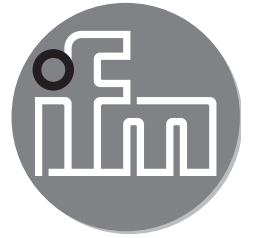




ifm electronic



Bedienungsanleitung
Operating instructions
Notice d'utilisation

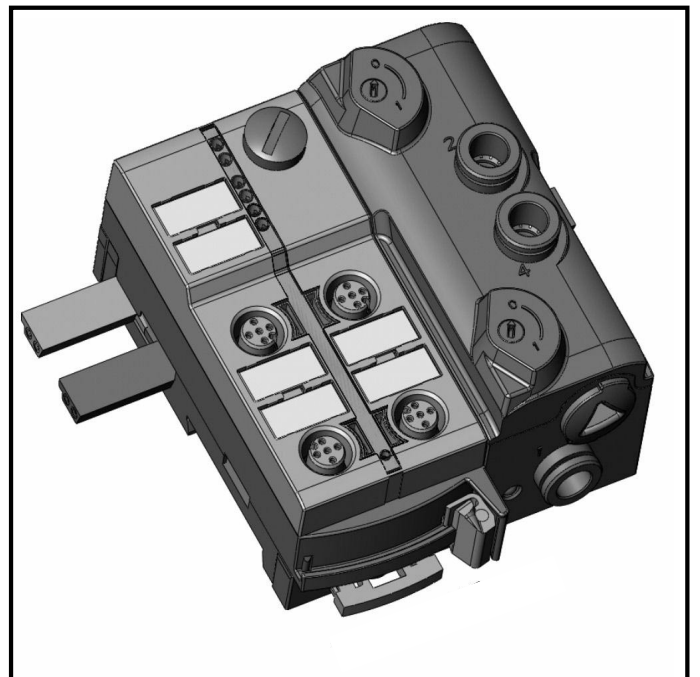
AS interface

AS-i AirBox

AC5246

AC5249

Sachnr. 7390640/00 05/2007

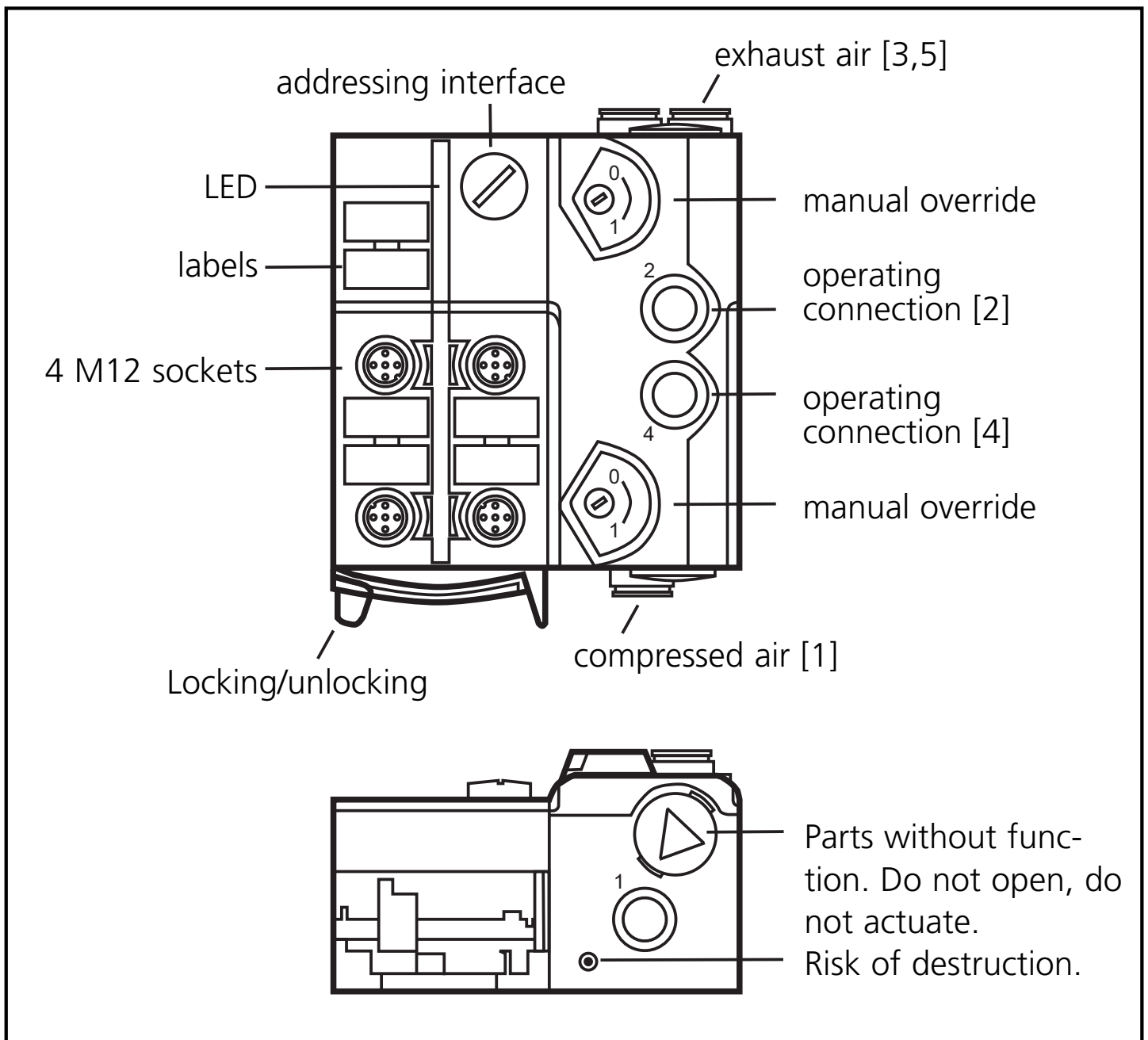


Functions and features

- maximum number of modules per master: 62
- AS-interface version 3.0, downward compatible
- connection to the pneumatic system via tube fitting, outside calibration according to CETOP standards RP 54 P
- operating pressure range 3...8 bar

Operation outside the indicated operating pressure range or use of incorrectly processed compressed air can cause permanent leaks and irreparable damage to the pneumatic components and may lead to malfunctioning.

Operating and display elements



Installation

Notes on installation from page 26.

Addressing

At the factory the address is set to 0.

Addressing with the AC1144 addressing unit

When mounted and wired the module can be addressed with the addressing cable (E70213) via the implemented addressing interface.

If a slave with the extended addressing mode is used in combination with a master of the first generation (version 2.0), the parameter P3 must be 1 and the output bit D3 must be 0*. The output bit D3 and the parameter bit P3 must not be used. * Default setting

If a slave with the extended addressing mode is used in combination with a master of the first generation (version 2.0), an address between 1A and 31A must be assigned to this slave.

Electrical connection

Connect the plugs of the sensors to the M12 sockets.

Cover the unused sockets with protective caps (E73004)*, the addressing socket with the supplied protective cap. Tightening torque 0.6...0.8 Nm.

To guarantee protection rating IP 67 you also have to

- use the flat cable end seal (E70413)* if the module is at the end of the cable line
- discharge exhaust air via the tube connection

* to be ordered separately



If the AirBox is operated with silencer, the protection rating is IP65.

AC5246

4 inputs / 1 pneumatic output (NO/NC selectable)

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

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

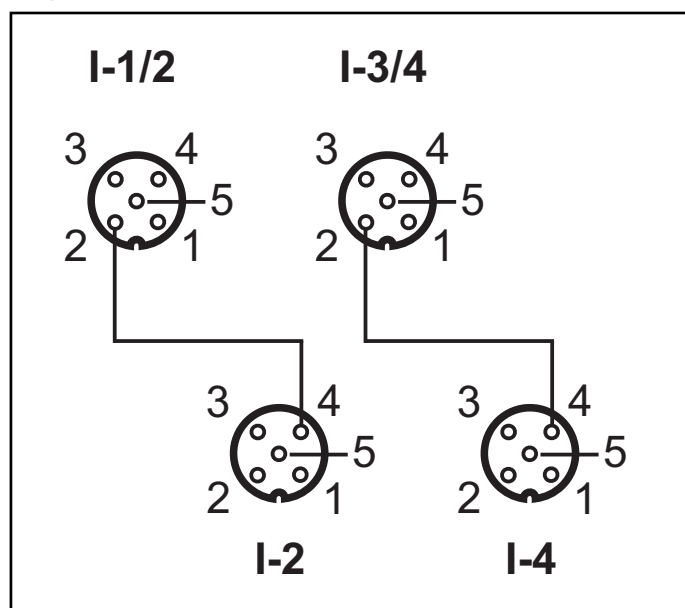
AC5249

4 inputs / 1 pneumatic output (NO/NC selectable)

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

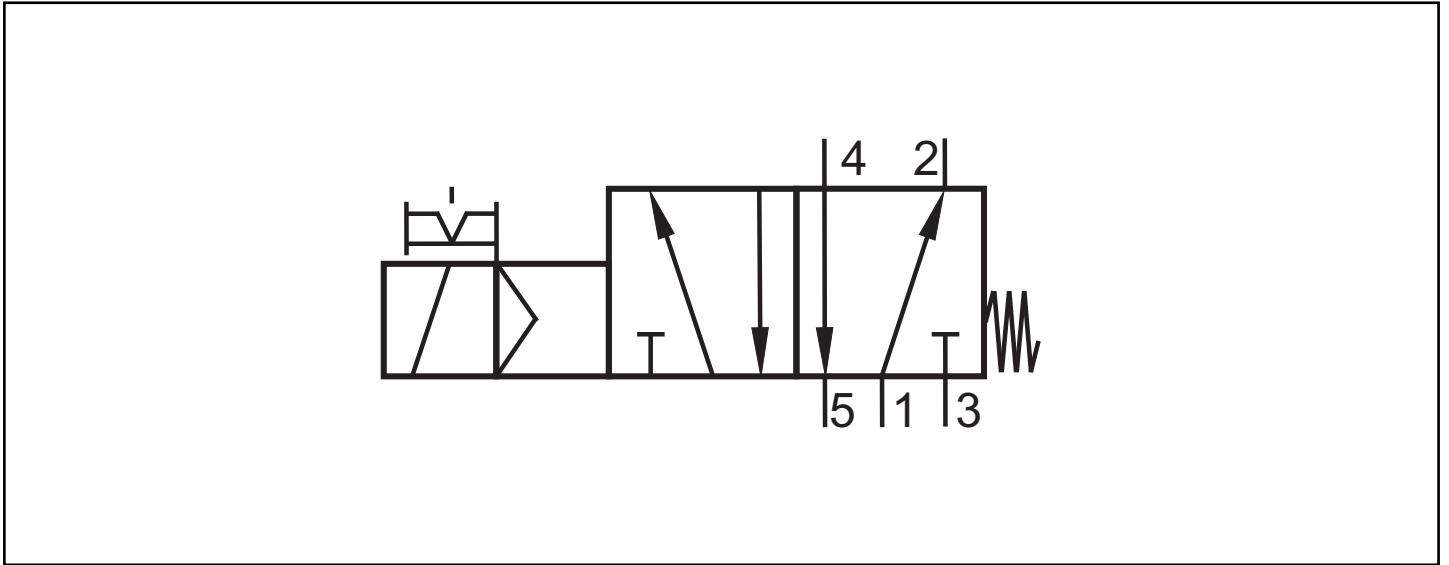
Data bit	D0	D1		D2	D3	
Input	1	2		3	4	
Socket	I1/2	I1/2	I2	I3/4	I3/4	I4
Pin	4	2	4	4	2	4
Pneumatic output	4	-		-	-	

Inputs (Y-circuit)



Pneumatics

Circuit diagram pneumatics 1x 5/2-way valve



Compressed air

Adhere to the safety regulations and provisions for the installation of pneumatic systems. Switch off pressure. Connect the compressed air supply 1, the operating connections 2 and 4 and if necessary the exhaust 3 and 5 to the pneumatic system. Cut the connection tube straight and push it into the tube fitting.

Removal of the tubes

To remove the tube push the grey clamping ring and pull out the tube at the same time.

Manual override

The pneumatic output can be activated manually using the manual override (pressing/releasing or pressing/turning/locking).

For trouble-free operation sufficiently treated air must be used.



The electrical triggering has priority over the mechanical triggering.

Specification of the compressed air purity

According to ISO 8573-1: 2001 the air purity is divided into three classes:

1. The purity class of the solid particle content
2. The purity class for the humidity content
3. The purity class for the total oil content

The AirBoxes are suitable for non-lubricated compressed air of the purity classes 6- 3- 1 and for lubricated compressed air of the purity classes 6-3-4.

Meaning:

1. Solid particle contamination according to class 6:
Max. particle size 5 μm , max. particle density 5 mg / m^3
2. Maximum water content according to class 3:
Pressure dew point -20°C
3. Maximum total oil content according to class 1:
for non-lubricated compressed air 0.01 mg / m^3
Maximum total oil content according to class 4:
for lubricated compressed air $< 5 \text{ mg} / \text{m}^3$, this corresponds
to approx. 1 oil drop / 4000 litres of air

Once the AirBox has been operated with lubricated air, it always has to be operated with lubricated air as the oil removes the initial lubrication.

Electromagnetic compatibility (EMC)

The AirBox is rated for operation in industrial environments. The test of the electrostatic discharge was carried out in accordance with EN 61000-4-2 with the following test levels:

- contact discharge ± 4 kV
- air discharge ± 8 kV

Special applications such as the conveying and distribution of bulk material can generate higher electrostatic charges.

To avoid electrostatic discharge the following remedial actions are possible, among others:

- Equalisation of potential according to the installation instructions
- Separate laying of
 - signal and bus cables
 - equipotential bonding conductors
 - power cables
- Physical separation of the AirBox and all cables from all parts carrying or discharging electrostatic charges.

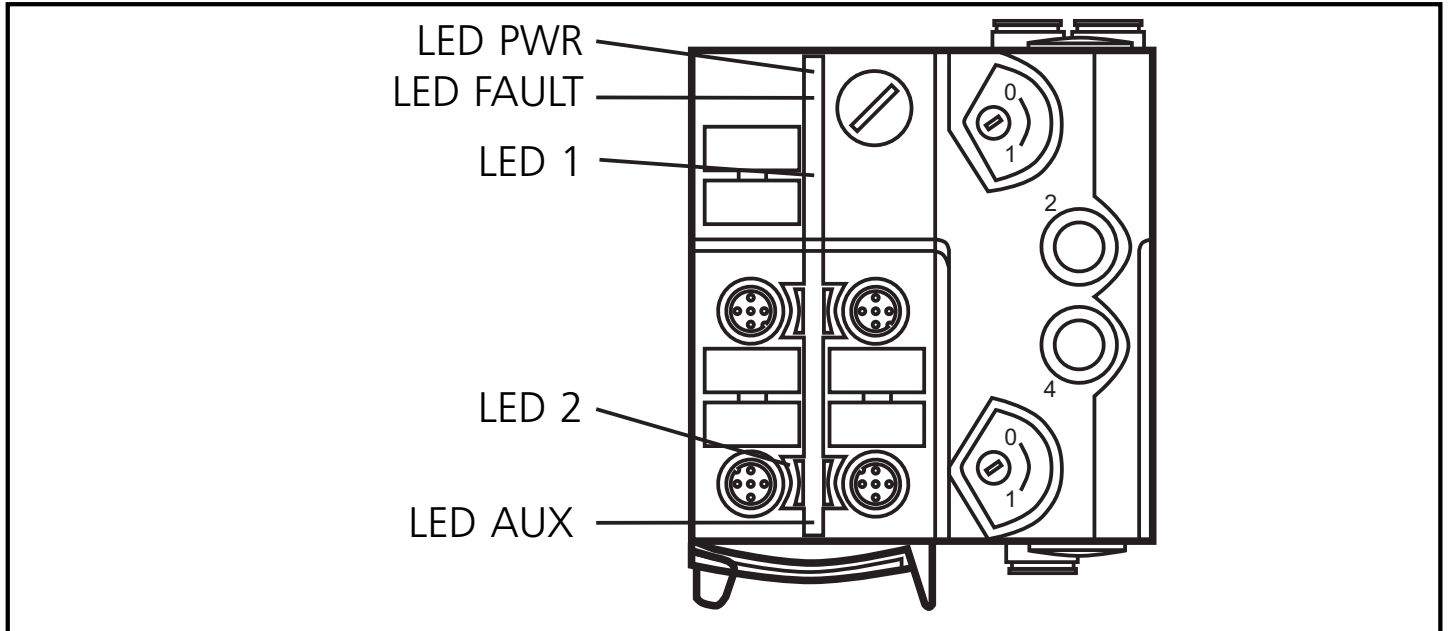
If these discharges are not avoided there is the danger of:

- injury to/incapacitation of operators and maintenance staff
- spark formation
- damage to the AirBox
- damage to the electrical equipment

Operation

Avoid build-up of dirt and dust on the upper and lower parts so that the locking mechanism is not affected.

Check the reliable functioning of the unit. Display by LEDs:



- LED 2 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 flashing: peripheral fault, e.g. overload or short circuit of the sensor supply

Important notes on LED AUX and LED 1

- LED AUX green: AUX voltage supply OK (AC5249)
Application of the AUX voltage is only indicated if the AS-i voltage is also available.
- LED 1 yellow: Only indicates the logic state of the PLC outputs. The pneumatic output status does not necessarily correspond to the indicated status of LED 1.
The pneumatic output status is not indicated on the unit.

Maintenance / repair

The unit must not be modified nor can it be repaired. In case of a fault please contact the manufacturer.

Technical data

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

--> Select your country --> Data sheet direct