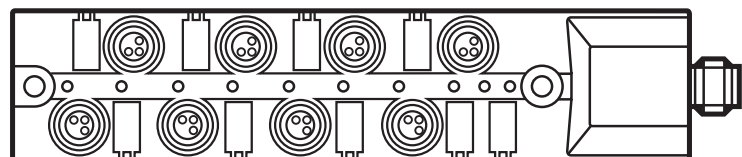


# Operating instructions AS-i CompactModule M8

UK

**AC2488**  
**AC2489**

7390940/03 04/2018



# 1 Preliminary note

Technical data, approvals, accessories and further information at [www.ifm.com](http://www.ifm.com).

## 1.1 Safety instructions

- Read this document before setting up the product and keep it during the entire service life.
- The product must be suitable for the corresponding applications and environmental conditions without any restrictions.
- Only use the product for its intended purpose (→ Functions and features).
- If the operating instructions or the technical data are not adhered to, personal injury and/or damage to property may occur.
- The manufacturer assumes no liability or warranty for any consequences caused by tampering with the product or incorrect use by the operator.
- Installation, electrical connection, set-up, operation and maintenance of the product must be carried out by qualified personnel authorised by the machine operator.
- The plant manufacturer is responsible for the safety of the plant in which the device is installed.
- If the device is used in a way that is not intended by the manufacturer, the protection supported by the device may be impaired.
- Protect units and cables against damage.

## 1.2 Symbols used

► Instructions

> Reaction, result



Important note

Non-compliance may result in malfunction or interference.



Information

Supplementary note

## 2 Functions and features

- AC2488: 8 inputs CTT3 (AS-i profile S-7.A.A) / AS-interface version 3.0 / master profile M4 / extended addressing mode: yes / maximum number of modules per master: 62
- AC2489: 2x4 inputs (AS-i profile 2x S-0.A.E) / AS-interface version 3.0, backwards compatible / master profile M3 or M4 / extended address mode: yes / maximum number of modules per master: 31 (2 independent A/B slaves per module)

## 3 Installation

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- ▶ Disconnect power before installation.

- ▶ For installation choose a flat mounting surface.

The entire bottom of the module must lie flat on the mounting surface.

- ▶ Fix the module onto the mounting surface using M4 screws and washers.

## 4 Electrical connection



The unit must be connected by a qualified electrician.


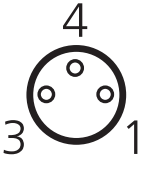
The national and international regulations for the installation of electrical equipment must be adhered to.

- ▶ Disconnect the installation from power and connect the unit.

To ensure the protection rating:

- ▶ Connect the plugs of the sensors to the M8 sockets.
- ▶ Tighten firmly, recommended tightening torque 0.3...0.5 Nm.
- ▶ Cover the unused sockets with the enclosed protective caps.
- ▶ Tighten firmly, recommended tightening torque 0.3...0.5 Nm.

## 4.1 Pin connection

<b>M12 connector</b> 1: AS-i + 3: AS-i -	
<b>Input M8</b> 1: Sensor supply + 3: Sensor supply - 4: Data input	

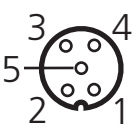
Parameter bit	Designation	Description
P1	Periphery fault	1 periphery fault indication active 0 periphery fault indication not active



In the AS-i network the AC2489 module functions like 2 independent A/B slaves.

## 5 Addressing

- Addressing the unit via the M12 connector (AS-i); the address is set to 0 at the factory.

AC1154 addressing unit Wiring of the addressing socket		1: AS-i + / 2: TTL → / 3: AS-i - 4: TTL ← / 5: + 5 V
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### 5.1 Addressing the AC2489 module

In the factory setting, initially only the first slave gives a signal on address 0. It can be addressed to any address between 1A...31B.

If this slave is addressed, the second slave with the address 0 appears automatically in the display. Now this slave can be addressed to any address between 1A...31B.



Both slaves can be assigned any A/B addresses (e.g. 3A/6A or 9A/25B....).  
No address can be assigned twice (e.g. 3A/3A or 9B/9B).

If a slave with the ID code "A" (extended address mode possible) is used in combination with a master of the 1st generation (version 2.0),

- the parameter P3 must be 1 and the output bit D3 must be 0.\* The output bit D3 must not be used.
- an address between 1A and 31A must be assigned to this slave.

\* default setting

### 5.1.1 Restore the factory setting (address both slaves to 0) to AC2489

Recommendation:

Use the addressing unit AC1154 to restore the factory settings.



When AS-i masters are used and „automatic addressing“ is activated restoring the factory settings is reversed.

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Using the addressing unit AC1154 the factory settings of the module are restored by writing a 0 to ID1 of the second slave (factory setting ID1 = 2).

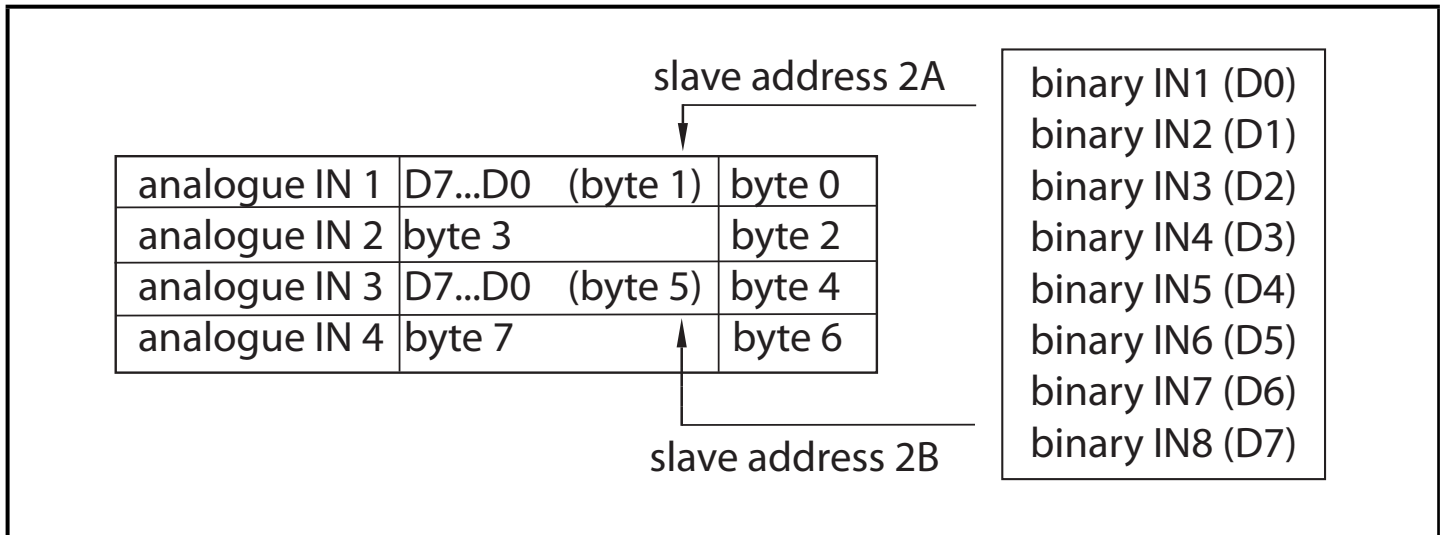
When the factory settings are restored via the AC1154 the status message [F3] is displayed.

- ▶ Press mode button once to close the status message.
- ▶ Operating mode ID2 appears.
- ▶ Then press the mode button as long as the addressing mode ADDR is visible to display the factory settings (address 0).

## 6 Settings

The AC2488 module occupies only one slave address. The data of the module is in the analogue range.

## 6.1 Value range CTT3 in the M4 Controller<sub>e</sub> and AC14xx to AC2488



## 6.2 Display of the M4 Controller<sub>e</sub> and AC14xx to AC2488

Display (hex.) in the menu [Slave Info] of the M4 Controller <sub>e</sub>		Display (dec.) in case of AC14xx units
I-1	0x100	256
I-2	0x200	512
I-3	0x400	1024
I-4	0x800	2048
I-5	0x1000	4096
I-6	0x2000	8192
I-7	0x4000	16384
I-8	0x8000	32768

## 6.3 Display in a higher-level controller (e.g. Siemens) for AC2488

Example: Slave 2A, inputs I-5 and I-8 switched

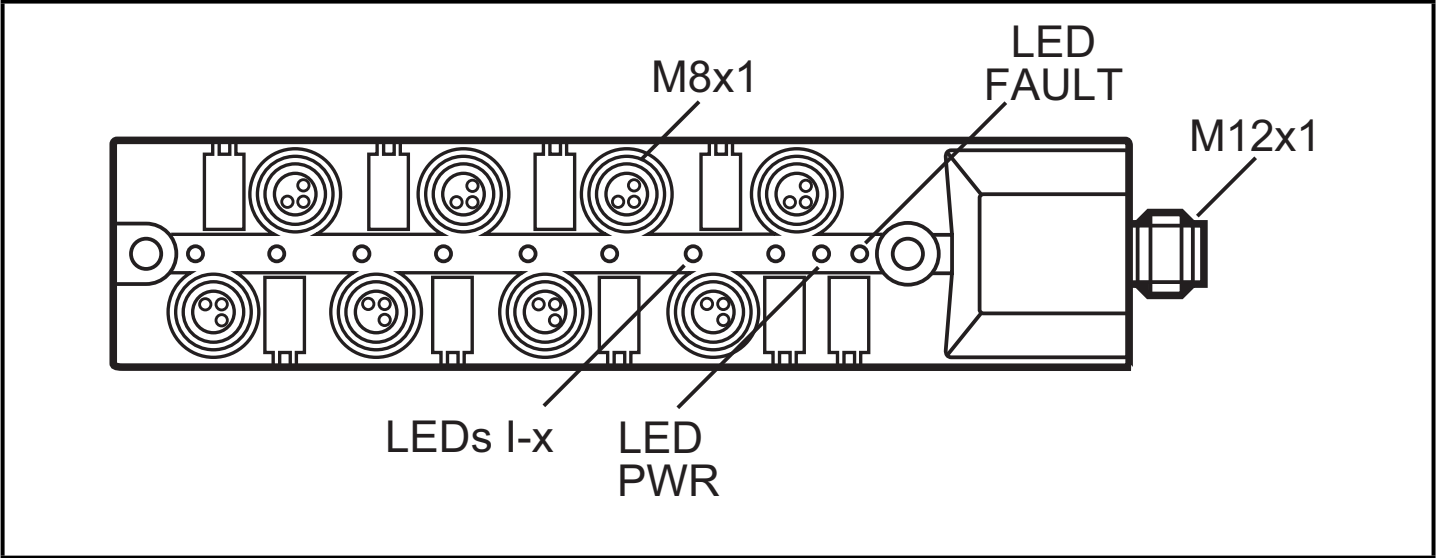
Channel 1 (input word 1)	1001 000 Byte 1	(Byte 0)
Channel 2 (input word 2)	(Byte 3)	(Byte 2)
Channel 3 (input word 3)	(Byte 5)	(Byte 4)
Channel 4 (input word 4)	(Byte 7)	(Byte 6)

Example: Slave 2B, inputs I-5 and I-8 switched

Channel 1 (input word 1)	(Byte 1)	(Byte 0)
Channel 2 (input word 2)	(Byte 3)	(Byte 2)
Channel 3 (input word 3)	1001 000 Byte 5	(Byte 4)
Channel 4 (input word 4)	(Byte 7)	(Byte 6)

## 7 Operating and display elements

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## 8 Operation

LED I-x yellow:	Input switched
LED PWR green:	AS-i voltage supply OK
LED FAULT red lights:	AS-i communication error, slave does not participate in the "normal" exchange of data, e.g. slave address 0
LED FAULT red flashes:	Periphery fault, e.g. sensor supply overloaded or shorted, is signalled to the AS-i master (version 2.1 or higher).