W2027ASC-CO$_2$ SPLIT CONTROL UNIT

Ambiance CO2 + Humidity + Temperature Real Time Detection
with Three On/Off Outputs or Three Analog Outputs

CE Approval   C E

Indoor Air Quality
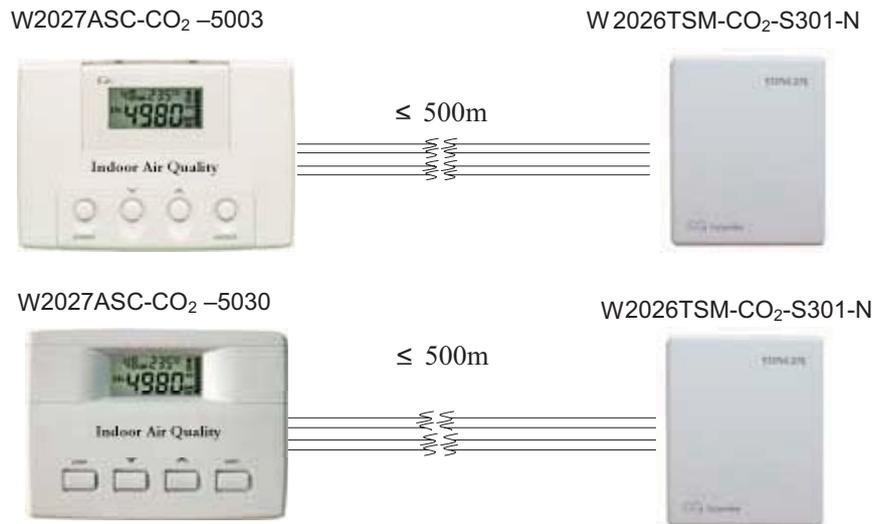Beltéri Levegőminőség Kft.
www.iaq.hu

W2027ASC-CO2 Split Control Unit is composed by two parts as below figure.

W2027ASC-CO$_2$ –5003   W 2026TSM-CO$_2$-S301-N

≤ 500m

W2027ASC-CO$_2$ –5030   W2026TSM-CO$_2$-S301-N

≤ 500m

◆ Features

Features of Controller   (W2027 ASC-CO$_2$)

- ◆ Network function with RS-485 communication interface, 15KV anti-static protection. It 's used with the sensor box (W2026TSM-CO$_2$-S301-N) together

- ◆ Real time monitor and control CO2+temperature+humidity with LCD display

- ◆ Preset CO$_2$ level, humidity and temperature , also lock the operation buttons by end users.

- ◆ Specially provide the altitude calibration

- ◆ Provide 3 x relay on/off outputs to control CO$_2$ level and humidity and temperature (W2027ASC-CO2-5003)

- ◆ Provide 3 x analog outputs (0~10VDC) wide range linearization outputs to correspond with carbon dioxide and humidity and temperature measurements (W2027ASC-CO2-5030)

- ◆ PC/ABS flame retardant housing

Features of Sensor Box (W2026TSM-CO$_2$-S301-N)

- ◆ Integrate CO$_2$, humidity and temperature sensors in a box. Non-Dispersive Infrared Detector (NDIR) CO2 sensor, which can ensure CO$_2$ detection and control more precision with 15 years long lifetime

- ◆ ABC Logic Self-calibration available for almost all application places.

- ◆ Detection and control CO$_2$ range selectable:

0~ 20000ppm or 0~50000ppm

- ◆ Humidity range: 5~ 99%RH; temperature range: 0~ 50°C

- ◆ Provide altitude calibration function to end users

- ◆ RS-485 network communication interface with 15KV anti-static protection makes it connecting with the W2027ASC-CO$_2$-5003 controller together.

- ◆ PC/ABS flame retardant housing

◆ Application

- ◆ Greenhouses, seed cultivate and other relative agriculture establishments
- ◆ Food refresh and storage
- ◆ Other places where need remote detection and control CO_2 level, humidity and temperature
- ◆ Separate controller and sensors makes the sensors being installed in the places where people cannot enter but need real time detection CO_2 level, humidity and temperature

◆ Specifications

Gas sensor	Non-Dispersive Infrared Detector (NDIR) arbon Dioxide sensor
Accuracy@25°C (77 °F)	±40ppm + 3% of reading (@22°C)
Stability	<2% of FS over life of sensor (15 yr typical)
Calibration interval	ABC_Logic Self Calibration
Non linearity	<1% of FS
Altitude calibration	Programmable from 0-9,900m in 100m increments
Response Time	<2 minutes for 90% step change
Signal update	Every 2 seconds
Warm up time	48 hours (first time) 10 minutes (normal operation)
CO_2 measuring range	0~20,000ppm or 0~50,000ppmt selectable
CO_2 setting & Display resolution	1ppm
Temperature sensor	NTC
Humidity sensor	HS series capacitive sensor
Temperature dependence	0.2% FS/°C
Temperature correction	Self compensation
Temperature measuring/ setting range	0~50°C (32~122 °F)/ 5~45°C (41~113℉)
Humidity measuring/setting range	0~99%RH / 5~95%RH
Relay outputs	3Xrelay on/off outputs to control CO_2 device/fan and humidity device and temperature device
Analog outputs	3Xanalog outputs (0~10VDC) to control CO_2 device/fan and humidity device and temperature device
Communication interface	RS-485, 19200(default) 15KV antistatic protection
Flow rates	Diffusion version 80 ~ 120 cc/min
Operation conditions	0~50°C(32~122°F); 0~95%RH, non condensing
Storage conditions	-40~70°C (-40~158°F)
NDIR CO_2 sensor lifetime	15 years
Power supply	24VAC/24VDC
Net weight	W2027ASC-CO_2 -5003: 290g, W2027ASC- CO_2 -5030: 250g W2026TSM-CO_2-S301-N: 210g
Dimensions	W2027ASC-CO_2 -5003: 130mm×90mm×40mm W2027ASC-CO_2 -5030: 120mm×90mm×24mm W2027TSM-CO_2-S301-N: 100mm×80mm×28mm
Installment standard	65mm×65mm or 2"×4"wire box
Approval Standard	CE-Approval
Selection of setup	DIP switch inside and button outside

◆ Models

Model	Description
W2027ASC-5003-20 (with W2026TSM-CO_2-S301-N)	Environment CO_2 + humidity + temperature detection, 3 XON/OFF relay outputs to control a CO_2 generator/ ventilation system as well as humidity and temperature device. CO_2 detection range: 0~20,000ppm (programmable setting , default:0~2,000ppm)

W2027ASC-5003-50 (with W2026TSM- CO_2-S301-N)	Environment CO_2 + humidity + temperature detection, 3 XON/OFF relay outputs to control a CO_2 generator/ventilation system as well as humidity and temperature device. CO_2 detection range: 0~50,000ppm (programmable setting , default:0~50,000ppm)
W2027ASC-5030-20 (with W2026TSM- CO_2-S301-N)	Environment CO_2 + humidity + temperature detection, provide 3 0~10VDC wide range linearization outputs corresponding with CO_2 measurement and humidity and temperature. CO_2 range: 0~20,000ppm (programmable setting, default:0~2,000ppm)
W2027ASC-5030-50 (with W2026TSM- CO_2-S301-N)	Environment CO_2 + humidity + temperature detection, provide 3 x 0~10VDC Wide range linearization outputs corresponding with measurement CO_2 and humidity and temperature. CO_2 range: 0~50,000ppm (programmable setting, default:0~50,000ppm)

◆ **Wiring Diagrams**

W2027ASC-CO2-5003-(C)   W2026TSM-CO2-X-301-N

W2027ASC-CO2-5030-V-(C)   F2000TSM-CO2-X-301-N