)	**VT08MS**	**VT08MF**
	Opaque plastic	**VT08PNS**	**VT08PNF**
	Transparent	**VT08TS**	**VT08TF**
12	Metal (non transparent)	**VT12MS**	**VT12MF**
	Opaque plastic	**VT12PNS**	**VT12PNF**
	Transparent	**VT12TS**	**VT12TF**
16	Metal (non transparent)	**VT16MS**	**VT16MF**
	Opaque plastic	**VT16PNS**	**VT16PNF**
	Transparent	**VT16TS**	**VT16TF**
20	Metal (non transparent)	**VT20MS**	**VT20MF**
	Opaque plastic	**VT20PNS**	**VT20PNF**
	Transparent	**VT20TS**	**VT20TF**

Invicta DIN rail distribution boards

DR32S

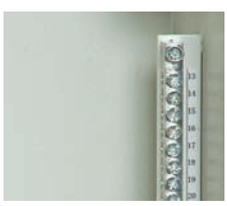
Designation	*No. of rows*	*No. of Modules*	*Cat. Ref.* **Surface mounted**	*Cat. Ref.* **Flush mounted**
DIN Rail Distribution boards				
	1	16	**DR16S**	**DR16F**
	2	32	**DR32S**	**DR32F**
	3	48	**DR48S**	**DR48F**
	4	64	**DR64S**	**DR64F**
	5	80	**DR80S**	**DR80F**
	6	96	**DR96S**	**DR96F**

Designation	*Cat Ref*
Accessories	
Joining kits for surface boards	**JK01SK**
Joining kits for flush boards	**JK01FK**
1 mod blanking strip	**P032H**
Key lock	**VZ303**



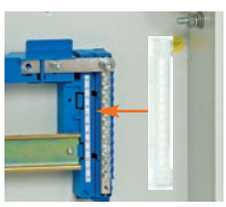
Removable door and reversible for ease of fitting

Ease of phase identification L1, L2, L3 mouldings show through when the front cover is fitted. Textured surface on busbar assembly allows to write circuit identification.



Earth terminal bars are mounted offset to neutral terminal bars and angled towards the installer for easy cable installation. The screws are fully turned down for simple and fast cabling,

Top tap off for board extensions for MCBs up to 100A



Optional transparent IP2X neutral cover

Whole set of busbar separated into “circuit A & circuit B” in split load board.

Technical characteristics

Standards:
BS EN 60439 - 1 & 3

Suitable for modular as well as non modular incomers and modular outgoings

ASTA certified

Busbar current rating:
125A

- Rated short circuit withstand for busbars:
  20 kA at 415V for 0.2 sec.

Removable pre punched top and bottom gland plates.

Incomer cutout width: 9 mod

Reversible doors.

1.2 mm thickness sheet steel with epoxy powder coating in RAL 9002

IP41

Accessories like key lock, DIN rail extension boxes etc...

JK1B08S2

Designation	*Cat. Ref.* **Surface**	*Cat. Ref.* **Flush**
4 way	**JK1B04S2**	**JK1B04F2**
6 way	**JK1B06S2**	**JK1B06F2**
8 way	**JK1B08S2**	**JK1B08F2**
10 way	**JK1B10S2**	**JK1B10F2**
12 way	**JK1B12S2**	**JK1B12F2**
16 way	**JK1B16S2**	**JK1B16F2**
18 way	**JK1B18S2**	**JK1B18F2**
24 way	**JK1B24S2**	**JK1B24F2**

Notes:
1. I/C link kit suitable for 3 pole isolator (up to 125A) / MCBs up to 63A / RCCBs fitted as standard with the DB
2. For product references of boards with I/C fitted, please suffix the I/C product reference to the board reference. e.g. if JK1B04S2 to be fitted with SB399, the new reference will be JK1B04S2SB399.

Invicta - TPN125 type B distribution board extensions & accessories

Designation	*Cat. Ref.*
Incomer link kits	
3 pole isolator (up to 125A) / MCB (up to 63A) (Fitted as standard with the DB)	**JK1L1003SM**
3 pole 80A - 125A MCB	**JK1L1253MM**
3 pole isolator + RCCB	**JK1L1003SR**
3 pole 80A - 125A MCB + RCCB	**JK1L1253MR**
3 pole 125A switch disconnector (JK125S)	**JK1L1253SK**
4 pole isolator (up to 125A) / MCB (up to 63A) / RCCB	**JK1L1004SM**
4 pole 80 - 125A MCB	**JK1L1254MM**
Direct connection kit	**JK2L2504D**
4 pole 80 - 125A MCB + RCCB	**JK1L1254MR**
4 pole isolator + RCCB	**JK1L1004SR**

Cable spreader box	**Surface**	**Flush**
Cable spreader box	**JK1E01S**	**JK1E01F**

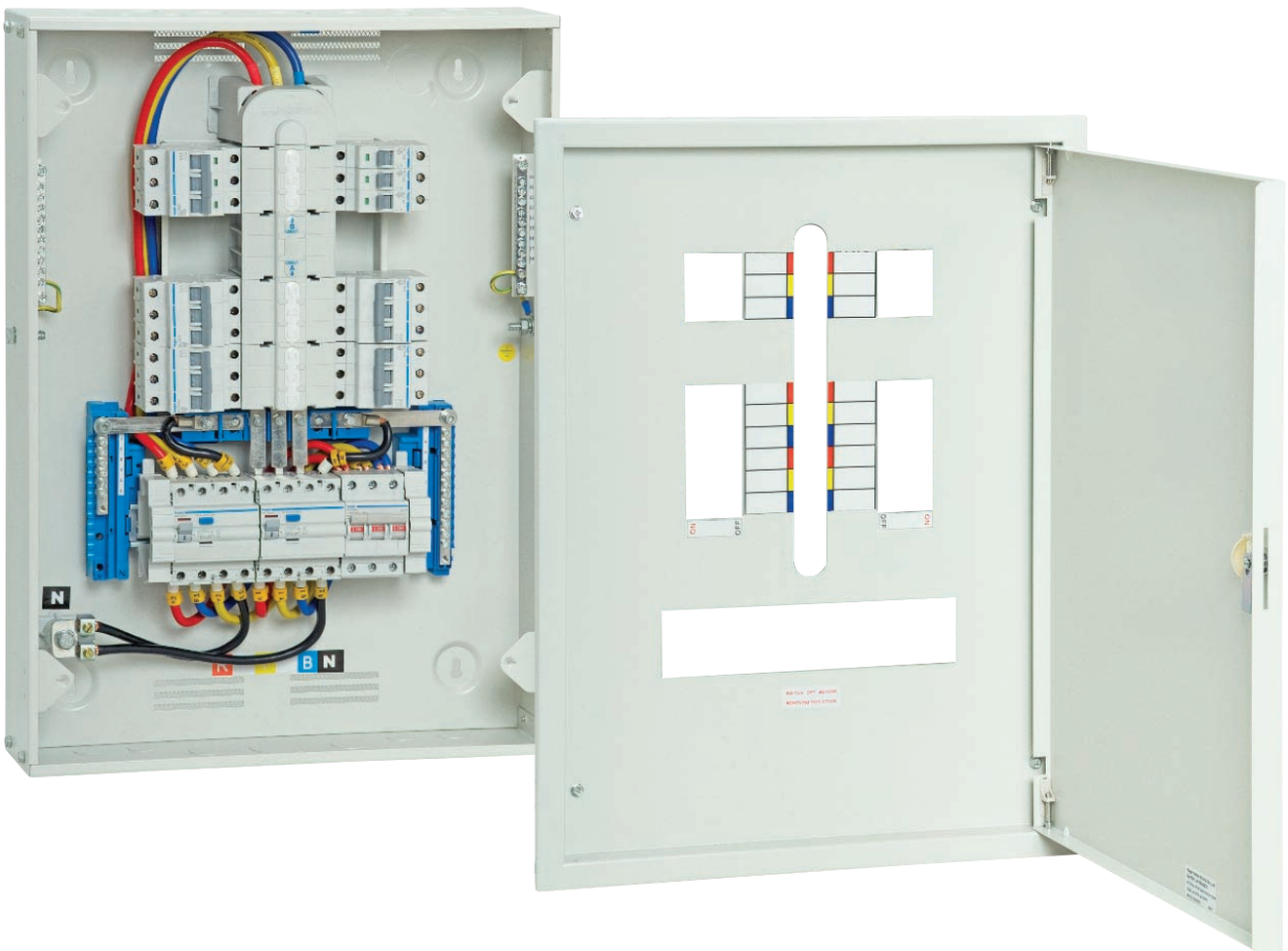
DIN rail extension box	**Surface**	**Flush**
16 mod	**JK1E16S**	**JK1E16F**
32 mod	**JK1E32S**	**JK1E32F**
48 mod	**JK1E48S**	**JK1E48F**

JK1XBSP

P032H

JK1XNC

Accessories	
Top & bottom gland plate with screws	**JK1XGP**
1 mod blank	**P032H**
1 mod MCB blank	**JK1XBSP**
Busbar protective boot	**P100H**
Key lock	**JK1XKLS**
Incomer shroud 9 mod	**JK1XIS**
Netural terminal cover IP2X	**JK1XNC**



Order codes for invicta split busbar boards without wire sets.

No. of ways Section A	*Section B*	*Cat. Ref.* **Surface**	*Cat. Ref.* **Flush**
2	2	**JK1B022S2**	**JK1B022F2**
4	2	**JK1B042S2**	**JK1B042F2**
4	4	**JK1B044S2**	**JK1B044F2**
6	2	**JK1B062S2**	**JK1B062F2**
6	4	**JK1B064S2**	**JK1B064F2**
6	6	**JK1B066S2**	**JK1B066F2**
8	4	**JK1B084S2**	**JK1B084F2**
8	6	**JK1B086S2**	**JK1B086F2**
8	8	**JK1B088S2**	**JK1B088F2**
10	4	**JK1B104S2**	**JK1B104F2**

JK1B042S2WA316

To fit up to 125A isolator 4P RCCB (Section B) and MU363A (Section A) as incomer.

No. of out going ways Section A	*Section B*	*Cat. Ref.* **Surface**	*Cat. Ref.* **Flush**
2	2	**JK1B022S2WA216**	**JK1B022F2WA216**
4	2	**JK1B042S2WA216**	**JK1B042F2WA216**
4	4	**JK1B044S2WA216**	**JK1B044F2WA216**
6	2	**JK1B062S2WA216**	**JK1B062F2WA216**
6	4	**JK1B064S2WA216**	**JK1B064F2WA216**
6	6	**JK1B066S2WA216**	**JK1B066F2WA216**
8	4	**JK1B084S2WA216**	**JK1B084F2WA216**
8	6	**JK1B086S2WA216**	**JK1B086F2WA216**
8	8	**JK1B088S2WA216**	**JK1B088F2WA216**
10	4	**JK1B104S2WA216**	**JK1B104F2WA216**

To fit up to 125A isolator 2 nos of 4P RCCB (Section A and B) as incomers.

No. of out going ways Section A	*Section B*	*Cat. Ref.* **Surface**	*Cat. Ref.* **Flush**
2	2	**JK1B022S2WA316**	**JK1B022F2WA316**
4	2	**JK1B042S2WA316**	**JK1B042F2WA316**
4	4	**JK1B044S2WA316**	**JK1B044F2WA316**
6	2	**JK1B062S2WA316**	**JK1B062F2WA316**
6	4	**JK1B064S2WA316**	**JK1B064F2WA316**
6	6	**JK1B066S2WA316**	**JK1B066F2WA316**
8	4	**JK1B084S2WA316**	**JK1B084F2WA316**
8	6	**JK1B086S2WA316**	**JK1B086F2WA316**
8	8	**JK1B088S2WA316**	**JK1B088F2WA316**
10	4	**JK1B104S2WA316**	**JK1B104F2WA316**

Notes:
Incomers are not fitted and should be ordered separately

Invicta - TPN125 type B distribution board with split busbar accessories

Designation		*Cat. Ref.*
Cable spreader box	**Surface**	**Flush**
Cable spreader box	**JK2E01S**	**JK2E01F**
DIN rail extension box		
16 mod	**JK2E16S**	**JK2E16F**
32 mod	**JK2E32S**	**JK2E32F**
48 mod	**JK2E48S**	**JK2E48F**
Accessories		
Top & bottom gland plate with screws		**JK1XGP**
1 mod blank		**P032H**
1 mod MCB blank		**JK1XBSP**
Busbar protective boot		**P100H**
Key lock		**JK1XKLS**
Incomer shroud 13 mod		**JK2XISS**
Netural terminal cover IP2X		**JK1XNC**

JK1XBSP

P032H

JK1XNC

Technical characteristics

Standards:
BS EN 60439 - 1 & 3

Suitable for non modular incomers and modular outgoings

ASTA certified

Busbar current rating:
250A

- Rated short circuit withstand for busbars:
  20 kA at 415V for 0.2 sec.

Removable pre punched top and bottom gland plates.

Reversible doors.

1.2 mm thick, sheet steel RAL 9002 epoxy powder coated enclosure.

IP41

Accessories like key lock, DIN rail extension boxes etc...

JK2B06S2

Designation	*Cat. Ref.* **Surface**	*Cat. Ref.* **Flush**
4 way	**JK2B04S2**	**JK2B04F2**
6 way	**JK2B06S2**	**JK2B06F2**
8 way	**JK2B08S2**	**JK2B08F2**
10 way	**JK2B10S2**	**JK2B10F2**
12 way	**JK2B12S2**	**JK2B12F2**
16 way	**JK2B16S2**	**JK2B16F2**
18 way	**JK2B18S2**	**JK2B18F2**
24 way	**JK2B24S2**	**JK2B24F2**

Notes:
1. I/C link kits are not supplied as standard, please order link kits separately.
2. 13mod Blank supplied with link kit to suit JK switch/MCCB incomers
3. For product references of boards with I/C fitted, please suffix the I/C product reference to the board reference.
   e.g. if JK2B04S2 to be fitted with JK200S, the new reference will be JK2B04S2JK200S.
   e.g. if JK2B04S2 to be fitted with MCCB HHA100Z, the new reference will be JK2B04S2HHA100Z.

Invicta - TPN250 type B distribution board extensions & accessories

Designation	*Cat. Ref.*
Incomer link kits	
3 pole 160A switch disconnector (JK160S)	**JK2L1603SK**
3 pole 200A / 250A switch disconnector (JK200S/JK250S)	**JK2L2503SK**
3 pole X160 Frame MCCB (up to 160A)	**JK2L1603MH**
3 pole X250 Frame MCCB (up to 250A)	**JK2L2503MH**
4 pole X160 Frame MCCB (up to 160A)	**JK2L1604MH**
4 pole X250 Frame MCCB (up to 250A)	**JK2L2504MH**
Direct connection kit	**JK2L2504D**

Cable spreader box	**Surface**	**Flush**
Cable spreader box	**JK2E01S**	**JK2E01F**

DIN rail extension box		
16 mod	**JK2E16S**	**JK2E16F**
32 mod	**JK2E32S**	**JK2E32F**
48 mod	**JK2E48S**	**JK2E48F**

Accessories	
Top & bottom gland plate with screws	**JK2XGP**
1 mod blank	**P032H**
1 mod MCB blank	**JK1XBSP**
Busbar protective boot	**P100H**
Key lock	**JK1XKLS**
Neutral terminal cover IP2X	**JK1XNC**
13 mod blank for 160A switch disconnector (JK160S)	**JK2XBSK1**
13 mod blank for 200/250A switch disconnector (JK250S)	**JK2XBSK2**
13 mod blank for X160 frame MCCB	**JK2XBMH1**
13 mod blank for X250 frame MCCB	**JK2XBMH2**

JK1XBSP

P032H

JK1XNC

Optimal cabling space.

Ease of phase identification L1, L2, L3 mouldings show through when the front cover is fitted. Textured surface on bus-bar assembly allows contractor to write circuit identification.

Earth and neutral bars positioned for easier cabling

Multiple incomer choice switch or MCCB

Technical characteristics

Standards:
BS EN 60439 - 1 & 3

Suitable for non - modular (MCCBs & isolating switches) incomers and MCCB outgoings.

Option for installing CTs in meterable versions.

ASTA certified

Busbar current rating:
250A

- Rated short circuit withstand for busbars 25KA for 1 sec

Removable top and bottom gland plates.

1.5 mm thickness sheet steel with epoxy powder coating RAL 9002

IP41

Accessories like key lock, DIN rail extension boxes etc...

JN2B00006S2

Designation	*No. of out going ways X160 frame MCCB (up to125A)*	*Provision for 3 pole switch disconnector (JK200S / JK250S) / X250 frame MCCB (up to 250A) incomer* **(non-meterable)**	*Provision for 3 pole X250 / h250 frame MCCB (up to 250A) incomer* **(meterable)**
250A panel board Incomer: X250 frame MCCB (up to 250A) / JK200S / JK250S switch disconnector Outgoing: X160 frame MCCB (up to 125A)	2	**JN2B00002S2**	**JN2B00002S3**
	4	**JN2B00004S2**	**JN2B00004S3**
	6	**JN2B00006S2**	**JN2B00006S3**
	8	**JN2B00008S2**	**JN2B00008S3**
	10	**JN2B00010S2**	**JN2B00010S3**
	12	**JN2B00012S2**	**JN2B00012S3**
	16	**JN2B00016S2**	**JN2B00016S3**

Notes:

1. Incomer link kits are not supplied as standard for non meterable boards. For link kits refer below table
2. 3 pole incomer link kits are supplied with the meterable boards.

Invicta - 250A panel board accessories

Description	*Cat. Ref.*
Incomer kits	
3 pole X250 frame MCCB	**JN2L2503MH**
3 pole H250 frame MCCB (for meterable boards only)	**JN2L2503MHH**
3 pole switch disconnector (JK200S/JK250S)	**JN2L2503SK**
250A direct incomer kit	**JN2L2503D**
Extension box	
Cable spreader box / Meter box without cutout	**JN2E01S**
Meter box with cutout (Provision for 96mm x 96mm for VM/AM, RYB indicating lamps, selector switches)	**JN2E02S**
20 mod din rail box	**JN2E20S**
Accessories / spares	
Single pole X160 frame MCCB blank	**JN2XBSP**
Key lock	**JK1XKLS**

JN2E02S

Technical characteristics

Standards:
BS EN 60439 - 1 & 3

Suitable for MCCBs incomers and outgoings.

Option for installing CTs in meterable versions.
ASTA certified

Busbar current rating:
400A

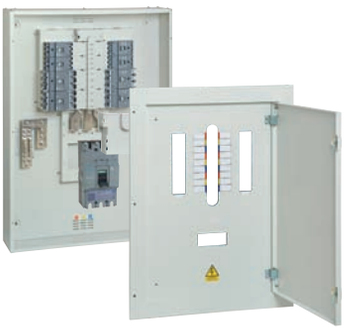
- Rated short circuit withstand for busbars 35KA for 1 sec

Removable top and bottom gland plates.

1.5 mm thickness sheet steel with epoxy powder coating RAL 9002

IP41

Accessories like key lock, DIN rail extension boxes etc...



JNAB00404S2

Designation	*No. of out going ways X160 frame MCCB (up to125A)*	*Provision for 3 pole h400 frame MCCB incomer* **(non-meterable)**	*Provision for 3 pole h400 frame MCCB incomer* **(meterable)**
400A panel board Incomer: h400 frame MCCB (up to 400A) Outgoing: X160 frame MCCB (up to 125A)	4	**JN4B00004S2**	**JN4B00004S3**
	6	**JN4B00006S2**	**JN4B00006S3**
	8	**JN4B00008S2**	**JN4B00008S3**
	10	**JN4B00010S2**	**JN4B00010S3**
	12	**JN4B00012S2**	**JN4B00012S3**
	16	**JN4B00016S2**	**JN4B00016S3**

Designation	*No. of out going ways X250 frame MCCB (up to 250A)*	*No. of out going ways X160 frame MCCB (up to125A)*	*Provision for 3 pole h400 frame MCCB incomer* **(non-meterable)**	*Provision for 3 pole h400 frame MCCB incomer* **(meterable)**
400A panel board Incomer: h400 frame MCCB (up to 400A) Outgoing: X250 frame MCCB (up to 250A) + X160 frame MCCB (up to 125A)	2	2	**JN4B00202S2**	**JN4B00202S3**
	2	4	**JN4B00204S2**	**JN4B00204S3**
	2	6	**JN4B00206S2**	**JN4B00206S3**
	2	8	**JN4B00208S2**	**JN4B00208S3**
	2	10	**JN4B00210S2**	**JN4B00210S3**
	2	14	**JN4B00214S2**	**JN4B00214S3**

Notes:

1. Incomer link kits are not supplied as standard for non-meterable boards. For link kits refer below table
2. 3 pole incomer link kits are supplied with the meterable boards.

Invicta - 400A panel board accessories

JN4E02S

JN8E02S

Description	*Cat. Ref.*
Incomer kits	
3 pole h400 frame MCCB	**JN4L4003MH**
400A direct incomer kit	**JN4L4003D**
Extension box	
for X160 frame MCCB outgoing	
Cable spreader box / Meter box without cutout	**JN4E01S**
Meter box with cutout (Provision for 96mm x 96mm for VM/AM, RYB indicating lamps, selector switches)	**JN4E02S**
24 mod din rail box	**JN4E24S**
for X250 + X160 frame MCCB outgoing	
Cable spreader box / Meter box without cutout	**JN8E01S**
Meter box with cutout (Provision for 96mm x 96mm for VM/AM, RYB indicating lamps, selector switches)	**JN8E02S**
32 mod din rail box	**JN8E32S**
Accessories / spares	
Blank for single pole X160 frame MCCB	**JN2XBSP**
Blank for three pole X250 frame MCCB	**JN4XBTP**
Key lock	**JK1XKLS**

Technical characteristics

Standards:
BS EN 60439 - 1 & 3

Suitable for MCCBs incomers and outgoings.

Option for installing CTs in meterable versions.

ASTA certified

Busbar current rating:
800A

Rated short circuit withstand for busbars 40KA for 1 sec

Removable top and bottom gland plates.

1.5 mm thickness sheet steel with epoxy powder coating in RAL 9002

IP41

Accessories like key lock, DIN rail extension boxes etc...

JN8B00006S2

Description	*No. of out going ways X250 frame MCCB (up to 250A)*	*No. of out going ways X160 frame MCCB (up to125A)*	*Provision for 3 pole h630/h800 frame MCCB incomer* **(non-meterable)**	*Provision for 3 pole h630/h800 frame MCCB incomer* **(meterable)**
630A / 800A panel board Incomer: h630 frame MCCB (up to 630A) / h800 frame MCCB (up to 800A) Outgoing: X160 frame MCCB (up to 125A)	/	4	**JN8B00004S2**	/
	/	6	**JN8B00006S2**	/
	/	8	**JN8B00008S2**	/
	/	10	**JN8B00010S2**	/
	/	12	**JN8B00012S2**	/
	/	16	**JN8B00016S2**	/
630A / 800A panel board Incomer: h630 frame MCCB (up to 630A) / h800 frame MCCB (up to 800A) Outgoing: X250 frame MCCB (up to 250A)	4	/	**JN8B00400S2**	/
	6	/	**JN8B00600S2**	/
	8	/	**JN8B00800S2**	/
	10	/	**JN8B01000S2**	/
	12	/	**JN8B01200S2**	/
	16	/	**JN8B01600S2**	/
630A / 800A panel board Incomer: h630 frame MCCB (up to 630A) / h800 frame MCCB (up to 800A) Outgoing: X250 frame MCCB (up to 250A) + X160 frame MCCB (up to 125A)	2	2	**JN8B00202S2**	**JN8B00202S3**
	2	4	**JN8B00204S2**	**JN8B00204S3**
	2	6	**JN8B00206S2**	**JN8B00206S3**
	2	8	**JN8B00208S2**	**JN8B00208S3**
	2	10	**JN8B00210S2**	**JN8B00210S3**
	2	14	**JN8B00214S2**	**JN8B00214S3**
630A / 800A panel board Incomer: h630 frame MCCB (up to 630A) / h800 frame MCCB (up to 800A) Outgoing: X250 frame MCCB (up to 250A) + X160 frame MCCB (up to 125A)	4	2	**JN8B00402S2**	/
	4	4	**JN8B00404S2**	/
	4	6	**JN8B00406S2**	/
	4	8	**JN8B00408S2**	/
	4	10	**JN8B00410S2**	/

Notes:
1. Incomer link kits are not supplied as standard for non meterable boards, For link kits please refer next page.
2. 3 pole h630 frame MCCB incomer link kits are supplied with the meterable boards.

JN8B00006S2

Description	*No. of out going ways h400 frame MCCB (up to 400A)*	*No. of out going ways X250 frame MCCB (up to 250A)*	*No. of out going ways X160 frame MCCB (up to125A)*	*Provision for 3 pole h630/h800 frame MCCB incomer* **(non-meterable)**	*Provision for 3 pole h630/h800 frame MCCB incomer* **(meterable)**
630A / 800A panel board					
Incomer:	/	6	6	**JN8B00606S2**	/
h630 frame MCCB (up to 630A) / h800 frame MCCB (up to 800A)	/	6	8	**JN8B00608S2**	/
Outgoing:					
X250 frame MCCB (up to 250A) + X160 frame MCCB (up to 125A)					

Notes:
1. Incomer link kits are not supplied as standard for non meterable boards, For link kits please refer next page.
2. 3 pole h630 frame MCCB incomer link kits are supplied with the meterable boards.

Invicta - 630A / 800A panel board accessories

Description	*Cat. Ref.*
Incomer Kits	
3 pole h630 frame MCCB incomer	**JN8L6303MH**
630A direct incomer kit	**JN8L6303D**
3 pole h800 frame MCCB incomer	**JN8L8003MH**
800A direct incomer	**JN8L8003D**
Extension box	
Cable spreader box / Meter box without cutout	**JN8E01S**
Meter box with cutout (Provision for 96mm x 96mm for VM/AM, RYB indicating lamps, selector switches)	**JN8E02S**
32 mod din rail box	**JN8E32S**
Accessories / spares	
Key lock	**JK1XKLS**

JN8E02S

Description
The range of enclosed LBS have been designed to match the TP&N range of distribution boards. The number of enclosure sizes have been optimized, to ensure that the installation is easy and uniform.
Products are designed to isolate individual circuits.
All handles can be padlocked in the off position.

Extension boxes are available for extra cabling space.
Operation is through a door operated rotary handle.

Electrical specification
Tested and complies to
BS EN 60439-1 (enclosure)
BS EN 60947-3 (device)
LBS Sequence 1 & 3
FCS Sequence 1 & 4

Electrical Supply
415V ~ AC
Rating AC23A (100, 315, 400 & 630A AC22A)

Mechanical specification
Material 1.2 mm CR4 Steel
Powder Coated RAL 9002
IP40
Devices & accessories
TPN 20-1600A (14 ratings)
TPSN 20-1600A (14 ratings)

JAB306

Description	*In A*	*Utilisation category*	*Cat. ref.*
Triple pole and neutral	20A	AC23A	**JAB302**
	32A	AC23A	**JAB303**
	63A	AC23A	**JAB306**
	100A	AC22A	**JAB310**
	125A	AC23A	**JAC312**
	160A	AC23A	**JAC316**
	200A	AC23A	**JAE320**
	250A	AC23A	**JAE325**
	315A	AC22A	**JAG331**
	400A	AC22A	**JAG340**
	630A	AC22B	**JAH363**
	800A	AC23B	**JAH380**
	1250A	AC23A	**JAH390**
	1600A	AC23A	**JAH392**
Triple pole switched neutral	20A	AC23A	**JAB402**
	32A	AC23A	**JAB403**
	63A	AC23A	**JAB406**
	100A	AC22A	**JAB410**
	125A	AC23A	**JAC412**
	160A	AC23A	**JAC416**
	200A	AC23A	**JAE420**
	250A	AC23A	**JAE425**
	315A	AC22A	**JAG431**
	400A	AC22A	**JAG440**
	630A	AC22B	**JAH463**
	800A	AC23B	**JAH480**
	1250A	AC23A	**JAH490**
	1600A	AC23A	**JAH492**
Cable extension boxes triple pole and triple pole switched neutral	125A, 160A		**JZA700**
	200A, 250A, 315A, 400A		**JZA701**
	630A, 800A		**JZA702**
Auxiliary contact 1NO+1NC	20A to 63A		**HZ021**
	100A to 160A		**HZ022**
	200A to 630A		**HZ023**
	800A to 1600A		**HZ025**

Description	*In A*	*Cat. ref. 3P*	*Cat. ref. 4P*
Terminal cover	125A to 200A,	**HZC201**	**HZC202**
	250A to 400A	**HZC203**	**HZC204**
	630A	**HZC205**	**HZC206**
	800A	**HZ036**	**HZ046**
	1250A to 1600A	**HZ037**	**HZ047**

Description
The range of enclosed FCS have been designed to match the TP&N range of distribution boards. The number of enclosure sizes have been optimized, to ensure that the installation is easy and uniform. The FCS products are designed to protect and isolate individual circuits. All handles can be padlocked in the off position. Extension boxes are available for extra cabling space.

Operation is through a door operated rotary handle.

Note
Maximum rate fuse links are fitted in all fuse combination switches.

Electrical specification
Tested and complies to
IEC 60 497-3
LBS Sequence 1 & 3
FCS Sequence 1 & 4

Electrical Supply
415V~AC Rating AC23
(100A~AC22A)

Mechanical specification
Material 1.2mm CR4 Steel
Powder Coated RAL 9002
IP40

Devices & accessories
SPSN 20 - 100A (4 ratings)
TP & N 20 - 800A (12 ratings)
TPSN 20 - 800A (12 ratings)


JFD306U

Description	*In A*	*Utilisation category*	*Fuse type*	*Cat. ref.*
Single pole switched neutral	20A	AC23A	A1	**JFB202U**
	32A	AC23A	A1	**JFB203U**
	63A	AC23A	A2-A3	**JFD206U**
	100A	AC22A	A4	**JFE210U**
Triple pole and neutral	20A	AC23A	A1	**JFB302U**
	32A	AC23A	A1	**JFB303U**
	63A	AC23A	A2-A3	**JFD306U**
	100A	AC22A	A4	**JFE310U**
	125A	AC23A	B1-B2	**JFG312U**
	160A	AC23A	B1-B2	**JFG316U**
	200A	AC23A	B1-B2	**JFG320U**
	250A	AC23A	B1-B3	**JFG325U**
	315A	AC23B	B1-B3	**JFH331U**
	400A	AC23B	B1-B4	**JFH340U**
	630A	AC23B	C1-C2	**JFI363U**
	800A	AC23B	C1-C3	**JFI380U**
Triple pole switched neutral	20A	AC23A	A1	**JFB402U**
	32A	AC23A	A1	**JFB403U**
	63A	AC23A	A2-A3	**JFD406U**
	100A	AC22A	A4	**JFE410U**
	125A	AC23A	B1-B2	**JFG412U**
	160A	AC23A	B1-B2	**JFG416U**
	200A	AC23A	B1-B2	**JFG420U**
	250A	AC23A	B1-B3	**JFG425U**
	315A	AC23B	B1-B3	**JFH431U**
	400A	AC23B	B1-B4	**JFH440U**
	630A	AC23B	C1-C2	**JFI463U**
	800A	AC23B	C1-C3	**JFI480U**
Cable extension boxes triple pole and triple pole switched neutral	125A, 160A, 200A, 250A 315A, 400A 630A, 800A			**JZA701** **JZA702** **JZA703**
Auxiliary contact				
1AC type NO				**HZF301**
1AC type NC				**HZF302**

Description	*In A*	*Cat. ref. 2P*	*Cat. ref. 3P*	*Cat. ref. 4P*
Terminal cover	100A	**HZF201**	**HZF202**	**HZF203**
	125A, 160A,	-	**HZF202**	**HZF203**
	200A to 400A	-	**HZF204**	**HZF205**
	630A to 800A	-	**HZF206**	**HZF207**

Technical characteristics

Surface mounting

1.2 mm thickness sheet steel

Epoxy Powder coated
RAL 9002 colour

Operating voltage :
127/220/415V AC 50/60Hz

Insulation Voltage : 690 VAC

Direct cable connection for MCCBs, Neutral and Earth terminal up to 125A. For higher ratings neutral bar with bolts and nuts as standard

Provision for Padlock

Removable pre punched top and bottom glandplates

Dual knockouts

Enough cabling space

MCCBs are calibrated at
50 Deg Centigrade

Designation	*Cat. Ref.*
Enclosed circuit breaker fitted with MCCB	
ECB fitted with MCCB X160 3P 18kA 63A	**MH1253S2HDA063Z**
ECB fitted with MCCB X160 3P 18kA 100A	**MH1253S2HDA100Z**
ECB fitted with MCCB X160 3P 18kA 125A	**MH1253S2HDA125Z**
ECB fitted with MCCB X160 3P 25kA 63A	**MH1253S2HHA063Z**
ECB fitted with MCCB X160 3P 25kA 100A	**MH1253S2HHA100Z**
ECB fitted with MCCB X160 3P 25kA 125A	**MH1253S2HHA125Z**
ECB fitted with MCCB X160 3P 40kA 63A	**MH1253S2HNA063Z**
ECB fitted with MCCB X160 3P 40kA 100A	**MH1253S2HNA100Z**
ECB fitted with MCCB X160 3P 40kA 125A	**MH1253S2HNA125Z**
ECB fitted with MCCB X250 3P 25kA 160A	**MH2503S2HHB160Z**
ECB fitted with MCCB X250 3P 25kA 200A	**MH2503S2HHB200Z**
ECB fitted with MCCB X250 3P 25kA 250A	**MH2503S2HHB250Z**
ECB fitted with MCCB X250 3P 40kA 160A	**MH2503S2HNB160Z**
ECB fitted with MCCB X250 3P 40kA 200A	**MH2503S2HNB200Z**
ECB fitted with MCCB X250 3P 40kA 250A	**MH2503S2HNB250Z**
ECB fitted with MCCB h400 3P 50kA 400A	**MH4003S2HND400U**
ECB fitted with MCCB h630 3P 50kA 630A	**MH6303S2HND630U**

Note:
The above are the standard ratings of MCCBs. Incase any other ratings are required add the MCCB reference to the board reference.
For Eg : If x160 frame,3P,18KA, 40A MCCB required the cat reference will be MH1253S2HDA040Z.

Technical characteristics:
• Standards: IEC 60439
• IP rating: IP55 / 65 as per IEC 529
• insulation voltage: 400V AC
• colour: RAL 7035 light grey
• mechanical impact resistance:
  - enclosures < 12 - IK07
  - enclosures > 12 - IK08
• Reversible doors - for enclosures > 12 modules
• supplied with earth and neutral terminals
• Distance between rails
  - 12 mod. wide enclosures - 125 mm
  - 18 mod. wide enclosures - 150 mm
• Metric knock outs on top and bottom
• Transparent door for all enclosures sizes


VE218L

Designation	*Dimension (H x W x D)*	*Cat. Ref.*
1 Row, 2 + 1 modules	175 x 111 x 93	**VE103L**
1 Row, 4 + 2 modules	190 x 165 x 113	**VE106L**
1 Row, 8 + 2 modules	210 x 237 x 114	**VE110L**
1 Row, 12 modules	302 x 310 x 151	**VE112L**
2 Row, 24 modules	427 x 310 x 151	**VE212L**
3 Row, 36 modules	552 x 310 x 151	**VE312L**
4 Row, 48 modules	677 x 310 x 151	**VE412L**
1 Row, 18 modules	302 x 418 x 151	**VE118L**
2 Row, 36 modules	452 x 418 x 151	**VE218L**
3 Row, 54 modules	602 x 418 x 151	**VE318L**

Golf enclosures

Technical characteristics:
• Golf enclosures are available in surface and flush mounting 1 - 3 rows, 4 to 54 modules.
• Enclosures are of insulating material coloured RAL 9010.
• Fixed DIN rail for devices with shoulder measurement of 47mm.
• Distance between rails 125mm.
• Door opens up to 180°.
• Surface mounted enclosures are available with opaque or transparent doors.
• Key lock optional.
• IP40


VS212TF

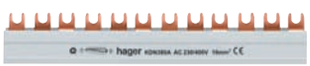
Designation	*Characteristics*	*Plain door cat. ref.*	*Transparent door cat. ref.*
Surface mounting	1 row, 4 modules	**VS104PF**	**VS104TF**
	1 row, 8 modules	**VS108PF**	**VS108TF**
	1 row, 12 modules	**VS112PF**	**VS112TF**
	1 row, 18 modules	**VS118PF**	**VS118TF**
	1 row, 22 modules	**VS122PF**	**VS122TF**
	2 rows, 24 modules	**VS212PF**	**VS212TF**
	2 rows, 36 modules	**VS218PF**	**VS218TF**
	3 rows, 36 modules	**VS312PF**	**VS312TF**
	3 rows, 54 modules	**VS318PF**	**VS318TF**
	4 rows, 72 modules	**VS418PF**	**VS418TF**
Flush mounting	1row, 4 modules	**VF104PF**	**VF104TF**
	1 row, 8 modules	**VF108PF**	**VF108TF**
	1 row, 12 modules	**VF112PF**	**VF112TF**
	1 row, 18 modules	**VF118PF**	**VF118TF**
	1 row, 22 modules	**VF122PF**	**VF122TF**
	2 rows, 24 modules	**VF212PF**	**VF212TF**
	2 rows, 36 modules	**VF218PF**	**VF218TF**
	3 rows, 36 modules	**VF312PF**	**VF312TF**
	3 rows, 54 modules	**VF318PF**	**VF318TF**
	4 rows, 72 modules	**VF418PF**	**VF418TF**

Insulated busbars

KB163P

KB190C

KD263B



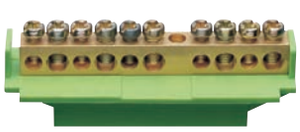
KD363B

Type		Prong In/A	Section mod. mm²	Width	Cat. Ref.	Fork In/A	Section mod. mm²	Width	Cat. Ref.
1 Pole	Brown insulated	63A	10	13	**KB163P**				
	Blue insulated	63A	10	13	**KB163N**				
						63A	10	56	**KD163B**
						80A	16	56	**KD180B**
		100A	20	57	**KB190B**	100A	20	56	**KD190B**
		100A	20	24	**KB190C**				
1P end caps					**KZ021**				**KZN021**
2 Pole		63A	10	12	**KB263A**				
		63A	10	24	**KB263C**				
						63A	10	56	**KD263B**
		80A	16	56	**KB280B**	80A	16	56	**KDN280B**
2P end caps					**KZ022**				**KZN023**
3 Pole		63A	10	12	**KB363A**				
		63A	10	57	**KB363B**	63A	10	57	**KD363B**
		63A	10	24	**KB363C**				
		80A	16	12	**KB380A**				
		80A	16	57	**KB380B**	80A	16	57	**KD380B**
3P end caps					**KZ023A**				
4 Poles		63A	10	12	**KB463A**				
		63A	10	24	**KB463C**				
						63A	10	56	**KD463B**
		80A	16	12	**KB480A**				
		80A	16	56	**KB480B**	80A	16	56	**KDN480B**
4P end caps					**KZ024**				**KZN024**

Note : all busbars grey insulated unless otherwise mentioned

Brass terminals

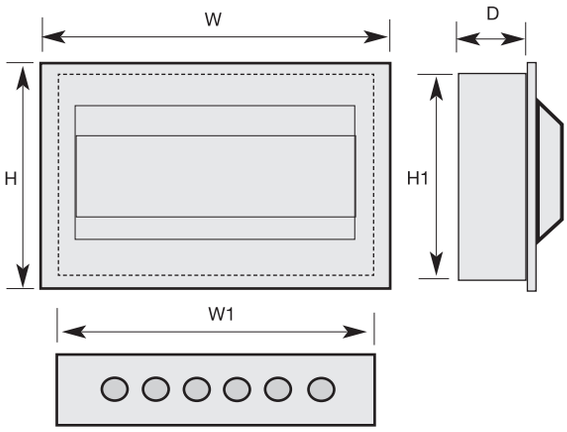
K151



KM10B

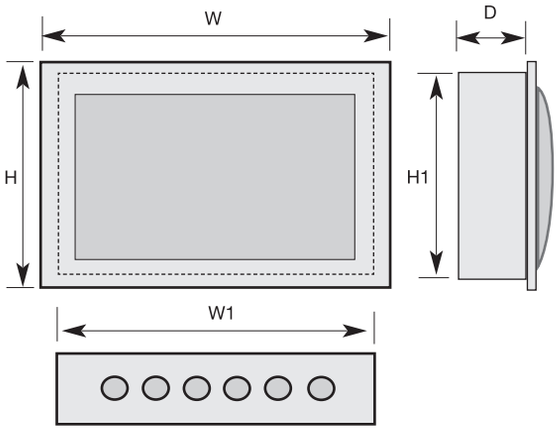
Connections mm2	Terminals with support Neutral	Earth	Phase	Terminals w/o support Bare
2x16 + 2x10			**KM04L**	**K140**
4x16 + 4x10			**KM08L**	
3x16 + 4x10	**KM07N**	**KM07E**	**KM07L**	**K142**
5x16 + 5x10	**KM10A**	**KM10B**	**KM10C**	**K143**
5x16 + 6x10	**KM11N**	**KM11E**	**KM11L**	**K144**
2x16 + 8x10	**KM10N**	**KM10E**	**KM10L**	**K145**
6x16 + 7x10	**KM13N**	**KM13E**		**K148**
1x25 + 5x16 + 5x10		**KM11B**		**K151**
1x25 + 8x16 + 8x10	**KM17N**	**KM17E**		**K156**
1x25 + 11x16 + 13x10	**KM25N**	**KM25E**		**K158**
1x25 + 8x16 + 29x10				**K159**
1x25 + 16x16 + 61x10				**K160**
1x25 + 33x16 + 129x10				**K162**

Supports and Rail Clips available

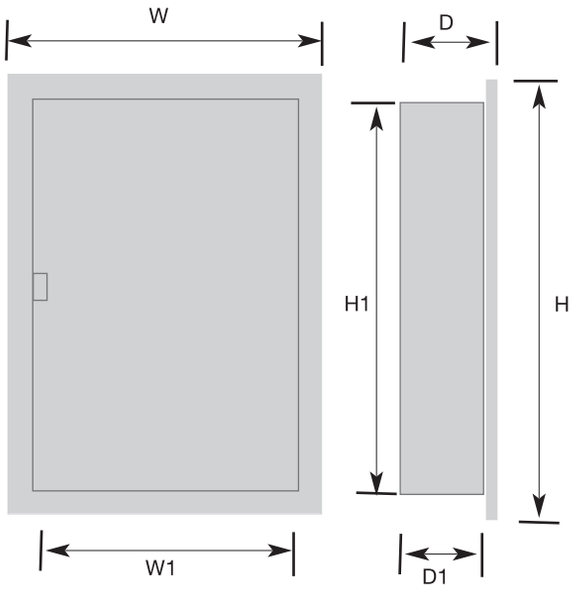


Cat. Ref.	*Dimensions*				
	H	*W*	*D*	*H1*	*W1*
Surface					
VT04SM	231	214	70	226	208
VT06SM	231	250	70	226	244
VT08SM	231	286	70	226	280
VT10SM	231	322	70	226	316
VT12SM	231	358	70	226	352
VT16SM	231	430	70	226	424
Flush					
VT04FM	251	234	70	226	208
VT06FM	251	270	70	226	244
VT08FM	251	306	70	226	280
VT10FM	251	342	70	226	316
VT12FM	251	378	70	226	352
VT16FM	251	450	70	226	424

Consumer unit without busbar

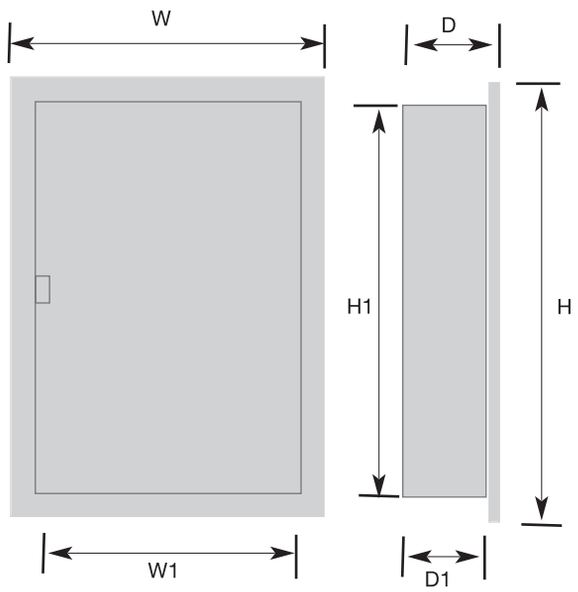


Cat. Ref.	*Dimensions*				
	H	*W*	*D*	*H1*	*W1*
Surface					
VT04MS/PNS/TS	253	245	93	250	242
VT08MS/PNS/TS	253	316	93	250	313
VT12MS/PNS/TS	253	387	93	250	384
VT16MS/PNS/TS	253	458	93	250	456
VT20MS/PNS/TS	253	529	93	250	527
Flush					
VT04MF/PNF/TF	253	245	93	220	206
VT08MF/PNF/TF	253	316	93	220	277
VT12MF/PNF/TF	253	387	93	220	348
VT16MF/PNF/TF	253	458	93	220	420
VT20MF/PNF/TF	253	529	93	220	491

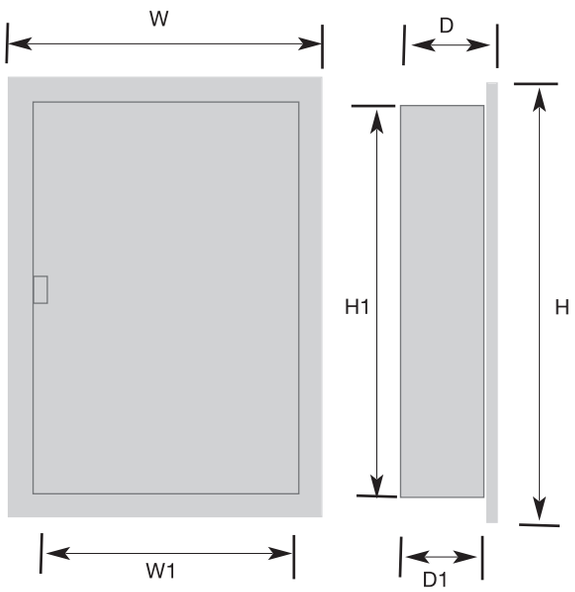


Cat. Ref.	*Dimensions*				
	H	*W*	*H1*	*W1*	*D1*
Surface					
DR16S	325	405	320	400	110
DR32S	475	405	470	400	110
DR48S	625	405	620	400	110
DR64S	775	405	770	400	110
DR80S	925	405	920	400	110
DR96S	1075	405	1070	400	110
Flush					
DR16F	350	430	320	400	110
DR32F	500	430	470	400	110
DR48F	650	430	620	400	110
DR64F	800	430	770	400	110
DR80F	950	430	920	400	110
DR96F	1110	430	1070	400	110

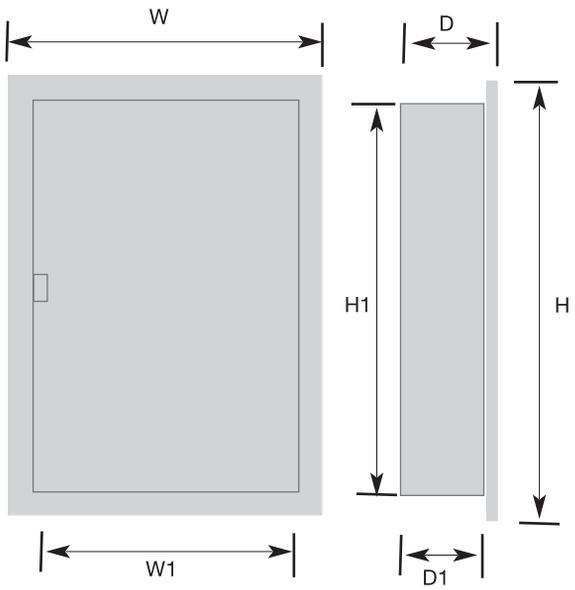
TPN 125 type B distribution boards



Cat. Ref.	*Dimensions*					
	H	*W*	*D*	*H1*	*W1*	*D1*
Surface						
JK1B04S2	495	405	115	490	400	110
JK1B06S2	555	405	115	550	400	110
JK1B08S2	605	405	115	600	400	110
JK1B10S2	660	405	115	655	400	110
JK1B12S2	715	405	115	710	400	110
JK1B14S2	770	405	115	765	400	110
JK1B16S2	820	405	115	815	400	110
JK1B18S2	940	405	115	935	400	110
JK1B24S2	1105	405	115	1100	400	110
Flush						
JK1B04F2	520	430	115	490	400	110
JK1B06F2	580	430	115	550	400	110
JK1B08F2	630	430	115	600	400	110
JK1B10F2	685	430	115	655	400	110
JK1B12F2	740	430	115	710	400	110
JK1B14F2	795	430	115	765	400	110
JK1B16F2	845	430	115	815	400	110
JK1B18F2	965	430	115	935	400	110
JK1B24F2	1130	430	115	1100	400	110

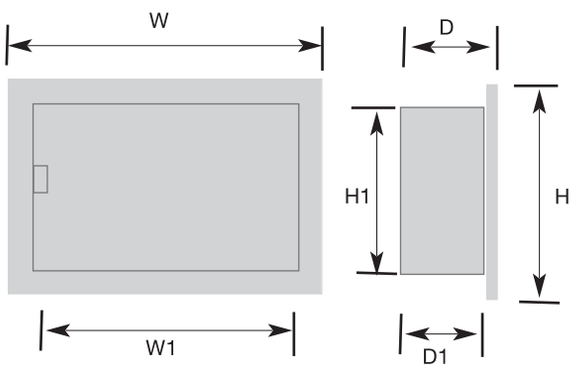


Cat. Ref.	*Dimensions*					
	H	*W*	*D*	*H1*	*W1*	*D1*
Surface						
JK1B022S2	555	445	115	550	440	110
JK1B042S2	610	445	115	605	440	110
JK1B044S2	665	445	115	660	440	110
JK1B062S2	665	445	115	660	440	110
JK1B064S2	720	445	115	715	440	110
JK1B066S2	775	445	115	770	440	110
JK1B082S2	720	445	115	715	440	110
JK1B084S2	775	445	115	770	440	110
JK1B086S2	830	445	115	825	440	110
JK1B088S2	885	445	115	880	440	110
JK1B104S2	935	445	115	930	440	110
Flush						
JK1B022F2	580	470	115	550	440	110
JK1B042F2	635	470	115	605	440	110
JK1B044F2	690	470	115	660	440	110
JK1B062F2	690	470	115	660	440	110
JK1B064F2	745	470	115	715	440	110
JK1B066F2	800	470	115	770	440	110
JK1B082F2	745	470	115	715	440	110
JK1B084F2	800	470	115	770	440	110
JK1B086F2	855	470	115	825	440	110
JK1B088F2	910	470	115	880	440	110
JK1B104F2	960	470	115	930	440	110

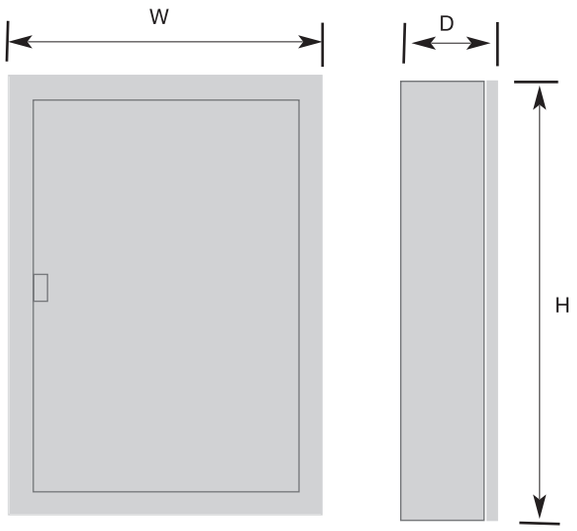


Cat. Ref.	*Dimensions*					
	H	*W*	*D*	*H1*	*W1*	*D1*
Surface						
JK2B04S2	655	445	115	650	440	110
JK2B06S2	705	445	115	700	440	110
JK2B08S2	760	445	115	755	440	110
JK2B10S2	815	445	115	810	440	110
JK2B12S2	865	445	115	860	440	110
JK2B14S2	920	445	115	915	440	110
JK2B16S2	975	445	115	970	440	110
JK2B18S2	1030	445	115	1025	440	110
JK2B24S2	1195	445	115	1190	440	110
Flush						
JK2B04F2	680	470	115	650	440	110
JK2B06F2	730	470	115	700	440	110
JK2B08F2	785	470	115	755	440	110
JK2B10F2	840	470	115	810	440	110
JK2B12F2	890	470	115	860	440	110
JK2B14F2	945	470	115	915	440	110
JK2B16F2	1000	470	115	970	440	110
JK2B18F2	1055	470	115	1025	440	110
JK2B24F2	1220	470	115	1190	440	110

TPN Board Accessories

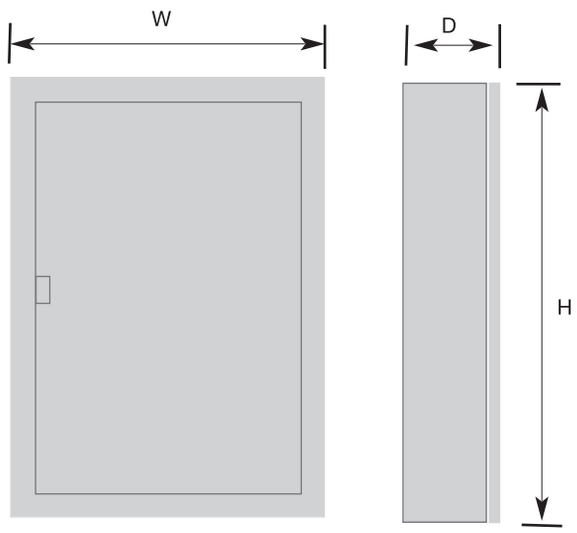


Cat. Ref.	*Dimensions*					
	H	*W*	*D*	*H1*	*W1*	*D1*
JK1E01S	275	405	115	269	400	108
JK2E01S	275	445	115	269	440	108
JK1E01F	300	430	115	269	400	108
JK2E01F	300	470	115	269	440	108
JK1E16S	275	405	115	269	400	108
JK1E32S	425	405	115	420	400	108
JK1E48S	655	405	115	650	400	108
JK2E16S	275	445	115	270	440	108
JK2E32S	425	445	115	420	440	108
JK2E48S	575	445	115	570	440	108
JK1E16F	300	430	115	269	400	108
JK1E32F	450	430	115	419	400	108
JK1E48F	600	430	115	569	400	108
JK2E16F	300	470	115	269	440	108
JK2E32F	450	470	115	419	440	108
JK2E48F	600	470	115	569	440	108

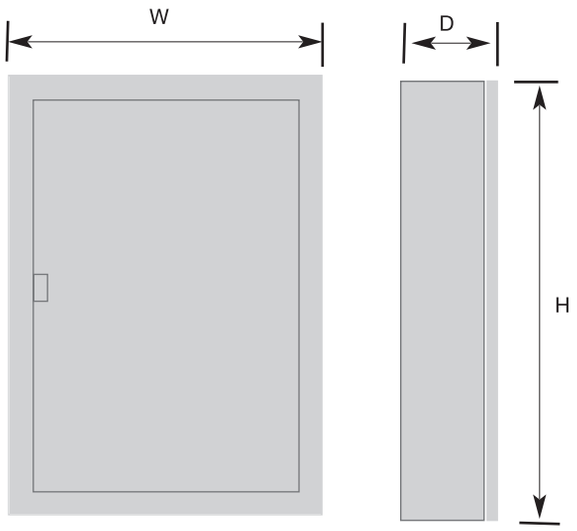


Cat. Ref.	*Dimensions*		
	H	*W*	*D*
Surface mounted			
JN2B00002S2	700	615	160
JN2B00004S2	775	615	160
JN2B00006S2	850	615	160
JN2B00008S2	925	615	160
JN2B00010S2	1000	615	160
JN2B00012S2	1115	615	160
JN2B00016S2	1375	615	160
JN2B00002S3	860	615	160
JN2B00004S3	935	615	160
JN2B00006S3	1010	615	160
JN2B00008S3	1085	615	160
JN2B00010S3	1160	615	160
JN2B00012S3	1275	615	160
JN2B00016S3	1535	615	160

Invicta 400A panel board

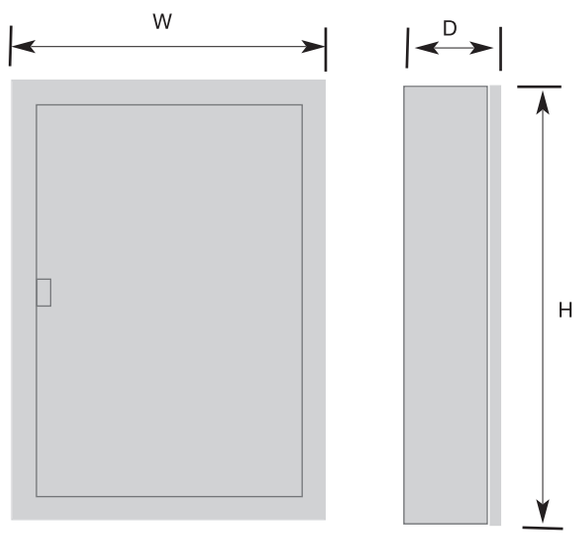


Cat. Ref.	*Dimensions*		
	H	*W*	*D*
Surface mounted			
JN4B00004S2	930	690	200
JN4B00006S2	1005	690	200
JN4B00008S2	1080	690	200
JN4B00010S2	1155	690	200
JN4B00012S2	1230	690	200
JN4B00016S2	1380	690	200
JN4B00202S2	960	846	200
JN4B00204S2	1035	846	200
JN4B00206S2	1110	846	200
JN4B00208S2	1185	846	200
JN4B00210S2	1260	846	200
JN4B00214S2	1410	846	200

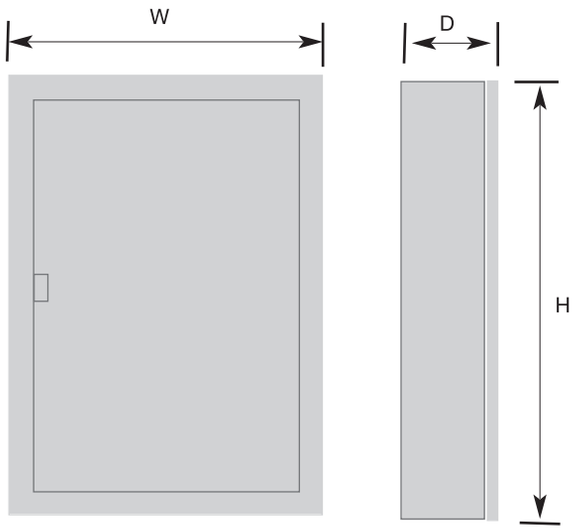


Cat. Ref.	*Dimensions*		
	H	*W*	*D*
Surface mounted			
JN4B00004S3	1090	690	200
JN4B00006S3	1165	690	200
JN4B00008S3	1240	690	200
JN4B00010S3	1315	690	200
JN4B00012S3	1390	690	200
JN4B00016S3	1540	690	200
JN4B00202S3	1120	846	200
JN4B00204S3	1195	846	200
JN4B00206S3	1270	846	200
JN4B00208S3	1345	846	200
JN4B00210S3	1420	846	200
JN4B00214S3	1570	846	200

Invicta 630 / 800A panel boards

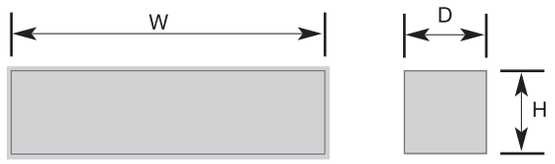


Cat. Ref.	*Dimensions*		
	H	*W*	*D*
Surface			
JN8B00004S2	1035	846	200
JN8B00006S2	1110	846	200
JN8B00008S2	1215	846	200
JN8B00010S2	1320	846	200
JN8B00012S2	1410	846	200
JN8B00016S2	1620	846	200
JN8B00202S2	1065	846	200
JN8B00204S2	1140	846	200
JN8B00206S2	1215	846	200
JN8B00208S2	1320	846	200
JN8B00210S2	1410	846	200
JN8B00214S2	1560	846	200
JN8B00402S2	1170	846	200
JN8B00404S2	1245	846	200
JN8B00406S2	1350	846	200
JN8B00408S2	1440	846	200
JN8B00410S2	1650	846	200
JN8B00606S2	1485	846	200
JN8B00608S2	1620	846	200
JN8B00400S2	1095	846	200
JN8B00600S2	1200	846	200
JN8B00800S2	1305	846	200
JN8B01000S2	1410	846	200
JN8B01200S2	1515	846	200
JN8B01400S2	1725	846	200



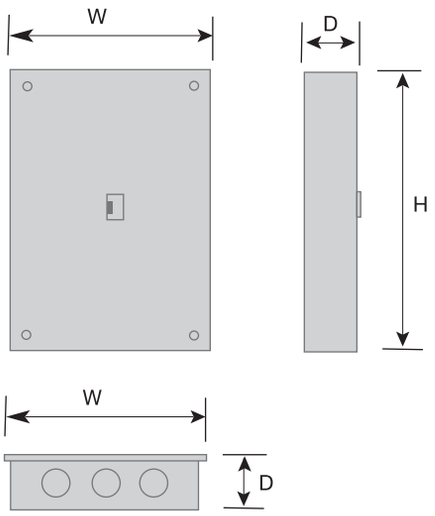
Cat. Ref.	Dimensions		
	H	W	D
Surface			
JN8B00202S3	1225	846	200
JN8B00204S3	1300	846	200
JN8B00206S3	1375	846	200
JN8B00208S3	1480	846	200
JN8B00210S3	1570	846	200
JN8B00214S3	1720	846	200

Invicta panel board accessories



Cat. Ref.	Dimensions		
	H	W	D
Surface			
JN2E01S	303	615	160
JN2E02S	179	615	160
JN2E20S	303	615	160
JN4E01S	303	690	200
JN4E02S	179	690	200
JN4E24S	303	690	200
JN8E01S	303	846	200
JN8E02S	179	846	200
JN8E32S	453	846	200

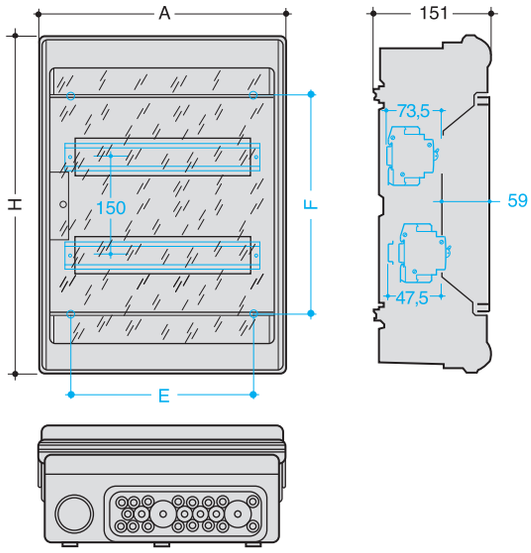
Enclosed circuit breaker



Cat. Ref.	Dimensions		
	H	W	D
MH1253S2	400	245	112
MH2503S2	630	350	112
MH4003S2	650	370	152
MH6303S2	1010	600	152

Vector IP65 enclosures

VE 212L - 2 rows 24

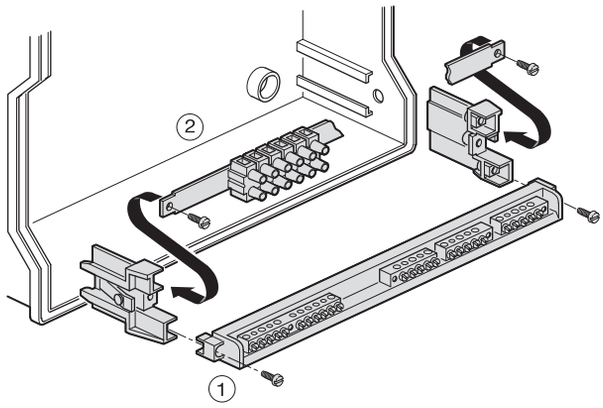


Dimensions

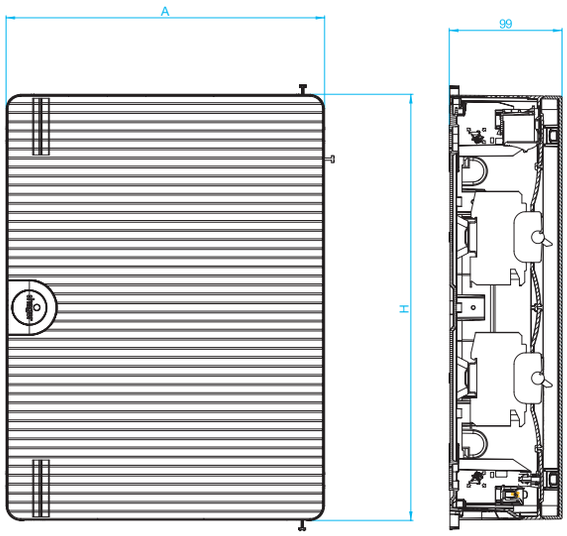
References		Enclosure sizes			Wall box	
		B	A	H	E	F
VE103L	3	1	111	175	-	147
VE106L	6	1	165	190	108	158
VE110L	10	1	237	210	180	173
VE112L	12	1	310	302	230	155
VE212L	24	2	310	427	230	280
VE312L	36	3	310	552	230	405
VE412L	18	4	310	677	230	550
VE118L	18	1	418	302	338	155
VE218L	36	2	418	452	338	305
VE318L	54	3	418	602	338	455

Connection assembly

mounting on insulating support at both end of the chassis
additional connection assembly : VZ 403 or VZ 428
insulated terminal VZ 743



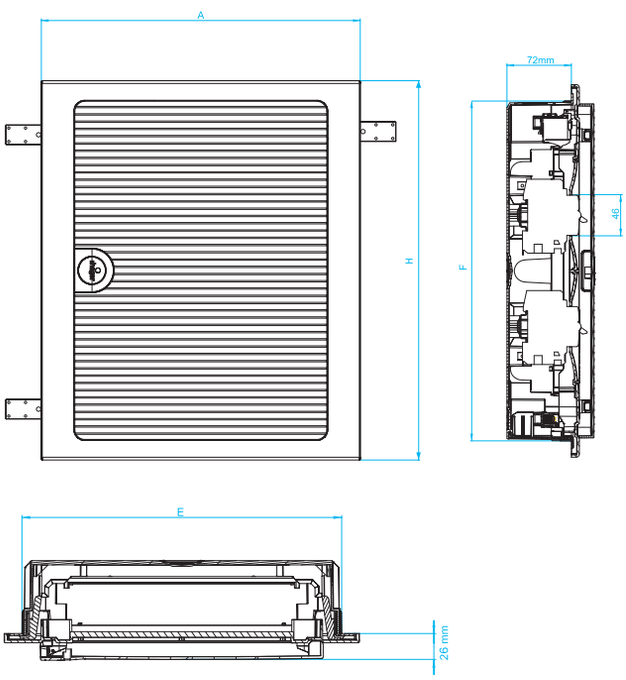
enclosure reference	knock outs high and low	side	supplied cable bushes
VE103L	2 x M20	-	3 x M20
VE106L	1 x M20 + 1 x M25 + 1 x M20/32	2 x 16	2 x M20 + 2 x M25 + 1 x M32
VE110L	1 x M20/32 + 1 x M25 + 3 x M20	2 x 16	4 x M20 + 2 x M25 + 1 x M32
VE112L	2 x M20/32/40 + 2 x M 25/32 + 3 x M25 + 6 x M20	2 x 21	10 x M20 + 2 x M25 + 1 x M32
VE118L	1 x M20/40/50 + 2 x M20/32 + 12 x M25 + 2 x M20	2 x 21	8 x M20 + 10 x M25 + 1 x M32
VE212L	2 x M20/32/40 + 2 x M25/32 + 3 x M25 + 6 x M20	3 x 21	14 x M20 + 4 x M25 + 1 x M32
VE218L	1 x M20/40/50 + 2 x M20/32 + 12 x M25 + 2 x M20	3 x 21	8 x M20 + 14 x M25 + 1 x M32
VE312L	2 x M20/32/40 + 2 x M25/32 + 3 x M25 + 6 x M20	4 x 21	14 x M20 + 10 x M25 + 2 x M32
VE318L	1 x M20/40/50 + 2 x M20/32 + 12 x M25 + 2 x M20	4 x 21	8 x M20 + 18 x M25 + 2 x M32
VE412L	2 x M20/32/40 + 2 x M25/32 + 3 x M25 + 6 x M20	5 x 21	14 x M20 + 10 x M25 + 2 x M32



Ref.		Dimension		Wall fixation		
		A	H	E	F	G
VS104...	1 row 4 ▮	137,5	183,5	101	68	58
VS108...	2 row 8 ▮	209,5	183,5	173,5	68	58
VS112...	1 row 12 ▮	281,5	251,5	221,5	135,5	58
VS212...	2 row 12 ▮	281,5	376,5	221,5	260,5	58
VS312...	3 row 12 ▮	281,5	500	221,5	385,5	58
VS412...	4 row 12 ▮	281,5	646,5	221,5	491	78
VS118...	1 row 18 ▮	389,5	251,5	329,5	135,5	58
VS218...	2 row 18 ▮	389,5	376,5	329,5	260,5	58
VS318...	3 row 18 ▮	389,5	500	329,5	385,5	58
VS418...	4 row 18 ▮	389,5	646,5	329,5	491	78
VS122...	1 row 22 ▮	461,5	251,5	401,5	135,5	58

▮- mod

Golf flush mounted enclosure
VF series



Ref.		Dimension // mm			
		Frame		Wall niche	
		A	H	E	F
VF104...	1 row 4 ▮	204	225	170	189
VF108...	2 row 8 ▮	275	225	242	189
VF112...	1 row 12 ▮	352	293	318	257
VF212...	2 row 12 ▮	352	418	318	382
VF312...	3 row 12 ▮	352	543	318	507
VF412...	4 row 12 ▮	352	688	318	652
VF118...	1 row 18 ▮	460	293	426	257
VF218...	2 row 18 ▮	460	418	426	382
VF318...	3 row 18 ▮	460	543	426	507
VF418...	4 row 18 ▮	460	688	426	652
VF122...	1 row 22 ▮	532	293	498	257

For the wall niche, these dimensions are minimal.

▮- mod