EVC-PY-DA-MB SMOKE DETECTOR WITH MODBUS 24V
**Modbus communication in the base, automatic sensitivity adjustment and service alarm.
Optical function**
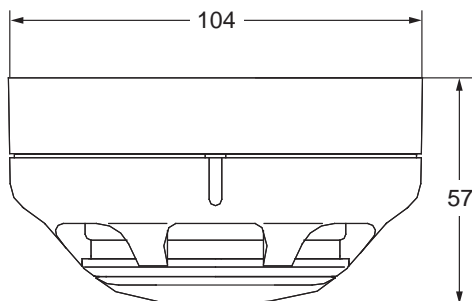
CE

CHARACTERISTICS
- **Modbus RTU communication**
- **Automatic sensitivity adjustment**
  - **longer lifespan**
  - **fewer false alarms**
- **Service alarm**

FUNCTION

Connect EVC-PY-DA-MB to a Modbus master that scanns the Modbus registers in the smoke detector. Three status indications are possible to read out of the smoke detector: Smoke alarm, service alarm (contamination) and removed detector head. RS 485 termination (120 Ohm) is activated by a programming jumper on the PCB in the base. Modbus ID (address), parity and baud rate are set on the DIP switch. To reset a smoke alarm, break the power supply shortly.
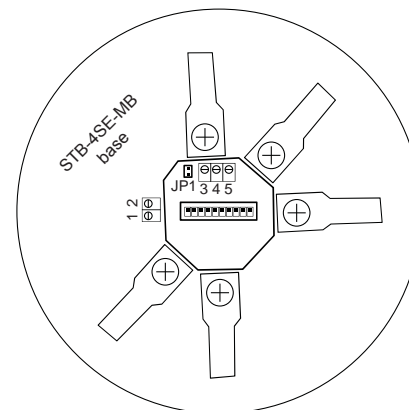
The detector is equipped with a bayonet mount, which makes it easy to fit and remove.

EVC-PY-DA has an intelligent monitoring circuit that continuously checks and adjusts the sensitivity for optimum functionality during the entire life of the detector. When the detector can no longer compensate for environmental influences, a service alarm is generated.

The design of the detector makes it almost completely immune to high air speeds, dirt and radio frequency interference.

For more information about the smoke detector head, please see the data sheet for EVC-PY-DA.

TECHNICAL DATA

Voltage supply:	24V AC/DC
Current consumption:	100 mA
Detector head:	White PC with metal net around the chamber
Base:	White PC
Unit load:	24 kOhm (1/2 UL)
Operating temperature:	-10°C to +55°C
Humidity:	Max. 99% rH
Sensitivity:	According to EN-54-7
Tests and approvals:	Detector head certified by VdS (Germany), according to EN-54-7
LED indications:	Green - service alarm Red - smoke alarm
Weight:	ca 200 g
Service alarm:	Green LED
Smoke alarm:	Red LED
Protection:	Base IP22

DIMENSIONS
(mm)

Mounting: 2 x M4 screws, 50 / 60 / 70 mm c/c

WIRING DIAGRAM

1	24V AC/DC
2	24V AC/DC
3	0 GND
4	A RS485 +
5	B RS485 -
JP1	120Ω Termination

ORDERING EXAMPLE

Article code	Description
EVC-PY-DA-MB	Smoke detector optical with service alarm and Modbus communication

CALECTRO®

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SIMPLE FUNCTIONAL TEST

After completing the installation, it is recommended to test the alarm function of the detector and to test that it is properly installed. To ensure the function, test the smoke detector with i.e. test spray RDP-300.

DIP SWITCH

Pos.	ON	OFF
1	Address 0=1 (binary)	Address 0=0 (binary)
2	Address 1=1 (binary)	Address 1=0 (binary)
3	Address 2=1 (binary)	Address 2=0 (binary)
4	Address 3=1 (binary)	Address 3=0 (binary)
5	Address 4=1 (binary)	Address 4=0 (binary)
6	Address 5=1 (binary)	Address 5=0 (binary)
7	Address 6=1 (binary)	Address 6=0 (binary)
8	Address 7=1 (binary)	Address 7=0 (binary)
9	1 startbit, 1 stop bit, Even parity*	1 startbit, 2 stop bits, No parity*
10	38400 baud rate*	9600 baud rate*

* Must be set before connecting the power.

TERMINATION

Jumper 1 ON	120 Ohm Termination

MODBUS REGISTERS

Discrete Inputs	Address	Comment		Min	Max
	1x0001	Detector mounted in base		0	1
	1x0002	Service alarm		0	1
	1x0003	Smoke alarm		0	1

Holding Registers	Address	Comment	
	4x0001	Reset smoke alarm	234 = reset alarm 1 = Set to normal

NOTE!

To ensure that the fire monitoring is active, the Modbus master must continuously supervise the communication with all connected smoke detectors. If the communication with any of the smoke detectors fail, there must be a warning sent to the person responsible. The reason for communication failure could be: sabotage, cable fault, product fault etc.