

# Masterpact MVS

LV power circuit breakers & switch disconnectors  
800 to 3200A



**Schneider**  
Electric

# Schneider Electric

The global specialist in  
energy management





# Schneider Electric, undisputed global leader in Power Circuit Breakers

Ever since the launch of first circuit breaker in 1923

- > At forefront in developing products with cutting-edge technology
- > Masterpact NT/NW Power Circuit Breakers with integrated metering, communication capabilities & high performance levels have set new standards around the world
- > We also understand the optimum needs of our customers and we continue to innovate

Inheriting the key values of Masterpact Family–

“Safety, Reliability and Simplicity”, now we introduce



# Masterpact MVS

from 800 to 3200A



## Masterpact Value System

- > Single frame size for complete range
- >  $I_{cu} = I_{cs} = I_{cw}$  (1 sec) = 50kA
- > Microprocessor based ET trip system



Safety



Reliability



Simplicity

# Masterpact MVS stands for...

Safety



Reliability



Simplicity





# Masterpact MVS stands for ...Safety

## Standard safety shutters with locking provision

- > the safety shutters automatically block access to contact clusters & no live parts are accessible. The shutter-locking system is made up of a moving block that can be padlocked.



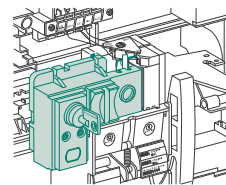
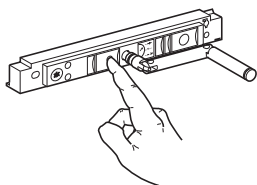
## Ready to Close Contact

- > The "ready to close" position of the circuit breaker is indicated by a mechanical indicator and a PF changeover contact. This signal indicates that all safety parameters are full-filled & valid.



## Locking Arrangements

- > The positive locking of "connected", "disconnected" and "test" positions is built in feature in draw-out breakers & the exact position is obtained when the racking handle blocks. A release button is used to free it.
- > Door interlock inhibits the opening of cubicle door when breaker is in "connected" or "test" position.
- > Push button locking, blocks access to ON/OFF pushbuttons and may be locked with padlocks, screws or lead seal.
- > The circuit breaker is locked in OFF position using key locks by physically maintaining the opening pushbutton pressed down.

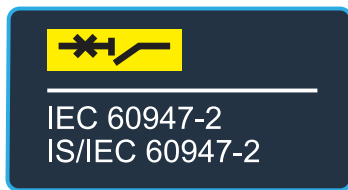








# Masterpact MVS stands for...Reliability



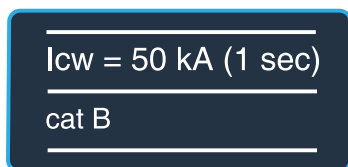
Conforms to IS/IEC 60947-2 for circuit breaker & 60947-3 for switch disconnecter functions.

> Tested & certified at CPRI/ERDA



High electrical & mechanical life

> 10000 mechanical operations & 5000 electrical operations without maintenance up to 1600A



Complete range with Icw = 50kA (1sec) with no derating up to 50°C



Intelligent micro processor based ET trip system

- > 2I - Overload, Short-circuit protections
- > 5S - Overload, Short-circuit & Instantaneous protections
- > 6G - Overload, Short-circuit, Instantaneous & ground-fault protections



Suitability for Copper & Aluminium terminations

> Offers flexibility in busbar terminations for Indian environmental conditions



Fully rated neutral with protection

> All 4Pole breakers are with fully rated neutral & can be protected against overload & short-circuit with settings at 50%-100%-OFF





# Masterpact MVS stands for... **Simplicity**



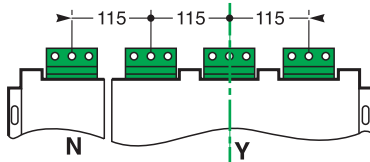
## Single frame size

- > Masterpact MVS offers single frame size for the complete range of circuit breakers & switch dis-connector versions up to 3200A which helps in faster design & delivery of distribution systems.



## Common height, width & depth

- > Draw out breaker
  - 439 x 441 x 395mm for 3Pole
  - 439 x 556 x 395mm for 4Pole
- > Fixed breaker
  - 352 x 422 x 297mm for 3Pole
  - 352 x 537 x 297mm for 4Pole



## Single pole pitch of 115mm

- > Enables termination of aluminium/copper busbars or cables.



## Flexibility in terminal orientation

- > Simply turn a horizontal rear connector 90° to make it a vertical connector.



## Single bolt for motor mechanism

- > Manual operated breaker can be converted in to Electrical breaker at installation with less down time.



## Common accessories

- > Accessories & auxiliaries are common for the complete range of Masterpact family, thus reducing the inventory costs.





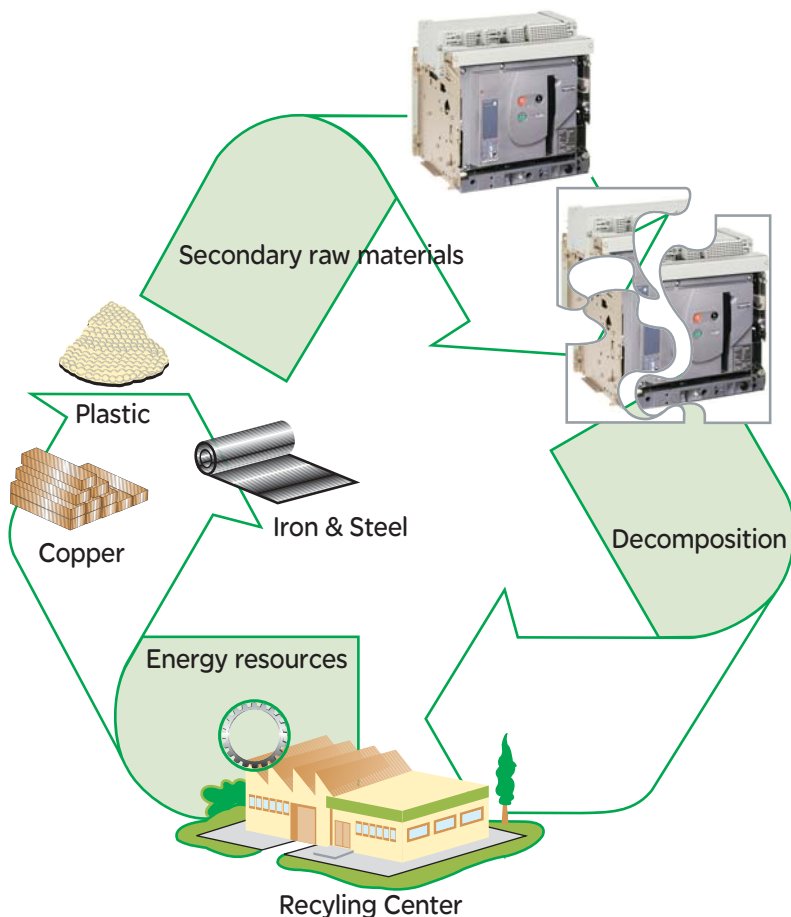


# Environmentally responsible

> Masterpact MVS is part of Schneider Electric's energy efficiency approach. Designed for easy disassembly and recycling at end of life, Masterpact MVS complies with environmental directives RoHS\* and WEEE\*\*, and with ISO 14001 standards, thanks to non-polluting factories.

Schneider Electric fully takes into account environmental requirements, starting right from the design phase of every product through to the end of its service life:

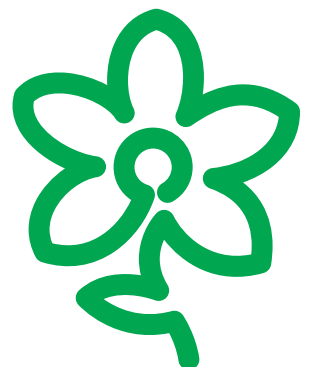
- the materials used for Masterpact MVS are not potentially dangerous to the environment
- the production facilities are non-polluting in compliance with the ISO 14001 standard
- the energy dissipated per pole is low, making energy losses insignificant
- the materials are marked to facilitate sorting for recycling at the end of product service life.



Masterpact MVS power circuit breakers and accessories can be recycled and reused optimally.

\* RoHS = Restriction of Hazardous Substances

\*\* WEEE = Waste Electrical and Electronic Equipment









Ideal for variety of **Applications**

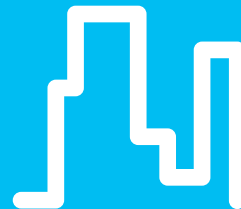
Energy &  
infrastructure



Industry



Buildings



Residential







# Masterpact MVS

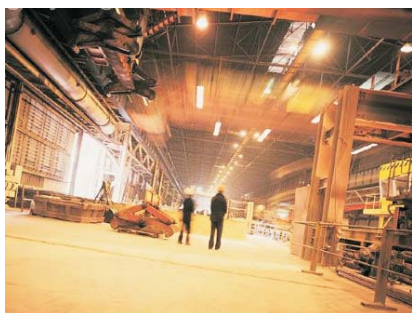
## Benefits for every customer



## Panel builders / Contractors

- > Single frame size from 800A-3200A with identical door cut-outs
- > Suitable for Copper & Aluminium termination with a single pole pitch of 115mm.
- > Terminal orientation can be converted from horizontal to vertical and vice-versa at workshop
- > Direct mounting Door frames (Escutcheon) without drilling any holes.
- > Front fitted accessories like Under-volt release, shunt release & closing coil for complete range.
- > Conversion of manual operated breaker in to electrical operated, with single bolt fixing

*Masterpact MVS with single frame size, common accessories helps to increase the shop floor efficiency, enabling faster delivery of switch boards*



## End Users

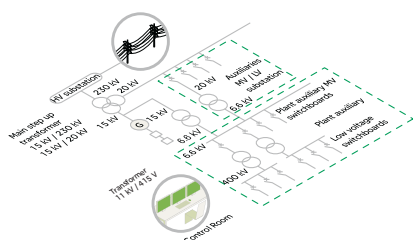
- > Moulded case design ensures high endurance without maintenance
- > Intelligent Microprocessor based trip units with thermal memory
- > Overload run alarm & individual LED indications enable fault identification
- >  $I_{cu}=I_{cs}=I_{cw}(1 \text{ sec})=50\text{kA}$  ensures complete selectivity
- > Inbuilt safety shutter & interlocks
- > Ready-to-close contact signal indicates that all safety parameters are full-filled & valid.
- > No derating up to 50°C
- > All 4Pole breakers are with fully rated neutral with adjustable protections at OFF-50%-100%

*Masterpact MVS answers even to the most stringent application with most reliable distribution systems assuring continuity of service.*

## Designers

- > Conforms to IS/IEC 60947-2 for breakers & IS/IEC60947-3 for disconnectors
- > Intelligent Microprocessor based trip units with overload, short circuit & earth fault protections with in-built thermal memory
- >  $I_{cu}=I_{cs}=I_{cw}(1 \text{ sec}) = 50\text{kA}$
- > Typical design of shunt coil & closing coil helps in simple interlocking schemes
- > Ready-to-close contacts ensures safety parameters are full-filled enabling closure of breaker.
- > Masterpact MVS respects the environment throughout their life cycle

*Masterpact MVS is the answer to the needs of your customers with flexibility to modify system design during the design phase*







Common characteristics

Number of poles		3/4
Rated insulation voltage (V)	Ui	1 000
Impulse withstand voltage (kV)	Uimp	12
Rated operational voltage (V AC 50/60 Hz)	Ue	440
Suitability for isolation	IEC 60947-2	Yes
Degree of pollution	IEC 60664-1	4

Basic circuit-breaker

Circuit-breaker as per IEC 60947-2

Rated current (A) at 50 °C	In
Rating of 4th pole (A)	
Ultimate breaking capacity (kA rms) V AC 50/60 Hz	Icu
Rated service breaking capacity (kA rms)	Ics
Rated short-time withstand current (kA rms) V AC 50/60 Hz	Icw 1s 3s
Rated making capacity (kA peak) V AC 50/60 Hz	Icm
Utilisation category	
Closing time	(ms)
Opening time	(ms)

Switch-disconnector according to IEC 60947-3

Rated making capacity (kA peak) AC23 category	Icm V AC 50/60 Hz
Rated short-time withstand current (kA rms) AC23 category	Icw V AC 50/60 Hz 1s

Installation/connection/maintenance

Service life C/O cycles x 1000	Mechanical	with maintenance
		without maintenance
	Electrical	without maintenance
Connection		Horizontal
		Vertical
Dimension (mm) (H x W x D)	Drawout	3P
		4P
	Fixed	3P
		4P
Weight (kg)	Drawout	3P/4P
	Fixed	3P/4P

(1) 3200A: with vertical connections for drawout type circuit breaker

	MVS08 N	MVS10 N	MVS12 N	MVS16 N	MVS20 N	MVS25 N	MVS32 N
	800	1000	1250	1600	2000	2500	3200 <sup>(1)</sup>
	800	1000	1250	1600	2000	2500	3200
	50	50	50	50	50	50	50
	50	50	50	50	50	50	50
	50	50	50	50	50	50	50
	35	35	35	35	35	35	35
	105	105	105	105	105	105	105
	B						
	<70						
	<40						
	MVS08 NA	MVS10 NA	MVS12 NA	MVS16 NA	MVS20 NA	MVS25 NA	MVS32 NA
	105	105	105	105	105	105	105
	50	50	50	50	50	50	50
	20				16		
	10				8		
	5				3		
	Yes						
	Yes						
	439 x 441 x 395						
	439 x 556 x 395						
	352 x 422 x 297						
	352 x 537 x 297						
	78/95						
	42/52						



Range	Current Rating	Type	Pole	Installation	Protection
Masterpact MVS (from 800 to 3200A) Icu=Ics=Icw (1 sec)=50kA					
MVS	08 10 12 16 20 25 32	N NA	3P 4P	MF EF MW EW	2I 6G D
Digits used: 3	2	1or2	2	2	1or2
					12 digit reference no.
					<b>Protections offered</b> 2I LI 6G LSIG D No Protection for Switch
				M Manually Operated ACB/SD E Electrical Operated ACB/SD F Fixed type ACB/SD W draw-out type ACB/SD	<b>Installation Type</b>
				3P 4P	<b>Number of Poles</b> 3 Poles 4 Poles
		<b>Breaker/ Switch Disconnecter</b>			
		N	Circuit Breaker with Micro processor based ET trip system Icu=Ics=Icw(1sec)=50kA		
		NA	Switch disconnector without Protection Icu=Ics=Icw(1sec)=50kA		
				08 10 12 16 20 25 32	<b>Current Rating</b> 800 Amps 1000Amps 1250Amps 1600Amps 2000Amps 2500Amps 3200Amps

example 1

MVS32N4PEW6G

MVS	32	N	4P	EW	6G
Masterpact MVS	3200A	Breaker 50kA	4 Pole	Electrical operated draw-out type	ET trip system 6G (LSIG)

example 2

MVS16NA3PMWD

MVS	16	NA	3P	MW	D
Masterpact MVS	1600A	Switch 50kA	3 Pole	Manual operated draw-out type	Switch disconnector without protection

Type	Rated Current	Air Circuit Breakers				Switch Disconnectors	
		3 Pole		4 Pole		3 Pole without Protections	4 Pole without Protections
		LI Protections	LSIG Protections	LI Protections	LSIG Protections		
Manual Fixed	800A	MVS08N3PMF2I	MVS08N3PMF6G	MVS08N4PMF2I	MVS08N4PMF6G	MVS08NA3PMFD	MVS08NA4PMFD
	1000A	MVS10N3PMF2I	MVS10N3PMF6G	MVS10N4PMF2I	MVS10N4PMF6G	MVS10NA3PMFD	MVS10NA4PMFD
	1250A	MVS12N3PMF2I	MVS12N3PMF6G	MVS12N4PMF2I	MVS12N4PMF6G	MVS12NA3PMFD	MVS12NA4PMFD
	1600A	MVS16N3PMF2I	MVS16N3PMF6G	MVS16N4PMF2I	MVS16N4PMF6G	MVS16NA3PMFD	MVS16NA4PMFD
	2000A	MVS20N3PMF2I	MVS20N3PMF6G	MVS20N4PMF2I	MVS20N4PMF6G	MVS20NA3PMFD	MVS20NA4PMFD
	2500A	MVS25N3PMF2I	MVS25N3PMF6G	MVS25N4PMF2I	MVS25N4PMF6G	MVS25NA3PMFD	MVS25NA4PMFD
	3200A	MVS32N3PMF2I	MVS32N3PMF6G	MVS32N4PMF2I	MVS32N4PMF6G	MVS32NA3PMFD	MVS42NA4PMFD
Electrical Fixed	800A	MVS08N3PEF2I	MVS08N3PEF6G	MVS08N4PEF2I	MVS08N4PEF6G	MVS08NA3PEFD	MVS08NA4PEFD
	1000A	MVS10N3PEF2I	MVS10N3PEF6G	MVS10N4PEF2I	MVS10N4PEF6G	MVS10NA3PEFD	MVS10NA4PEFD
	1250A	MVS12N3PEF2I	MVS12N3PEF6G	MVS12N4PEF2I	MVS12N4PEF6G	MVS12NA3PEFD	MVS12NA4PEFD
	1600A	MVS16N3PEF2I	MVS16N3PEF6G	MVS16N4PEF2I	MVS16N4PEF6G	MVS16NA3PEFD	MVS16NA4PEFD
	2000A	MVS20N3PEF2I	MVS20N3PEF6G	MVS20N4PEF2I	MVS20N4PEF6G	MVS20NA3PEFD	MVS20NA4PEFD
	2500A	MVS25N3PEF2I	MVS25N3PEF6G	MVS25N4PEF2I	MVS25N4PEF6G	MVS25NA3PEFD	MVS25NA4PEFD
	3200A	MVS32N3PEF2I	MVS32N3PEF6G	MVS32N4PEF2I	MVS32N4PEF6G	MVS32NA3PEFD	MVS42NA4PEFD
Manual Drawout	800A	MVS08N3PMW2I	MVS08N3PMW6G	MVS08N4PMW2I	MVS08N4PMW6G	MVS08NA3PMWD	MVS08NA4PMWD
	1000A	MVS10N3PMW2I	MVS10N3PMW6G	MVS10N4PMW2I	MVS10N4PMW6G	MVS10NA3PMWD	MVS10NA4PMWD
	1250A	MVS12N3PMW2I	MVS12N3PMW6G	MVS12N4PMW2I	MVS12N4PMW6G	MVS12NA3PMWD	MVS12NA4PMWD
	1600A	MVS16N3PMW2I	MVS16N3PMW6G	MVS16N4PMW2I	MVS16N4PMW6G	MVS16NA3PMWD	MVS16NA4PMWD
	2000A	MVS20N3PMW2I	MVS20N3PMW6G	MVS20N4PMW2I	MVS20N4PMW6G	MVS20NA3PMWD	MVS20NA4PMWD
	2500A	MVS25N3PMW2I	MVS25N3PMW6G	MVS25N4PMW2I	MVS25N4PMW6G	MVS25NA3PMWD	MVS25NA4PMWD
	3200A	MVS32N3PMW2I	MVS32N3PMW6G	MVS32N4PMW2I	MVS32N4PMW6G	MVS32NA3PMWD	MVS42NA4PMWD
Electrical Drawout	800A	MVS08N3PEW2I	MVS08N3PEW6G	MVS08N4PEW2I	MVS08N4PEW6G	MVS08NA3PEWD	MVS08NA4PEWD
	1000A	MVS10N3PEW2I	MVS10N3PEW6G	MVS10N4PEW2I	MVS10N4PEW6G	MVS10NA3PEWD	MVS10NA4PEWD
	1250A	MVS12N3PEW2I	MVS12N3PEW6G	MVS12N4PEW2I	MVS12N4PEW6G	MVS12NA3PEWD	MVS12NA4PEWD
	1600A	MVS16N3PEW2I	MVS16N3PEW6G	MVS16N4PEW2I	MVS16N4PEW6G	MVS16NA3PEWD	MVS16NA4PEWD
	2000A	MVS20N3PEW2I	MVS20N3PEW6G	MVS20N4PEW2I	MVS20N4PEW6G	MVS20NA3PEWD	MVS20NA4PEWD
	2500A	MVS25N3PEW2I	MVS25N3PEW6G	MVS25N4PEW2I	MVS25N4PEW6G	MVS25NA3PEWD	MVS25NA4PEWD
	3200A	MVS32N3PEW2I	MVS32N3PEW6G	MVS32N4PEW2I	MVS32N4PEW6G	MVS32NA3PEWD	MVS42NA4PEWD



## Order form

Order ref no:

Date:

Product ref no:

Masterpact MVS  
Circuit breaker and  
Switch-disconnectors

To indicate your choices, check the applicable square boxes  
and enter the appropriate information in the rectangles

Circuit breaker or switch-disconnector	Quantity
Rating	A
Circuit breaker / Switch Disconnector	N/ NA
Number of poles	3 or 4
Type of equipment	Fixed <input type="checkbox"/> Drawout with chassis <input type="checkbox"/> Drawout without chassis (moving part only) <input type="checkbox"/> Chassis alone <input type="checkbox"/>
Operating Mechanism	Manual operated <input type="checkbox"/> Electrical operated <input type="checkbox"/>
MCH - Gear Motor	V <input type="checkbox"/>
XF - Closing voltage release	V <input type="checkbox"/>
MX - Shunt/opening voltage release	V <input type="checkbox"/>
<b>ET Trip System</b>	
2I : basic protection (long time + inst.)	<input type="checkbox"/>
5S : selective protection (long time + short time + inst.)	<input type="checkbox"/>
6G : selective + earth-fault protection (long time + short time + inst. + earth-fault)	<input type="checkbox"/>
LR - long-time rating plug	Standard 0.4 to 1 Ir

Connection				
Horizontal	Top	<input type="checkbox"/>	Bottom	<input type="checkbox"/>
	Top	<input type="checkbox"/>	Bottom	<input type="checkbox"/>
Vertical	Top	<input type="checkbox"/>	Bottom	<input type="checkbox"/>
	Top	<input type="checkbox"/>	Bottom	<input type="checkbox"/>

**Indication contacts****OF - ON/OFF indication contacts**

Standard	1 block of 4 OF	10 A-240/380V AC
Additional	1 block of 4 OF	6 A-240/380V AC

**SDE - "fault-trip" indication contact**

Standard	1 SDE	5A -240/380V AC
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**Optionals****Carriage switches**

CE - "connected" position	Max. 3	qty	
CD - "disconnected" position	Max. 3	qty	
CT - "test" position	Max. 3	qty	

Remote tripping	MN - under voltage release	V	
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	R - delay unit (fixed time delay)	0.25s	
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	Rr - adjustable delay unit	0.5s....3s	
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TCE - external sensor (CT) fro neutral of 3 Phase- 4 Wire systems	400/2000A	
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TCE - external sensor (CT) fro neutral of 3 Phase- 4 Wire systems	1000/3200A	
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PF - "Ready to close" contact	5 A-240/380V AC	
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**Notes:**

All draw-out breakers/switches will be supplied with Chassis &amp; safety shutter.

All breakers/switches will be supplied with Escutcheon as standard.

For Electrical operated breakers/switches, voltage ratings of MCH, XF &amp; MX to be filled in:

Refer to product catalogue for available voltage ratings of MCH/XF/MX &amp; MN.

# Masterpact MVS range of ACBs are complimented by Compact CVS range of MCCBs

- **Compact CVS is packed with world class features and designed especially to meet technical & commercial needs of customers**



**Compact CVS 100-800A**

## **16 to 630A in 3/ 4 pole versions**

- Conforms to IS/IEC 60947-1 & 2
- Breaking Capacities: 25kA (16-250A), 36kA (16A-630A), 50kA (400&630A)
- Complete range with Service breaking capacity,  $I_{cs}=100\%$  Ultimate breaking capacity,  $I_{cu}$
- Two frame sizes for complete range helps is faster design & delivery of distribution systems
- Thermal magnetic trip units (up to 250A) & electronic trip units ( 400& 630A)
- Fault current limitation technology helps to reduce the thermal stresses & thus increases the life of cables and installation
- Front accessible common snap fit auxiliaries simplifies the installation procedures & reduces inventory costs
- Suitability for Isolation ensures that the circuit is isolated from the remainder of the system thus the personnel carry out work with complete safety
- Class 2 front face reinforces safety with unique modular construction where the auxiliaries are isolated from the main current path
- MCCBs can be pad locked & with key lock option ensuring safety and better control on installation
- High electrical & mechanical endurances
- Unique electronic ground fault protection device with individual LEDs for system healthiness & fault trip indications
- Systems can be upgraded with easily retrofit table with Compact CVS or Compact NSX without any modifications in the panel design

## **Compact CVS also available in 800A frame size in 3/ 4 Pole versions**

- Breaking Capacities : 35kA & 50kA with  $I_{cs}=100\%$   $I_{cu}$
- Compact CVS range is complete with 800A offering:
- Line-load reversibility
- High endurances assures continuous performance
- Available in thermal magnetic version with both adjustable over-load & short circuit settings
- Wide range of accessories & auxiliaries
- Sufficient pole pitch helps to terminate copper and Aluminium bus bars or cables
- Compact CVS respects the environment throughout the life cycle & confirms to ROHS/WEEE norms

*Kindly contact your nearest sales office to get your copy of Compact CVS Catalogue*



# Global specialist in Energy Management



Visit us at : [www.schneider-electric.co.in](http://www.schneider-electric.co.in)



For queries contact us at:

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1800 103 0011 (Airtel)

Phone: +91 11 4168 2434/35



For more information visit our website at: [www.schneider-electric.co.in](http://www.schneider-electric.co.in)

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General numbers : 011-41682434/35, email : [in-care@in.schneider-electric.com](mailto:in-care@in.schneider-electric.com)