Product Research Report: Siemens 3VL4740-1TH46-0AA0

1. Product Name

Siemens SENTRON 3VL4740-1TH46-0AA0 Molded Case Circuit Breaker (MCCB)

2. SEO Keywords

- Siemens 3VL4740 MCCB
- Siemens 3VL47 400A circuit breaker
- Siemens SENTRON 3VL4 electronic trip
- 3VL4740-1TH46-0AA0 specifications
- Siemens 400A MCCB ETU
- Siemens VL400 molded case breaker
- Siemens 3VL4 electronic trip unit
- IEC 60947-2 MCCB 400A

3. Category

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

4. Product Introduction

Series#: Circuit Breaker -> [new] Siemens Circuit Breaker -> Siemens 3VL Series MCCB
- Siemens SENTRON 3VL4740-1TH46-0AA0 Molded Case Circuit Breaker
- We have large inventory for Siemens SENTRON 3VL MCCB, Molded Case Circuit Breaker 3VL 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：3VL4740-1TH46-0AA0
brand：Siemens

6. Service & Applications

The Siemens 3VL4740-1TH46-0AA0 is a SENTRON 3VL series molded case circuit breaker rated at 400A with a 3-pole configuration and an advanced electronic trip unit (ETU) featuring an LCD display for precise parameter adjustment and real-time current monitoring. This Frame Size 4 MCCB delivers 50kA rated ultimate breaking capacity (Icu) at 415V AC, with Ics equal to Icu, ensuring maximum service continuity. The electronic ETU provides full-range adjustable protection: L (long-delay overload, adjustable 0.4–1.0 × In, covering 160A–400A), S (short-delay short-circuit with adjustable time and current), I (instantaneous short-circuit), and N (neutral protection at In/2 setting). Rated for operation up to 690V AC with 800V insulation voltage and 8kV impulse withstand, the 3VL4740 complies fully with IEC 60947-2. With approximate mounting dimensions of 210mm (W) × 310mm (H) × 147mm (D), it uses standard screw terminals suitable for copper bars or cable connections and supports fixed mounting. Typical applications include incoming feeder protection in main distribution boards, large motor feeder protection, sub-distribution feeders, and industrial PCC/MCC panels where high current capacity and precise selectivity coordination are required.

7. Specifications Table

Feature	Specification
Order Number	3VL4740-1TH46-0AA0
Product Series	Siemens SENTRON 3VL (VL400)
Breaker Type	Molded Case Circuit Breaker (MCCB)
Rated Current (In)	400A
Number of Poles	3-Pole (3P)
Frame Size	Size 4
Trip Unit Type	Electronic Trip Unit (ETU) with LCD display
Rated Operational Voltage (Ue)	Up to 690V AC
Rated Insulation Voltage (Ui)	800V
Rated Impulse Withstand Voltage (Uimp)	8kV
Breaking Capacity Icu @ 415V AC	50kA
Breaking Capacity Ics @ 415V AC	100% of Icu (50kA)
L Protection (Overload)	Adjustable, 0.4–1.0 × In (160A–400A)
S Protection (Short Delay)	Adjustable time delay and current setting
I Protection (Instantaneous)	Adjustable or switchable On/Off
N Protection (Neutral)	Included, typically In/2 setting
Utilization Category	Category A (non-selective)
Mounting Type	Fixed mounting (screw connection)
Connection	Standard screw terminals (copper bar / cable)
Width (approx.)	210 mm
Height (approx.)	310 mm
Depth (approx.)	147 mm (without terminals)
Standards Compliance	IEC 60947-2
Protection Class	IP40 (enclosed) / IP20 (terminals)

8. FAQ

Q: What is the rated current of the Siemens 3VL4740-1TH46-0AA0?
The rated current (In) is 400A. The "40" in the part number indicates the 400A rating at frame size 4.

Q: What type of trip unit does this model use?
It uses an advanced Electronic Trip Unit (ETU) with LCD display for precise parameter setting and real-time current monitoring. The ETU provides L/S/I/N protection with adjustable settings.

Q: Can I adjust the overload protection setting?
Yes, the L (long-delay overload) protection is adjustable from 0.4 to 1.0 × In, providing coverage from 160A to 400A to match your specific load requirements.

Q: What is the breaking capacity of the 3VL4740?
The rated ultimate breaking capacity (Icu) is 50kA at 415V AC. The service breaking capacity (Ics) equals 100% of Icu (50kA) for full reliability.

Q: Does this model come with auxiliary contacts or shunt trips?
The "0AA0" suffix indicates a standard configuration without factory-installed auxiliary contacts. These must be ordered separately as accessories (e.g., 3VL9800-... series).

Q: What are the physical dimensions of this breaker?
Approximately 210mm (W) × 310mm (H) × 147mm (D) for the 3-pole fixed-mount version. This is significantly larger than the 200A Frame Size 3 due to the higher current rating.

Q: Is the 3VL4740 suitable for motor protection?
Yes, the adjustable electronic trip unit allows precise setting of overload and short-circuit parameters, making it suitable for protection of large motor feeders in industrial MCC panels and distribution boards.

Q: How does the neutral protection work?
The ETU includes neutral conductor protection typically configured at In/2, providing balanced protection for three-phase systems with neutral loading.