

HUMIDITY, TEMPERATURE AND ATMOSPHERIC PRESSURE SENSOR

CSPA-2



Catalogue card



DESCRIPTION

Humidity, temperature and atmospheric pressure sensor CSPA-2 is a stationary device for measuring relative humidity, temperature and atmospheric pressure in explosion hazard areas in underground coalmines. It cooperates with telemetric central station CST-40A, CST-40C through analogue station CSA-1 or CSA-2. It may also cooperate with other devices provided that the parameters of the terminal of the feeder-measurement line are compatible.

The sensor is supplied from a 12V intrinsically safe source. The measured and processed values of humidity, temperature and atmospheric pressure are sent to three analogue sensor outputs which generate a signal of 0.4 to 2V. Additionally, by modulating the analogue value, the first output may operate in serial digital transmission mode. Output operation in digital mode enables sending to the central station of the CST-40 system (via the CSA-1 or CSA-2 station) measurement values of higher precision, sending diagnostic information and the manufacturer's serial number of the sensor.

The CSPA-2 sensor is a device of M1 category and may thus be used in all underground mines with possible methane or coal dust explosion hazard.

BASIC TECHNICAL DATA

Humidity, temperature and atmospheric pressure sensor CSPA-2

Power supply	from 8 to 14,5 VDC (nominal 12 VDC)	
Consumption of current	max 4 mA	
Measurement range	atmospheric pressure, standard relative humidity temperature	from 800 hPa to 1300 hPa from 0% RH to 100% RH from -20°C to +50°C
Accuracy	atmospheric pressure atmospheric pressure relative humidity temperature	±2 hPa (full temperature range) ±0.5 hPa (temperature range +5°C to +50°C) ±3 % ±1°C
Resolution	0.1 hPa, 0.1% RH, 0.1°C	
Measurement method	Continuous	
Response time t_{90}	≤2s for atmospheric pressure measurement ≤30s for temperature measurement ≤4s for relative humidity measurement	
Working position	Humidity and temperature sensor inlet from the side or the bottom (recommended)	
Scaling method	Calibrator KR-2	
Working temperature range	from -10 °C to + 40°C	
Relative humidity range	from 15% to 95%	
Dimensions	110 x 75 x 80 mm	
Weight	0,65 kg	
Casing internal protection	IP54	

EXPLOSION-PROOF MARK



EC-TYPE EXAMINATION CERTIFICATE: KDB 09 ATEX 095