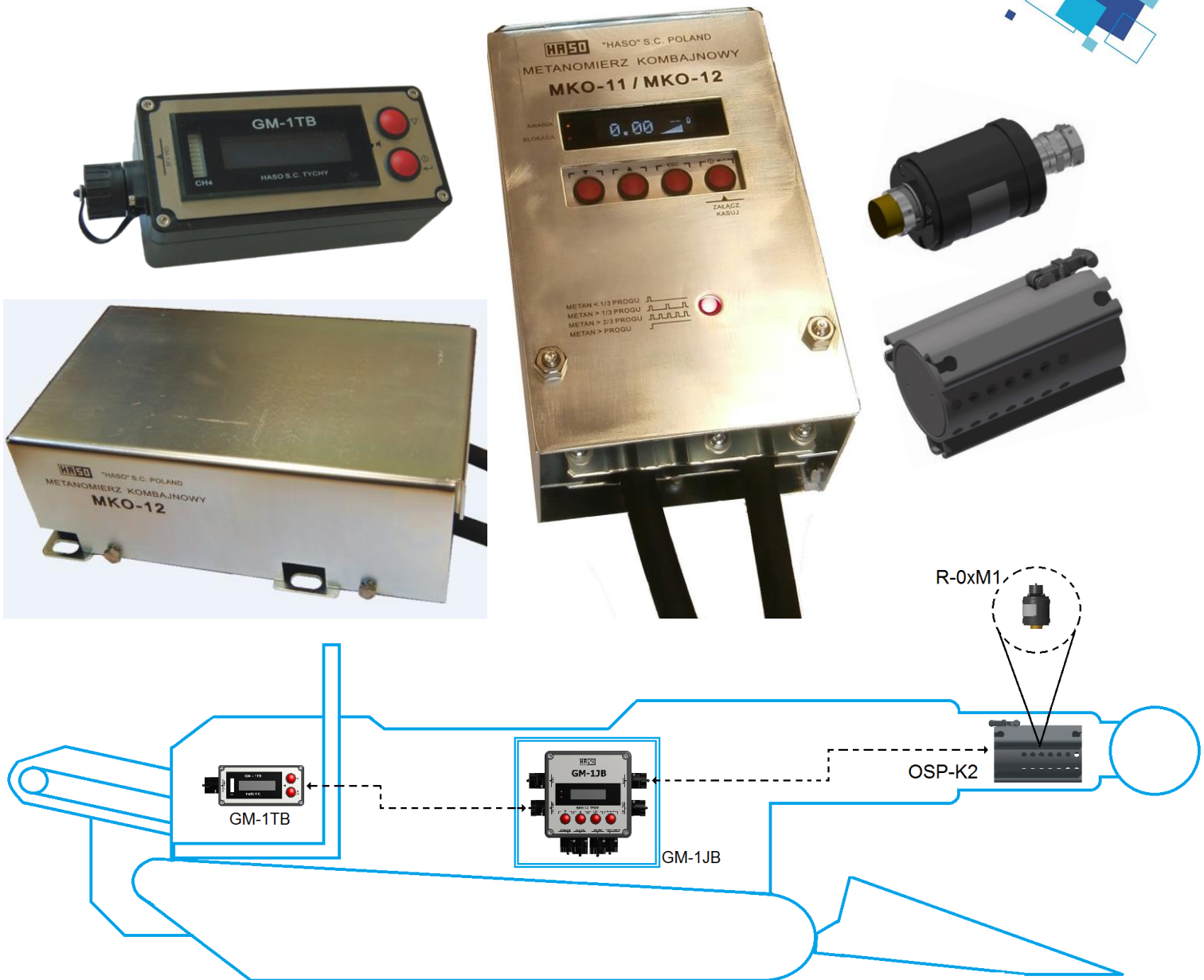


COMBINE METHANE DETECTOR

MKO-1X



Catalogue card



DESCRIPTION

Combine methane detector MKO-1x is a stationary device designed to measure and signal the concentration of methane in the area of combine mining work. In case of increasing the methane concentrations and exceeding the set threshold, the alarm signal is activated and the power of combine is shutdown by opening the control circuit UW1 / UW2.

MKO-1 consists of:

- The main controller GM-1JB/xS
- The user terminal GM-1TB
- Remote probe R-xM1 in combines cover OSP-Kx.

In addition, MKO-12 version has intrinsically safe power supply type ZIB-1/x with cable to GM-1JB.

Methane detector in MKO-11 version is powered by an external intrinsically safe power supply 12V DC, and MKO-12 is powered from the alternating voltage source with a value determined by power supply ZIB-1/x. Main controller GM-1JB has a built-in battery which allows activation of methane detector before powering combine, measure the initial concentration of methane and then switching power supply control circuit of combine.

MKO-1X is a device of M1 category and may thus be used in all underground mines with possible methane or coal dust explosion hazard.

TECHNICAL DATA

Combine methane detector MKO-1X	
Power supply (MKO-11 version) power consumption (maximum)	10÷16V DC 800mA
Power supply (MKO-12 version) power consumption (maximum)	24 V or 42V or 230V AC 40 VA
Power supply autonomy	min. 8h when the battery is fully charged
Working temperature range	from -5°C to +40°C
Relative humidity range	from 10% to 95% without condensation
Measurement method	Continuous, infrared, gas penetration through diffusion
Measurement range	0 - 100% CH ₄
Basic error	± 0,1% CH ₄ in the range 0 ÷ 2% CH ₄ ± 0,2% CH ₄ or 5% indications in the range 2 ÷ 5% CH ₄ ± 5% indications in the range 5 ÷ 100% CH ₄
Response time T ₉₀	<30s
Circuits parameters UW1, UW2	U _i = 60V, I _i = 3,3A
Adjustable shutdown thresholds UW, UW2	any value within the measuring range
External dimensions / weight: - main controller GM-1JB/xS - user terminal GM-1TB - probe R-xM1 in combine cover - power supply ZIB-1/x	160 x 160 x 90 mm / 2,5 kg 75 x 160 x 56 mm / 1 kg 220 x Ø135 mm / 5,8 kg 295 x 250 x 125 mm / 10 kg
Working position: - probe R-xM1 in combine cover - Other elements	deviation of ±70° axis of front-back from horizontal deviation of ±20° axis of the up-down from vertical any
Casing internal protection	IP 55

EXPLOSION-PROOF MARK



I M2(M1)/M1

EC type examination certificate: TEST 15 ATEX 0042X