



Technical Commercial Information

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Division: Power Products

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Title: **New shunt releases for Vmax circuit breaker**

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1. Introduction

The aim of the following Technical Information is to notify the sales network and customers that as of June 2, 2013, orders for Vmax circuit breakers (all versions) will be loaded and delivered with new shunt releases for the following functions:

- opening,
- supplementary opening,
- closing,
- undervoltage,
- locking electromagnet on the operating mechanism.

The new series of shunt releases will replace the current ones for all series of vacuum circuit breakers provided with the EL mechanical actuator. Other Technical Information will follow with the introduction dates for other vacuum circuit breaker series.

2. Product

This Technical Commercial Information applies to the following series of circuit breakers:

- a) fixed construction Vmax series, 12 kV and 17.5 kV according to IEC STDs
- b) fixed construction Vmax series, 15 kV according to ANSI STDs
- c) removable construction Vmax/F series for ABB UniGear 500 R switchgear (acc. to IEC STDs)
- d) draw-out construction Vmax/L series for ABB UniGear 550 switchgear (acc. to IEC STDs)
- e) draw-out construction Vmax/W series, 12 kV and 17.5 kV according to IEC STDs
- f) draw-out construction Vmax/W series, 15 kV according to ANSI STDs

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The new shunt releases are composed of an electronic control device and a single winding which carries out the functions of both a launch winding and a maintenance winding, thanks to electronic control of current consumption.

The new series of shunt releases is available at the same power supply voltages as for the current series: 24 Vcc; 30 Vcc; 48 Vcc/ac 50-60 Hz; 60 Vcc/ac 50-60 Hz; 110...127 Vcc/ac 50-60 Hz; 132 Vcc; 220...250 Vcc/ac 50-60 Hz.

The new shunt releases are fully interchangeable with current ones.

Their main technical characteristics are:

	Power supply voltage range	
Power supply voltage	24...60 Vcc; 48...60 Vac	110...250 Vcc; 110...240 Vac
Temperature range	-40°C ... +70°C	-40°C ... 65°C
Inrush power consumption (1)	60 ... 100 W	
Continuous service power (1)	1.5 W	
Consumption of the electronic controller (no coil powered; the value is independent of the voltage applied)	1.5 mA	

(1) indicative value that may vary based on the ambient temperature, but is independent of power supply voltage

The advantages of the new shunt releases are:

- improved construction of the coil and the electronic controller,
- improved EMC,
- enlarged temperature range,
- electronic controller with protection against overcurrent and temperature rises,
- minimal variations in operation times in response to fluctuations in power supply voltage,
- trip thresholds and operation times differentiated for IEC and ANSI circuit breakers (for ANSI circuit breakers setting for 3 cycle or 5 cycle opening time),
- reduced power consumption,
- traceability of the individual electronic components through to the finished control circuit,
- compatibility with CCC (Control Coil Continuity) and TCS (Trip Circuit Supervision) devices.

Specifically, it has been verified that the new shunt releases are compatible with the following devices:

- ABB STU (Shunt Test Unit)
- ABB CC2
- ABB SPER 1C1 (HV) – 1C2 (LV)
- ABB REF 542+
- ABB REF 601
- ABB REF 615
- ABB REF 630
- Contrel TCS-3 / 4
- Thytronic NA016
- TSW 800-I

Please note that compatibility with CCC and TCS devices means that production of special "instantaneous" shunt opening releases as an alternative to the current standard version can be

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eliminated. Therefore, as of June 2, 2013, special "instantaneous" shunt opening releases for the Vmax series can no longer be provided (except for as spare parts by Service Department).

3. Price lists

Please refer to the Vmax series price list.

4. Availability

Mass production of new shunt releases have been started since July 2012 and since that time they have been successfully introduced on the VD4 circuit breaker series with lateral side actuator.

5. Sales support tools

Detailed information will be available in the Vmax catalog and instruction manual, which are currently being updated.

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