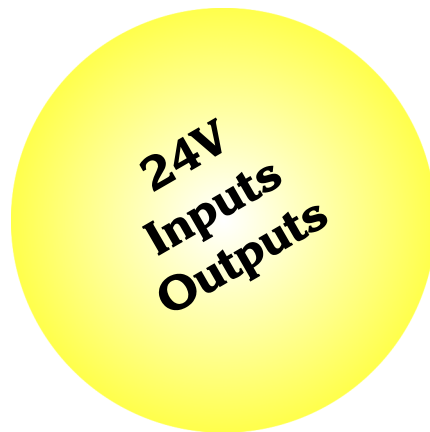


# 16 In- and Outputs

# INFO-16P



## Technical Data

### Inputs

- 16 inputs
- 24V, 5mA
- Isolated as group, p-channel (switch must pull to plus)
- Maximum 4000 inputs per INFO-Link

### 24V power supply

- Power supply for proximity switches

### Outputs

- 16 outputs
- 24V, max. 2A
- Short-circuit-proof
- Isolated as group. Two separately supplied groups with 8 outputs each
- Maximum 4000 outputs per INFO-Link

### Stepping motor control

- Max. frequency 1kHz

### Pulse width modulation

- Shaft speed control by pulse width modulation

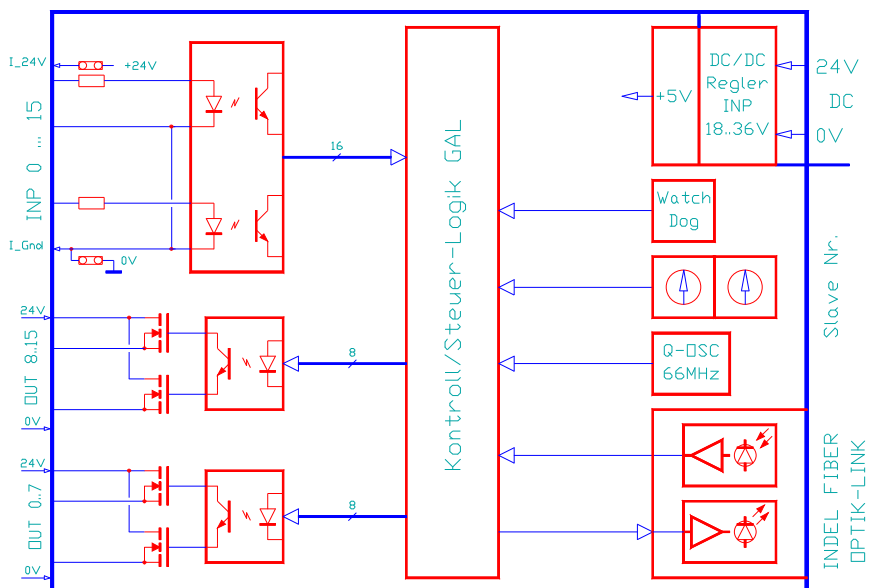
### Status display

- User-friendly display of all inputs and outputs by LEDs.

The INFO-16P board belongs to the digital I/O modules; as all modules, it is served once per millisecond, i.e. each input and each output in the machine/plant is refreshed every ms. The power supply of the outputs is divided into groups of 8. This allows

various stop functions to be implemented. When the output power supply is switched off, it is still possible to read in the inputs.

The board is also suitable for controlling low-speed stepping motors up to 2kHz or pulse width modulated DC motors.



Order No INFO-16P 609416000

# INFO-16P

# 16 In- and Outputs

## Function

The INFO-16P board allows 16 inductive or ohmic loads, e.g. relays, valves, various motors and other users to be controlled with up to 2A continuous load. At the same time, 16 input signals are registered by p-channel switches.

The inputs are divided into one, the outputs into two groups. This allows stop functions according to EN60204-1 to be implemented. The input/output groups are electrically isolated from the board logics.

The states of all inputs and outputs are indicated by LEDs. Per input, three connections are available (24V, 0V, INP) and per output two (OUT, 0V). This allows direct wiring of the sensors and users.

Up to maximum 250 INFO-16P boards can be connected with the INFO-Link to the PC master. A total of 4000 inputs and outputs! This makes serial transmission so fast that a board is served every 4 µs. In other words, in one millisecond all 250 INFO-16P boards are addressed.

In the event of a power-off of the computer or rupturing of the optical fiber, a watchdog immediately switches off all outputs.

The board is snapped onto a 35mm DIN bar.

## Connector allocations

	d		b		z	
2	O	OUT - 0	O	O_GND	I	O_24V
4	O	OUT - 1	O	O_GND	I	O_24V
6	O	OUT - 2	O	O_GND	I	O_GND
8	O	OUT - 3	O	O_GND	I	O_GND
10	O	OUT - 4	O	O_GND	I	K_24V
12	O	OUT - 5	O	O_GND	I	K_GND
14	O	OUT - 6	O	O_GND		
16	O	OUT - 7	O	O_GND		
18	O	OUT - 8	O	O_GND		
20	O	OUT - 9	O	O_GND		
22	O	OUT - 10	O	O_GND		
24	O	OUT - 11	O	O_GND		
26	O	OUT - 12	O	O_GND	I	O_GND
28	O	OUT - 13	O	O_GND	I	O_GND
30	O	OUT - 14	O	O_GND	I	O_24V
32	O	OUT - 15	O	O_GND	I	O_24V

### Connector 1

vertical  
DIN41612, Type F-48  
2.8mm pins

	d		b		z	
2	I	I_GND	I	I_24V	I	INP - 0
4	I	I_GND	I	I_24V	I	INP - 1
6	I	I_GND	I	I_24V	I	INP - 2
8	I	I_GND	I	I_24V	I	INP - 3
10	I	I_GND	I	I_24V	I	INP - 4
12	I	I_GND	I	I_24V	I	INP - 5
14	I	I_GND	I	I_24V	I	INP - 6
16	I	I_GND	I	I_24V	I	INP - 7
18	I	I_GND	I	I_24V	I	INP - 8
20	I	I_GND	I	I_24V	I	INP - 9
22	I	I_GND	I	I_24V	I	INP - 10
24	I	I_GND	I	I_24V	I	INP - 11
26	I	I_GND	I	I_24V	I	INP - 12
28	I	I_GND	I	I_24V	I	INP - 13
30	I	I_GND	I	I_24V	I	INP - 14
32	I	I_GND	I	I_24V	I	INP - 15

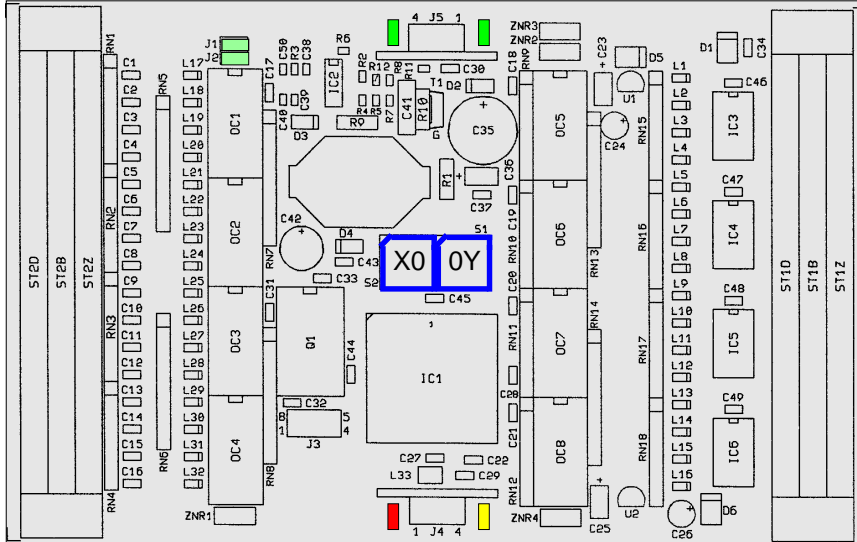
### Connector 2

vertical  
DIN41612, Type F-48  
2.8mm pins

# 16 In- and Outputs

# INFO-16P

## Assembly



### Addressing (blue)

S2 (X0)	S1 (OY)	I/O board
0	0	0
...	...	...
F0	0F	255

### Jumpers (green)

The jumpers influence the light intensity of the emitting LED and thereby the segment length of the fiber cable to the next board.

Segment length	Jumper position
0 ... 10m	no jumper
8 ... 30m	> 10
20 ... 50m	> 30

### LEDs on receiver module

LED-red	=	+5V supply
LED-yellow	=	INFO-Link receiver signal OK

### Jumper (light green)

If the sensors are to be supplied by the +24V board supply (pin 10, 12z), the jumpers J1, J2 must be fitted. If the sensors are supplied from an external source, the supply can be through any pin from pins 2 ... 32d, b (connector 2).

### LEDs on PCB

Inputs and outputs are signaled by LEDs.

## Specifications

### Power supply

+18 ... 36V, 280mA max.  
(all I/Os active)

### Climatic conditions

- Ambient temperature:
  - Storage: -20...+80°C
  - Operation: 0 ... +45°C
- Board temperature:
  - Operation: 0...+70 °C
- Relative air humidity
  - No condensation: 95%

### Inputs

- 16 p-channel inputs  
(switch must pull to plus)
- Isolated as group
- 24V, 5mA
- Switching threshold: 10V

### 24V power supply

- Supply for proximity switches  
24V, max. 2A

### Outputs

- 16 p-channel FET outputs
- 24V, 1A continuous power  
(all outputs)
- Max. 2A per output  
(every other output)
- Short-circuit-proof,  
thermal cutout  
of output stage (FET)
- Isolated as group,  
two separately supplied groups  
with 8 outputs each.
- $R_{on} = 110m\Omega$
- Power dissipation:  
 $P = 1.8W/board (16x1A)$

### Assembly

- Connector DIN 41612, Type F-48
- Assembly on 35mm DIN bar
- Dimensions:  
105 x 165 x 45mm (WxDxH)

Customer-specific modifications are available at any time.

## Connections

### Board power supply

For the board power supply, a 3-phase rectifier without electrolytic capacitor is sufficient. But to avoid malfunctions, an electrolytic capacitor of 4700 ... 10,000µF is recommended. The 24V power supply must pass through a line filter.

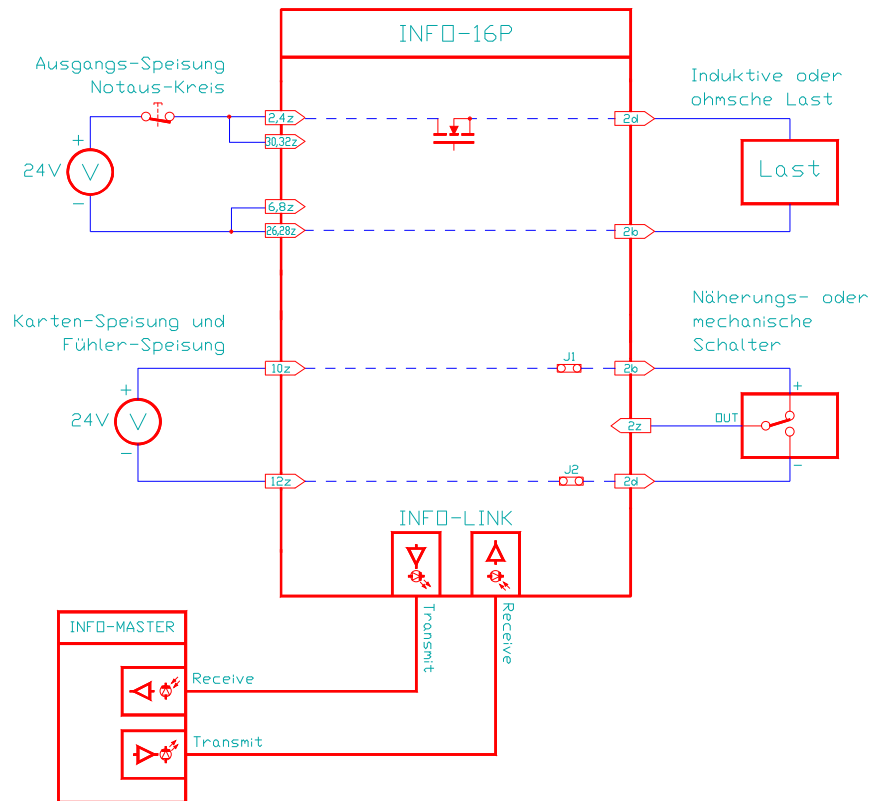
### Screened lines

All lines from and to the INFO-16P board can be installed without screening.

### Grounding

Grounding of the 16P board is through the casing. Take care to ensure that the mounting bar has very good contact with the mounting plate or the chassis to allow discharge of interference. The mounting bar is preferably mounted on a bare mounting plate.

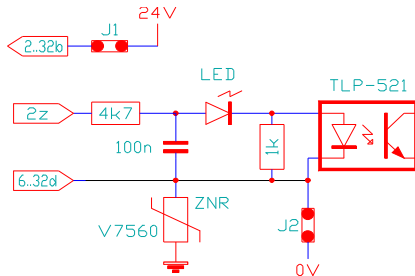
## Connection example



## Interfaces

## Wiring

### Inputs



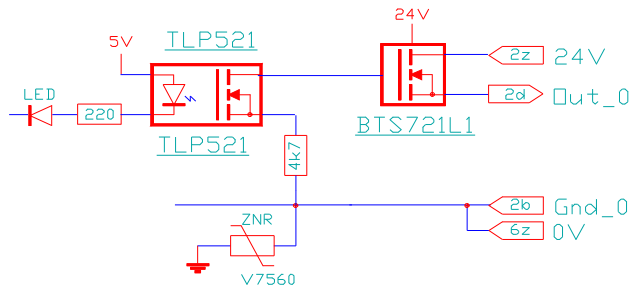
### Inputs

Connection of input

Inp-0 connector 2

The supply voltage for, say, contactless limit switches varies with the board supply between +18 ... 36V.

### Outputs



### Outputs

Connecton of the outputs

Out-0 connector 1