Product Research Report: Siemens 3VA MAX EA

1. Product Name

Siemens 3VA MAX EA Molded Case Circuit Breaker (MCCB) with Electronic Trip Unit

2. SEO Keywords

- Siemens 3VA MCCB
- Siemens 3VA MAX circuit breaker
- Siemens 3VA electronic trip unit
- Molded case circuit breaker 1600A
- Siemens SENTRON 3VA
- Siemens 3VA MAX ETU
- MCCB with communication Modbus Profinet
- Siemens 3VA molded case breaker

3. Category

Circuit Breaker -> [new] Siemens Circuit Breaker -> Siemens 3VA Series MCCB

4. Product Introduction

Series#: Circuit Breaker -> [new] Siemens Circuit Breaker -> Siemens 3VA Series MCCB
- Siemens 3VA MAX EA Molded Case Circuit Breaker
- We have large inventory for Siemens 3VA MAX MCCB, Molded Case Circuit Breaker 3VA series and related accessories.
- 100% Original and new,In stock by Eaton Company.
- Delivery time: Ready in stock and 1 days for ship out
- MOQ: 1pcs

5. Brand & Model

model：3VA MAX EA
brand：Siemens

6. Service & Applications

The Siemens 3VA MAX series is a high-performance molded case circuit breaker (MCCB) family designed for demanding commercial and industrial power distribution. Featuring advanced Electronic Trip Units (ETU 3.5 / 5.5 / 7.5 / 7.6) with precise overload (L), short-circuit short delay (S), instantaneous (I), neutral (N), and optional ground fault (G) protection, the 3VA MAX delivers comprehensive circuit protection from 25A to 1600A across frame sizes 160AF to 1600AF. With rated operational voltage up to 690V AC and available breaking capacities up to 200kA @ 415V (Type L), it integrates seamlessly into smart grid and energy management systems via Modbus RTU, Profibus DP, Profinet, and IO-Link communication protocols. The 3VA MAX supports Zone Selective Interlocking (ZSI), detailed energy monitoring (current, voltage, power, harmonics), and is available in fixed or draw-out mounting configurations with a full range of accessories including motor operators, shunt trips, undervoltage releases, and auxiliary contacts. Typical applications include main and sub-distribution boards, motor control centers (MCC), critical power infrastructure, and industrial plant automation where high selectivity, metering, and remote monitoring are required.

7. Specifications Table

Feature	Specification
Product Series	Siemens SENTRON 3VA MAX (3VA1 / 3VA2)
Breaker Type	Molded Case Circuit Breaker (MCCB)
Trip Unit	Electronic Trip Unit (ETU 3.5 / 5.5 / 7.5 / 7.6)
Frame Sizes (AF)	160A, 250A, 400A, 630A, 800A, 1000A, 1250A, 1600A
Rated Current (In)	Adjustable 25A – 1600A (frame dependent)
Number of Poles	3-Pole (3P) / 4-Pole (4P)
Rated Operational Voltage (Ue)	Up to 690V AC (50/60 Hz); up to 500V DC
Rated Insulation Voltage (Ui)	800V
Rated Impulse Withstand Voltage (Uimp)	8kV
Breaking Capacity (Icu @ 415V AC)	Type N: 25–50kA; Type H: 70–100kA; Type L: 150–200kA
Service Breaking Capacity (Ics)	100% of Icu (Ics = Icu)
L Protection (Overload)	0.4 – 1.0 × In adjustable
S Protection (Short Delay)	1.5 – 10 × In adjustable
I Protection (Instantaneous)	2.0 – 15 × In adjustable
N Protection (Neutral)	Selectable: ON / OFF / 50% / 100%
G Protection (Ground Fault)	Available on ETU 7.5 / 7.6
Zone Selective Interlocking (ZSI)	Supported (wired or via communication)
Communication Protocols	Modbus RTU, Profibus DP, Profinet, IO-Link
Energy Monitoring	Current, voltage, power, energy, harmonics
Mounting Type	Fixed or Draw-out (Plug-in / Withdrawable)
Utilization Category	Category A / B (selectivity capable)
Standards Compliance	IEC 60947-2
Protection Class	IP40 (enclosed) / IP20 (terminals)

8. FAQ

Q: What is the difference between Siemens 3VA MAX and standard 3VA MCCB?
The 3VA MAX features electronic trip units (ETU) with advanced protection functions including ground fault detection, LCD display, and communication capabilities (Modbus/Profinet/IO-Link), whereas standard 3VA uses thermal-magnetic trip units.

Q: What is the rated operational voltage of the Siemens 3VA MAX?
The rated operational voltage (Ue) is up to 690V AC (50/60 Hz). DC versions are available for up to 500V DC depending on configuration.

Q: What breaking capacity classes are available for the 3VA MAX series?
Three classes: Type N (standard, 25–50kA @ 415V), Type H (high, 70–100kA @ 415V), and Type L (very high, 150–200kA @ 415V). Ics equals 100% of Icu for maximum reliability.

Q: What frame sizes are available in the 3VA MAX range?
Eight frame sizes from 160AF (3VA6) up to 1600AF (3VA32), covering rated currents from 25A to 1600A with adjustable settings via the electronic trip unit.

Q: What communication protocols does the 3VA MAX support?
The 3VA MAX supports Modbus RTU, Profibus DP, Profinet, and IO-Link via Commsion module, enabling integration into automation and energy management systems.

Q: What protection functions does the ETU 7.5/7.6 trip unit provide?
The ETU 7.5/7.6 provides L (overload), S (short-circuit short delay), I (instantaneous short-circuit), N (neutral), and G (ground fault) protection. It also features an LCD display for real-time current and settings readout.

Q: Is the 3VA MAX suitable for DC applications?
Yes, specific DC-rated versions support up to 500V DC. Verify the exact part number for DC rating as not all configurations include DC capability.

Q: What accessories are available for the 3VA MAX series?
A full range of accessories including motor operators, shunt trips, undervoltage releases (UVR), auxiliary contacts, alarm switches, and communication modules are available.