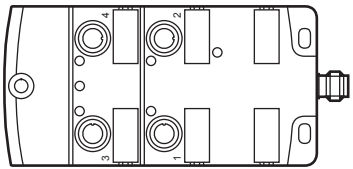
Operating instructions
AS-i CompactLine module

UK

**AC2464**
**AC2465**
**AC2467**
**AC2468**



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# Contents

# 1 Preliminary note

▶ Instruction

> Reaction, result

Important note
Non-compliance can result in malfunction or interference.

Information
Supplementary note.



# 2 Safety instructions

- Please read the operating instructions prior to set-up of the device. Ensure that the product is suitable for your application without any restrictions.
- The unit conforms to the relevant regulations and EC directives.
- Improper or non-intended use may lead to malfunctions of the unit or to unwanted effects in your application.
- Installation, electrical connection, set-up, operation and maintenance of the unit must only be carried out by qualified personnel authorised by the machine operator.

# 3 Functions and features

AC2464 / AC2465

- maximum number of modules per master: 31
- AS-interface version 2.1

AC2467 / AC2468

- maximum number of modules per master: 62
- AS-interface version 3.0

# 4 Installation

▶ Disconnect the system from 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 (1).
Tightening torque 1.8 Nm.
Use stainless steel sleeve (E70402)* for installation in case of high mechanical stress.

▶ Connect the plugs of the sensors (2) to the M12 sockets.
Tightening torque 0.8...1.5 Nm.

▶ Cover the unused sockets with protective caps (E73004)*.
Tightening torque 0.6...0.8 Nm.

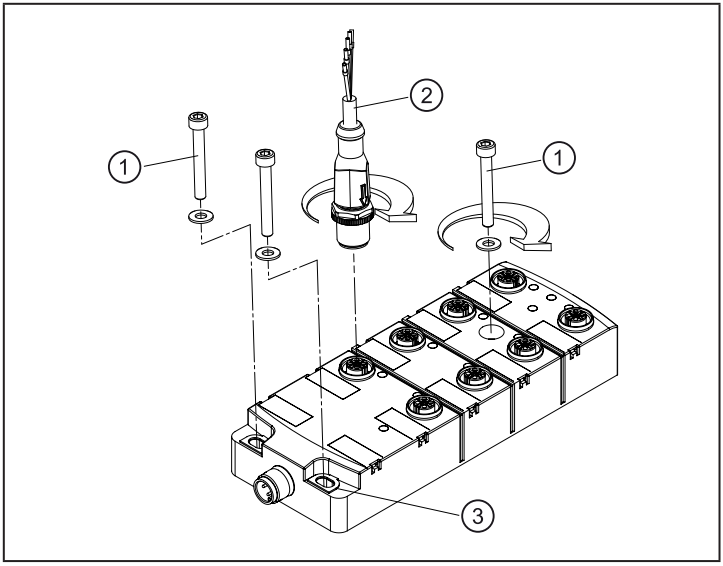
▶ The flat cable end seal (E70413)* must be used if the module is at the end of the cable line.

*to be ordered separately

In case of interference coupling to the sensor cables or the black flat cable (24 V DC auxiliary supply) the use of the functional earth springs can improve the EMC.

Requirement: An interference-free and low-resistance connection to the machine ground.

▶ If necessary, you can ground the module via the functional earth springs (3).




1: M4 screws and washers (not supplied with the device). Tightening torque 1.8 Nm.
2: M12 connector. Tightening torque 0.8...1.5 Nm.
3: functional earth springs

Observe the maximum tightening torque of the connection cable.

# 5 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.

Intended for connection to class 2 (cULus class 2) circuits only.

- ▶ Disconnect power.
- ▶ Connect the unit.

## 5.1 External protective circuitry for inductive loads

The switch-on and switch-off capacity for triggering solenoids is rated up to 20 W (IEC 60947-5-1, utilisation category DC-13).

Recommendation: For inductive loads use a free wheel diode on the load. ifm electronic offers valve plugs with integrated free wheel diodes.

# 6 Addressing

AC2464 / AC2465

- ▶ Assign a free address between 1 and 31.

The address is set to 0 at the factory.

AC2467 / AC2468

- ▶ Assign a free address between 1A and 31B.

The address is set to 0 at the factory.

# 7 Pin connection / data bits

**inputs**
1: sensor supply +
2+4: data input
3: sensor supply -
5: functional earth


**outputs**
3: external voltage AUX -
4: switching output
5: functional earth (FE)
1,2: not connected (n.c.)

**connector M12 AC2464 / AC2468**
1: AS-i +
3: AS-i -


**connector M12 AC2465 / AC2467**
1: AS-i +
2: AUX -
3: AS-i -
4: AUX +




## AC2464

4 inputs

AS-i profile S-0.0.E / extended addressing mode: no

| **Data** bit | **D0** | **D1** | **D2** | **D3** |
|---|---|---|---|---|
| Input | 1 | 2 | 3 | 4 |
| Socket | I-1 | I-2 | I-3 | I-4 |
| Pin | 2+4 | 2+4 | 2+4 | 2+4 |

## AC2465

4 inputs / 4 outputs

AS-i profile S-7.0.E / extended addressing mode: no

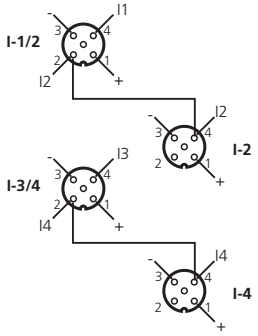
| **Data bit** | **D0** | **D1** | **D2** | **D3** |
|---|---|---|---|---|
| Input | 1 | 2 | 3 | 4 |
| Socket | I-1 | I-2 | I-3 | I-4 |
| Pin | 2+4 | 2+4 | 2+4 | 2+4 |
| Output | 1 | 2 | 3 | 4 |
| Socket | O-1 | O-2 | O-3 | O-4 |
| Pin | 4 | 4 | 4 | 4 |

**AC2467**

4 inputs / 4 outputs

AS-i profile S-7.A.7 / extended addressing mode: yes

| **Data bit** | **D0** | **D1** | | **D2** | **D3** | |
|---|---|---|---|---|---|---|
| Input | I1 | I2 | | I-3 | I-4 | |
| Socket | I-1/2 | I-1/2 | I-2 | I-3/4 | I-3/4 | I-4 |
| Pin | 4 | 2 | 4 | 4 | 2 | 4 |
| Output | O1 | O2 | | O3 | O4 | |
| Socket | O-1 | O-2 | | O-3 | O-4 | |
| Pin | 4 | 4 | | 4 | 4 | |

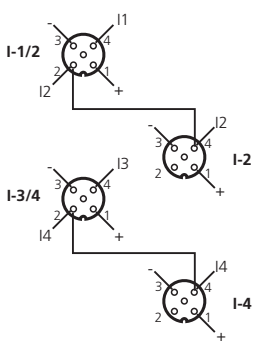
| **Inputs Y-circuit** | **Outputs** |
|---|---|
|  |  |
| Inputs<br>1: sensor supply +<br>2: data input<br>3: sensor supply +<br>4: data input<br>5: functional earth (FE) | Outputs<br>3: external voltage AUX -<br>4: switching output<br>5: functional earth (FE)<br>1.2: not connected (n.c.) |

**AC2468**

4 inputs / AS-i profile S-0.A.E / extended addressing mode: yes

| Data bit | D0 | D1 | | D2 | D3 | |
|---|---|---|---|---|---|---|
| Input | I1 | I2 | | I3 | I4 | |
| Socket | I-1/2 | I-1/2 | I-2 | I-3/4 | I-3/4 | I-4 |
| Pin | 4 | 2 | 4 | 4 | 2 | 4 |

**Inputs Y-circuit**




Inputs
1: sensor supply +
2: data input
3: sensor supply +
4: data input
5: functional earth (FE)

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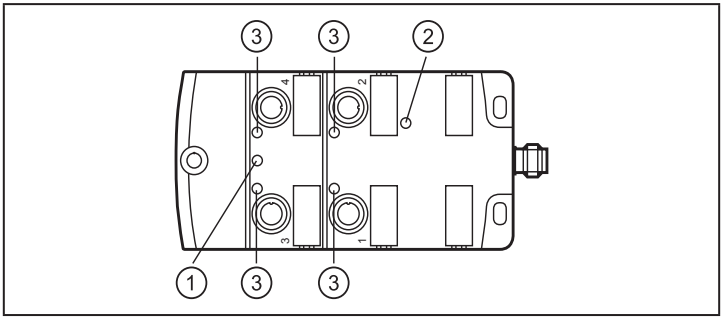
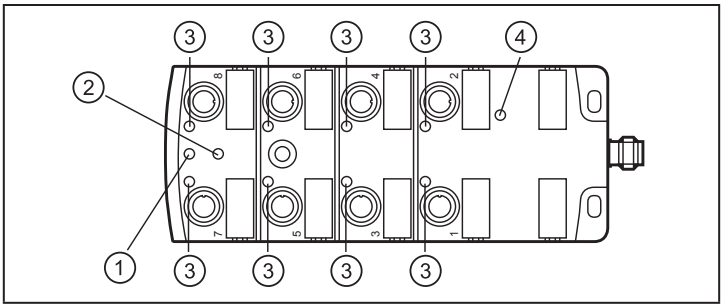
# 8 Operating and display elements




1: LED AS-i
2: LED FAULT
3: LED IN / OUT




1: LED AS-i
2: LED AUX
3: LED IN / OUT
4: LED FAULT

| | |
|---|---|
| LED AS-i green lights: | AS-i voltage supply ok |
| LED AUX green lights: | AUX voltage supply ok (AC2465 / AC2467) |
| LED IN / OUT lights: | input / output switched |

| | |
|---|---|
| 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: | peripheral fault, e.g. sensor supply / output overloaded or shorted, communication active |

Overload and short circuit of the input supply and the outputs are signalled as peripheral fault to the AS-i master (version 2.1 or higher).

## 9 Maintenance, repair and disposal

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The operation of the unit is maintenance-free.

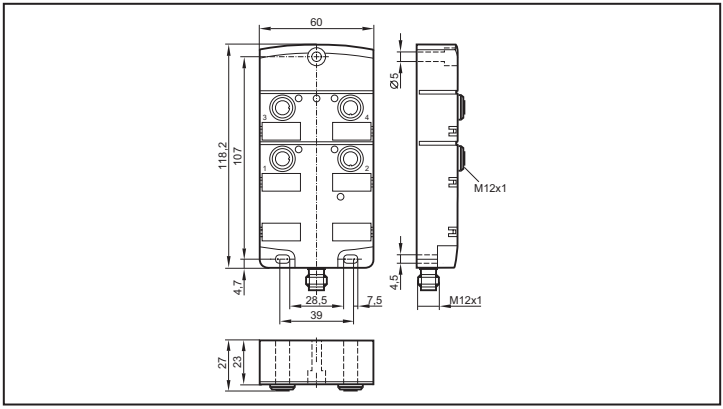
After use dispose of the unit in an environmentally friendly way in accordance with the applicable national regulations.

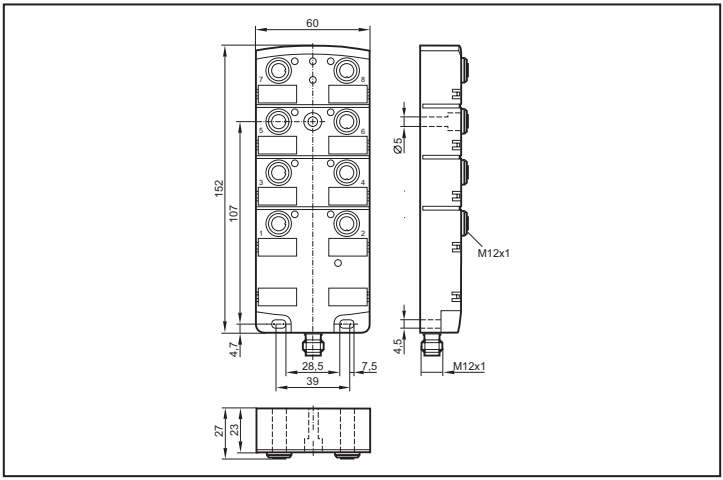
## 10 Technical data

Technical data and further information at www.ifm.com.

## 11 Scale drawing

AC2464 / AC2468

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M12x1
M12x1