

# Consumer Unit Design Evo Switch Disconnecter Incomer

For the distribution of power in a residential application, conforming to BS EN 61439-3 including Annex ZB (16kA rating).



VME113SPD

Design Evo is the board for use in applications where the consumer unit is located in a living area of the dwelling.

The single row range of consumer units with a 116A rated current (InA) have been designed for installations where the upstream overcurrent protection device (OCPD) is rated at 100A or below, the 116A (InA) is where the consumer unit can be used with a 16A generation set when the bi-directional RCBO can be installed at the far end of the busbar.

(This is not applicable in Dual Row enclosures)

Protection against transient over voltages, provided by factory fitted type 2 SPD.

Description	Size	Cat ref.
6 Way 116A Switch Disconnecter Incomer with Factory Fitted SPD	4	VME109SPD
13 Way 116A Switch Disconnecter Incomer with Factory Fitted SPD	5	VME113SPD
19 Way 116A Switch Disconnecter Incomer with Factory Fitted SPD	7	VME119SPD

## Features & Benefits

- Cable clamp - Secures supply cables on entry to main incoming device preventing any movement being transmitted through meter tails to device
- Round cable entry points top, bottom and sides
- Rear Knockouts for ease of cable entry - Cable protector plate provided
- Rigid top wall - Enhances rigidity to prevent distortion when removing knockouts
- Locate and hold cover - allows use of both hands whilst fixing cover
- Front cover retained screws - Prevents loss during installation
- Full metal DIN rail - Secure and stable attachment of devices Design Evo Switch Disconnecter Incomer Consumer Unit with SPD
- Quick release clip on MCB/RCBO - Allows removal of MCB/RCBO with busbar still in place
- Optimised cabling space - DIN rail position allows maximum cabling space
- Top mounted terminal rail makes the wiring of the neutral and earth connections neat and simple.
- Torque settings displayed inside front cover so they're easily accessible by the electrician.
- Type 2 Surge protection factory fitted
- Single row references have a 116A InA.

**Technical Characteristics**

Standards	BS EN 61439-3
Classification	Consumer Unit
Rated & Operational Voltage ( $U_n/U_e$ )	230V a.c 50 Hz
Rated Insulation Voltage ( $U_i$ )	320V a.c. 50Hz
Rated Frequency (fn)	50 Hz
Rated impulse withstand voltage ( $U_{imp}$ )	4kV
Rated Current of the Assembly ( $I_{na}$ )	63A/100A
Rated Current of an Outgoing Circuit $I_{nC}$	RCBO <b>ADA1**G</b> - 40A - 45A (Marked Rated Current on Device) RCBO <b>ADA3**G</b> - 6A - 32A (Marked Rated Current on Device)
Rated Conditional Short Circuit of the Assembly ( $I_{cc}$ )	Annex ZB: 16kA rms at 250V, power factor 0.6 with equipment and arrangements specified in Hager's technical documentation/catalogue
Protection against electric shock	Consumer Unit shall be installed in an electrical system conforming to IE 60364 / BS 7671
Rated Diversity Factor (RDF) / Values of assumed loading	2 Way to 3 Way - 0.8, 4 Way to 5 Way - 0.7, 6 Way to 9 Way - 0.6, 10 Way and above - 0.5
<p>Note: RDF only applies to continuously and simultaneously loaded circuits. In principle, this means adjacent circuit breakers having a load on time exceeding 30 minutes or where a load not exceeding 30 minutes has an 'off' time less than the 'on' time will need to have the rated diversity factor applied as indicated.</p>	
Pollution Degree	2
Types of System Earthing for which the assembly is designed	TNC-S, TT and TN-S when installed in an electrical system conforming to BS 7671
Intended locations	Indoor use only
Stationary assembly	
Degree of protection	IP2XC with door open / closed and full compliment of devices / blanks fitted. Note: Where cables are installed through the top wall of the enclosure, gaps of IP4X to be maintained.
Intended use	Intended for use in domestic (residential) or similar premises
Electromagnetic compatibility (EMC) classification	EMC environment B
External design	Wall mounted, surface type, enclosed assembly.
Mechanical impact protection	IK05
Type of construction	Fixed parts
Incoming Line/Neutral terminal (80 - 100A board)	50mm <sup>2</sup>
Incoming Line/Neutral terminal (63A board)	25mm <sup>2</sup>
Incoming Earth Terminal	16mm <sup>2</sup>
Warranty - Hager undertakes to replace or repair at its discretion products should they become inoperable within the time periods as stated. - 2 Years	

**Accessories**

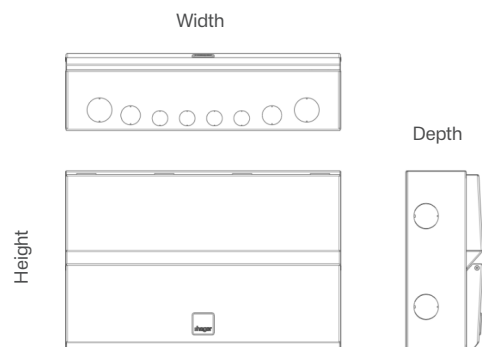
Cable protector plate	Provides protection for cables entering from the rear of the board	<b>VM02CE</b>
Rear stand off plates	To stand consumer unit off wall allowing surface mounted cables to enter through rear of unit.	<b>VM01SP</b>

**Devices**

Single Pole, Single Mod RCBO 6kA, 40A - 45A Type A	<b>ADA1**G</b>
Single Pole, Single Mod Reduced Height RCBO 6kA, 6A - 32A Type A	<b>ADA3**G</b>

**Design Dimensions (mm)**

	Enclosure Size		
	4	5	7
Height	204	204	204
Width	293	364	472
Depth	102.5	102.5	102.5



- CT2 connection as per 534.4.3.2 BS 7671
- Optical status indication for cartridge replacement  
**Green = Healthy, Red = Replace**
- Replacement cartridge reference : **SPL013Z**
- Pluggable surge protection module for ease of replacement
- Cartridge can be routinely checked and changed if required without interrupting supply to loads
- No secondary back-up protection required.



## SPD P+N TN-C-S/TNS/TT Uc 275V In 20kA I<sub>max</sub> 40kA

### I<sub>max</sub> 40kA Technical Features

Number of modules	1
<b>Dimensions</b>	
Depth	74 mm
Height	84 mm
Width	17.5 mm
<b>Electric current</b>	
Max. discharge (I <sub>max</sub> ) L-N(PEN)/ N-PE	40 kA
Max. overcurrent protection device, parallel connection (fuse)	100 A
<b>Equipment</b>	
With remote signalling contact	No
<b>Frequency</b>	
Frequency	50 - 60 Hz
<b>Installation, mounting</b>	
Nominal tightening torque	1.2 - 2.5 Nm
<b>Network configuration</b>	
Network type	TN-C-S TN-S TT
<b>Standards</b>	
Requirement class IEC 61643	T2
<b>Use conditions</b>	
Operating temperature	-40 - 60 °C
<b>Voltage</b>	
Continuous operating voltage U <sub>c</sub> according to IEC 61643-1	275 V
Rated operational voltage U <sub>e</sub>	230 - 230 V
Voltage level U <sub>p</sub> L-N/PEN IEC 61643-11	1.5 kV
<b>Sustainability</b>	
REACH conform	Yes
RoHS conform	Yes