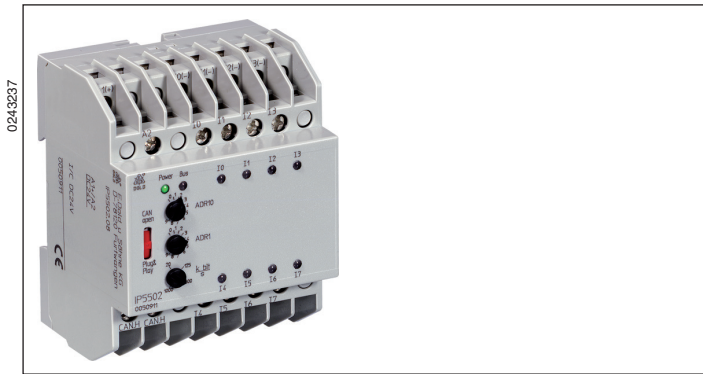
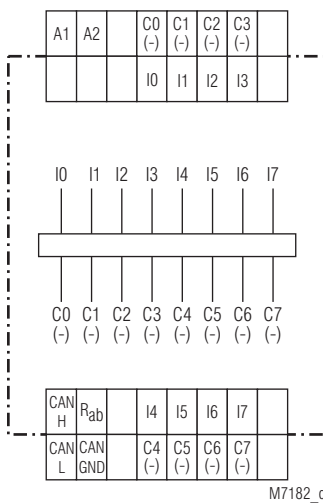


## MINIMASTER Input Module for CANopen IP 5502



- According to IEC/EN 61 131-2, IEC/EN 50 178
- CANopen interface according to DS301 version 3.0 (Plug and Play selectable), as option with galvanic separation
- 8 digital inputs for DC 24 V
- LED indicators for supply voltage and Bus status
- 70 mm width

### Circuit Diagram



IP 5502.08

### Additional Information

- Datasheet Output Module IP 5503
- Datasheet Emergency Off Monitor BH 5922
- Datasheet MINIMASTER IL 5504, IN 5504
- Datasheet Power Supply IR 5592
- Datasheet Analogue Input Module IL 5508
- Datasheet Analogue Output Module IL 5507

### Approvals and Markings



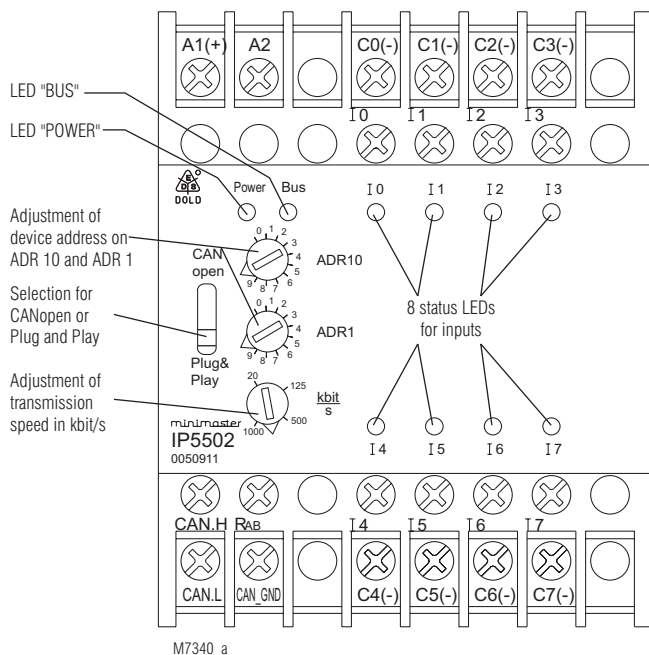
### Application

The digital input module IP 5502 collects signals of a control circuit from limit switches, push buttons, sensors etc. The modules are used in industrial control circuits and building automation.

### Indicators

- yellow LED "Power": on, when supply connected
- yellow LED "BUS": on, when bus is active
- green LEDs I<sub>0</sub> ... I<sub>7</sub>: on, when input signal applied

### Setting and Adjustment



### CANopen operation

With switch in position "CANopen" the CAN bus runs the CANopen protocol. The configuration is made with the programming software PN 5501 in conjunction with minimaster IL 5504 / IN 5504 or e.g. with ProCANopen. The corresponding configuration file on CD can be ordered under order no. PN 5501, article no. 0052860

### Plug and Play operation

With switch in position "Plug and Play" the CANopen bus runs a variant of the CANopen protocol and allows only to operate Dold modules that have this feature. If a system is configured in Plug and Play operation, it can be altered to CANopen at any time.

### Address setting in Plug and Play mode

To allow the input module to communicate via CAN-bus with a corresponding device, the address has to be adjusted on the 2 rotational switches on the front see below: The addresses 1 ... 49 and 51 ... 99 can be chosen. In Plug and Play mode the addresses 0 and 50 do not exist.

Input module IP 5502 with address	transmits to	Output module IP 5503 with address
1	→	51
...		...
49	→	99

Example of setting:  
Upper rotational switch "ADR 10": address 14  
Lower rotational switch "ADR 1": in position 1

## Setting and Adjustment

### Set-up procedure

- 1.) Connect device to CANopen-bus
- 2.) Terminate bus on both ends with bridge between CAN-H and R<sub>ab</sub> on first and last module.
- 3.) Adjust transmission speed (e. g. 20 K bit / s)
- 4.) Adjust device addresses

### Attention:



To allow transmission in Plug and Play mode, one of the input modules e.g. IP 5502 of the CAN-bus has to be set to address 1.

## Technical Data

### Auxiliary voltage

**Auxiliary voltage U<sub>H</sub> A1/A2:** DC 24 V  
**Voltage range:** 0.8 ... 1.1 U<sub>N</sub>  
**Nominal consumption:** 0.5 W DC 24 V

### Input

**Inputs** galvanic separated  
IP 5502: 8 digital inputs IEC/EN 61 131-2  
**Input voltage:** DC 24 V

### CANopen interface

IP 5502.08/100: galvanic separation according to ISO 11 898-1  
Wire: screened twisted pair  
Transmission speed: adjustable 20 K bit/s, 125 K bit/s, 500 K bit/s, 1 M bit/s,  
max. length: 20 K bit/s = 2.500 m  
125 K bit/s = 500 m  
500 K bit/s = 100 m  
1 M bit/s = 25 m

### Plug and Play

Transmission speed: 20 K bit / s (recommended)

### Attention:



Both ends of the 2-wire bus have to be terminated with a bridge between CAN\_H and R<sub>ab</sub>.

## General Data

**Operating mode:** Continuous operation  
**Temperature range:** - 20 ... + 60°C  
**Clearance and creepage distances**  
rated impulse voltage / pollution degree: 4 kV / 2 IEC 60 664-1

**EMC**  
Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2  
HF-irradiation: 10 V / m IEC/EN 61 000-4-3  
Fast transients: 2 kV IEC/EN 61 000-4-4  
Surge voltages between wires for power supply: 1 kV IEC/EN 61 000-4-5  
between wire and ground: 2 kV IEC/EN 61 000-4-5  
Interference suppression: Limit value class B EN 55 011

### Degree of protection

Housing: IP 40 IEC/EN 60 529  
Terminals: IP 20 IEC/EN 60 529

**Housing:** Thermoplastic with V0-behaviour according to UL subject 94  
amplitude 0.35 mm

### Vibration resistance:

frequency 10 ... 55 Hz IEC/EN 60 068-2-6  
20 / 060 / 04 IEC/EN 60 068-1

### Climate resistance:

**Terminal designation:** EN 50 005

### Wire connection:

2 x 2.5 mm<sup>2</sup> solid or  
2 x 1.5 mm<sup>2</sup> stranded wire with sleeve  
DIN 46 228-1/-2/-3/-4

### Wire fixing:

Flat terminals with self-lifting clamping peace IEC/EN 60 999-1

### Mounting:

DIN rail IEC/EN 60 715

### Weight:

187 g

## Technical Data

### Dimensions

**Width x height x depth:** 70 x 90 x 61 mm

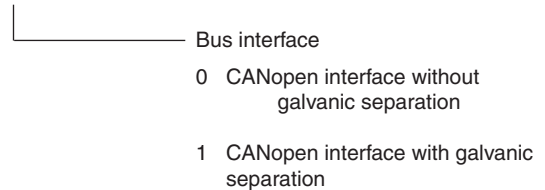
### Standard Type

IP 5502.08 DC 24 V  
Article number: 0050911  
• 8 digital inputs  
• Nominal voltage U<sub>N</sub>: DC 24 V  
• Width: 70 mm

### Variant

#### Ordering example for variant

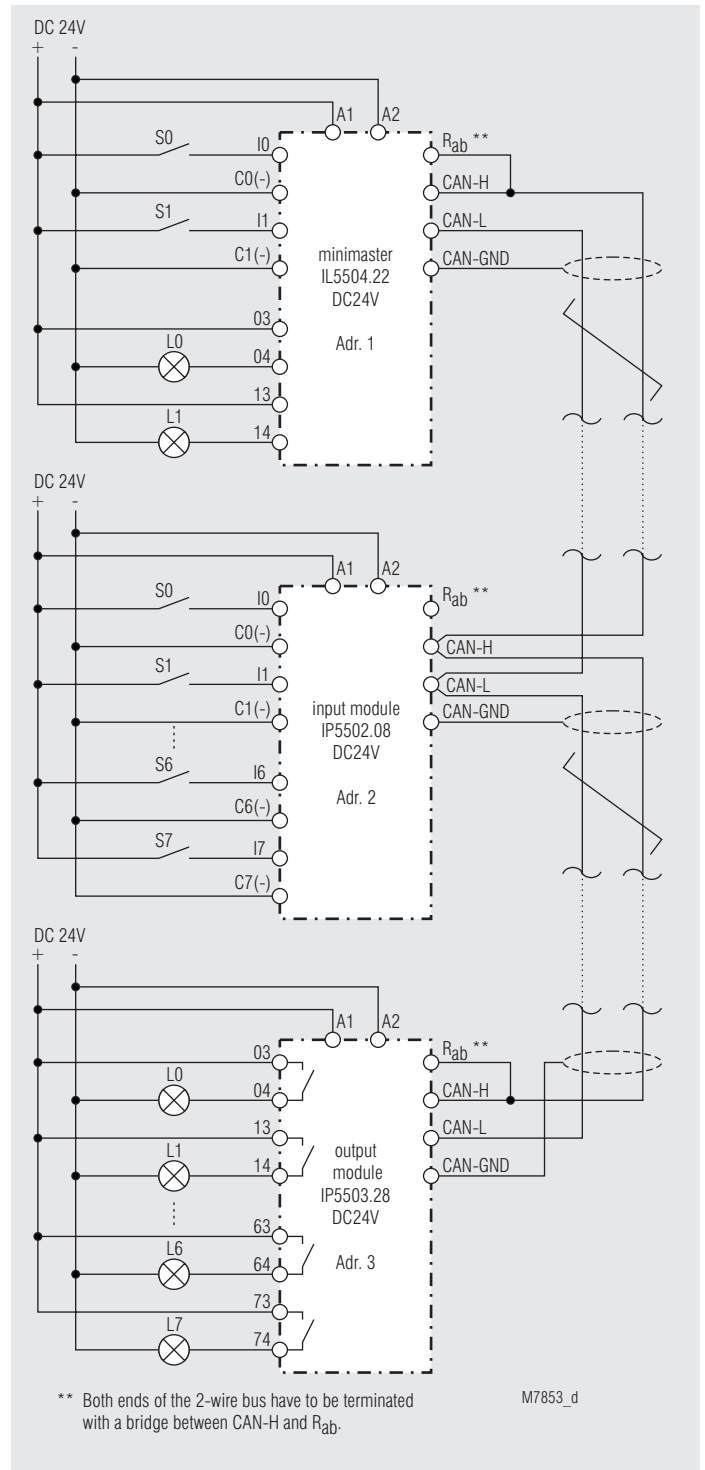
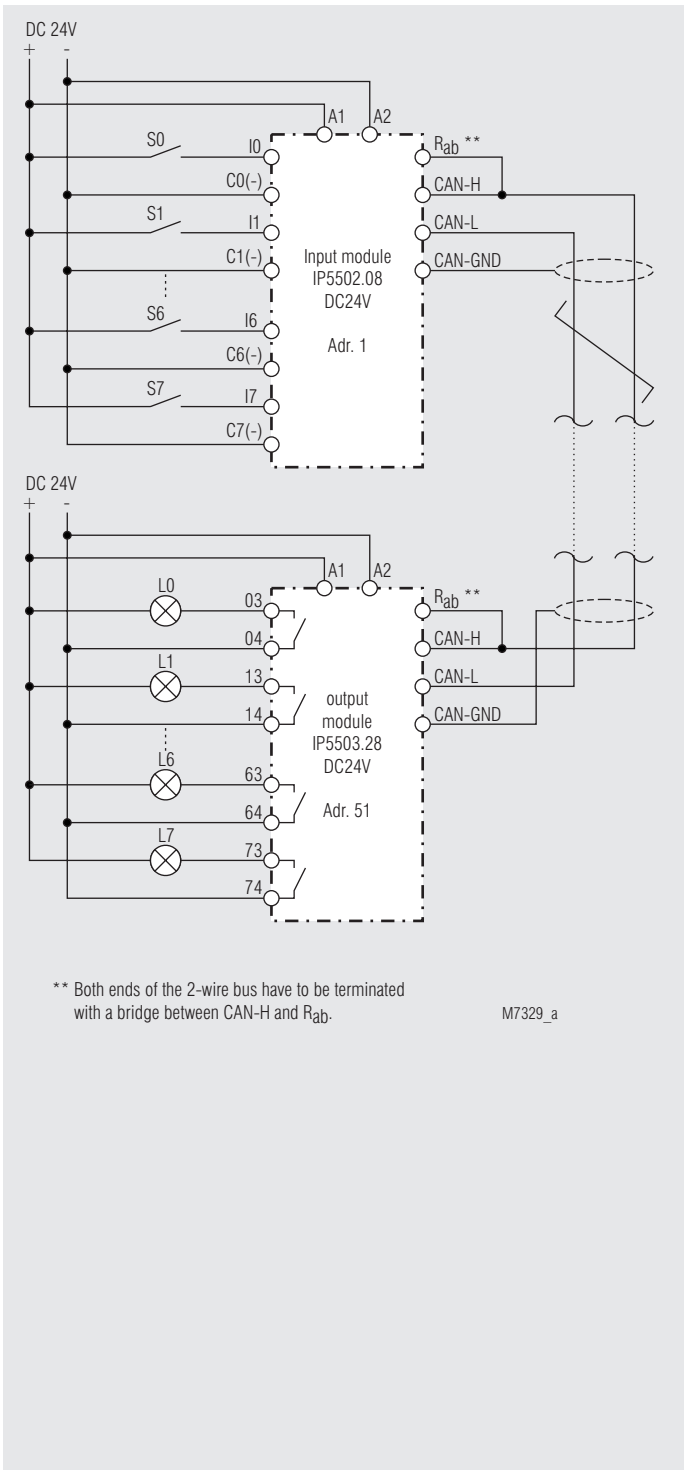
IP 5502.08/\_00 DC 24 V



### Accessories

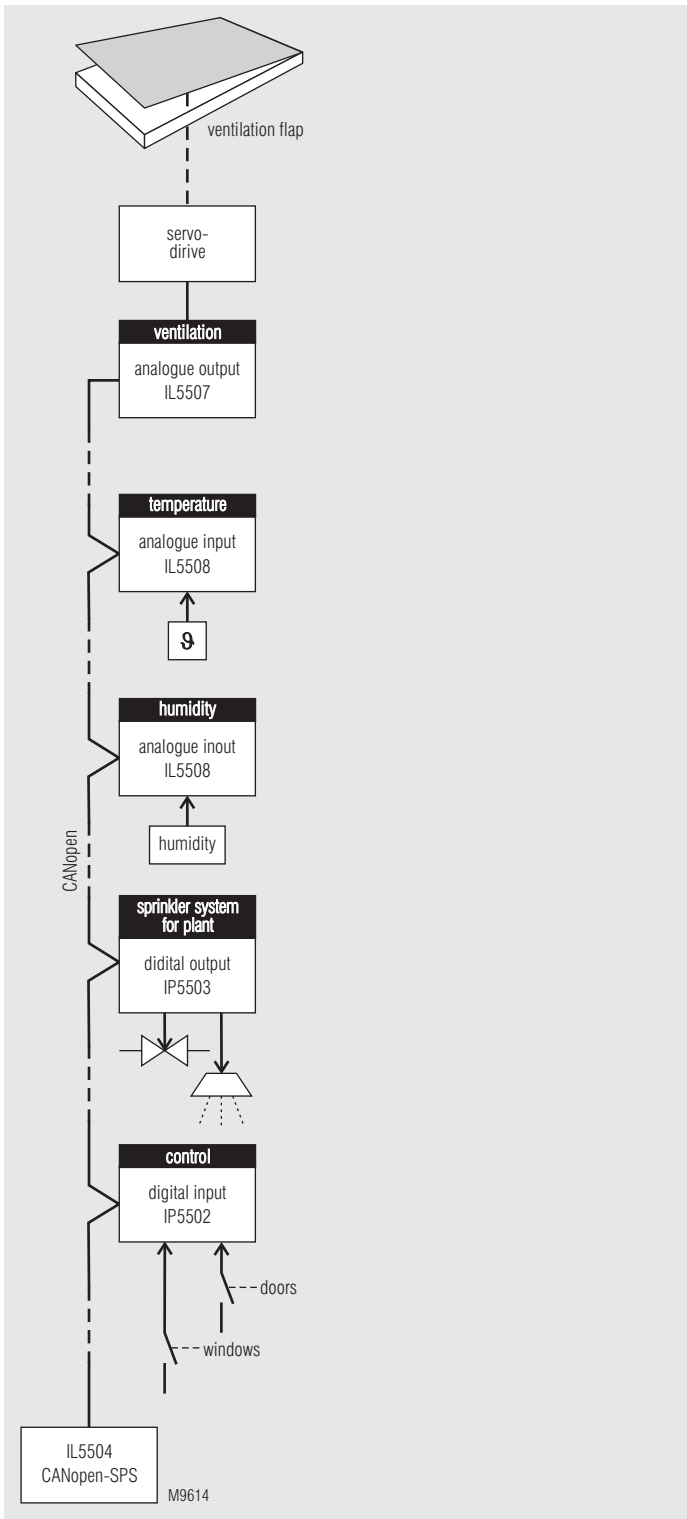
- CANopen PLC IL 5504
- Input / Output module IN 5509
- Input module, digital IP 5502
- Output module, digital IP 5503
- Input module, analogue IL 5508
- Output module, analogue IL 5507

## Application Examples



Design of a 2-wire remote control is very simple:  
 Connect input module IP 5502 to output module IP 5503 via a 2-wire line  
 adjust addresses and speed ... ready to go.

## Application example



CANopen-application for greenhouses:  
 depend on temperature- and humidity ventilation flap applications and  
 sprinkler systems for plants in a greenhouse.