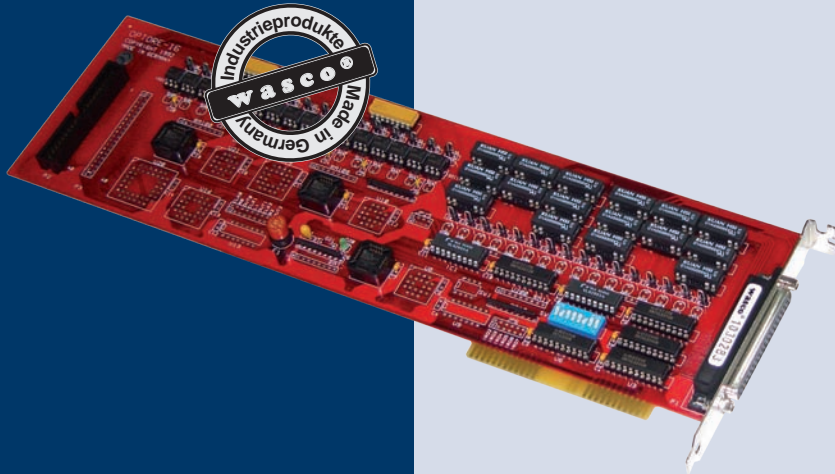


# OPTORE-16<sub>STANDARD</sub>

Digital ISA I/O Interface Card with 16 Optocoupler Inputs and 16 Reed Relay Outputs



16 Optocoupler Isolated Digital Inputs

16 Reed Relay Outputs

## SPECIFICATIONS

The **wasco**<sup>®</sup> interface card OPTORE-16<sub>STANDARD</sub> features 16 digital inputs and 16 outputs, each of which is galvanically isolated. The inputs are electrically isolated by 16 high quality optocouplers with Schmitt trigger function, the outputs by 16 reed relays. You can adjust two different input voltage ranges via easily exchangeable, pluggable resistor arrays. The reed relays of the outputs manage a maximum switching current of 500 mA.

The output relays are connected to a 37-pin Sub-D female connector mounted on the slot bracket of the board. The optocoupler inputs are connected to a 40pin male connector on the board. A flat ribbon cable is available to relocate to a 37pin female connector with slot bracket, if required.

The pin assignments and input voltage ranges are identical to PCI card OPTORE-PCI16<sub>STANDARD</sub>.

### Optocoupler inputs

Optocoupler: 16 \* PC900V

16 channels, galvanically isolated

Galvanic isolation also between every single channel with each two discrete connections for each of the channels

Two different input voltage ranges, selectable by enclosed pluggable resistor arrays:

R = 4,7 k $\Omega$ : high = 8..30 Volt  
low = 0..4 Volt

R = 1,0 k $\Omega$ : high = 2,2..15 Volt  
low = 0..1,5 Volt

Input frequency: max. 10 KHz

### Reed Relay outputs

16 channels, galvanically isolated

Galvanic isolation also between every single channel with each two separate connections for each of the channels

Switching current: 500mA max.

Switching voltage: 50 volt DC max.

Switching capacity: 10 watt

Circuit time (typ): 0,5 ms

Fall time: 0,2 ms

Coil voltage: 5 V

Coil resistance: 500  $\Omega$

Coil current: 10 mA

### Connectors

1 \* 37-pin Sub-D female connector

1 \* 40-pin box header

### Power consumption

+ 5 volt typ. 450mA

### Dimensions

340 mm x 100 mm (l x h)

4layer Multilayer Board

### Other

Fuse for power supply

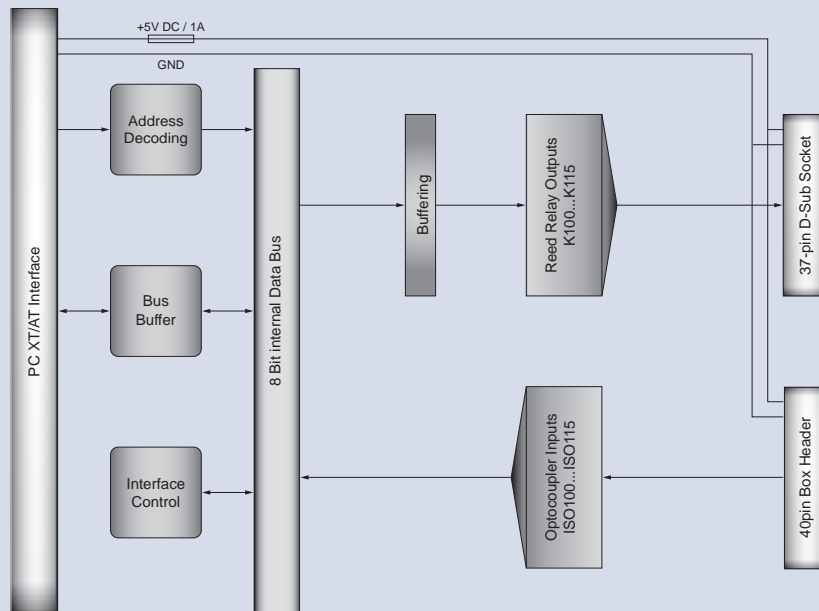
LED for voltage control.

All IC sockets with gold plated contacts

### Address Assignment

In the port section a block of 16 addresses can be assigned. Any address spaces are adjustable via DIP switches

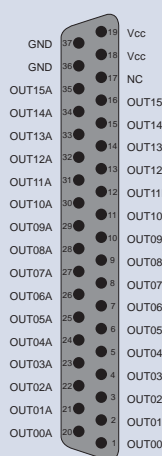
## BLOCK DIAGRAM



## PIN ASSIGNMENT

The positive and negative connections of the relays are fed to the 37-pin Sub-D socket P1 for each channel separately. Anode and cathode of the optocouplers are fed to the 40-pin box header P2 for each channel separately. P1 is located on the slot bracket of the board, P2 is placed directly on the board and accessible inside the computer only. An optimum connection of the peripherals with strain relief is to obtain by an optional available flat ribbon cable set (see „Suitable Accessories“)

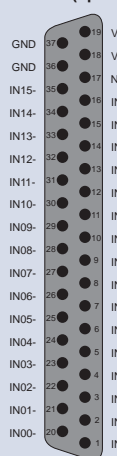
**Sub-D Socket P1**



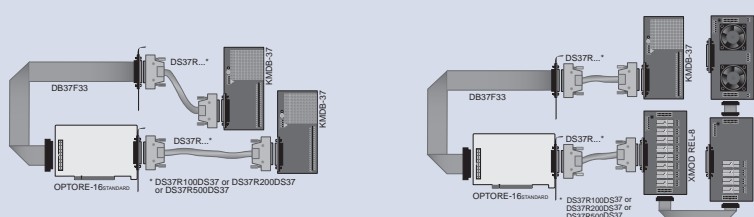
**Box Header P2**



**P2 as a Sub-D Socket (optionally)**



## CONNECTION TECHNIQUE (APPLICATION EXAMPLES)



## PROGRAMMING

The accompanying CD provides sample programs for DOS in Basic (Quick-Basic®, Powerbasic® and GW-Basic®), C (Borland Turbo-C®) and Pascal (Borland Turbo-Pascal®) as well as drivers for Windows95®, Windows98® and WindowsNT® in Microsoft Visual Basic and Microsoft C++

## SCOPE OF DELIVERY

Interface Card OPTORE-16<sup>STANDARD</sup>  
German Manual  
CD with driver and program examples

## ORDER INFORMATION

OPTORE-16<sup>STANDARD</sup> EDP No. A-1222  
Output Card

## SUITABLE ACCESSORIES

**DB37F33** EDP-Nr. A-1976  
Flat ribbon cable (approx. 23 cm) to relocate signals from P2 (40-pin box header) to a 37pin Sub-D socket with slot bracket

**DS37R500DS37** EDP No. A-202800  
Shielded connection line (approx. 5 m) to connect KMDB-37 to a 37pin Sub-D jack

**DS37R200DS37** EDP No. A-202400  
Shielded connection line (approx. 2 m) to connect KMDB-37 to a 37pin Sub-D jack

**DS37R100DS37** EDP-No. A-202200  
Shielded connection line (approx. 1 m) to connect KMDB-37 to a 37pin Sub-D jack

**KMDB-37** EDP No. A-2046  
Terminal module with a 37pin screw terminal block with prototype area for soldering, to connect to a 37pin Sub-D jack

**XMOD REL-8** EDP No. A-3268  
Relay module with eight isolated outputs for switching currents up to 5 A (Connection to the reed relay outputs, cascading of the modules is possible)

**XMOD REL-4** EDP No. A-3264  
Relay module with four isolated outputs for switching currents up to 5 A (Connection to the reed relay outputs, cascading of the modules is possible)

**XMOD SSR-4** EDP No. A-3284  
Solid-State Relay Module with four isolated outputs for switching currents up to 5 A (Connection to the reed relay outputs, cascading of the modules is possible)

**XMOD SSR-2** EDP No. A-3282  
Solid-State Relay Module with two isolated outputs for switching currents up to 5 A (Connection to the reed relay outputs, cascading of the modules is possible)

For more detailed information about the here listed and other accessories we refer to the corresponding data sheets