

HV circuit breaker analyzer

PKV/M17M

new development

Note: Standard complete set of the PKV/M17M includes two displacement transducers – the linear DP12 and the angular DP21 – for measuring travel and speed parameters. For **simultaneous monitoring across 3 phases**, the device must be equipped with two additional transducers of the same type, two sticks (when selecting DP12 transducers), and two transducer cables. The device can also be equipped with a DP32 rheostat transducer (on order).

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Standard complete set:

Item	Photo	Application
Main instrument PKV/M17M 047.00.00.000-01		Instrument and additional documents: Calibration Certificate, User Manual, Log Book.
Angular displacement transducer DP21 009.00.00.000		For measuring the angle of shaft turn in high-voltage circuit breakers. Measuring range: 0.2 – 360°. Resolution: 0.09°.
Linear displacement transducer DP12 012.00.00.000		For displacement measurement of moving parts in high-voltage circuit breakers. Range: 1 – 900 mm. Resolution: 0.5 mm. To be used together with a measuring stick.
Measuring stick 012.03.00.000-02		Measuring stick in a case. To be used together with linear displacement transducer DP12. Length in a standard complete set: 700 mm.
Attachment devices set to install transducers on circuit breakers		For attachment of DP12 and DP21 transducers to various types of circuit breakers.
Transducer cable 047.20.00.000		For connecting linear (DP12) or angular (DP21) displacement transducer to the instrument. Length: 7 m.

Pole cables 047.11.00.000K		For connecting to the pole of high-voltage circuit breaker. The cable is equipped with Crocodile clamps. Length: 7.5 m.
Auxiliary channel cable 047.23.00.000		For recording the moments when electrical voltage is applied/removed, and for the closing/opening moments of various contacts on the circuit breaker drive. Length: 5 m.
Control unit cable 047.19.00.000K		For connecting to the control circuits of a high-voltage circuit breaker. Length: 5 m.
Mains cable 018.09.00.000		Mains cable 1 x 2 m. For instrument connection to the mains. Temperature range: -25°C to +45°C. Rubber insulation.
Voltmeter cable 047.10.00.000		For measuring voltage in the control circuits of a high-voltage circuit breaker. Length: 5 m.
Ground cable 010.01.00.000		Ground cable 1 x 2 m (0.07 kg) for instrument grounding. The cable is equipped with a C-clamp and a screw end cap. Rated current is 50 A.
LAN cable 024.26.00.000		For connecting the instrument to the computer network or laptop. Length: 2 m.
Fuse 0505020 MXEP (2 pcs.)		For the drive control connectors.
Fuse VP2B-1V-2 A (2 pcs.)		For the power source protection.
Tool bag 147.06.00.000		Convenient, robust, wear proof bag for transportation of cables, documentation and other accessories.
Attachment devices set kit 126.06.02.00		Tool bag for attachment devices.

Additional complete set for simultaneous monitoring across 3 phases (on order):

Item	Photo	Application
Angular displacement transducer DP21 (2 pcs.) 009.00.00.000		Two additional transducers (DP12 and/or DP21) allow you to simultaneously measure the travel and speed parameters of the circuit breaker across all 3 phases (includes Log Book and Calibration Certificate). Measuring range: 0.2 – 360°. Resolution: 0.09°. Standard complete set includes DP21 transducer (1 pc.).

Linear displacement transducer DP12 (2 pcs.) 012.00.00.000		Two additional transducers (DP12 and/or DP21) allow you to simultaneously measure the travel and speed parameters of the circuit breaker across all 3 phases (includes Log Book and Calibration Certificate). To work with transducers, measuring sticks are required (see below). Range: 1 – 900 mm. Resolution: 0.5 mm. Standard complete set includes DP12 transducer (1 pc.).
Measuring stick 012.03.00.00-02 (2 pcs.) 012.03.00.00 012.03.00.00-01		Two additional measuring sticks are required when using DP12 transducers for displacement measurement of moving parts in high-voltage circuit breakers across all 3 phases simultaneously. Measuring stick in a case. Length on order – 550 mm, 700 mm and 1,000 mm. Standard complete set includes 1 measuring stick 700 mm.
Transducer cable (2 pcs.) 047.20.00.000-01 047.20.00.000-02		For connecting linear (DP12) or angular (DP21) displacement transducer to the instrument. Standard complete set includes 1 pc. Length: 7 m.

Additional complete set (on order):

Item	Photo	Application
Rheostat transducer DP32 026.22.00.000		For measuring the linear displacement of vacuum circuit breakers with an open insulating housing in the range of 0.2 – 20 mm. Accuracy is ± 0.2 mm. It is used complete with adapter 026.24.00.000.
Pole cable 047.11.00.000K		Additional pole cables 7.5 m with jaw up to 50 mm for circuit breakers with two open circuits per phase.
Pole cable extension 058.07.00.000K		A set of extensions to lengthen standard complete set pole cables. Length: 5 m.
Drive power supply unit 053.13.00.000		For controlling DC and AC drives during internal triggering and spring winding in high-voltage circuit breaker drives. Supplied together with cable 047.19.00.000 (2 pcs.). Length: 5 m.
Auxiliary channel cable 047.23.00.000		For recording the moments when electrical voltage is applied/removed, and for the closing/opening moments of various contacts on the circuit breaker drive. Length: 5 m.
Auxiliary channel extension cable 047.24.00.000		For placing the PKV/M17M device more than 5 meters away from the circuit breaker drive. Length: 5 m
Transducer cable extension 047.18.00.000K		For extending the length of the transducer cable. Length: 5 m.

Voltmeter cable extension 047.39.00.000		For extending the length of the voltmeter cable. Length: 5 m.
Current clamp cable extension 047.17.01.000		For extending the length of the current clamp cable. Length: 5 m.
BNC connection cable		Designed to connect the device to a reference voltage source during testing and calibration.
Additional battery unit 058.10.00.000		Additional battery unit for easy replacement.
Attachment devices set to install transducers on circuit breakers		Additional attachment devices for attaching DP12 and DP21 transducers to all 3 phases simultaneously (clamps, mounting plates, adapters, etc.). Can be purchased separately or on order.
Calibration cable for analog transducers 047.41.00.000		Cable 1 x 1.5 m for calibrating analog transducers channels is designed to check the metrological characteristics of the analog transducers channels on the PKV/M17M instrument during testing or calibration.

Recommended accessories:

Item	Photo	Application
DCRT-200 059.00.00.000		Dynamic contact resistance tester which is designed to determine the state of the arc extinguish chamber of SF6 circuit breakers by DCRM method. In conjunction with the PKV/M17M, the DCRT-200 provides complete diagnostics and detection of defects in the contact system.
Manipulating rod 010.41.00.000 010.41.00.000-01 010.41.00.000-02		Manipulating rod is designed for test cables connection from the ground or from the tank cover to the bushings of high-voltage circuit breakers, and to the structural elements of high-voltage disconnecting switches and earthing devices, without the use of ladders or elevated platforms. The manipulating rod is completed with special extension cables 3.3 m. There is a Kelvin clamp with current and potential contacts to connect to the object on one side, and a contact pad on the other side. The device test cable is connected to the contact pad from the ground or a tank cover. Manipulating rod extension cable is made according to a four-wire (Kelvin) scheme with the test current capacity of 100 A in the presence of a good contact. Manipulating rod - 2.2 (length 2.2 m / weight as an assembled set 3.4 kg); Manipulating rod - 3.7 (length 3.7 m / weight as an assembled set 4.0 kg); Manipulating rod - 5.1 (length 5.1 m / weight as an assembled set 4.6 kg).

Extension cable set (2 pcs.) 010.41.08.000		An additional extension cable set for the manipulating rod's standard complete set, designed for simultaneous connection to 4 high-voltage object bushings. Weight: 1.72 kg.
Extension cable set (4 pcs.) 010.41.08.000		An additional extension cable set for the manipulating rod's standard complete set, designed for simultaneous connection to 6 high-voltage object bushings. Weight: 3.44 kg.