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Data Sheet 3.18/2

Trigger Systems for Series L, M, G

Application

HV impulse tests are an essential part of the development and quality assurance of electrical equipment. To generate pulses with a reproducible amplitude or chopping time, the sparking gap respectively the chopping gap has to be triggered by the generator control exactly in the right moment.

General Description

The trigger system consists of two parts (see Figure 1). The trigger delay unit H 405-DP communicates with the control system and generates an optical output signal linked via fibre-optic cables to the trigger generator H 366, which is placed very close to the lowest gap of the impulse generator or chopping gap. The trigger generator transforms the optical input signal to a HV impulse with an amplitude of some kV. This HV impulse initiates a small flashover between the trigger pin and one main electrode of the sparking gap or chopping gap.

For some special HV impulse tests a phase synchronization with an AC test voltage is required. Therefore the trigger delay unit H 405-DP optionally contains an optical input for a synchronization signal, which can be connected to the phase detection sensor H 406.

■ Trigger generator type H 366

- Two optical inputs (activation and trigger signal) for infrared light (850 nm, SMA connectors)
- Output peak voltage (non load) 9 kV
- Output polarity can be changed by internal connections
- Powered by three alkaline batteries LR14 with an average lifetime of at least one year by intelligent power management
- Mounted in a metal box: 125 mm x 125 mm x 90 mm.

■ Trigger delay unit type H 405-DP

- Programmable by Profibus DP protocol
- Two trigger channels with a programmable delay time 0 ... 2550 μ s and two optical outputs for each channel
- One electrical output for triggering an oscilloscope (-45 V impulse)
- Optical inputs for firing and breakdown detection
- Optical input for phase synchronization
- All optical inputs and outputs are designed for infrared light (850 nm) and SMA connectors
- Mounted in a metal housing, provided for rail mounting: 195 mm x 65 mm x 125 mm.

■ **Phase detection sensor type H 406**

- Two inputs for AC synchronization voltage (100 V / 1 MOhm and 600 V / 10 MOhm)
- Wide frequency range (30 ... 500 Hz)
- Optical output (850 nm, SMA connector)
- Powered by 4 batteries LR6 with a lifetime of at least 100 hours
- Mounted in a separate housing: 125 mm x 49 mm x 208 mm

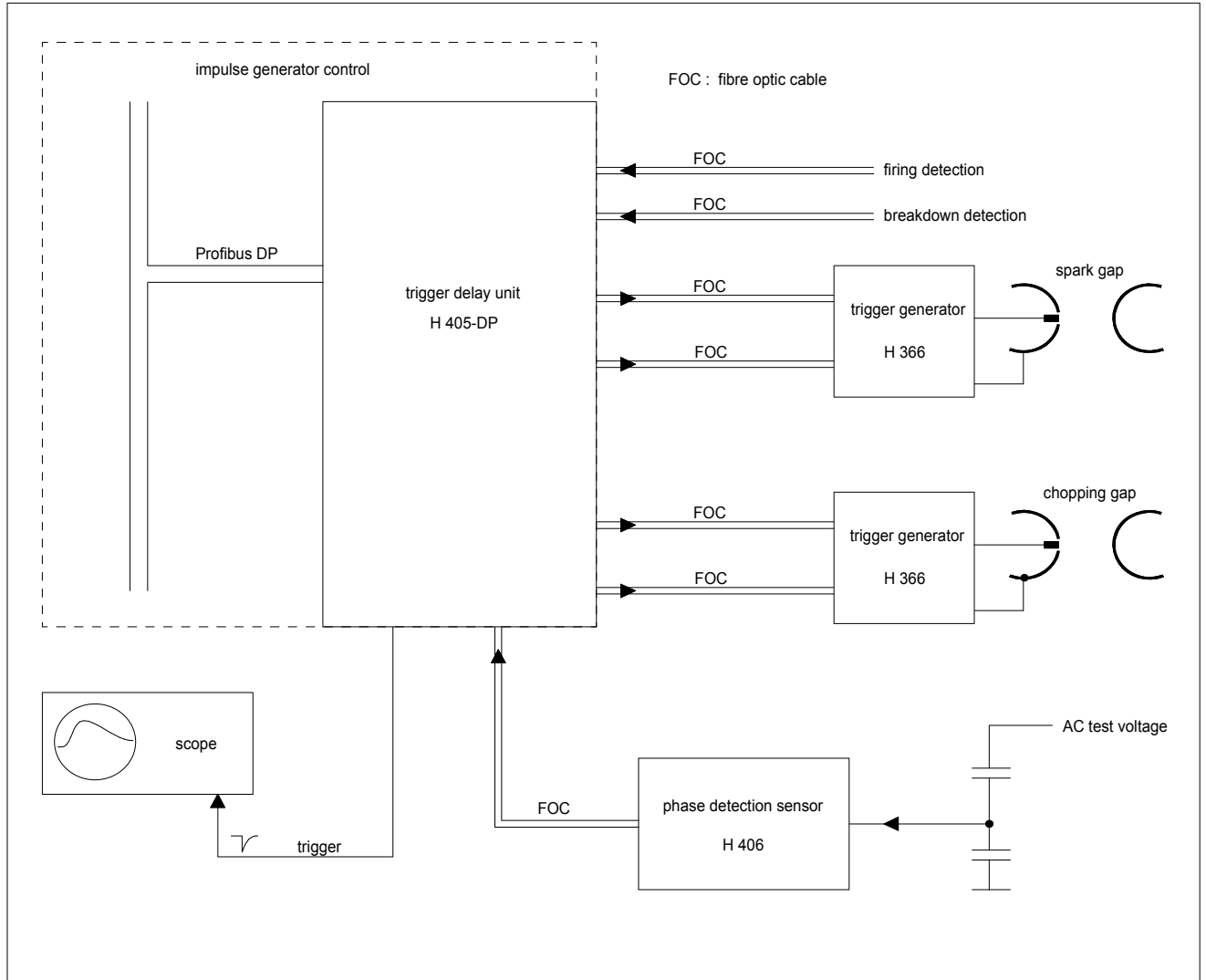


Figure 1: General design of a trigger system with all options