

## Hyperterminal

This program is available as standard with Windows 95, 98, 2000 and Me (millenium). It can be only used to transmit the data from the instrument.

Parameter:

- In menu [connect to], select	[connection using]	<b>Directed to {n}</b>
- In menu [parameter], select	[terminal keyboard [emulation]	<b>Suppr. ANSI</b>
- In menu [port parameters], select :	[bits/sec]	<b>4800</b>
	[data bits]	<b>7</b>
	[parity]	<b>Even</b>
	[stop bits]	<b>2</b>
	[Flux control]	<b>None</b>

## Specifications

Connection .....	RS232 compatible, Dsub 9p female or open
Plug's power supply .....	from periphery, with TXD, DTR and RTS lines
Instrument's power supply .....	Pin 4 (+5 -15V) Pin 5 (0V)
Data transmission parameters .....	4800 bds, even parity, 7 data bits, 2 stop bits
Max. cable length .....	15 m according to IEC standards
Number of transmissions /sec. ....	4-8/sec (depends on the instrument connected)
Data transmission format .....	[ Sign   E1-En   "."   F1-Fn   CR ] [ "ERR"   Number   CR ]

## Options and Accessories

Please ask your local agent or visit the web site [www.sylvac.ch](http://www.sylvac.ch) to obtain more information about options and accessoires available.



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## Instructions for use RS 232 connection + power supply

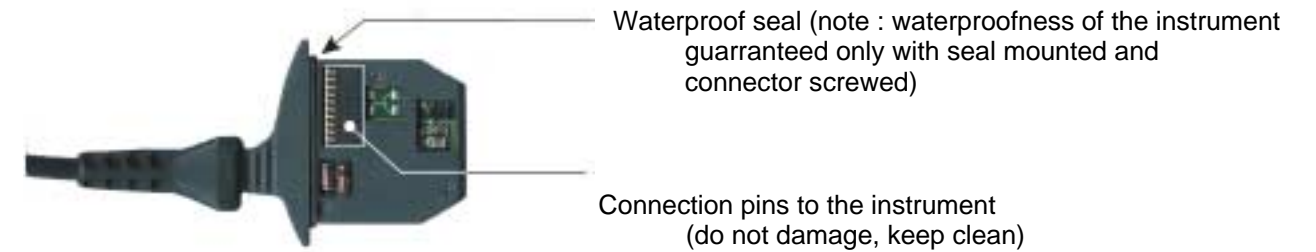
### General

The RS 232 cable enables a power supply and a direct connection with most of the Sylvac measuring instruments to a personal computer, a dedicated printer or to a Sylvac display unit.

It is not only a cable, but an interface which converts the data output of the instrument to a compatible RS 232 signal. The periphery instrument connection must be able to supply power to the RS 232 plug.

### Definition

Connected the plug instead of the instrument's power supply battery



### RS232 communication parameters

4800 baudrate, even parity, 7 data bits, 2 stop bits

### Data format

Data request (from PC)

[ ? | CR ]

Data transmission

[ Sign | E1-En | "." | F1-Fn | CR ]

Sign : « + », « - », ou « »  
E1-En: interger  
F1-Fn: fractional  
n: depends on used unit and resolution

Errors

[ "ERR" | Number | CR ]

0: sensor error (e.g. speed, scale distance)  
1: incorrect command  
2: parity error  
3: exceeded measurement range

Identification

[ "SY" | Instr. | "." | OPT1 | {"." | OPT2} | CR ]

SY: Sylvac  
Instr: 233, 234, etc...  
OPT1: version option  
OPT2: additional version options (according to instrument used)

Note: The id. transmission is done only when switching ON the instrument.

## Connection description

The duplex cable allows a 2-way communication between an instrument and a PC in half-duplex mode (e.g. 2-way communication but not simultaneously).

**Important :** Only Duplex instruments have the ability to receive RS232 commands. If you use this cable with a simplex instrument, all commands other than "?" will be seen as a data request.

### Connections

Line definition	Name	Sub-D 9 pin	Cable color	Line status	Value
Positive power supply :	DTR	4	white	ON (HIGH)	+5 à +15V
Negative power supply	RTS	7	brown	OFF (LOW)	-5 à -15V
Data (instrument to periphery)	RXD	2	yellow	INPUT	
Data request:	TXD	3	green	<?>+<CR>	
Signal ground :	GND	5	Ground		0V

**Note :** In case of data sending from the instrument, the hold mode will be active. To disable the Hold mode simply do a new data request.

## Utilisation

### Using of the plug as a simple power supply

Connect pins 4 (white) and 5 (ground)

### Connection to a Sylvac D100S (or D104) display unit

The channel dedicated to the instrument has to be configured with the option *OptoRS Duplex*. The instrument transmits continuously the data to the display unit.

### Connection to a personal computer (PC)

The data transmission can be requested from the PC or directly from the instrument (key SET)

#### Restriction :

On some instruments, the data transmission can only be requested from the PC. Please refer to the user's manual delivered with the instrument to connect.

## Remote commands

Valid on duplex instruments only.

### Format

[! C1-Cn ! { S1-Sn } ! CR ]  
 C1-Cn: command of 2 to 3 characters  
 S1-Sn : 0/1 : command disabled/activated  
 ? :status request  
 +XXX.YYY: entering numerical values

### List of remote commands

This list shows the main remote commands applied using DUPLEX instruments.

<NOR>	Places the instrument in Measuring mode (or in Reference mode if the keyboard is disabled)
<MOD?>	The instrument sends its operating mode (NOR, REF, MIN, MAX, DEL, TOL1)
<STO0>, <STO1>	Disables, enables measuring value freeze
<RST>	Resets the instrument to its initial parameters
<SET?>	The instrument sends its main parameters: (MM RES2 REF1 etc) Note: B1 battery OK , B0 replace the battery
<ID?>	The instrument sends its identification code:

<OUT0>, <OUT1>	Disables, enables continuous transfer of the displayed value
<OFF>	Switches off the instrument
<ON>	Switches on the instrument (No command echo when the instrument is switched on !)
<PRI>, <?>	The instrument sends the displayed value. Note: in tolerance mode, the value is followed by the symbols '<', '=' or '>'.
<MM>, <IN>	Changes the measurement unit
<RES2>, <RES3>	Changes the resolution: <RES2>: 0.001 mm, <RES3>: 0.01 mm
<REF1>, <REF2>	Changes the reference
<PRE>	Recalls the preset
<PRE?>	The instrument sends the preset value of the active reference
<PRE +123.45> <PRE +0>	Enter preset. Numeric values must always be preceded by a sign.

Refer to the user's manual of the specific instrument for special applications.

## Program samples

### Standard Basic

Serial port opening and parameters	OPEN "COM1:4800, E, 7, 2, PE"
Power supply setting (RTS=OFF, DTR = ON) &H3FC register adresse (COM2: &H2FC)	OUT &H3FC,&H09
Data request (<CR> will be automatic using this command)	PRINT #1, "?"
Data reading	LINE INPUT #1,a\$

### Visual Basic

The communication control (MsComm) of VisualBasic must be applied :

Port opening	' Use COM1. Comm1.CommPort = 1 ' 4800 baud, even parity, 7 data, and 2 stop bit. Comm1.Settings = "4800,E,7,2" ' Open the port. Comm1.PortOpen = True
Power supply setting	Form1.MSComm1.DTREnable = True Form1.MSComm1.RTSEnable = False
Data request	MSComm1.Output = "?" + Chr\$(13)
Data reading	InString\$ = Comm1.Input

For more information, refer to the help menu of MSComm in Visual Basic. Program available on [www.sylvac.ch](http://www.sylvac.ch) web site.

## Application program

### OPTO-RS test

This program is available free of charge on the Sylvac web site or at your distributor. It is a Visual Basic program with all source files for testing connections and transmission.

### Winwedge

WinWedge is designed to transfer any data obtained using Sylvac measuring instruments to a computer application program running under Windows.

Different versions of the Winwedge program are available (light, professional, Windows CE). For more information contact TAL Technologies, Inc. or consult the [www.taltech.com](http://www.taltech.com) web site.

A light version of WinWedge named GageWedge is available free of charge on the Sylvac web site or at your distributor. However, this program version has restrictions regarding data transfer from the instrument.