



Warsaw

GENERAL SPECIFICATION

CO2 CONTROLLER

AirTECH agro PLUS

with INFRA-RED Sensor series W

PURPOSE

AirTECH agro PLUS is an ventilation controller to monitor indoor carbon dioxide concentration at the range of 0 ÷ 5000 ppm (optionally up to 20% v/v). Measurement of CO2 is realized by state-of-the-art non-dispersive infrared sensor.

In particular, the unit is designed to be used in greenhouses, mushroom farming, food transportation etc.

AirTECH agro PLUS is supplied with steering/supplying module with relay outputs to control the ventilation system and 12VDC alarm outputs for signaling. Optionally module can be equipped with 4-20mA output and/or RS485 MODBUS digital output.

FEATURES

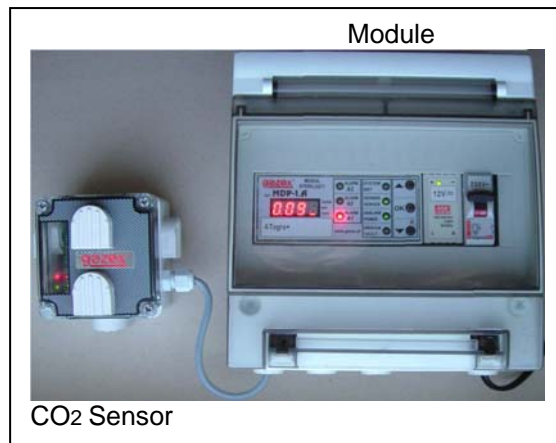
AirTECH agro PLUS consists of two units: remote CO2 Sensor (to be mounted in the monitored room) and steering/supplying Module.

CO2 SENSOR (type DG-P8R.EN):

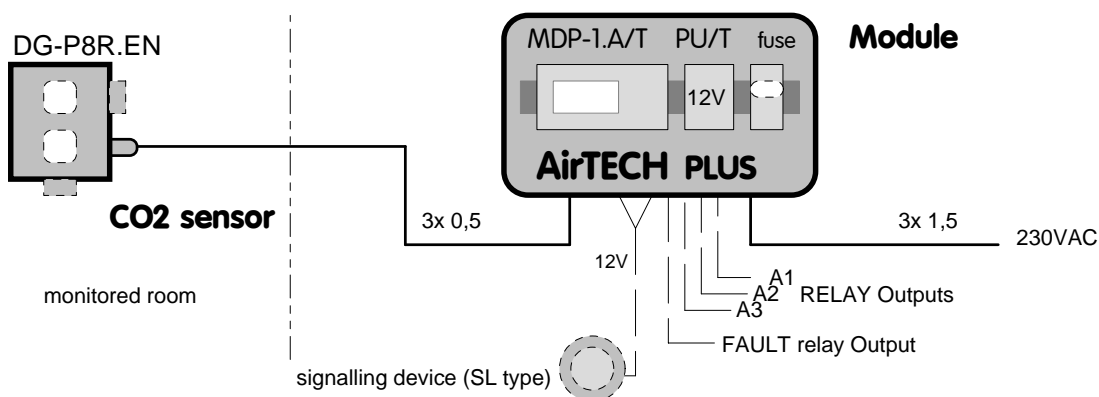
- state-of-the-art non-dispersive infrared (NDIR) technology to measure carbon dioxide gas concentration
4-20mA analog output
internal automatic self diagnostic and calibration
long sensor operating lifetime (> 10 years)
wall-mounted housing (IP43) with standard connecting cable (10m, can be upgraded up to 150m)
universal mounting bracket

STEERING/SUPPLYING MODULE (type AirTECH PLUS):

- internal digital control unit type MDP1.A/T, with 3 threshold levels (settable from push-buttons), 4-digit LED display, 7 status LEDs
IP54 wall-mount cabinet
Standard 4 relay outputs (max 250 VAC)
12VDC power supply + 230 VAC power-ON switch mounted on standard 35mm rail
Optionally: 4-20mA analog output and/or RS485 MODBUS digital output



CONNECTION DIAGRAM



TECHNICAL SPECIFICATIONS

<i>DETECTOR</i>	AirTECH agro PLUS
Detecting gas	carbon dioxide (CO ₂)
Operation principle	non-dispersive infrared (NDIR)
Measurement range / accuracy	standard: 0 ÷ 5000ppm / ± 5% of reading or > ± 50ppm; option: 0 ÷ 20% v/v ± 5% of reading or > ± 0,2% v/v
Cross sensitivity	no
Gas sampling mode	diffusion (response time T ₉₀ = ~5min)
Maintenance interval	12 months (calibrations recommended); sensor life expectancy: > 10 years
Operating temperature range	sensor: 0°C ÷ +45°C; module: -10°C ÷ +40°C
Operating humidity range	5 ÷ 95 % (non condensing)
Alarm outputs	alarm outputs set at factory: A1, A2, A3 = within the range, Hysteresis: 100 ppm
Alarm set accuracy	± 10 % of set value or ± 50 ppm, whichever is greater
Display	4 digit LED display in module only, current CO ₂ values
Module signalization	optical: power supply on - green LED, A1/A2/A3 on – red LED audible: siren in module (70dB/30 cm)
Sensor output	4-20mA
Module outputs	ALARM1, ALARM2, ALARM3 relay NO/NC type outputs, max. 2A (AC motors) or 0,6A (fluorescent lamps), max 250 VAC or 30 VDC); AWARIA (FAULT) relay output (type as above); A1, A2 - 12VDC alarm outputs (max 100mA, can be extended up to 800mA from internal 12VDC power supply); option AirTECH agro PLUS/420 only: 4-20mA analog output in 0 ÷ 5000 ppm range; option AirTECH agro PLUS/M only: RS485 digital output with MODBUS RTU protocol
Power supply	230VAC, 50Hz (max 6W) or 12VDC (4W) – without internal 12V power supply
Housing / weight	sensor: 95 x 110 x 75 mm, ABS/PC, IP43 / 0,2kg; module: 200 x 190 x 110 mm, ABS, IP54 / 1,2kg
Warranty	12 months Standard Gazex Guarantee (SGG); Possibility to extend to 36 months – after product registration procedure (see RGG3Y rules)

1000 ppm = 0,1% v/v , 10 000 ppm = 1% v/v



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