

ACTAS



ACTAS P260+ | P360+ Portable switchgear test systems



Flexible and compact test systems for the testing of medium-, high- and extra-high voltage switchgear with a plus in control and performance.

- Stand-alone operation
- Operation and evaluation via 7" touch screen
- Extremely robust and compact in hard case
- Complete switchgear testing without reconnecting in one test sequence
- PIR and main contact measurement on up to 12 contact chambers
- Static and dynamic resistance determination on up to 12 contact chambers and more with micro-ohm meter PROMET.
- Testing with earthing on both sides for AIS and GIS
- Recording and analysis of coil and motor current
- Testing of the minimum tripping voltage and the under-voltage release by voltage source EPOS MC4.

ACTAS P260+ | P360+

Complete switchgear testing on site

Using the integrated control panel of ACTAS P260+ | P360+, it is possible to carry out and evaluate comprehensive switchgear tests quickly and easily and with a high degree of flexibility within a single test procedure:

■ Measurement on 12 PIR and main contacts

Determination of operating times for various switching sequences on up to 12 PIR and main contacts.

■ Earthing on both sides

In combination with PROMET SE, simultaneous tests can be carried out on up to 3 poles, each of which has 4 main contact chambers, with earthing on both sides. More contact chambers are possible. In GIS systems, the operating times of the breaker units are measured via current pulses. For this purpose, Rogowski coils are attached to the insulated ground of the GIS system.

■ 12 auxiliary contact inputs

Status messages from up to 12 auxiliary contacts with integrated wet / dry switchover.

■ 9 universal sensor inputs

Up to 9 analogue/digital sensor inputs for pressure, displacement, current and temperature measurement for analogue and incremental sensors. The sensor inputs can be flexibly parameterised according to requirements and used for special measurement procedures such as First Trip or measurement via VDS.

■ Coil and motor current

Coil current measurement on up to 3 closing and 3 opening coils. Freely selectable measuring ranges make it possible to obtain extremely precise measurement results.

■ Relay outputs

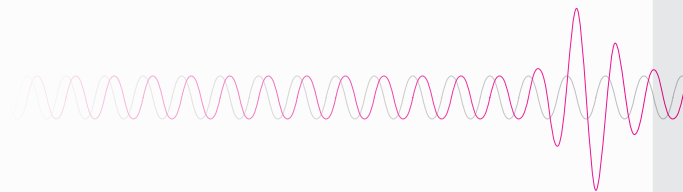
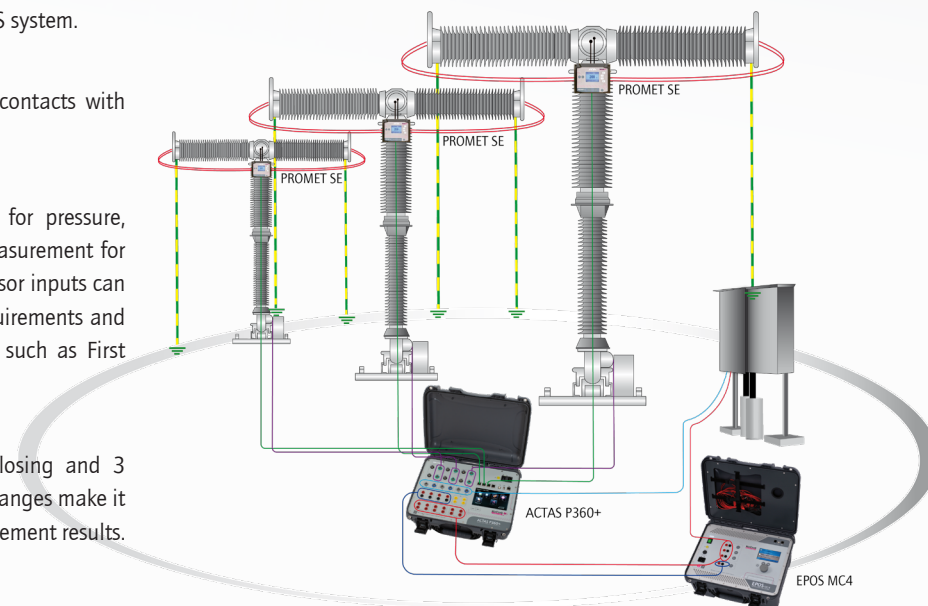
Up to 2 relay outputs for actuator control

■ Contact resistance determination

The determination of both static and dynamic contact resistance can be carried out simultaneously on 3 poles in combination with the various PROMET resistance measuring devices. Depending on the PROMET system, measurements on one or more contact chambers per pole and switch can be tested simultaneously.

■ Undervoltage release and minimum release voltage

To be able to test motors and coils independently of the station voltage, the supply voltage can be provided by the powerful AC/DC source EPOS or other supported source types. Tests of, for example, the undervoltage releases and the minimum release voltage of coils can thus be carried out reproducibly under always the same conditions.



System solution with stand-alone option

The KoCoS system solution with ACTAS, PROMET, EPOS offers clear advantages due to its wide range of functions and high flexibility:

- Precise analysis of the entire contact system and all actuators
- Joint operation and data management via ACTAS
- Common test plan for managing the test systems, one test report
- Stand-alone operation of each individual test system for maximum flexibility

Testing of gas-insulated medium-voltage switchgear

ACTAS P360 + makes it possible to measure the operating times of a medium-voltage system encapsulated in SF6 gas in the simplest way via the capacitive measuring points of the switch's own VDS system. The connection is made directly to the measuring inputs of the ACTAS test system without any further measuring components.

First Trip- Measurements

Due to the diverse connection options for sensors, first trip measurements can also be carried out with ACTAS. Up to five current clamps are connected to the secondary side of the current transformers and to the coils for this purpose. Using external trigger signals, the ACTAS test system can fully automatically determine the switching time during the first switching operation.

Robust and reliable, even in the extra-high voltage range

ACTAS P260 + | P360 + feature a compact and robust design in a handy hard case. The use of proven hardware components guarantees reliable operation during on-site testing of medium, high and extra-high voltage switchgear as well as disconnectors and earthing switches.

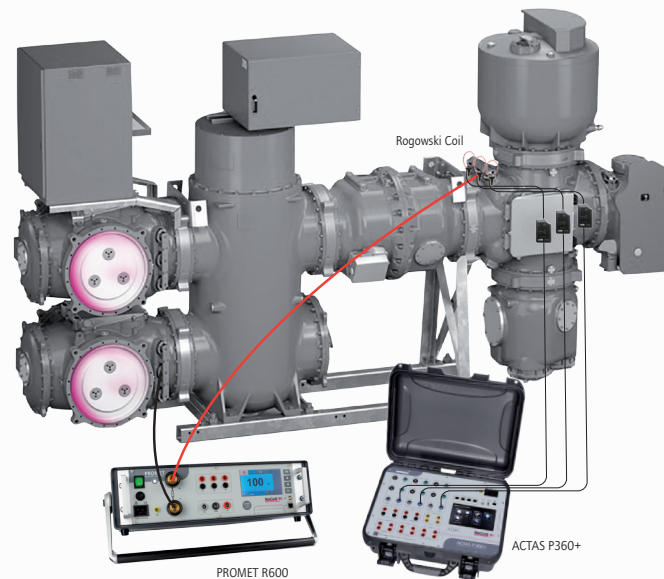
Operation and evaluation on the touch screen

A further optimized, easy-to-understand operating concept and even more powerful hardware ensure simple operation with optimum display of all information. The clearly structured user interface is self-explanatory and leads the user intuitively and quickly to the goal without extensive training.

- 7" touch screen with graphical user interface
- Display of measurement results with easy-to-understand graphics and icons
- Test report in PDF format
- Selection of test settings from individual templates
- LEDs for easy display of contact status
- USB and Ethernet interfaces for direct connection to PCs www networks as well as for additional devices

Parameterize and analyze

The parameterization of tests and the analysis of test results can be carried out on site directly on the device or also in the office via a PC and the ACTAS test software. The test data and parameters can be imported or exported at any time, e.g. via USB flash drive or network connection.



Technical data

	P360+	P260+
Operating voltage	110...265 VAC/DC	
Control outputs for closing coils	3	1
Control outputs for opening coils	3	2
Main and PIR contacts	6 x 2	3 x 2
Coil current	3 x 2 (I/O)	1 x 2 (I/O) + 1 x 0
Coil / Motor / Station voltage	3	1
Motor current via shunt	1	1
Sensor (+/- 10 V / digital)	6	3
Sensor (+/- 10 V / 0...20 mA)	3	1
Auxiliary contacts	3 x 4	2 x 4
Reference voltage for sensors 10 VDC / 200 mA	3	1
Relay control outputs	2	1
PC connection	1 x Ethernet	
Interfaces	1 x USB A / 1 x USB B	
Interfaces for external devices	3 x RJ45 for external devices 1 x RJ45 for CSW3	
User interface	7" graphic display with touch screen and 2 function keys	
Housing	Robust hard shell case	
Protection class	IP65 (closed)	
Dimensions (mm)	475 x 375 x 180	424 x 340 x 173
Weight (kg)	6.9	5.3

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