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INTELLIGENT 3VA2 MCCB TRAINER

The new generation of circuit breaker from Siemens 3VA1 and 3VA2 family offers many unique features like Intelligent Power Distribution, Communicative capable with SCADA, DCS, Integrated Measuring Functions & etc, Remote Motorized Drive Control.

Advancing digitalization and automation are creating new challenges in electrical power distribution. Systems and components must be integration-capable, communicative, and completely flexible to reliably protect electrical systems against faults and failure. This Powerful components 3VA2 MCCB molded case circuit breakers ensure the necessary safety and flexibility in digital environments. The system offers the best preconditions for machine and switchgear manufacturers. This Trainer enables the students to exercise all features of this powerful Circuit Breaker.

STRONG BENEFITS OF 3VA2 MCCBs

- # automated engineering processes thanks to a comprehensive range of software
- # Seamless connection to industrial and building automation via common bus systems
- # Support of comprehensive energy efficiency concepts due to integrated measuring functions

This Trainer uses a 3VA2 MCCB with addition of many add on, facilitates the students to conduct many experiments on this new technology. It consists of i. 3VA2, 63A, MCCB ii. COM60 communication module iii. Microprocessor Trip Unit iv. integrated acquisition of current, voltage and energy values v. External Display DSP 800 with many Protocol options vi. Remote Motorized Control vii. **30KW Three Phase Resistive load.**

Advanced features:

- * One 63Amp MCCB (3VA20) with microprocessor Trip unit
- * 3VA2 MCCB could very well used in the process and automation industries, in Industrial Buildings etc.
- * Communication capable 3VA2 MCCBs are suitable for a variety of applications.
- * Can retrieve all information about MCCB directly at your smart phone via QR Code.
- * Can identify potential energy savings.
- * It can reliably reports i) System status ii) Measured values through ETU series to PLC /SCADA /PCS 7 DCS software.
- * Manual Rotary operators with illumination kit or motor operator.
- * Tripping characteristics can be set via ETU.
- * Both setting Parameters and the measured values clearly visible on the display.
- * 3VA2 has integrated acquisition of current, voltage and energy values using ETU 8 series.



- * The Circuit breaker status (ON, OFF, TRIP) and limit values are also acquired.
- * 3VA2 MCCB measure power consumption and support load management,
- * Useful for keeping a close watch of the Switch Gear Implementation.
- * 3 VA2 can be connected to higher level power management via Profinet.
- * One Residual current Device (RCD) provided.
- * EFB300 external function box for connecting to ETU
- * Integrated measuring value display
- * Measuring function: Voltage, current & energy values.
- * Communication capable PROFINET / MODBUS RTU
- * RCD continuously detect fault and differential currents and ensure disconnection in the event of emergency.
- * Communication Modules:
 - # COM 060 connection module is mounted on the right-hand side of 3VA2
 - # It establish the connection to the 3VA2 MCCB Via T-connectors.
 - # This is used to transmit measured Data to COM100



Motorised Drive Motorised operator

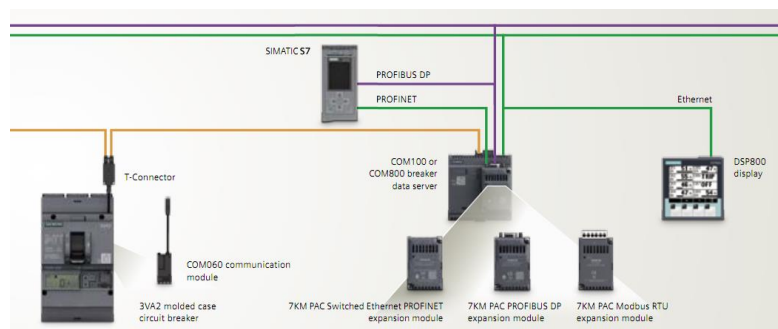
The motorized operating mechanisms allow for convenient remote switching of the 3VA moulded-case circuit breaker, using I/O of PLC or DCS Controller.



- Com 100 Data Concentrator:
 - # Can monitor one 3VA2 MCCBs.
 - # For connecting 3VA2 MCCB Breakers to standard PLC/DCS Systems.
 - # It collects Data from these MCCBs.
 - # Integrated Ethernet Interface.
 - # 7KM PAC switched Ethernet PROFINET to connect to Simatic PLC: S7-1200 by means of plug – in to com 100
- One External Display DSP 800
 - # For displaying status, measured values and parameters
 - # Connection to com100 Breaker data server via Ethernet.

Unique features :

- *3VA2 MCCB with open interfaces and standard protocols (PROFIBUS, PROFINET, Modbus TCP, Modbus RTU), 3VA2 molded case circuit breakers can be seamlessly integrated into an existing technical infrastructure and automation environment, ensuring that the processes in your plant will always be transparent.
- *3VA2 molded case circuit breakers provide specific information about your system's capacity utilization and status, providing perfect plant monitoring and maximum system availability.
- *3VA2 molded case circuit breakers constantly record consumption values and indicate where power usage by individual loads is disproportionately high. The result: targeted energy and cost efficiency.
- *The integrated measuring function allows the 3VA2 molded case circuit breakers to prevent costly plant downtimes and mechanical damage.
- *3VA2 molded case circuit breakers provide a complete overview of all energy- relevant data. This ensures end-to-end monitoring, evaluation, documentation, and control.



30KW Three Phase Resistive load

- * Rotary switch provided to vary the load for continuous loading upto 40Amps
- * For voltage and current sensing to 3VA2 MCCB and used to experiment the TRIP action of the 3VA2 MCCB
- * 20 tapping for setting the current
- * 415Volt AC Input

