



- According to IEC/EN 61131-2
- 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

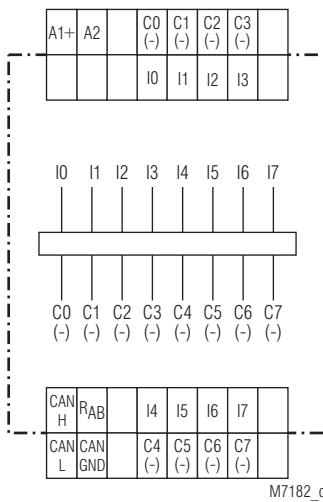
### Product Description

The CANopen input module IP 5502 has 8 digital inputs. The IP 5502 can be operated both in combination with a CANopen PLC and in plug & play operation with a CANopen output module IP 5503.

### Additional Information

- Datasheet Output Module IP 5503
- Datasheet Emergency Off Monitor BH 5922
- Datasheet CANopen PLC IL 5504

### Circuit Diagram



### 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.

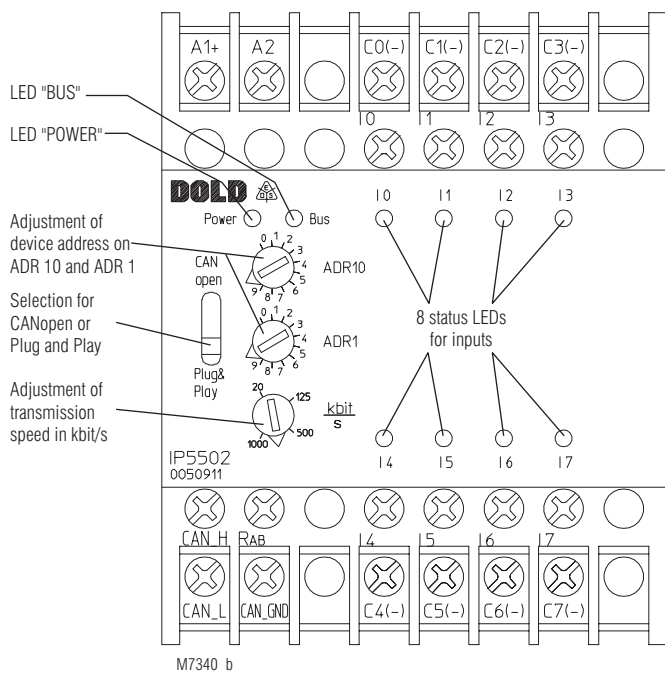
### Indicators

- |  |                               |
|--|-------------------------------|
| 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 |

### Connection Terminals

Terminal designation	Signal description
A1+	Auxiliary voltage + DC 24 V
A2	Auxiliary voltage 0 V
I0, I1, I2, I3, I4, I5, I6, I7	Digital inputs 0 ... 7 Anschluss +
C0(-), C1(-), C2(-), C3(-), C4(-), C5(-), C6(-), C7(-)	Digital inputs 0 ... 7 Anschluss -
CAN_H, CAN_L, CAN_GND	CANopen-connections
R <sub>AB</sub>	Connection for wire bridge

## 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 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: Address 14  
Upper rotational switch "ADR 10": In position 1  
Lower rotational switch "ADR 1": In position 4

### 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 Kbit/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 61131-2  
**Input voltage:** DC 24 V

**CANopen interface** Galvanic separation  
IP 5502.08/100: according to ISO 11898-1  
Screened twisted pair  
**Wire:** Adjustable 20 Kbit/s, 125 Kbit/s, 500 Kbit/s, 1 Mbit/s,  
**Transmission speed:** 20 Kbit/s = 2.500 m  
125 Kbit/s = 500 m  
500 Kbit/s = 100 m  
1 Mbit/s = 25 m

**Max. length:**

### Plug and Play

**Transmission speed:** 20 Kbit/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

<b>Operating mode:</b>	Continuous operation
<b>Temperature range</b>	
Operation:	- 20 ... + 60 °C
Storage:	- 25 ... + 80 °C
<b>Relative air humidity:</b>	93 % at 40 °C
<b>Altitude:</b>	≤ 2000 m
<b>Clearance and creepage distances</b>	
Rated impulse voltage / pollution degree:	4 kV / 2 IEC 60664-1
<b>EMC</b>	
Electrostatic discharge:	8 kV (air) IEC/EN 61000-4-2
HF-irradiation:	10 V / m IEC/EN 61000-4-3
Fast transients:	2 kV IEC/EN 61000-4-4
Surge voltages between	
Wires for power supply:	1 kV IEC/EN 61000-4-5
Between wire and ground:	2 kV IEC/EN 61000-4-5
Interference suppression:	Limit value class B EN 55011
<b>Degree of protection</b>	
Housing:	IP 40 IEC/EN 60529
Terminals:	IP 20 IEC/EN 60529
<b>Housing:</b>	Thermoplastic with V0-behaviour according to UL subject 94
<b>Vibration resistance:</b>	Amplitude 0.35 mm frequency 10 ... 55 Hz IEC/EN 60068-2-6
<b>Climate resistance:</b>	20 / 060 / 04 IEC/EN 60068-1
<b>Terminal designation:</b>	EN 50005
<b>Wire connection:</b>	2 x 2.5 mm <sup>2</sup> solid or 2 x 1.5 mm <sup>2</sup> stranded wire with sleeve DIN 46228-1/-2/-3/-4
Insulation of wires or sleeve length:	10 mm
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping peace IEC/EN 60999-1
<b>Fixing torque:</b>	0.8 Nm
<b>Mounting:</b>	DIN rail IEC/EN 60715
<b>Weight:</b>	187 g

### Dimensions

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

### Standard Type

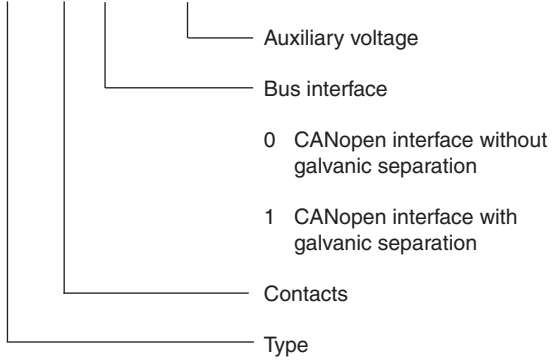
IP 5502.08 DC 24 V

Article number: 0050911

- 8 digital inputs
- Nominal voltage  $U_N$ : DC 24 V
- Width: 70 mm

### Ordering example for variant

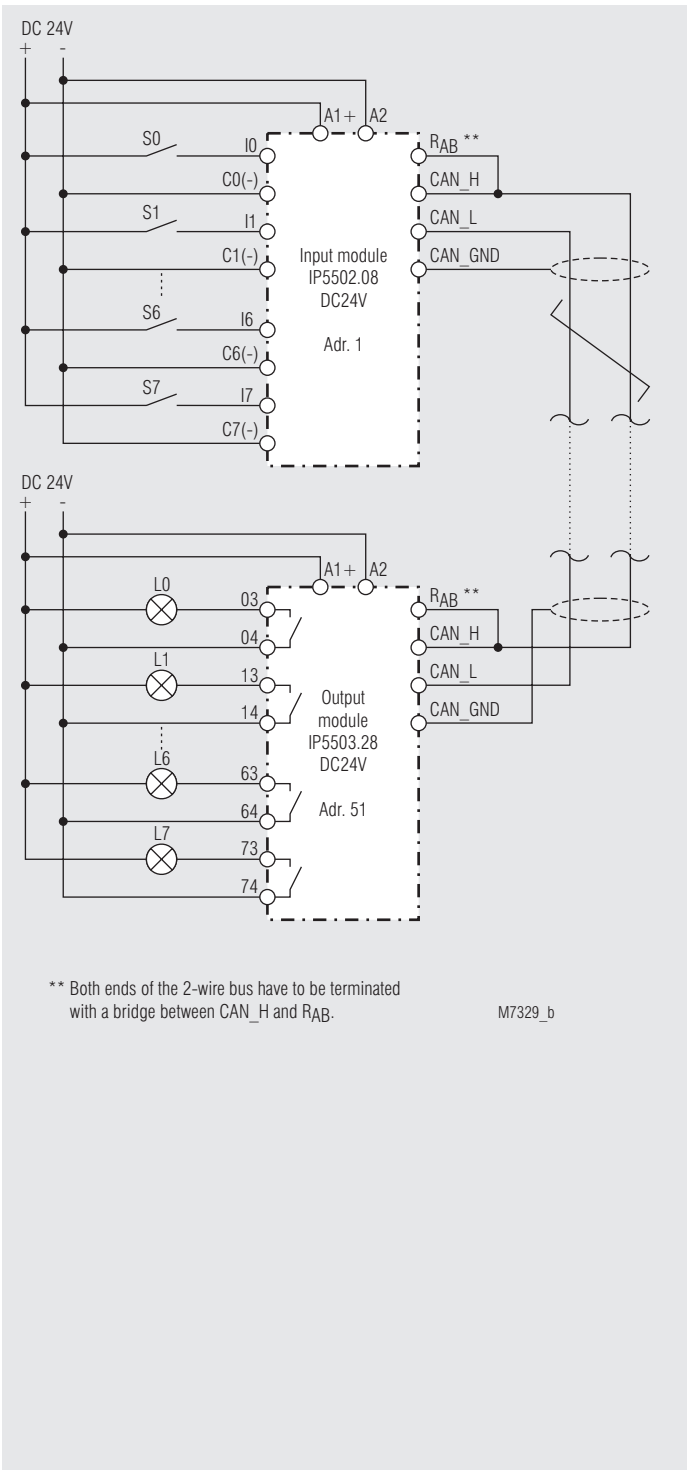
IP 5502 08 /\_00 DC 24 V



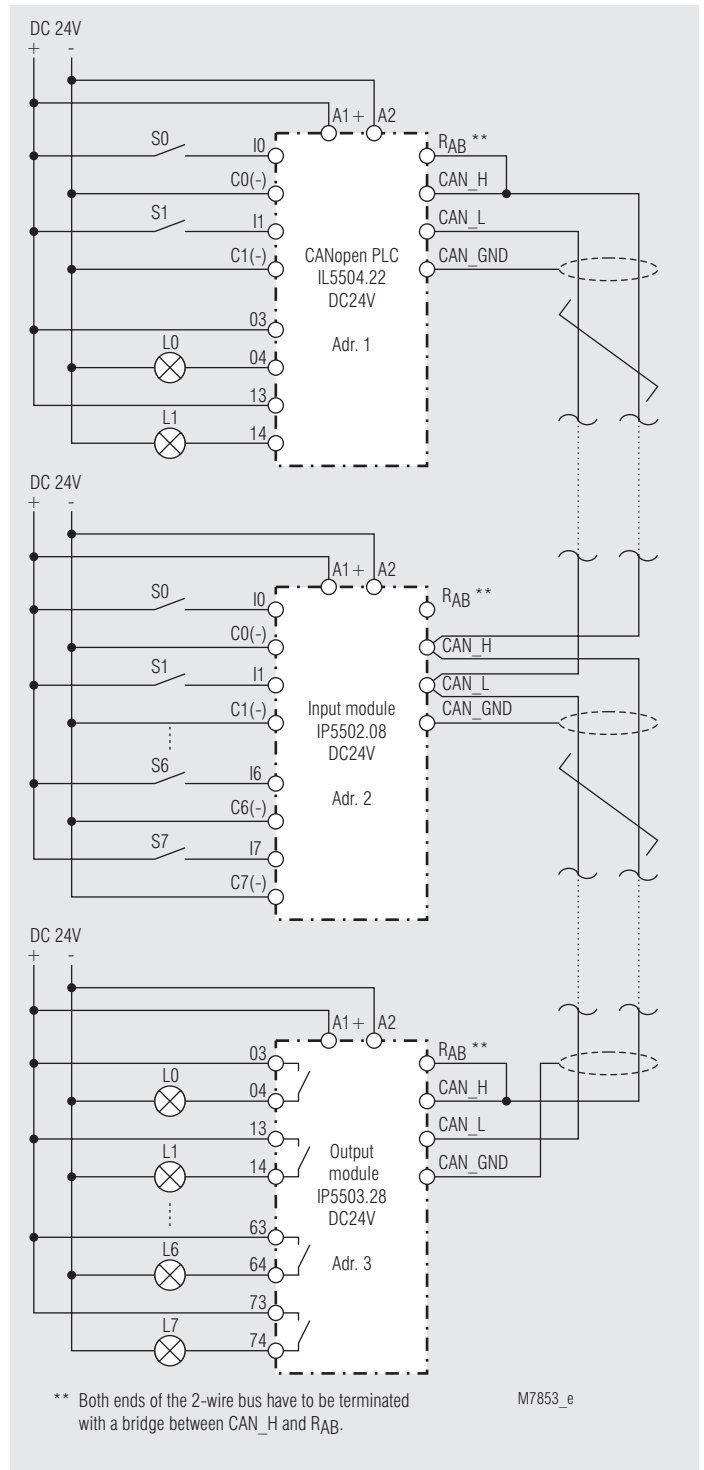
### Accessories

- CANopen PLC IL 5504
- Input module, digital IP 5502
- Output module, digital IP 5503

## Application Examples



Design of a 2-wire remote control  
Switch position: Plug & Play  
Connect input module IP 5502 to output module IP 5503 via a 2-wire line  
adjust addresses and slide switch.



Operation with CANopen PLC  
Switch position: CANopen