



# Surge Protective Devices

## OVR NE12 Series - Enclosed SPD

Power and productivity  
for a better world™







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The OVR NE12 enclosed surge protective device (SPD) is the latest addition to ABB's extensive range of surge protection products. It is designed to be installed at the service entrance, thereby protecting the entire facility from the harmful effects of transient surges. These surges are the result of:

- Direct and indirect lightning strikes
- Power company load switching
- Upstream load switching at other facilities

**Extensive damage and expensive repairs can result from these types of disturbances if surge protection is not present.**

## Lightning Strikes

A lightning strike (direct or indirect) can have a destructive or disturbing effect on installations located up to several miles from the actual point of the strike. During a storm, underground cables can transmit energy from a lightning strike to equipment installed inside buildings.

A lightning protection device (such as a lightning rod or Faraday cage) installed on a building to protect against the risk of a direct strike can increase the risk of damage to electrical equipment connected to the main power supply near or inside the building.

The lightning protection device diverts the high strike current to ground, considerably raising the potential of the ground close to the building on which it is installed. This causes overvoltages on the electrical equipment directly via the ground terminals and induced via the underground supply cables.

## Switching Effects on Power Distribution

The switching of transformers, motors or inductances in general, variation of load, disconnection of circuit breakers or cut outs lead to overvoltages that penetrate a building. The closer the building is to a generating station, substation or upstream switching point, the higher the overvoltages may be.

**ABB recommends the installation of the OVR NE12 enclosed SPD wherever uptime is a critical element of a facility or operation.**

## Features & Benefits

The OVR NE12 is a multistage protector with fast acting varistor (MOV) and EMI/RFI noise attenuation filter to limit overvoltage to values compatible with the sensitive equipment connected to the network. In addition to the OVR NE12, ABB recommends adding OVR DIN rail SPDs at branch panels and equipment, creating a multi-level approach to protection.

### General

- NEMA 12 enclosure
- All mode protection (L-L/L-N/L-G/N-G)
- Auxiliary contacts for remote monitoring
- Safety disconnect, fused
- LED power on/fault indicator
- Audible alarm

### MOV Technology

- 160kA or 320kA per phase
- Replaceable MOV blocks
- Visual and audible MOV replacement indication

### Surge Counter/Diagnostic LCD Display (Optional)

- Count of surges 2kA and higher with time and date
- Visual diagnostic information

## Applications

The OVR NE12 is suitable for protection for all manner of facilities and operations. It is designed with a NEMA Type 12 enclosure, and rated as a Type 2 SPD, requiring indoor installation on the load side of the main breaker or fuse.

Here are some examples of operations that would benefit from an OVR NE12 enclosed SPD:

- Critical power (hospitals, data centers, etc)
- Renewable energy
- Water/wastewater
- Communications
- Manufacturing
- Commercial

## Specifications

- Type 2 Surge Protective Device
- UL 1449, 3rd Edition Listed
- NEMA 12 enclosure
- Three service voltages (AC): 240/120V Split Phase, 480V Delta and 480/277V Wye
- 160kA or 320kA per phase protection
- Short circuit current rating (SCCR): 200kA

## Overvoltages due to direct lightning strikes

These can take two forms:

- When lightning **strikes a lightning conductor or the roof of a building** which is grounded, the lightning current is dissipated into the ground. The impedance of the ground and the current flowing through it create large difference of potential: this is the overvoltage. This overvoltage then propagates throughout the building via the cables, damaging equipment along the way.
- When lightning **strikes an overhead low voltage line**, the strike produces high currents which penetrate into the building creating large overvoltages. The damage caused by this type of overvoltage is usually catastrophic (e.g. fire in the electrical switchboard causing the destruction of buildings and industrial equipment) and results in explosions.



Direct lightning strike on a lightning conductor or the roof of a building



Direct lightning strike on an overhead line

## Overvoltages due to the indirect effects of lightning strikes

Overvoltages are also produced when lightning strikes in the vicinity of a building, due to the increase in potential of the ground at the point of impact. The electromagnetic fields created by the lightning current generate inductive and capacitive coupling, leading to other overvoltages.

Within a radius up to several kilometers, the electromagnetic field caused by lightning in clouds can also create sudden increases in voltage. Although less spectacular than in the previous case, irreparable damage is also caused to sensitive equipment such as fax machines, computer power supplies and safety and communication systems.



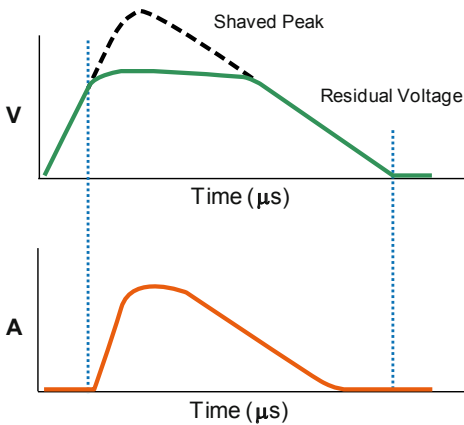
Increase in ground potential



Magnetic field



Electrostatic field



\* Graph depicts an 8/20 $\mu$ s wave

**Notes:**

Test wave 8/20 $\mu$ s according to IEEE # C62.62-200/UL 1449  
 The first number corresponds to the time from 10% to 90% of its peak value (8 $\mu$ s).  
 The second number corresponds to the time taken for the wave to descend to 50% of its peak value (20 $\mu$ s).

## SPD Terminology

**8/20 wave:**

Current waveform which passes through equipment when subjected to an overvoltage (low energy).

**Type 2 surge protective device (SPD)**

Permanently connected SPDs intended for installation on the load side of the service equipment overcurrent device, including SPDs located at a branch panel. It has successfully passed testing to the standard with the 8/20 wave (class II test).

**Metal oxide varistor (MOV):**

A varistor is an electronic component with a “diode like” nonlinear current-voltage characteristic, used to protect circuits against excessive transient voltages. Most commonly composed of metal oxides.

**Maximum continuous operating voltage (MCOV):**

The maximum designated root mean square (rms) value of power frequency voltage that may be applied continuously between the terminals of the SPD.

**Nominal discharge current (In):**

Peak current value of an 8/20 waveform which the SPD is rated for based on the test program.

**Maximum discharge current (Imax):**

Peak current value of an 8/20 waveform which can be safely discharged by the SPD, with an amplitude complying with the class II operating test sequence.  $I_{max} > I_n$

**Short circuit current rating (SCCR):**

Maximum symmetrical fault current, at rated voltage, that the SPD can withstand without sustaining damage that exceeds acceptable criteria or creates a hazardous operating condition.

**Voltage protection rating (VPR):**

The value of the VPR is determined as the nearest highest value, taken from Table 63.1 of ANSI/UL 1449 3rd Edition, to the measured limiting voltage determined during the transient voltage surge suppression test using the combination wave generator at a setting of 6kV, 3kA.

## Common mode and / or differential mode protection

**Common mode**

Common mode overvoltages appear between the live conductors and ground, e.g. phase/ground or neutral/ground.

A live conductor not only refers to the phase conductors but also to the neutral conductor.

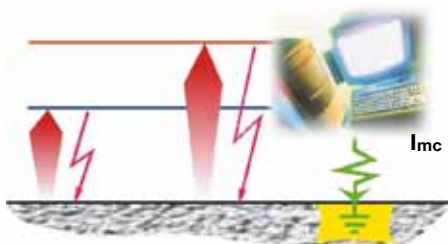
This overvoltage mode destroys equipment connected to ground (class I equipment) and also equipment not connected to ground (class II equipment) which is located near a grounded mass and which does not have sufficient electrical isolation (a few kilovolts).

Class II equipment not located near a grounded mass is theoretically protected from this type of attack.

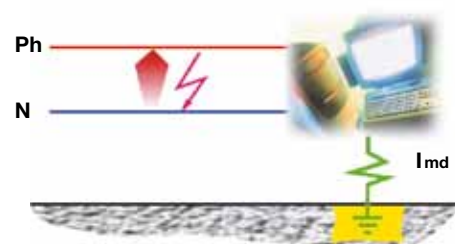
**Differential mode**

Differential mode overvoltages circulate between live conductors: phase/phase or phase/neutral.

These overvoltages have a potentially high damaging effect for all equipment connected to the electrical network, especially ‘sensitive’ equipment.



Note:  
Common mode overvoltages affect all grounding systems.





**Product Information**  
**Product Selection**  
**Technical Data**



**Replaceable MOV  
Blocks**

**Safety Disconnect,  
Fused**



**State Indicator +  
Surge Counter/ LCD  
(optional)**

**Choosing the Correct Model**

There are three steps to choosing the correct OVR NE12 model:

**1) Select service voltage**

Consult qualified personnel if the facility or operation service voltage is unknown.

The OVR NE12 is available in three service voltages:

- 480V Delta
- 480Y/277V
- 240/120V Split Phase

**2) Choose the protection level**

The protection level is the maximum discharge current ( $I_{max}$ ) per phase. Each MOV is capable of withstanding multiple surges below the maximum surge level.

Two protection levels are available:

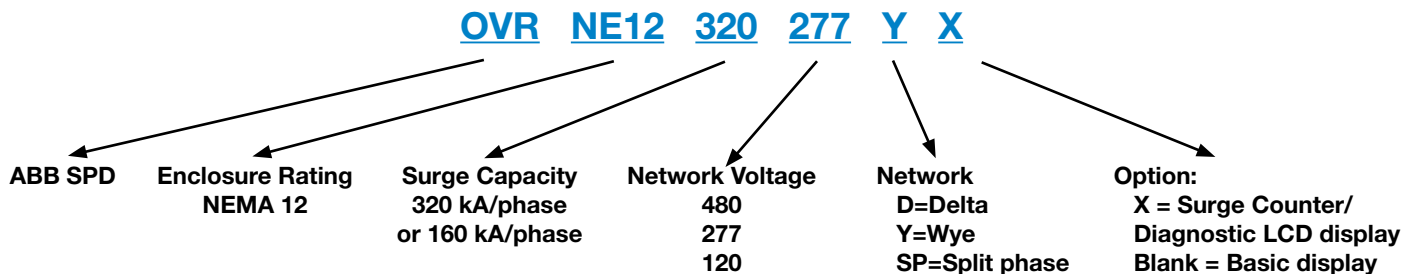
- 160kA per phase
- 320kA per phase

**3) Choose a basic display or the surge counter/diagnostic LCD display**

- Basic display: LED lights and alarm
- Surge counter/diagnostic LCD display: LED lights, alarm and LCD screen displaying percentage protection level, surge count and last surge date

Once these three steps are complete, consult the tables below and on Page 7 to select the unit. If technical assistance is required, please call ABB Technical Support at (888) 385-1221 option #4.

**OVR NE12 Enclosed SPD**



Designation	Service Voltage	Features		
		Default Visualization Green/Red LED	Audible Alarm	Surge Counter
OVR NE12 320 480D X	480V Delta	Yes	Yes	Yes
OVR NE12 160 480D X	480V Delta	Yes	Yes	Yes
OVR NE12 320 277Y X	480Y/277V	Yes	Yes	Yes
OVR NE12 160 277Y X	480Y/277V	Yes	Yes	Yes
OVR NE12 320 120SP X	240/120V Split Phase	Yes	Yes	Yes
OVR NE12 160 120SP X	240/120V Split Phase	Yes	Yes	Yes
OVR NE12 320 480D	480V Delta	Yes	Yes	No
OVR NE12 160 480D	480V Delta	Yes	Yes	No
OVR NE12 320 277Y	480Y/277V	Yes	Yes	No
OVR NE12 160 277Y	480Y/277V	Yes	Yes	No
OVR NE12 320 120SP	240/120V Split Phase	Yes	Yes	No
OVR NE12 160 120SP	240/120V Split Phase	Yes	Yes	No



### OVR NE12 Enclosed SPD

Surge Capacity Per Phase kA	Service Voltage	Catalog Number	List Price	Description
320	480V Delta	OVRNE12320480DX	<b>\$ 11,400</b>	OVR NE12 Enclosed SPD, 480V Delta, 320kA, w/ Surge Counter
		OVRNE12320480D	<b>10,525</b>	OVR NE12 Enclosed SPD, 480V Delta, 320kA
	480Y/277V	OVRNE12320277YX	<b>11,150</b>	OVR NE12 Enclosed SPD, 480Y/277V, 320kA, w/ Surge Counter
		OVRNE12320277Y	<b>10,275</b>	OVR NE12 Enclosed SPD, 480Y/277V, 320kA
	240/120V SP	OVRNE12320120SPX	<b>8,650</b>	OVR NE12 Enclosed SPD, 240/120V Split Phase, 320kA, w/ Surge Counter
		OVRNE12320120SP	<b>7,900</b>	OVR NE12 Enclosed SPD, 240/120V Split Phase, 320kA
160	480V Delta	OVRNE12160480DX	<b>7,925</b>	OVR NE12 Enclosed SPD, 480V Delta, 160kA, w/ Surge Counter
		OVRNE12160480D	<b>7,250</b>	OVR NE12 Enclosed SPD, 480V Delta, 160kA
	480Y/277V	OVRNE12160277YX	<b>8,000</b>	OVR NE12 Enclosed SPD, 480Y/277V, 160kA, w/ Surge Counter
		OVRNE12160277Y	<b>7,300</b>	OVR NE12 Enclosed SPD, 480Y/277V, 160kA
	240/120V SP	OVRNE12160120SPX	<b>6,500</b>	OVR NE12 Enclosed SPD, 240/120V Split Phase, 160kA, w/ Surge Counter
		OVRNE12160120SP	<b>6,000</b>	OVR NE12 Enclosed SPD, 240/120V Split Phase, 160kA

### Replacement Power Supply and MOV Block

Surge Capacity kA	Service Voltage	Catalog Number	List Price	Description
160	480V Delta	OVR1N160480PS	<b>\$ 1,050</b>	OVR NE12 Power Supply, 480V Delta, 160kA
		OVR1N160480	<b>1,025</b>	OVR NE12 MOV, 480V Delta, 160kA
	480Y/277V	OVR1N160277PS	<b>975</b>	OVR NE12 Power Supply, 480Y/277V, 160kA
		OVR1N160277	<b>1,025</b>	OVR NE12 MOV, 480Y/277V, 160kA
	240/120V SP	OVR1N160120PS	<b>975</b>	OVR NE12 Power Supply, 240/120V Split Phase, 160kA
		OVR1N160120	<b>1,000</b>	OVR NE12 MOV, 240/120V Split Phase, 160kA

### Service Parts and Accessories

Description	Catalog Number	List Price	Extended Description
3P SW 100A J FUSE 600V*	OS100GJ03	<b>Call for pricing</b>	Fusible Disconnect Switch - 480V Delta and 240/120V Split Phase
3P+N SW 100A J FUSE 600V*	OS100GJ04N2		Fusible Disconnect Switch - 480Y/277V
PSTL HDL 6X65MM BLACK	OHB65J6		Enclosure Door Handle for Fusible Disconnect Switch
PSTL SHAFT 6X150MM	OMP6X150		Metal Shaft for Fusible Disconnect Switch
3P LUG KIT 100A FUSED (6 LUGS)	OZXA-24		Terminal Lug Kit
WALL MOUNTING BRACKETS (4)	AA1206		Enclosure Mounting Brackets

\* Fuses by others (Type J 100A)

		OVRNE12320480DX	OVRNE12320480D
<b>Technical Characteristics</b>			
Service voltage		480V Delta	480V Delta
Application		Service entrance	Service entrance
Phases		3	3
Mode of protection		L-L / L-N / L-G / N-G	L-L / L-N / L-G / N-G
Surge capacity/phase (I <sub>max</sub> )	kA	320	320
Maximum Continuous Operating Voltage (MCOV)	V	550	550
Voltage Protection Rating (VPR - UL 3rd Ed.)			
L-N	V	/	/
L-L	V	1800	1800
L-G	V	1800	1800
N-G	V	/	/
Nominal discharge current (I <sub>n</sub> )	kA	10	10
Short circuit current rating (SCCR)	kA	200	200
AC power frequency	Hz	50-60	50-60
Thermal fuse		Type J 100A	Type J 100A
EMI/RFI filtering	dB	-30	-30
<b>Mechanical Characteristics</b>			
Connection terminals	Inches	1/4 - 5/16 - 3/8 - 1/2	1/4 - 5/16 - 3/8 - 1/2
Terminal torque	Nm	6-75	6-75
Auxiliary contact connection terminals	AWG	22 - 12	22 - 12
Auxiliary contact terminal torque	Nm	1	1
Front display		Yes	Yes
LED indicators		Yes	Yes
Audible alarm		Yes	Yes
Auxiliary contact		Yes	Yes
Surge counter		Yes	No
Enclosure material		Painted steel	Painted steel
Enclosure rating		NEMA 12	NEMA 12
Dimensions H x W x D (approx.)	Inches	24" x 16" x 8"	24" x 16" x 8"
Weight (approx.)	lbs	40	40
<b>Miscellaneous Characteristics</b>			
Stocking temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Operating temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Maximum altitude		6600 feet (2000 m)	6600 feet (2000 m)
Fire resistance according to UL 94		V0	V0
Approvals		ANSI/UL 1449 3rd Ed. Meets IEEE requirements	ANSI/UL 1449 3rd Ed. Meets IEEE requirements
<b>Replacement MOV Block</b>			
OVR1N160480PS (power supply)			
OVR1N160480			

# Technical Data

## OVRNE12320277YX, OVRNE12320277Y

OVR NE12  
Series

		OVRNE12320277YX	OVRNE12320277Y
<b>Technical Characteristics</b>			
Service voltage		480Y / 277V	480Y / 277V
Application		Service entrance	Service entrance
Phases		3	3
Mode of protection		L-L / L-N / L-G / N-G	L-L / L-N / L-G / N-G
Surge capacity/phase (I <sub>max</sub> )	kA	320	320
Maximum Continuous Operating Voltage (MCOV)	V	320	320
Voltage Protection Rating (VPR - UL 3rd Ed.)			
L-N	V	1200	1200
L-L	V	2000	2000
L-G	V	1200	1200
N-G	V	1200	1200
Nominal discharge current (I <sub>n</sub> )	kA	10	10
Short circuit current rating (SCCR)	kA	200	200
AC power frequency	Hz	50-60	50-60
Thermal fuse		Type J 100A	Type J 100A
EMI/RFI filtering	dB	-30	-30
<b>Mechanical Characteristics</b>			
Connection terminals	Inches	1/4 - 5/16 - 3/8 - 1/2	1/4 - 5/16 - 3/8 - 1/2
Terminal torque	Nm	6-75	6-75
Auxiliary contact connection terminals	AWG	22 - 12	22 - 12
Auxiliary contact terminal torque	Nm	1	1
Front display		Yes	Yes
LED indicators		Yes	Yes
Audible alarm		Yes	Yes
Auxiliary contact		Yes	Yes
Surge counter		Yes	No
Enclosure material		Painted steel	Painted steel
Enclosure rating		NEMA 12	NEMA 12
Dimensions H x W x D (approx.)	Inches	24" x 16" x 8"	24" x 16" x 8"
Weight (approx.)	lbs	40	40
<b>Miscellaneous Characteristics</b>			
Stocking temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Operating temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Maximum altitude		6600 feet (2000 m)	6600 feet (2000 m)
Fire resistance according to UL 94		V0	V0
Approvals		ANSI/UL 1449 3rd Ed. Meets IEEE requirements	ANSI/UL 1449 3rd Ed. Meets IEEE requirements
<b>Replacement MOV Block</b>			
OVR1N160277PS (power supply)			
OVR1N160277			

		OVRNE12320120SPX	OVRNE12320120SP
<b>Technical Characteristics</b>			
Service voltage		240/120V Split phase	240/120V Split phase
Application		Service entrance	Service entrance
Phases		2	2
Mode of protection		L-L / L-N / L-G / N-G	L-L / L-N / L-G / N-G
Surge capacity/phase (I <sub>max</sub> )	kA	320	320
Maximum Continuous Operating Voltage (MCOV)	V	150	150
Voltage Protection Rating (VPR - UL 3rd Ed.)			
L-N	V	900	900
L-L	V	1200	1200
L-G	V	800	800
N-G	V	800	800
Nominal discharge current (I <sub>n</sub> )	kA	10	10
Short circuit current rating (SCCR)	kA	200	200
AC power frequency	Hz	50-60	50-60
Thermal fuse		Type J 100A	Type J 100A
EMI/RFI filtering	dB	-30	-30
<b>Mechanical Characteristics</b>			
Connection terminals	Inches	1/4 - 5/16 - 3/8 - 1/2	1/4 - 5/16 - 3/8 - 1/2
Terminal torque	Nm	6-75	6-75
Auxiliary contact connection terminals	AWG	22 - 12	22 - 12
Auxiliary contact terminal torque	Nm	1	1
Front display		Yes	Yes
LED indicators		Yes	Yes
Audible alarm		Yes	Yes
Auxiliary contact		Yes	Yes
Surge counter		Yes	No
Enclosure material		Painted steel	Painted steel
Enclosure rating		NEMA 12	NEMA 12
Dimensions H x W x D (approx.)	Inches	24" x 16" x 8"	24" x 16" x 8"
Weight (approx.)	lbs	40	40
<b>Miscellaneous Characteristics</b>			
Stocking temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Operating temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Maximum altitude		6600 feet (2000 m)	6600 feet (2000 m)
Fire resistance according to UL 94		V0	V0
Approvals		ANSI/UL 1449 3rd Ed. Meets IEEE requirements	ANSI/UL 1449 3rd Ed. Meets IEEE requirements
<b>Replacement MOV Block</b>			
OVR1N160120PS (power supply)			
OVR1N160120			

# Technical Data

## OVRNE12160480DX, OVRNE12160480D

OVR NE12  
Series

		OVRNE12160480DX	OVRNE12160480D
<b>Technical Characteristics</b>			
Service voltage		480V Delta	480V Delta
Application		Service entrance	Service entrance
Phases		3	3
Mode of protection		L-L / L-N / L-G / N-G	L-L / L-N / L-G / N-G
Surge capacity/phase ( $I_{max}$ )	kA	160	160
Maximum Continuous Operating Voltage (MCOV)	V	550	550
Voltage Protection Rating (VPR - UL 3rd Ed.)			
L-N	V	/	/
L-L	V	1800	1800
L-G	V	1800	1800
N-G	V	/	/
Nominal discharge current ( $I_n$ )	kA	10	10
Short circuit current rating (SCCR)	kA	200	200
AC power frequency	Hz	50-60	50-60
Thermal fuse		Type J 100A	Type J 100A
EMI/RFI filtering	dB	-30	-30
<b>Mechanical Characteristics</b>			
Connection terminals	Inches	1/4 - 5/16 - 3/8 - 1/2	1/4 - 5/16 - 3/8 - 1/2
Terminal torque	Nm	6-75	6-75
Auxiliary contact connection terminals	AWG	22 - 12	22 - 12
Auxiliary contact terminal torque	Nm	1	1
Front display		Yes	Yes
LED indicators		Yes	Yes
Audible alarm		Yes	Yes
Auxiliary contact		Yes	Yes
Surge counter		Yes	No
Enclosure material		Painted steel	Painted steel
Enclosure rating		NEMA 12	NEMA 12
Dimensions H x W x D (approx.)	Inches	24" x 16" x 8"	24" x 16" x 8"
Weight (approx.)	lbs	40	40
<b>Miscellaneous Characteristics</b>			
Stocking temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Operating temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Maximum altitude		6600 feet (2000 m)	6600 feet (2000 m)
Fire resistance according to UL 94		V0	V0
Approvals		ANSI/UL 1449 3rd Ed. Meets IEEE requirements	ANSI/UL 1449 3rd Ed. Meets IEEE requirements
<b>Replacement MOV Block</b>			
OVR1N160480PS (power supply)			
OVR1N160480			

		OVRNE12160277YX	OVRNE12160277Y
<b>Technical Characteristics</b>			
Service voltage		480Y / 277V	480Y / 277V
Application		Service entrance	Service entrance
Phases		3	3
Mode of protection		L-L / L-N / L-G / N-G	L-L / L-N / L-G / N-G
Surge capacity/phase (I <sub>max</sub> )	kA	160	160
Maximum Continuous Operating Voltage (MCOV)	V	320	320
Voltage Protection Rating (VPR - UL 3rd Ed.)			
L-N	V	1200	1200
L-L	V	2000	2000
L-G	V	1200	1200
N-G	V	1200	1200
Nominal discharge current (I <sub>n</sub> )	kA	10	10
Short circuit current rating (SCCR)	kA	200	200
AC power frequency	Hz	50-60	50-60
Thermal fuse		Type J 100A	Type J 100A
EMI/RFI filtering	dB	-30	-30
<b>Mechanical Characteristics</b>			
Connection terminals	Inches	1/4 - 5/16 - 3/8 - 1/2	1/4 - 5/16 - 3/8 - 1/2
Terminal torque	Nm	6-75	6-75
Auxiliary contact connection terminals	AWG	22 - 12	22 - 12
Auxiliary contact terminal torque	Nm	1	1
Front display		Yes	Yes
LED indicators		Yes	Yes
Audible alarm		Yes	Yes
Auxiliary contact		Yes	Yes
Surge counter		Yes	No
Enclosure material		Painted steel	Painted steel
Enclosure rating		NEMA 12	NEMA 12
Dimensions H x W x D (approx.)	Inches	24" x 16" x 8"	24" x 16" x 8"
Weight (approx.)	lbs	40	40
<b>Miscellaneous Characteristics</b>			
Stocking temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Operating temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Maximum altitude		6600 feet (2000 m)	6600 feet (2000 m)
Fire resistance according to UL 94		V0	V0
Approvals		ANSI/UL 1449 3rd Ed. Meets IEEE requirements	ANSI/UL 1449 3rd Ed. Meets IEEE requirements
<b>Replacement MOV Block</b>			
OVR1N160277PS (power supply)			
OVR1N160277			

# Technical Data

## OVRNE12160120SPX, OVRNE12160120SP

OVR NE12  
Series

		OVRNE12160120SPX	OVRNE12160120SP
<b>Technical Characteristics</b>			
Service voltage		240/120V Split phase	240/120V Split phase
Application		Service entrance	Service entrance
Phases		2	2
Mode of protection		L-L / L-N / L-G / N-G	L-L / L-N / L-G / N-G
Surge capacity/phase ( $I_{max}$ )	kA	160	160
Maximum Continuous Operating Voltage (MCOV)	V	150	150
Voltage Protection Rating (VPR - UL 3rd Ed.)			
L-N	V	900	900
L-L	V	1200	1200
L-G	V	800	800
N-G	V	800	800
Nominal discharge current ( $I_n$ )	kA	10	10
Short circuit current rating (SCCR)	kA	200	200
AC power frequency	Hz	50-60	50-60
Thermal fuse		Type J 100A	Type J 100A
EMI/RFI filtering	dB	-30	-30
<b>Mechanical Characteristics</b>			
Connection terminals	Inches	1/4 - 5/16 - 3/8 - 1/2	1/4 - 5/16 - 3/8 - 1/2
Terminal torque	Nm	6-75	6-75
Auxiliary contact connection terminals	AWG	22 - 12	22 - 12
Auxiliary contact terminal torque	Nm	1	1
Front display		Yes	Yes
LED indicators		Yes	Yes
Audible alarm		Yes	Yes
Auxiliary contact		Yes	Yes
Surge counter		Yes	No
Enclosure material		Painted steel	Painted steel
Enclosure rating		NEMA 12	NEMA 12
Dimensions H x W x D (approx.)	Inches	24" x 16" x 8"	24" x 16" x 8"
Weight (approx.)	lbs	40	40
<b>Miscellaneous Characteristics</b>			
Stocking temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Operating temperature		32°F (0°C) to 104°F (40°C)	32°F (0°C) to 104°F (40°C)
Maximum altitude		6600 feet (2000 m)	6600 feet (2000 m)
Fire resistance according to UL 94		V0	V0
Approvals		ANSI/UL 1449 3rd Ed. Meets IEEE requirements	ANSI/UL 1449 3rd Ed. Meets IEEE requirements
<b>Replacement MOV Block</b>			
OVR1N160120PS (power supply)			
OVR1N160120			

Technical Data

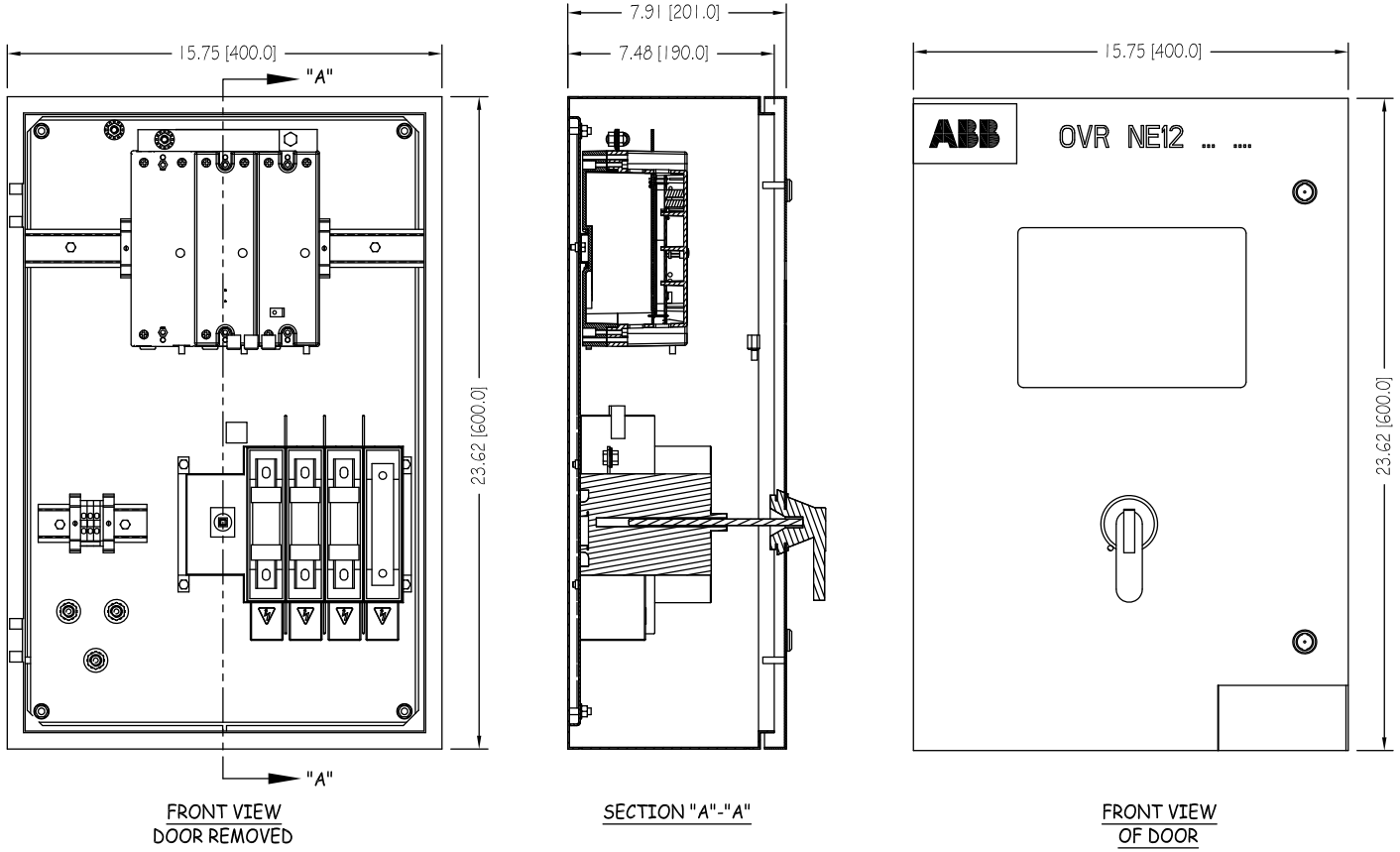
Catalog Number	Service Voltage	Maximum Continuous Operating Voltage (MCOV)	Nominal Discharge Current (In)	Short Circuit Current Rating (SCCR)	Fuse	TS I <sub>max</sub>	TS V <sub>max</sub>
OVRNE12320480DX OVRNE12160480DX OVRNE12320480D OVRNE12160480D	480 V	550 V	10 kA	200 kA	Type J 100 A	1 A	30 V
OVRNE12320277YX OVRNE12160277YX OVRNE12320277Y OVRNE12160277Y	277 V	320 V					
OVRNE12320120SPX OVRNE12160120SPX OVRNE12320120SP OVRNE12160120SP	120 V	150 V					

Voltage Protection Rating

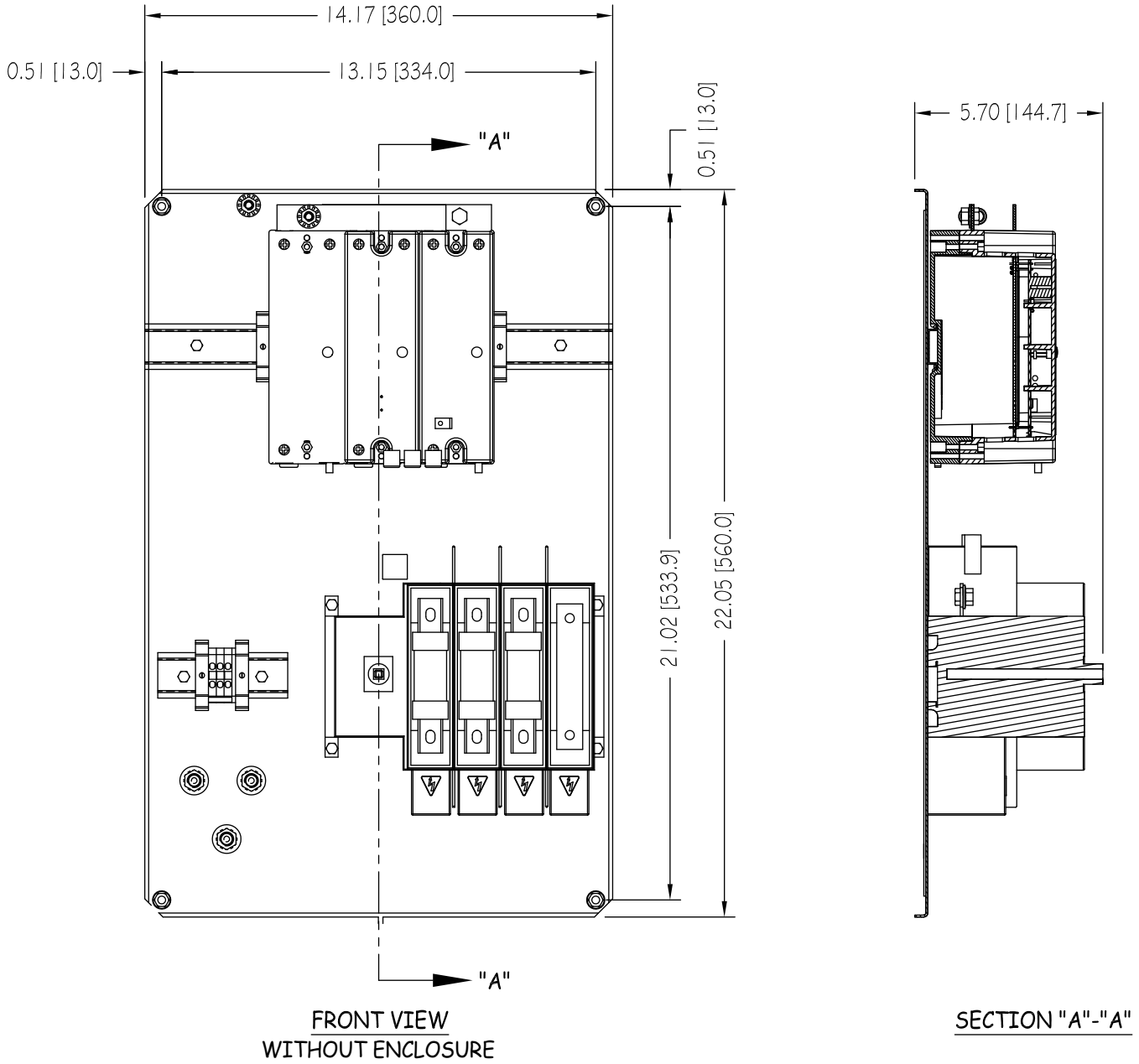
	OVRNE12320480DX	OVRNE12320480D	OVRNE12160480DX	OVRNE12160480D	OVRNE12320277YX	OVRNE12320277Y	OVRNE12160277YX	OVRNE12160277Y	OVRNE12320120SPX	OVRNE12320120SP	OVRNE12160120SPX	OVRNE12160120SP
L - N	—	—	—	—	1200 V	1200 V	1200 V	1200 V	900 V	900 V	900 V	900 V
L - L	1800 V	1800 V	1800 V	1800 V	2000 V	2000 V	2000 V	2000 V	1200 V	1200 V	1200 V	1200 V
L - G	1800 V	1800 V	1800 V	1800 V	1200 V	1200 V	1200 V	1200 V	800 V	800 V	800 V	800 V
N - G	—	—	—	—	1200 V	1200 V	1200 V	1200 V	800 V	800 V	800 V	800 V

# Approximate Dimensions

OVR NE12  
Series



## Approximate Dimensions





# Contact us

## **ABB Inc.**

Low Voltage Control Products

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Monday - Friday

**[www.abb.us/lowvoltage](http://www.abb.us/lowvoltage)**

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