

Scope

MYCOM 152 PROFIBUS PA:

FCYP PROFIBUS interface card : 1.04

Cyclic Service of MYCOM 152 pH

byte	data item	access	data format	unit
0, 1, 2, 3	main measured value (pH, redox absolut or redox relativ)	r	32-bit floating point number (IEEE-754)	pH, mV or %
4	status of main measured value	r	80h ¹ = O.K.	-
5, 6, 7, 8	temperature measured value	r	32-bit floating point number (IEEE-754)	°C
9	status of temperature measured value	r	80h = O.K.	-

All bytes have to be selected.

¹ 80h means 80 hex

Miscellaneous

- The cyclic telegram of MYCOM 152 is not affected by the configuration of the device.
- The implementation of the physical layer IEC 1158-2 ensures, that a reverse polarity on the signal lines has no effect on the functionality of the device.
- Proper cables for the signal lines are e.g. Belden 3097A or Siemens 6XY 1830-5AH10.
- 32-bit floating point number in IEEE-754 format:

byte n				byte n+1				byte n+2				byte n+3				
bit7	bit 6			bit 0	bit7	bit 6			bit 0	bit 7	bit 6			bit 0		
S	2 ⁷	2 ⁶	2 ⁵	2 ⁴	2 ³	2 ²	2 ¹	2 ⁰	2 ⁻¹	2 ⁻²	2 ⁻³	2 ⁻⁴	2 ⁻⁵	2 ⁻⁶	2 ⁻⁷	
Sign	exponent				mantissa				mantissa				mantissa			

Formula: **Value** = $(-1)^S \cdot 2^{(\text{exponent} - 127)} \cdot (1 + \text{mantissa})$

Example: 40 F0 00 00 h = 0100 0000 1111 0000 0000 0000 0000 0000 b

$$\begin{aligned}
 \text{Value} &= (-1)^0 \cdot 2^{(129 - 127)} \cdot (1 + 2^{-1} + 2^{-2} + 2^{-3}) \\
 &= 1 \cdot 2^2 \cdot (1 + 0,5 + 0,25 + 0,125) \\
 &= 1 \cdot 4 \cdot 1,875 \\
 &= 7,5
 \end{aligned}$$

- Coding of status according to „PROFIBUS PA Profile for Process Control Devices - General Requirements“ V 2.0:

STATUS-CODE (HEX)	MEANING	DEVICE-CONDITION
0C	device failure	BAD
80	ok	GOOD