

MCM 35

Memory Card Module for ASD

From production number 160116 and FW version 01.02.01

The MCM 35 is an additional module for the ASD 533 and ASD 535 aspirating smoke detector that logs operating data.

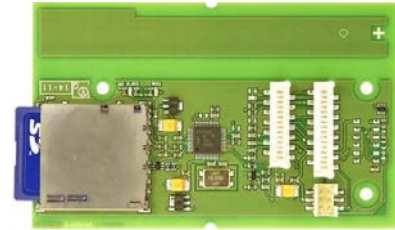


Fig. 1 MCM 35

Description

When an MCM 35 **Memory Card Module** is installed in the ASD aspirating smoke detector, operating data (e.g. long-term logging of smoke concentration, airflow, and event memory data) of the ASD is logged. The MCM 35 has an **SD memory card** which can be removed from the MCM 35 for data backup and data evaluation.

Mounting / Installation

There are four expansion slots for mounting the optional additional modules in the detector housing of the ASD.

In the mounting set of the MCM 35 there are module holders, mounting screws and the connection cable (ribbon cable) for connecting to the AMB 33 and AMB 35 (see Fig. 2).

The MCM 35 Memory Card Module is connected to connector **Option2** (or **Option1**).

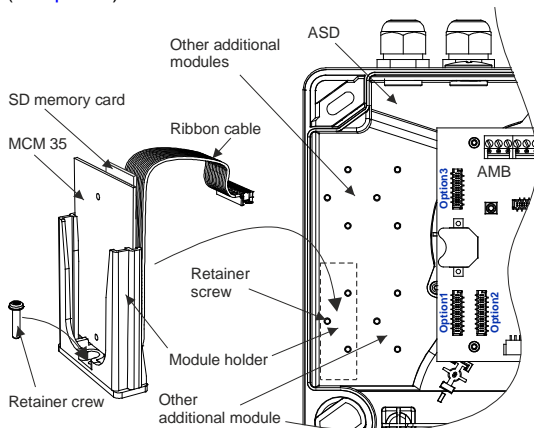


Fig. 2 Installing the MCM 35

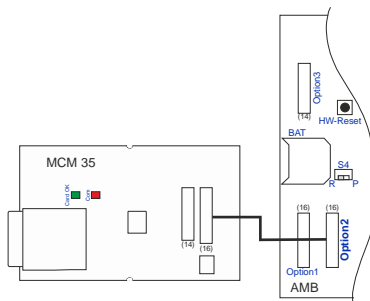


Fig. 3 Wiring the MCM 35

Programming

The MCM 35 requires no programming. As soon as the MCM 35 is electrically connected to the ASD and the **SD memory card** is inserted, data logging begins (see also "**Commissioning / Operation**").

Displays

Two LEDs on the MCM 35 indicate the operating state and the communication state between AMB and MCM.

LED card OK (green)	SD memory card state (lights only if supply from AMB is OK)
Not lit	MCM <-> AMB connection not Ok, SD memory card not inserted, MCM logged off
Continuously lit	MCM <-> AMB connection Ok, SD memory card inserted, MCM logged on
Com LED (red)	Communication / Write state
Not lit	No communication from AMB
Flashes (normal operation)	MCM <-> ASD communication Ok, SD memory card is logging

Data logging

Smoke and airflow values: Every second the alarm sensitivity, smoke level, dirt level and airflow values for each smoke sensor are logged and saved in **Log-Files** (.xls file) on the **SD memory card**. After 28,800 entries (corresponds to 8 hours at 1 s MCM interval) a new **Log-File** is generated automatically. A total of 251 **Log-Files** (L000.xls to L250.xls) can be generated for long-term logging. After the last **Log-File** the oldest one (L000.xls) is overwritten. The 251 **Log-Files** cover data logging for 83 days (at 1 s MCM interval). The **Log-Files** can then be opened in Excel and the data can be processed with the diagram assistant to create charts.

Events: All events which occur in the ASD are written to the **Event-Files** (.aev file). After 64,000 events a new **Event-File** is automatically created. A total of 251 **Event-Files** (E000.aev to E250.aev) can be generated for long-term logging. After the last **Event-File** the oldest one (E000.aev) is overwritten. The 251 **Event-Files** are adequate to log over 16 million events. The **Event-Files** can be opened with a text editor. The interpretation of the events is similar to that described in Technical Description T 140 287 and T 131 192, section 8.5.3. There is also the possibility of importing **Event-Files** using the configuration software "**ASD Config**" and displaying them as true event text.

Commissioning / Operation

The MCM 35 and the SD memory card are automatically detected when the device is switched on and are monitored from then on. The data logging begins automatically after about 10 s.



- Using the SD memory card: Before the SD memory card is used, make sure that it is empty (interpretation of the files).
- Removing the SD memory card: Before the SD memory card can be removed from the MCM 35, the MCM 35 has to be logged off the AMB Main Board via operating controls (to prevent data loss). This applies as well to a subsequent removal of the MCM (see "**Log off MCM**").
- Only **industrial SD memory cards** tested and approved by the manufacturer may be used.

Log off MCM

Measure	Display/indication	Procedure/comment
1. Press "UP" several times until display shows o	In sequence: A to o	• Display of switch setting group o
2. Press the "OK" button	ooo	• Display of additional module logoff
3. Press the "OK" button again	Flashing o - - (timeout approx. 15 s)	• Start of logoff procedure, duration approx. 15 s
4. Remove MCM or SD memory card		• If the MCM or SD memory card is not removed within 15 s, it is re-activated and logging is continued

The SD memory card is inserted with the contact side toward the MCM circuit board up to the stop in the holder until it snaps in. By pressing the SD memory card again, the locking mechanism is released and the SD memory card can then be pulled out of the holder.

Technical data

Type	MCM 35	
Operating voltage from AMB	5	VDC
Maximum power consumption	25	mA
Ambient conditions acc. to IEC 721-3-3 / EN 60721-3-3 (1995)	3K5 / 3Z1	class
Extended ambient conditions:		
• MCM 35 temperature range	-30 – +60	°C
• max. permitted storage temperature (without condensation)	-30 – +70	°C
• SD memory card temperature range	-40 – +85	°C
• Humidity ambient condition (transient without condensation)	95	% rel/F
• Humidity ambient condition (continuous)	70	% rel/F
SD memory card storage capacity	2	GB
Data logging in Log-File :	251	pieces
Number of entries per Log-File	28,800	pieces
Duration of the logging (at 1 s MCM interval)	83	days
Data logging in Event-File :	251	pieces
Number of events per Event-File	64,000	pieces
Total number of events	< 16 million	pieces
Dimensions (W x H x D)	99 x 58 x 17	mm
Weight (including module holder)	43	g

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Dimensioned drawing

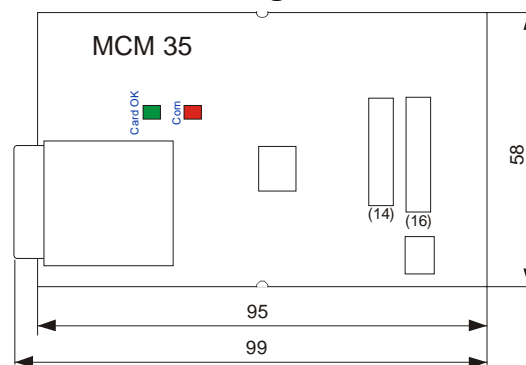


Fig. 4 MCM 35 dimensioned drawing

Article numbers / Spare parts

Brief description	Article number
MCM 35, incl. mounting set	4000285.0101
SD memory card (industrial version)	11-4000007-01-XX
Technical descriptions ASD 533	T 140 287
ASD 535	T 131 192
Data sheets ASD 533	T 140 288
ASD 535	T 131 193