0701 CO Wind sensor 910101

Use of the application program

Product family:	Physical sensors
Product type:	Wind sensor
Manufacturer:	Siemens
Name:	AP 257/41 Wind sensor
Order no.:	5WG1 257-3AB41

Contents overview

1. Functional overview

In a compact housing, the AP 257/41 wind sensor contains the sensor, the evaluating electronic system and the bus coupling unit.

The wind speed can be sent in EIS5 format via the bus and up to three limit values monitored. Limit values can be selected as parameters or as communication objects. The maximum wind speed can also be recorded, stored, queried and reset.

There are also eight AND gates and eight OR gates available, each with four inputs for logic operations. If the wind speed is measured at several points or on several façades, then the logic gates can be used, for example, to combine the wind alarms from several wind sensors to a central alarm.

The use of the ETS3 Engineering Tool Software is recommended for parameterization, since it renders possible the best graphic display of the wind sensor setting menus.

2. Behaviour on mains failure / recovery

If its power supply fails, the wind sensor does not store any data. When the power supply returns, the wind speed is measured, the reading checked against the limit values to be monitored, and the configured logic operartions carried out. Accordingly, to avoid the generation of a flood of telegrams after the power returns, it can be set separately via parameters for the limit values and the logic operations which waiting times must be kept before the telegrams with the current status information can be sent.

The wind sensor will detect a bus voltage failure. Data that is changed after a bus voltage failure will be stored and sent after bus voltage recovery.

3. Communication objects

Maximum number of group addresses:	254
Maximum number of assignments:	254

The following table contains the listing of all communication objects of the wind sensor.
Which objects are visible and therefore transmittable will be determined by the parameter settings by the user.
The explanation of the individual objects follows on this tabular overview.

No.	Object name	Function	Bit number	Flag
0	Value of wind speed	Output	16	CRT
1	Request of max. wind speed	Input	1	CRW
2	Maximum wind speed value	Output	16	CRT
3	Reset max. wind speed	Input	1	CRW
4	Fault of wind sensor	Output	1	CRT
5	Wind speed limit value 1	16-bit value	16	CRWTU
6	Wind speed limit value 1	1 = increase 0 = decrease	1	CRW
7	Wind speed limit value 1	Increase	1	CRW
8	Wind speed limit value 1	Decrease	1	CRW
9	Wind speed limit value 1	Switching output	1	CRT
10	Wind speed limit value 1	Blocking output	1	CRW
11	Wind speed limit value 2	16-bit value	16	CRWTU
12	Wind speed limit value 2	1 = increase 0 = decrease	1	CRW
13	Wind speed limit value 2	Increase	1	CRW
14	Wind speed limit value 2	Decrease	1	CRW
15	Wind speed limit value 2	Switching output	1	CRT
16	Wind speed limit value 2	Blocking output	1	CRW
17	Wind speed limit value 3	16-bit value	16	CRWTU
18	Wind speed limit value 3	1 = increase 0 = decrease	1	CRW

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No.	Object name	Function	Bit number	Flag
19	Wind speed limit value 3	Increase	1	CRW
20	Wind speed limit value 3	Decrease	1	CRW
21	Wind speed limit value 3	Switching output	1	CRT
22	Wind speed limit value 3	Blocking output	1	CRW
23	AND logic 1	Switching output	1	CRT
24	AND logic 1	8-bit output A	8	CRT
25	AND logic 1	8-bit output B	8	CRT
26	AND logic 2	Switching output	1	CRT
27	AND logic 2	8-bit output A	8	CRT
28	AND logic 2	8-bit output B	8	CRT
29	AND logic 3	Switching output	1	CRT
30	AND logic 3	8-bit output A	8	CRT
31	AND logic 3	8-bit output B	8	CRT
32	AND logic 4	Switching output	1	CRT
33	AND logic 4	8-bit output A	8	CRT
34	AND logic 4	8-bit output B	8	CRT
35	AND logic 5	Switching output	1	CRT
36	AND logic 5	8-bit output A	8	CRT
37	AND logic 5	8-bit output B	8	CRT
38	AND logic 6	Switching output	1	CRT
39	AND logic 6	8-bit output A	8	CRT
40	AND logic 6	8-bit output B	8	CRT
41	AND logic 7	Switching output	1	CRT
42	AND logic 7	8-bit output A	8	CRT
43	AND logic 7	8-bit output B	8	CRT
44	AND logic 8	Switching output	1	CRT
45	AND logic 8	8-bit output A	8	CRT
46	AND logic 8	8-bit output B	8	CRT
47	OR logic 1	Switching output	1	CRT
48	OR logic 1	8-bit output A	8	CRT
49	OR logic 1	8-bit output B	8	CRT
50	OR logic 2	Switching output	1	CRT
51	OR logic 2	8-bit output A	8	CRT
52	OR logic 2	8-bit output B	8	CRT
53	OR logic 3	Switching output	1	CRT
54	OR logic 3	8-bit output A	8	CRT
55	OR logic 3	8-bit output B	8	CRT
56	OR logic 4	Switching output	1	CRT
57	OR logic 4	8-bit output A	8	CRT
58	OR logic 4	8-bit output B	8	CRT
59	OR logic 5	Switching output	1	CRT
60	OR logic 5	8-bit output A	8	CRT
61	OR logic 5	8-bit output B	8	CRT
62	OR logic 6	Switching output	1	CRT
63	OR logic 6	8-bit output A	8	CRT
64	OR logic 6	8-bit output B	8	CRT
65	OR logic 7	Switching output	1	CRT
66	OR logic 7	8-bit output A	8	CRT
67	OR logic 7	8-bit output B	8	CRT
68	OR logic 8	Switching output	1	CRT
69	OR logic 8	8-bit output A	8	CRT
70	OR logic 8	8-bit output B	8	CRT
71	Input of logical operation 1		1	CRW
72	Input of logical operation 2		1	CRW
73	Input of logical operation 3		1	CRW
74	Input of logical operation 4		1	CRW
75	Input of logical operation 5		1	CRW
76	Input of logical operation 6		1	CRW
77	Input of logical operation 7		1	CRW
78	Input of logical operation 8		1	CRW

Obj	Object name	Function	Type	Flag
0	Valueof wind speed	Output	2 bytes	CRT
The current wind speed will be transmitted via this object as a 16-bit floating point number, with the dimension m/s.				
1	Request of max. wind speed	Input	1 bit	CRW
This object is only visible if the parameter "Transmission and reset of max. wind speed value upon request" in the "General Settings" parameter window is set to "enable". This object is used to request the transmission of the max. wind speed recorded from the sensor.				
2	Maximum wind speed value	Output	2 bytes	CRT
This object is only visible if the parameter "Transmission and reset of max. wind speed value upon request" in the "General Settings" parameter window is set to "enable". This object is used to send the max. wind speed recorded by the wind sensor since the last reset.				
3	Reset max. wind speed	Input	1 bit	CRW
This object is only visible if the parameter "Transmission and reset of max. wind speed value upon request" in the "General Settings" parameter window is set to "enable". This object is used to force a reset of the previously recorded max. wind speed to the value 0.				
4	Wind sensor fault	Output	1 bit	CRT
This object is visible only if the parameter "Use fault object" in the parameter window "General settings" is set to "Yes". This object reports a fault detected by the wind sensor.				
5 (11, 17)	Wind speed limit value 1 (2, 3)	16-bit value	2 bytes	CRWTU
These objects are visible only if the parameter "Limit setting" in the parameter window "Wind speed, limit value x" is set to "Communication object" and the parameter "Kind of limit change" to "Absolute value via a 16-bit object". These objects are used to set the relevant limit value via the bus to a new value and to request the relevant current limit value from the sensor.				
6 (12, 18)	Wind speed limit value 1 (2, 3)	1 = increase | 0 = decrease	1 bit	CRW
These objects are visible only if the parameter "Limit setting" in the parameter window "Wind speed, limit value x" is set to "Communication object" and the parameter "Kind of limit change" to "Increase / decrease with 1 comm. object". These objects are used to increase or decrease the relevant limit value by the set step size.				

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Obj	Object name	Function	Type	Flag
7 (13, 19)	Wind speed limit value 1 (2, 3)	Increase	1 bit	CRW
These objects are visible only if the parameter "Limit setting" in the parameter window "Wind speed, limit value x" is set to "Communication object" and the parameter "Kind of limit change" to "Increase / decrease with 2 comm. objects". These objects are used to increase the relevant limit value by the set step size via the bus, regardless of the telegram content (logical 0 or 1).				
8 (14, 20)	Wind speed limit value 1 (2, 3)	Decrease	1 bit	CRW
These objects are visible only if the parameter "Limit setting" in the parameter window "Wind speed, limit value x" is set to "Communication object" and the parameter "Kind of limit change" to "Increase / decrease with 2 comm. objects". These objects are used to decrease the relevant limit value by the set step size via the bus, regardless of the telegram content (logical 0 or 1).				
9 (15, 21)	Wind speed limit value 1 (2, 3)	Switching output	1 bit	CRT
These objects are visible only if the parameter "Switching output transmits" in the parameter window "Wind speed, limit value x" is not set to "no telegram". These objects transmit the status of the relevant limit value switching output after a change of status and, if configured accordingly, also cyclically.				
10 (16, 22)	Wind speed limit value 1 (2, 3)	Blocking output	1 bit	CRW
These objects are visible only if the parameter "Use of blocking output" in the parameter window "Wind speed, limit value x" is set to "Yes". Via these objects the transmission of the relevant limit value switching output can be blocked and released.				
23 (26, 29, 32, 35, 38, 41, 44)	AND logic 1 (2...8)	Switching output	1 bit	CRT
These objects are visible only if the parameter "Output of logic operation transmits" in the parameter window "AND logic operation x" is set to "one 1 bit object". Via these objects the set value (0 or 1) as result of the relevant logic AND operation is transmitted.				
24 (27, 30, 33, 36, 39, 42, 45)	AND logic 1 (2...8)	8-bit output A	1 bit	CRT
These objects are visible only if the parameter "Output of logic operation transmits" in the parameter window "AND logic operation x" is set to "two 8-bit objects". Via these objects the set first 8-bit value as result of the relevant logic AND operation is transmitted.				

Obj	Object name	Function	Type	Flag
25 (28, 31, 34, 37, 40, 43, 46)	AND logic 1 (2...8)	8-bit output B	1 bit	CRT
These objects are visible only if the parameter "Output of logic operation transmits" in the parameter window "AND logic operation x" is set to "two 8-bit objects". Via these objects the set second 8-bit value as result of the relevant logic AND operation is transmitted.				
47 (50, 53, 56, 59, 62, 65, 68)	OR logic 1 (2...8)	Switching output	1 bit	CRT
These objects are visible only if the parameter "Output of logic operation transmits" in the parameter window "OR logic operation x" is set to "one 1 bit object". Via these objects the set value (0 or 1) as result of the relevant logic OR operation is transmitted.				
48 (51, 54, 57, 60, 63, 66, 69)	OR logic 1 (2...8)	8-bit output A	1 bit	CRT
These objects are visible only if the parameter "Output of logic operation transmits" in the parameter window "OR logic operation x" is set to "two 8-bit objects". Via these objects the set first 8-bit value as result of the relevant logic OR operation is transmitted.				
49 (52, 55, 58, 61, 64, 67, 70)	OR logic 1 (2...8)	8-bit output B	1 bit	CRT
These objects are visible only if the parameter "Output of logic operation transmits" in the parameter window "OR logic operation x" is set to "two 8-bit objects". Via these objects the set second 8-bit value as result of the relevant logic OR operation is transmitted.				
71 (72, 73, 74, 75, 76, 77, 78)	Input of logical operation 1 (2...8)	Input	1 bit	CRW
These objects are visible only if the corresponding parameter "Communication objects of logic operation inputs" in the parameter window "Logic operation" is set to "enable". These objects are used to transfer status information (0 or 1) to the wind sensor and to assign them to the inputs of AND or OR operations.				

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4.   Parameter windows

The parameter windows shown below correspond to the ETS3 representation.

Figure 7. Maximum selectable parameter windows

In the wind sensor as delivered (or after a reset of all parameters to their default settings), only the 3 parameter windows "General settings", "Limit values" and "Logic operation" are visible and therefore selectable.
Figure 7 shows the max. selectable parameter windows if all the wind sensor's available functions have been activated.

4.1.   General settings

This parameter window is used to set whether and when the measured wind speed is to be transmitted via the bus, whether the max. wind speed is to be recorded and transmitted on request, whether an object is to be added to report a sensor failure and what the maximum number of telegrams to be sent per second by the wind sensor should be.

Parameter	Settings
Measuring value	**no transmission;** send cyclically; send on change of value; send on change of value and cyclically
This parameter sets whether and when the measured wind speed is to be sent on the bus.	
If difference in %	1...50; **20**
This parameter is used to set by how many percent the wind speed has to change, compared with the last value sent, before it is sent again.	
Send cyclically every	**5 secs**; 10 secs; 30 secs; 1 min; 2 min; 5 min; 10 min; 20 min; 30 min; 45 min; 1 hour; 1.5 hours; 2 hours
This parameter is used to set the cycle time for the cyclic transmission of the wind speed.	
Transmission and reset of max. wind speed value upon request	**disable;** enable
If this parameter is set to "enable", then the max. wind speed since the last reset of this value is recorded and stored in the wind sensor. The stored value can be queried at any time via the communication object "Request of max. wind speed" and is then transmitted via the communication object "Maximum wind speed value". The communication object "Reset max. wind speed" is used at any time to reset the stored value to "0". With this a new recording period begins automatically.	
Use fault object	**No**; Yes
If this parameter is set to "Yes", then the communication object "Fault of wind sensor ", via which a wind sensor fault is reported, is added to the visible objects.	
Maximum telegram rate	1; 2; 3; **5;** 10; 20 telegrams per second
This parameter is used to set the maximum number of telegrams the wind sensor should send to the bus within a second.	

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4.2. Limit values

This parameter window is used to set whether and at how many limit values the wind speed is to be monitored. This also sets the earliest point when the status of the switching outputs for limit value monitoring or the current limit values should be sent on the power supply for the electronics returning or after a data download with the ETS (Engineering Tool Software).

Parameter	Settings
Application of limit value 1 ... 3	**No**; Yes
This parameter is used to set whether and at how many limit values the wind speed is to be monitored.	
Transmission delay of switching outputs after voltage recovery and download	**5 secs**; 10 secs; 30 secs; 1 min; 2 min; 5 min; 10 min; 20 min; 30 min; 45 min; 1 hour; 1.5 hours; 2 hours
This parameter is used to set the delay time for sending the status information after the power supply for the electronics returns or after a data download with the ETS.	
Transmission delay of limit values after voltage recovery and download	**5 secs**; 10 secs; 30 secs; 1 min; 2 min; 5 min; 10 min; 20 min; 30 min; 45 min; 1 hour; 1.5 hours; 2 hours
This parameter is used to set the delay time for sending the current limit values at which the wind speed is monitored after the power supply for the electronics returns or after a data download with the ETS.	

4.3. Wind speed limit value x

This parameter window is used in each case to set the limit value (LV) for monitoring the measured value (MV) of the wind speed and how to react if the relevant limit value is breached in either direction.

Parameter	Settings
Limit setting	**Parameter**; Communication object
This parameter is used to set whether the limit value x is to be available as a parameter which can be changed only with the ETS or whether a communication object should be added so that the limit value can be changed via the bus.	
If the limit value setting is selected via a communication object, then whether and how a received limit value is stored is to be set via the following parameter "Hold last transmitted value".	

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Parameter	Settings
Limit value as multiple of 0.1 m/s	0...350; **40**
The parameter is visible only if the previous parameter "Limit setting" is set to "Parameter" or if the previous parameter "Limit setting" is set to "Communication object" and the parameter "Hold last transmitted value" is <u>not</u> set to "after voltage recovery and daownload". This parameter is used to set the limit value x as a multiple of 0.1 m/sec (range 0...35 m/sec).	
Hold last transmitted value	No telegram; after voltage recovery; after voltage recovery and download
This parameter is used to set whether or not a limit value which is to be changed via a communication object is to be stored such that it cannot be lost. "No telegram": A limit value changed by a communication object is lost with a power failure or after a data download with the ETS and is then replaced by the default value set by the parameter. "After voltage recovery": A limit value changed by a communication object is stored such that it is available even after a failure of the electronics power supply. "After voltage recovery and download": A limit value changed by a communication object is stored such that it is available even after a failure of the electronics power supply and, furthermore, even after a data download with the ETS. This setting should not be used when the wind sensor is commissioned for the first time.	
Kind of limit change	Absolute value via a 16-bit object; Increase/decrease with 1 comm. object; Increase/decrease with 2 comm. objects
This parameter is visible only if the previous parameter "Limit setting" is set to "Communication object". "Absolute value via a 16-bit object": A 16-bit communication object is added via which a new limit value can be sent to the wind sensor. "Increase/decrease with 1 comm. object": A 1-bit comm-unication object is added. This and the following parameter "Step" allow that a limit value can be increased by the set step size, for example by the user pressing a button to send a logical 1 (or be decreased by the set step size by sending a logical 0). "Increase/decrease with 2 comm. objects": Two 1-bit comm-unication objects are added. This and the following parameter "Step" allow a limit value to be increased or decreased by the set step size, for example by the user pressing the first button (regardless of whether this sends a logical 0 or a logical 1) or by pressing the second button (again regardless of whether this sends a logical 0 or a logical 1).	

Parameter	Settings
Step	0.1 m/sec; 0.2 m/sec; 0.3 m/sec; 0.4 m/sec; 0.5 m/sec; **1 m/sec**; 2 m/sec; 3 m/sec; 4 m/sec; 5 m/sec
This parameter is visible only if the previous parameter "Kind of limit change" is <u>not</u> set to "Absolute value via a 16-bit object". This parameter is used to set the step size by which the corresponding limit value is to be changed on receipt of a telegram with one of the communication objects to increase or decrease the limit value.	
Hysteresis in %	0...50; **20**
This parameter is used to set the hysteresis of the limit value in percent (relative to the current limit value).	
Output is at (LI = Limit)	**LV over =1	LV – Hyst. under =0** LV over =0	LV – Hyst. under =1 LV under =1	LV – Hyst. over =0 LV under =0	LV – Hyst. over =1
When monitoring an upper or lower limit, this parameter is used to set which value (0 or 1) is to be sent when a limit violation is coming or going.	
Switching delay at change from 0 to 1	**none;** 1 sec; 2 secs; 5 secs; 10 secs; 30 secs; 1 min; 2 min; 5 min; 10 min; 20 min; 30 min; 45 min; 1 hour; 1.5 hours; 2 hours
This parameter is used to set the time during which the limit value has to be exceeded (or the converse), before the status change from logical 0 to logical 1 is sent.	
Switching delay at change from 1 to 0	**none;** 1 sec; 2 secs; 5 secs; 10 secs; 30 secs; 1 min; 2 min; 5 min; 10 min; 20 min; 30 min; 45 min; 1 hour; 1.5 hours; 2 hours
This parameter is used to set the time during which the limit value must no longer be exceeded (or the converse), before the status change from logical 1 to logical 0 is sent.	
Switching output transmits	no telegram; on change of value; on change of value to 1; on change of value to 0; on change of value and cyclically; on change of value to 1 and cyclically; on change of value to 0 and cyclically
This parameter is used to set whether, which value and when this is to be sent.	
Send cyclically every	**5 secs**; 10 secs; 30 secs; 1 min; 2 min; 5 min; 10 min; 20 min; 30 min; 45 min; 1 hour; 1.5 hours; 2 hours
This parameter is used to set the cycle time for the cyclic transmission of the limit value status.	

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Parameter	Settings
Use of blocking output	Yes; **No**
This parameter is visible only if the parameter "Switching output transmits" is <u>not</u> set to "No telegram". This parameter is used to set whether a communication object is to be added to block/release the switching output.	
Evaluation of blocking object	**1 = disable | 0 = enable**; 0 = disable | 1 = enable
This parameter is visible only if the previous parameter "Use of output blocking" is set to "Yes". This parameter is used to set whether the switching object is to be blocked or released by a blocking object telegram with a logical 1.	
Value of disabling object before 1st transmission	**0**; 1
This parameter is used to set the status of the blocking object after a wind sensor restart.	
Behaviour of the switching output when disabling	**send no telegram**; send OFF; send ON
This parameter is used to set whether and with which value a telegram for the status of the switching output is to be sent when the switching output is blocked.	
Behaviour of the switching output when enabling (with 2seconds enabling delay)	**send no telegram**; send switching output status; if switching output = 1 ➜ send 1; if switching output = 0 ➜ send 0
This parameter is used to set whether and which telegram is to be sent via the switching output when the switching output is released. The parameters available for selection in each case are dependent on the setting in the parameter "Switching output transmits". If this parameter is set to one of the selection options with cyclical sending, then this is a pure display field. In all other cases, you can select whether no telegram is to be sent or whether it should be the telegram selected with the parameter "Switching output transmits".	

4.4. Logic

Via this parameter window up to 8 logical AND operations and up to 8 logical OR operations with up to 4 inputs (objects) each can be activated. As the result of a logic operation can be inverted, an AND function can be converted into a NAND function and an OR function can be converted into a NOR function if needed.

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Parameter	Settings
Communication objects of logic operation inputs	**disable;** enable
If this parameter is set to "enable", then the communication objects "Input of logic operation 1...8" are added.	
AND logical operation: Logic operation 1...8	**inactive**; active
This parameter is used to enable the corresponding AND operation.	
Transmission delay of switching outputs after voltage recovery and download	**5 secs**; 10 secs; 30 secs; 1 min; 2 min; 5 min; 10 min; 20 min; 30 min; 45 min; 1 hour; 1.5 hours; 2 hours
This parameter is used to set the delay time for sending the status of the switching outputs of the AND operations after power supply recovery for the electronics or after a data download with the ETS.	
OR logical operation: Logic operation 1...8	**inactive**; active
This parameter is used to enable the corresponding OR operation.	
Transmission delay of switching outputs after voltage recovery and download	**5 secs**; 10 secs; 30 secs; 1 min; 2 min; 5 min; 10 min; 20 min; 30 min; 45 min; 1 hour; 1.5 hours; 2 hours
This parameter is used to set the delay time for sending the status of the switching outputs of the OR operations after power supply recovery for the electronics or after a data download with the ETS.	

4.5.   AND logic operation x

Via this parameter window it is set for a logic AND operation which object is to be assigned to each input, which actions are to be taken if the result of the logic operation is a logical 1 or a logical 0 and when or how the operation result is to be transmitted via the bus.

Parameter	Settings
1st input (... 4th input)	**not used;** Communication object logic input 1...8; Comm. object of logical input 1...8 (inverted); Wind sensor fault; Wind sensor fault (inverted); Wind speed limit value 1...3; Wind speed limit value 1...3 inverted
With this parameter a wind sensor object (from a list of 25 objects) can be assigned to the relevant input for logic combination with up to three more objects from this list.	
Output of logic operation transmits	**no telegram;** one 1 bit object; two 8-bit objects
This parameter is used to set whether a 1-bit object or two 8-bit objects are to be sent as the result of the logic operation. Note: A 1-bit object can be used, for example, to move a sun blind into an upper or lower final position. The two 8-bit objects can be used, for example, to move a sun blind via object A and its slats via object B into a desired intermediate position.	

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Parameter	Settings
If logic output = 1, ➜ object value =	0; **1**
This parameter is visible only if the previous parameter "Output of logic operation transmits" is set to "one 1-bit object". If the result of the logic operation is = 1, then this parameter can invert it if needed, i.e. an AND operation will then become a NAND operation.	
If logic output = 0, ➜ object value =	**0**; 1
This parameter is visible only if the previous parameter "Output of logic operation transmits" is set to "one 1-bit object". If the result of the logic operation is = 0, then this parameter can invert it if needed, i.e. an AND operation will then become a NAND operation.	
Comm. object of AND logic 1 sends	**on change of logic output;** on change of logic output to 1; on change of logic output to 0; on change of logic output and cyclically; on change of logic output to 1 and cyclically; on change of logic output to 0 and cyclically
This parameter is visible only if the previous parameter "Output of logic operation transmits" is set to "one 1-bit object". This parameter is used to set when the switching object (result) of the logic AND operation is to be sent.	
If logic output = 1, ➜ value of object A =	0...255; **127**
This parameter is visible only if the previous parameter "Output of logic operation transmits" is set to "two 8-bit objects". If the result of the logic operation is = 1, then this parameter is used to set which value is to be sent via object A.	
If logic output = 0, ➜ value of object A =	0...255; **0**
This parameter is visible only if the previous parameter "Output of logic operation transmits" is set to "two 8-bit objects". If the result of the logic operation is = 0, then this parameter is used to set which value is to be sent via object A.	

Parameter	Settings
If logic output= 1, ➜ value of object B	0...255; **127**
This parameter is visible only if the previous parameter "Output of logic operation transmits" is set to "two 8-bit objects". If the result of the logic operation is = 1, then this parameter is used to set which value is to be sent via object B.	
If logic output= 0, ➜ value of object B	0...255; **0**
This parameter is visible only if the previous parameter "Output of logic operation transmits" is set to "two 8-bit objects". If the result of the logic operation is = 0, then this parameter is used to set which value is to be sent via object B.	
Comm. Object of AND logic 1 A&B send	**on change of logic output;** on change of logic output to 1; on change of logic output to 0; on change of logic output and cyclically; on change of logic output to 1 and cyclically; on change of logic output to 0 and cyclically
This parameter is visible only if the previous parameter "Output of logic operation transmits" is set to "two 8-bit objects". This parameter is used to set when the 8-bit objects dependent on the result of the logic operation are to be sent.	
Send cyclically every	**5 secs**; 10 secs; 30 secs; 1 min; 2 min; 5 min; 10 min; 20 min; 30 min; 45 min; 1 hour; 1.5 hours; 2 hours
This parameter is visible only if the previous parameter "Communication object of AND logic 1...8 sends" or the parameter "Comm. object of AND logic 1...8 A&B send" is set to one of the selection options with cyclical sending. This parameter is used to set the cycle time for the cyclical sending of the 1-bit object or the 8-bit objects for AND operation.	

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4.6.   OR logic operation x

Via this parameter window it is set for a logic OR operation which object is to be assigned to each input, which actions are to be taken if the result of the logic operation is a logical 1 or a logical 0 and when or how the operation result is to be transmitted via the bus.

Note: The parameterization of the OR logic operation is the same as the parameterization of the AND logic operation. However, the results of the logic AND operations (normal and inverted) can also be assigned to the inputs of an OR operation.

Parameter	Settings
1st input (... 4th input)	**not used**; Communication object logic input 1...8; Comm. object of logical input 1...8 (inverted); Wind sensor fault; Wind sensor fault (inverted); Wind speed limit value 1...3; Wind speed limit value 1...3 inverted; AND logic operation output 1...8; AND logic operation output 1...8 inverted
With this parameter a wind sensor object (from a list of 41 objects) can be assigned to the relevant input for logic combination with up to three more objects from this list.	

Space for notices