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ELECTRONIC VOLUME CONVERTER

Model EK220

Product informations

EK220, the battery-powered electronic volume converter with flexible data logger function and configurable serial interface; this device detects low-frequency pulses of the measured gas volume under operating conditions from a gas meter, measures the operating pressure and temperature of the gas, calculates the compressibility coefficient K and the conversion factor C . Using these data it is possible to calculate the gas volumes at standard conditions, the flow rate values at standard conditions and the flow rate values at operating conditions.

Product features

- consisting of a central unit equipped with an integrated or external pressure sensor and a temperature sensor
- the sensors are permanently connected to the unit
- the compressibility coefficient K can be programmed as a fixed value for all gases
- used for various applications in the field of natural gas measurement and station monitoring
- high accuracy
- four sealable and freely programmable digital outputs
- optical interface for parameterization and reading (IEC 62056-21)

Applications

- conversion of gas volumes for billing purposes
- data storage (data logging) for various applications
- assembly of measured values and typical functions of a measuring station



Technical Features

METRIC APPROVALS	• COMPLIES WITH EUROPEAN STANDARD EN 12405-1:2005 + A1:2016 • GAS VOLUME CONVERSION DEVICE MID DE-08-MI 002-PTB 001 (PTZ CONVERSION)
ATEX APPROVED	ZONE 1, EEX IA IIC T4
ENVIRONMENTAL CONDITIONS	- 25°C ÷ + 55°C
BATTERY POWERED	ONE LITHIUM BATTERY (SERVICE LIFE > 5 YEARS UNDER NORMAL OPERATING CONDITIONS), OPTIONAL ADDITIONAL BATTERY TO DOUBLE THE LIFE OF THE MAIN BATTERY
EXTERNAL POWER SUPPLY	EXTERNAL SUPPLY UNIT 5 - 10 VDC, I < 30 MA (IN COMBINATION WITH A SERIAL INTERFACE)
CONTROL PANEL	4 BUTTONS KEYBOARD
INPUT	3 DIGITAL INPUTS FOR CONNECTING LOW-FREQUENCY PULSE TRANSMITTERS AND SIGNALING STATUS VIA MESSAGES (E.G.: ANTI-TAMPER CONTACT)
TEMPERATURE SENSOR	• PT-500 (OR OPTIONALLY PT-100) RESISTANCE THERMOMETER ACCORDING TO DIN 60751, WITH THERMOWELL, FOR USE WITH THERMOWELL • INSTALLATION LENGTH 50 MM, Ø 6 MM, CABLE LENGTH 2.5 M



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STORAGE	2 MONTHLY ARCHIVES, 1 DAILY ARCHIVE, 1 MEASUREMENT ARCHIVE (CONTENT AND LOGGING INTERVAL ARE FIXED) 1 PROCESS DATA ARCHIVE, 1 MEASUREMENT ARCHIVE, 4 FLEXIBLE ADDITIONAL ARCHIVES (CONTENT, LOGGING INTERVAL AND ADDITIONAL EVENTS CAN BE SELECTED THAT GENERATE A RECORD)
LOGS	EVENT LOG • RECORDING OF NON-PERIODIC EVENTS (E.G. TIME CHANGES WITH TIMESTAMP) - MEMORY CAPACITY: 500 RECORDS CHANGE LOG (AUDIT TRAIL) • LOGGING OF ALL PARAMETERS AND VALUE CHANGES (TIMESTAMP, OLD AND NEW VALUES) • STORAGE CAPACITY: 200 RECORDS CERTIFICATION DATA LOG • RECORDING OF PARAMETER CHANGES AND VALUES (TIME STAMP, OLD AND NEW VALUES) WHICH ARE NORMALLY ACCESSIBLE UNDER THE CALIBRATION KEY • MEMORY CAPACITY: 50 RECORDS
PULSES OUTPUTS	4 DIGITAL TRANSISTOR OUTPUTS, FREELY PROGRAMMABLE AND LOCKABLE WITH CALIBRATION LOCK SUCH AS • PULSE OUTPUTS OF ALL OPERATING VOLUME COUNTERS OR STANDARD VOLUMES • OUTPUTS FOR SIGNALING ALARM AND/OR WARNING STATES



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DATA INTERFACE	• OPTICAL INTERFACE COMPLIANT WITH THE IEC 62056-21 STANDARD • INTERNAL SERIAL INTERFACE USABLE IN RS232 OR RS485 MODE
COMMUNICATION PROTOCOLS	• IEC 62056-21 (IEC 1107) • MODBUS ASCII / RTU • IDOM - SMS
CASE MATERIAL	IN CAST ALUMINIUM, FOR WALL OR COUNTER MOUNTING
DISPLAY	TWO-LINE DOT MATRIX WITH DESCRIPTION IN TEXT FORMAT OF THE DISPLAYED VALUES; DISPLAY OF ALL PARAMETERS, SETTINGS AND VALUES STORED IN THE ARCHIVE
DEGREE OF PROTECTION	IP66 (PROTECTED AGAINST STRONG JETS OF WATER FROM ANY DIRECTION AND COMPLETELY SEALED AGAINST DUST AND FUMES) - SUITABLE FOR OUTDOOR INSTALLATION
DIMENSIONS	126 X 120 X 90 MM (HXLXP) CONNECTION EXCLUDED
WEIGHT	1,5 KG APPROX (BATTERIES INCLUDED)

SKU	MODEL	PRICE
00000050555	VOLUME CONVERTER - MOD. EK220	€3927.0 VAT EXCLUDED



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