



# The all-in-one solution: Measure TSP data independently of the detonator

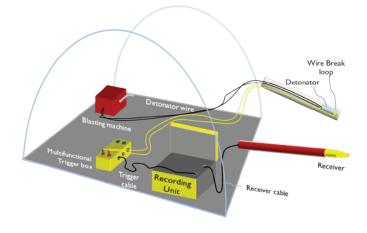
The method of the Multifunction Trigger allows TSP measurements independently of the type of detonator. It supports:

- Standard Trigger w/ electric zero delay detonators
- Wire Break Trigger w/ electric delay detonators or Nonelectric detonators
- Switch Trigger with e.g. hammer

The principle of the Wire Break Trigger of data recording works with the moment of detonator's firing instead of shot ignition by the blasting machine. Refer to right sketch.

### **B**enefits

- Enables TSP operations independently of the detonator's delay time and type.
- Achieves highest accuracy of the record trigger moment.
- Supports both systems TSP 303 and the preceding TSP 203.



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# Multifunctional Trigger Box

# **Technical Data**



Multifunctional Trigger Box (Art. 21386)

Dimension L  $\times$  W (terminals)  $\times$  H (terminals/LED): 175 mm  $\times$  80 (98) mm  $\times$  57 (59) mm Temperature range operation/storage: 0..45°C / -10..60°C Weight: 800 g

Trigger functions: 3 modes.



Standard Trigger Mode | Ready for Rec.: Recording Unit is ready for recording

Recording: lights up during recording

**Instant Detonator:** sockets for the bipolar shooting wire to the electric zero-delay detonator.



WBT Ready: Max. 12V DC ±10% provided by Recording Unit

**WBT Wire OK**: short circuit current 150 mA, wire break loop & supply wire  $\leq 7~\Omega$ , current is limited to max. 220 mA

**WBT** Wire: supply wire to be wrapped around the detonator; not included in delivery;

recommended wire specs: single wire, copper, diameter @length of  $50m: \ge 0.4 \text{ mm}^2$  @ $100m: \ge 0.6 \text{ mm}^2$ 





## Trigger Switch:

Socket allows for connection of, e.g. a hammer switch that is taped to a sledge-hammer handle. In this way, a hammer impact instead of a blast can be used as trigger for recording.

# Accessories for TSP 203 Systems: external battery & charger & Y-cable



Li-ion battery pack (Art. 20763)

II.IV / 4.6 Ah / 5I.06 Wh, 3S2P cells

Dimension L (terminals) x W x H: 105 (120) x 86 x 47 mm Weight: 520 g

Operating time: 8 h or 160 shots per 3 min. activation time Operating temperature: charging 0..40°C / discharging -20..60°C **Battery charger** (Art. 20699)

for Li-Ion battery II.I VDC, 4.7 Ah 230/II0 VAC mains, 50/60 Hz, with Euro plug

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