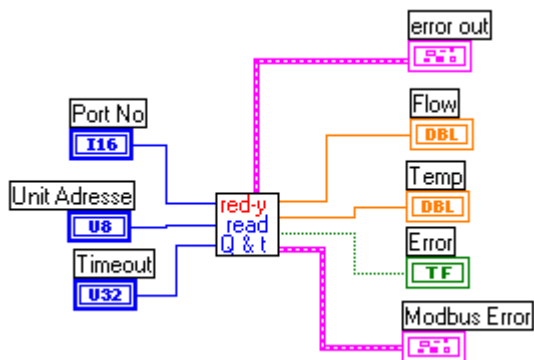


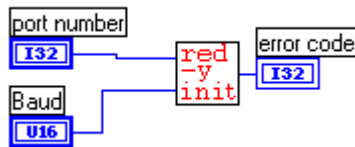
Labview driver, smart series



| | |
|--------------------------------------|----|
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Init-com.vi

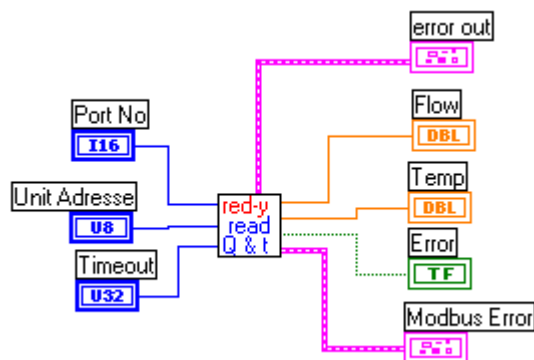
Open and configure the serial port.



| | |
|-------------|--|
| port number | Com1 = 0, Com2 = 1, etc. |
| Baud | Baud rate 9600 |
| Error code | 0 in case of success Other values see under Serial Port Init.vi |

red-y_read_Q_&_T.vi

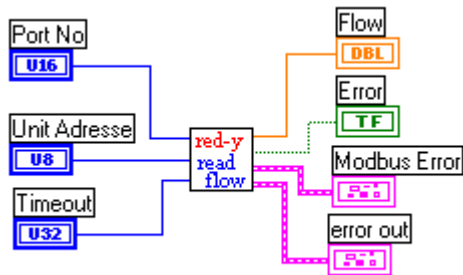
Read flow and temperature in one scan.



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| Flow | Actual flow |
| Temp | Actual temperature |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_read_flow.vi

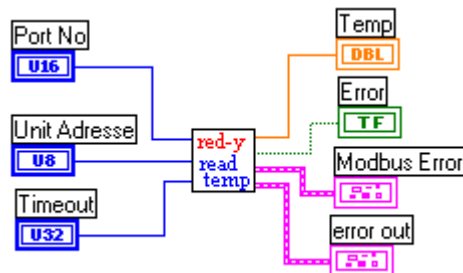
Read actual flow only



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| Flow | actual Flow |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_read_temp.vi

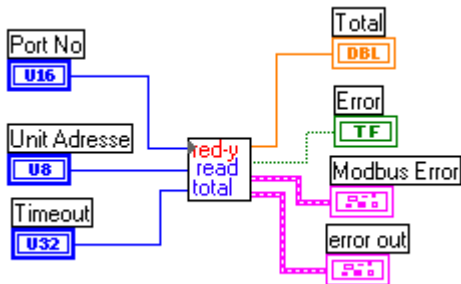
read actual temperature only



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| Temp | actual temperature |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_read_total.vi

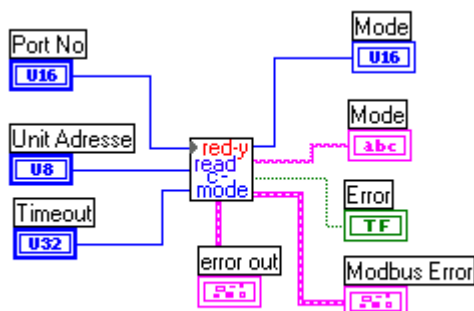
read the actual value of integrator (Total). This works only if this function is available.



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| Total | actual value of integrator |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_read_controlmode.vi

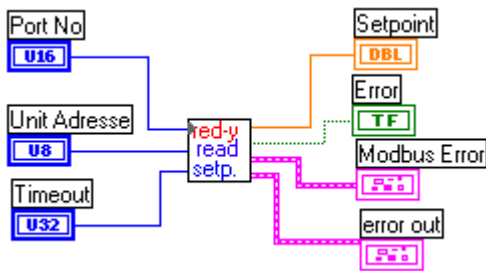
read the control mode



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| Mode (U16) | Control mode as Integer, values see red-y manual. |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |
| Mode (abc) | Control mode as string |

red_y_read_setpoint.vi

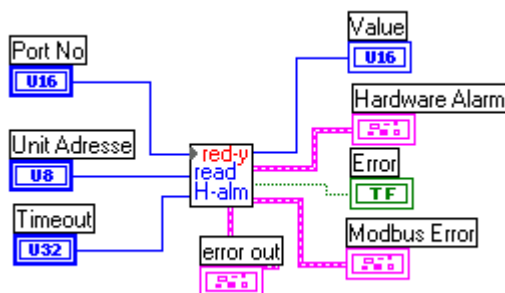
read the digital setpoint. In analog mode you can't see the actual setpoint.



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| Setpoint | Digital setpoint |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_read_HWAlarm.vi

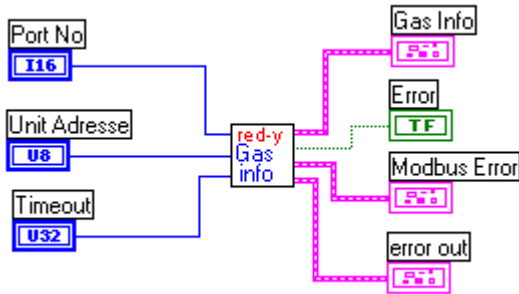
read the hardware alarm register



| | |
|----------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| Value | Alarms as integer, values see red-y manual |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |
| Hardware Alarm | Alarms as cluster of digital indicators |

red-y_read_gas_infos.vi

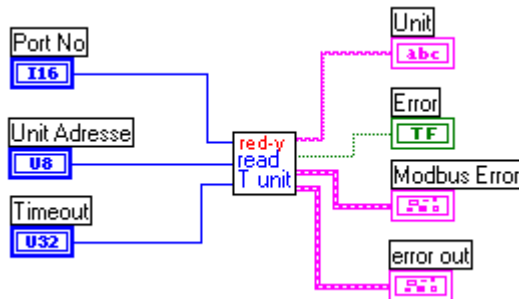
read the range, unit and gas name.



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Adresse | Address of the red-y |
| Timeout | Value in ms |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |
| Gas Info | Cluster with max. range as float, unit and gas as text |

red-y_read_total_unit.vi

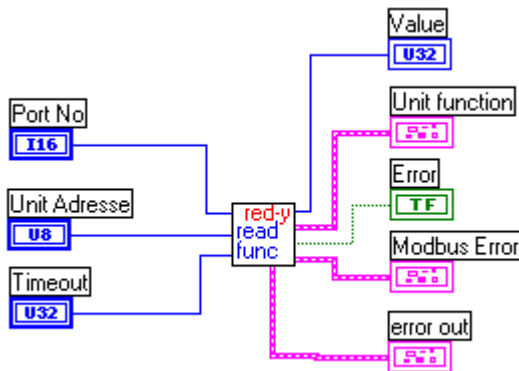
read the unit of the integrator (total)



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Adresse | Address of the red-y |
| Timeout | Value in ms |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |
| Unit | Unit of integrator (total) as text |

red-y_read_unitfunctions.vi

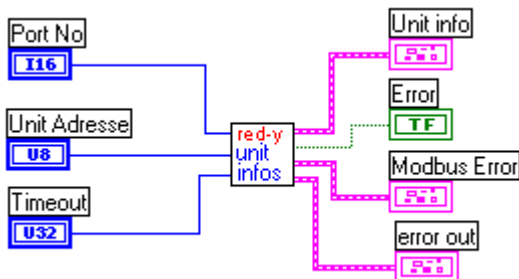
read the functions that the red-y does support.



| | |
|---------------|---|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| Value | Integer value which will shown the functions (see red-y manual) |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |
| Unit function | Cluster with the functions as digital indicator |

red-y_read_unit_infos.vi

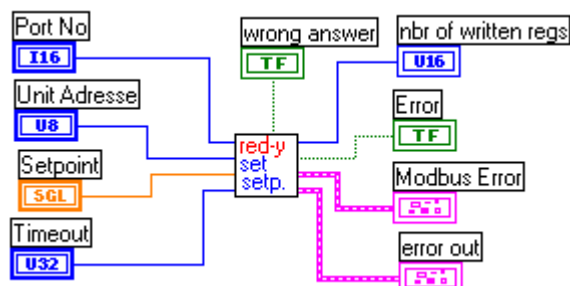
read hardware and software data of the red-y



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |
| Unit info | Cluster with SW/HW type and version, serial no and unit code |

red-y_set_setpoint.vi

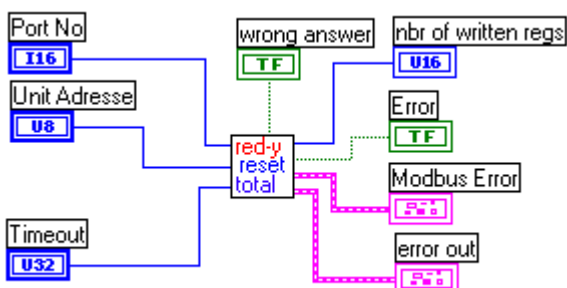
send a new setpoint to the red-y



| | |
|---------------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| nbr of written regs | Numbers of registers that red-y has written in memory |
| Setpoint | New digital setpoint |
| wrong answer | If answer is not as expected this output will be true |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_reset_total.vi

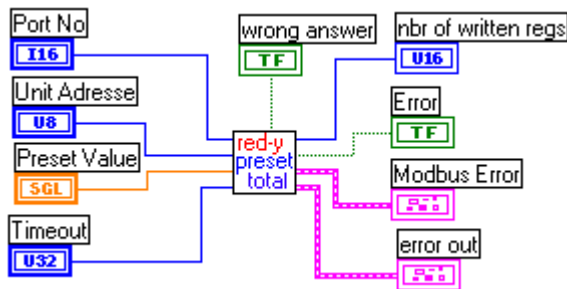
Set the integrator value to zero.



| | |
|---------------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| nbr of written regs | Numbers of registers that red-y has written in memory |
| wrong answer | If answer is not as expected this output will be true |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_preset_total.vi

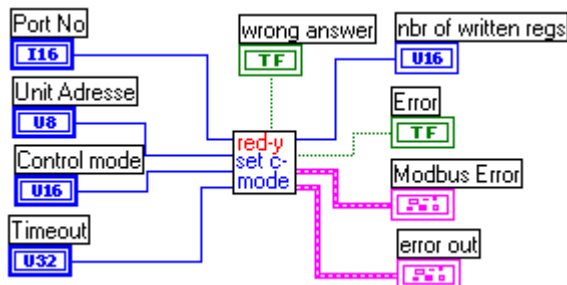
Set the integrator to the desired value



| | |
|---------------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| nbr of written regs | Numbers of registers that red-y has written in memory |
| Preset Value | New value of the integrator (total) |
| wrong answer | If answer is not as expected this output will be true |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_set_controlmode.vi

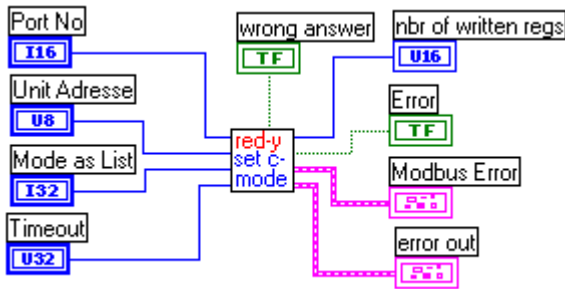
Set a new control mode to the red-y



| | |
|---------------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Control mode | Values see red-y manual |
| Timeout | Value in ms |
| nbr of written regs | Numbers of registers that red-y has written in memory |
| wrong answer | If answer is not as expected this output will be true |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_set_controlmodeAsList.vi

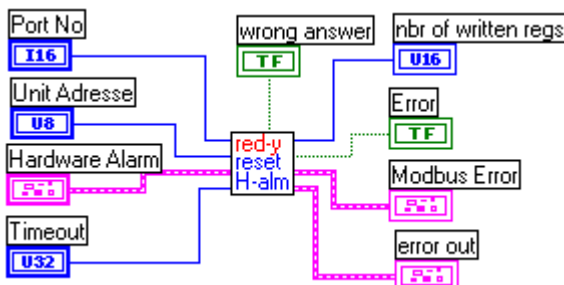
Set a new control mode to the redy



| | |
|---------------------|---|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Control mode | Gives a List Field to choose the control mode. Do not use this Vi, if you will choose the values from the red-y manual. |
| Timeout | Value in ms |
| nbr of written regs | Numbers of registers that red-y has written in memory |
| wrong answer | If answer is not as expected this output will be true |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

red-y_reset_HWAlarm.vi

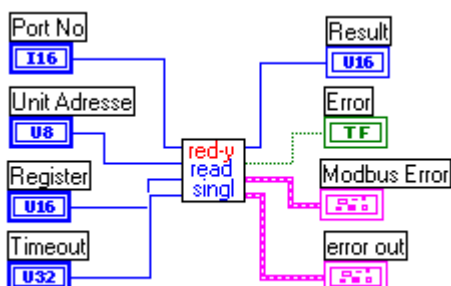
reset the specified hardware alarm



| | |
|---------------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Timeout | Value in ms |
| nbr of written regs | Numbers of registers that red-y has written in memory |
| wrong answer | If answer is not as expected this output will be true |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |
| Hardware Alarm | Cluster with digital switches which represent an alarm |

read-sing-reg.vi

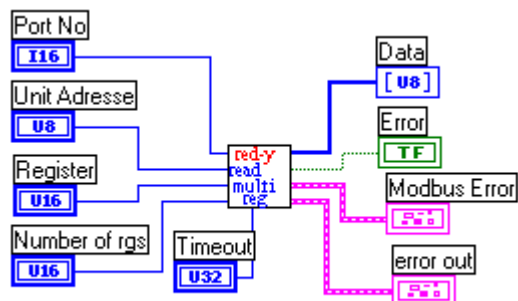
read a single Modbus register



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Register | Modbus register you will read |
| Timeout | Value in ms |
| Result | Value of the register |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

read-mult-reg.vi

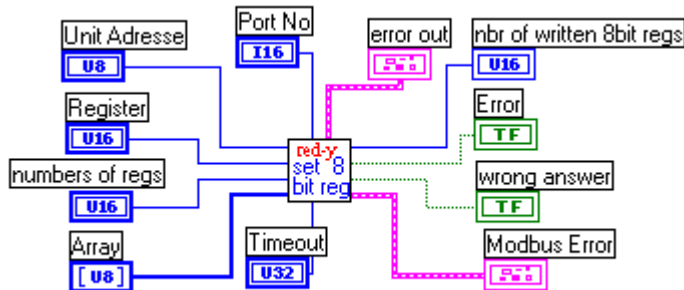
read one or more Modbus register



| | |
|---------------|---|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Register | Modbus register you will read |
| Number of rgs | Number of Modbus register you will read |
| Timeout | Value in ms |
| Data | Array of 8-bit integer, the interpretation must be done by the calling Vi |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

set-multi-8bit-reg.vi

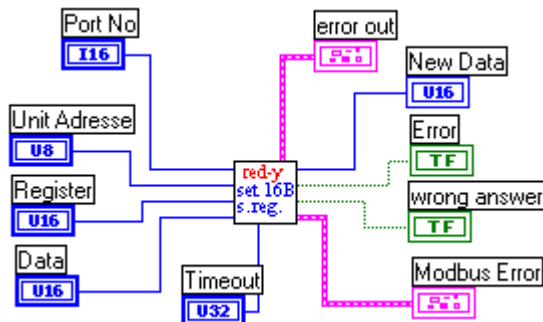
set multiple Modbus register. As Input you can give an array of 8 bit values. Two 8 bit values will be placed in one Modbus register



| | |
|------------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Register | Modbus register you will set |
| Numbers of regs | Number of 8 bit register you will set |
| Array | Array of 8 bit values |
| Timeout | Value in ms |
| Nbr of written.. | Number of 8 bit regs that the red-y has written to memory |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

set-single-16b-reg.vi

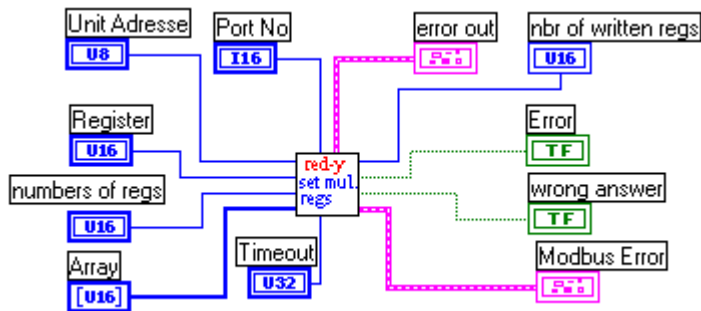
set one Modbus register



| | |
|--------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Register | Modbus register you will set |
| Data | Value to set |
| Timeout | Value in ms |
| New Data | Value that the red-y has written to memory |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

Set-multi-reg.vi

Set one or more Modbus register



| | |
|---------------------|--|
| Port No | Com1 = 0, Com2 = 1, etc. |
| Unit Address | Address of the red-y |
| Register | Modbus register you will set |
| numbers of regs | Number of Modbus register you will set |
| Array | Array of 16bit values you will set |
| Timeout | Value in ms |
| nbr of written regs | Number of registers that the red-y has written to memory |
| Error | If any error occurs this output will be true |
| Modbus Error | See Modbus errors |
| error out | Serial Com port error code (depending on operating system) |

Crc.vi

Calculate the CRC value for Modbus communication



| | |
|--------|---|
| String | Input string on which you will have the CRC |
| CRC | CRC Value |

Modbus Errors

| | |
|-----------------|------------------------------------|
| timeout: | No answer until Timeout |
| Too short: | Less bytes received than expected |
| CRC error: | Received data with wrong bytes |
| Error response: | Wrong answer to Modbus instruction |