

Date: 2 January 2013
Vendor Name: WindowMaster A/S
Product Name: BACnet and Modbus MotorLink™ MotorController
Product Model Number: WBA11M. MSTP BACnet-IP, MODBUS IP and RTU
Configuration Version (CSV): 1.00bL
Firmware Revision: V2.01k

Product Description:

The WindowMaster WBA11M is a motor controller with 4 motor lines used for controlling MotorLink™ window actuators. The WBA11M also have inputs for push button for manually operating the 4 motor lines independently.

MotorLink™ technology is a state of the art digital data communication between actuators and control unit using 3 wires for power and communication.

MotorLink™ technology enables position control and feedback of each group of motors. Up to 4 window actuators in a group are connected in parallel and runs 100% synchronous. The actual position is stored in non volatile memory in each actuator, so position information is maintained in case of loss of power. Up to 2 additional locking actuators can be connected to a MotorLink™ motor line.

WBA11M also supports operation with different actuator speeds:

- One low speed setting for automatic operation.
- One higher speed setting for manual control which is giving a slightly higher noise level and a faster response to user input.

If a maximum position signal is received the window can only be opened up to that limit. If a hand position command is received the automatic operation position commands will be overridden for a given time. Other parameters decide which speed the actuators use – typically lower speed settings are used for automatic control in order to achieve an almost soundless operation. There is a faster and more audible speed via manual operation.

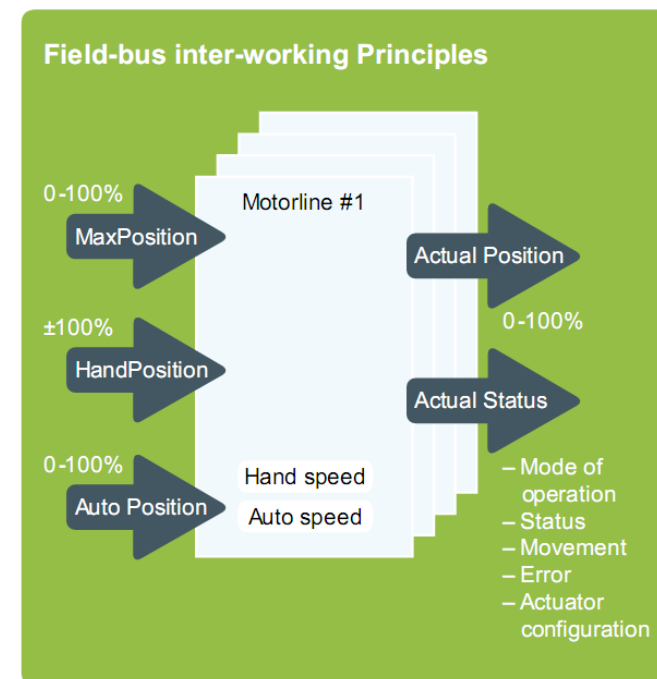
WBA11M is for instance used in the WindowMaster MotorController type WBC 16M 040A, WBC 16M 080B.

WBA 11M support the following protocols Modbus IP and RTU as well as BACnet MSTP and IP in the flowing combinations:

- 1) BACnet MSTP, BACnet IP and Modbus IP
- 2) MODBUS RTU, BACnet IP and Modbus IP

Modbus RTU or BACnet MSTP baud rate (2400, 4800, 9600, 19200, 38400, 76800, 115200) and device address are selectable on dip switches.

Modbus RTU settings: 8 data bits, even parity, 1 stop bit.



<u>Address:</u> 00001	<u>Name:</u> Close_All	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set that all motor lines must be closed	<u>Unit:</u>
<u>Long description:</u> This object is used to indicate that all motor lines should be closed. When closing the Heat & Smoke speed is being used. 0 = Off: No indication to close all motor lines. 1 = On: Indication to close all motor lines.				
<u>Address:</u> 00002	<u>Name:</u> Auto_Off	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set whether automatic control is active	<u>Unit:</u>
<u>Long description:</u> This object is used to indicate whether automatic control is enabled or not. 0 = Off: Automatic control enabled. 1 = On: Automatic control disabled.				
<u>Address:</u> 00003	<u>Name:</u> Service	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set to disable all actuator movements	<u>Unit:</u>
<u>Long description:</u> This object is used to indicate that the system is in Service mode. When the service object is set the MotorController does not move the actuators. 0 = Off: Movements allowed. 1 = On: Movements not allowed.				
<u>Address:</u> 00004	<u>Name:</u> Close_Line_1	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set that motor line 1 must be closed	<u>Unit:</u>
<u>Long description:</u> This object is used to indicate that the motor line must be closed. When closing the Heat & Smoke speed is being used. 0 = Off: Normal operation. 1 = On: Motor line must be closed.				
<u>Address:</u> 00005	<u>Name:</u> Close_Line_2	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set that motor line 2 must be closed	<u>Unit:</u>
<u>Long description:</u> See Close_Line_1				
<u>Address:</u> 00006	<u>Name:</u> Close_Line_3	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set that motor line 3 must be closed	<u>Unit:</u>
<u>Long description:</u> See Close_Line_1				
<u>Address:</u> 00007	<u>Name:</u> Close_Line_4	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set that motor line 4 must be closed	<u>Unit:</u>
<u>Long description:</u> See Close_Line_1				

<u>Address:</u> 00008	<u>Name:</u> Disable_Hand_Line_1	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set to disable manual control for motor line 1	<u>Unit:</u>
<u>Long description:</u> This object is used to disable manual control of the motor line. 0 = Off: Enable manual control of motor line. 1 = On: Disable manual control of motor line.				
<u>Address:</u> 00009	<u>Name:</u> Disable_Hand_Line_2	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set to disable manual control for motor line 2	<u>Unit:</u>
<u>Long description:</u> See Disable_Hand_Line_1				
<u>Address:</u> 00010	<u>Name:</u> Disable_Hand_Line_3	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set to disable manual control for motor line 3	<u>Unit:</u>
<u>Long description:</u> See Disable_Hand_Line_1				
<u>Address:</u> 00011	<u>Name:</u> Disable_Hand_Line_4	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set to disable manual control for motor line 4	<u>Unit:</u>
<u>Long description:</u> See Disable_Hand_Line_1				
<u>Address:</u> 00012	<u>Name:</u> Disable_Auto_Line_1	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set to disable automatic control for motor line 1	<u>Unit:</u>
<u>Long description:</u> This object is used to disable automatic control of the motor line. 0 = Off: Enable automatic control of motor line. 1 = On: Disable automatic control of motor line.				
<u>Address:</u> 00013	<u>Name:</u> Disable_Auto_Line_2	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set to disable automatic control for motor line 2	<u>Unit:</u>
<u>Long description:</u> See Disable_Auto_Line_1				
<u>Address:</u> 00014	<u>Name:</u> Disable_Auto_Line_3	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set to disable automatic control for motor line 3	<u>Unit:</u>
<u>Long description:</u> See Disable_Auto_Line_1				
<u>Address:</u> 00015	<u>Name:</u> Disable_Auto_Line_4	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Set to disable automatic control for motor line 4	<u>Unit:</u>
<u>Long description:</u> See Disable_Auto_Line_1				

<u>Address:</u> 40001	<u>Name:</u> Max_Position_Input_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Sets the maximum allowed position for motor line 1	<u>Unit:</u> Percent
<u>Long description:</u> This object is used to set the maximum allowed position for the motor line. When the actuators are moving due to a decreased maximum position heat & smoke speed is being used. Range: 0 - 100 %				
<u>Address:</u> 40002	<u>Name:</u> Max_Position_Input_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Sets the maximum allowed position for motor line 2	<u>Unit:</u> Percent
<u>Long description:</u> See Max_Position_Input_Line_1				
<u>Address:</u> 40003	<u>Name:</u> Max_Position_Input_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Sets the maximum allowed position for motor line 3	<u>Unit:</u> Percent
<u>Long description:</u> See Max_Position_Input_Line_1				
<u>Address:</u> 40004	<u>Name:</u> Max_Position_Input_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Sets the maximum allowed position for motor line 4	<u>Unit:</u> Percent
<u>Long description:</u> See Max_Position_Input_Line_1				
<u>Address:</u> 40005	<u>Name:</u> Auto_Position_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Sets the target position with auto speed for motor line 1	<u>Unit:</u> Percent
<u>Long description:</u> This object is used to set the target position with automatic priority motor line. Automatic speed is used during movement. Range: 0 - 100 %				
<u>Address:</u> 40006	<u>Name:</u> Auto_Position_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Sets the target position with auto speed for motor line 2	<u>Unit:</u> Percent
<u>Long description:</u> See Auto_Position_Line_1				
<u>Address:</u> 40007	<u>Name:</u> Auto_Position_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Sets the target position with auto speed for motor line 3	<u>Unit:</u> Percent
<u>Long description:</u> See Auto_Position_Line_1				
<u>Address:</u> 40008	<u>Name:</u> Auto_Position_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Sets the target position with auto speed for motor line 4	<u>Unit:</u> Percent
<u>Long description:</u> See Auto_Position_Line_1				

<u>Address:</u> 40009	<u>Name:</u> Hand_Relative_Position_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Hand relative position for motor line 1	<u>Unit:</u> Percent
<u>Long description:</u> This object is used to adjust the position for the motor line with manual priority. Hand speed is used during movement. Range: V: -100..-1 = Move actuator V% of full stroke in the closing direction relative to the current position of the actuator 0: Stop any ongoing actuator movement V: 1..100: Move actuator V% of full stroke in the opening direction relative to the current position of the actuator. V < -100 and >100 are truncated.				
<u>Address:</u> 40010	<u>Name:</u> Hand_Relative_Position_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Hand relative position for motor line 2	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Relative_Position_Line_1				
<u>Address:</u> 40011	<u>Name:</u> Hand_Relative_Position_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Hand relative position for motor line 3	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Relative_Position_Line_1				
<u>Address:</u> 40012	<u>Name:</u> Hand_Relative_Position_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Hand relative position for motor line 4	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Relative_Position_Line_1				
<u>Address:</u> 40013	<u>Name:</u> Hand_Absolute_Position_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Set the target position of motor line 1 using Hand speed	<u>Unit:</u> Percent
<u>Long description:</u> This object is used to set the target position of the motor line with manual priority. Hand speed is used during movement. Range: 0 - 100 %				
<u>Address:</u> 40014	<u>Name:</u> Hand_Absolute_Position_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Set the target position of motor line 2 using Hand speed	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Absolute_Position_Line_1				
<u>Address:</u> 40015	<u>Name:</u> Hand_Absolute_Position_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Set the target position of motor line 3 using Hand speed	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Absolute_Position_Line_1				
<u>Address:</u> 40016	<u>Name:</u> Hand_Absolute_Position_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> Set the target position of motor line 4 using Hand speed	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Absolute_Position_Line_1				

<u>Address:</u> 00016	<u>Name:</u> Clear_Hand_Timer_Line_1	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Clears the timer for manual movement of motor line 1 When cleared automatic control takes precedence	<u>Unit:</u>
<u>Long description:</u> This input object is used to clear the hand timer for the motor line. 0 = No action. 1 = Clear/expire timer.				
<u>Address:</u> 00017	<u>Name:</u> Clear_Hand_Timer_Line_2	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Clears the timer for manual movement of motor line 2 When cleared automatic control takes precedence	<u>Unit:</u>
<u>Long description:</u> See Clear_Hand_Timer_Line_1				
<u>Address:</u> 00018	<u>Name:</u> Clear_Hand_Timer_Line_3	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Clears the timer for manual movement of motor line 3 When cleared automatic control takes precedence	<u>Unit:</u>
<u>Long description:</u> See Clear_Hand_Timer_Line_1				
<u>Address:</u> 00019	<u>Name:</u> Clear_Hand_Timer_Line_4	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> Clears the timer for manual movement of motor line 4 When cleared automatic control takes precedence	<u>Unit:</u>
<u>Long description:</u> See Clear_Hand_Timer_Line_1				
<u>Address:</u> 30001	<u>Name:</u> Hand_Position_Output_Line_1	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Local input command cascade output for motor line 1	<u>Unit:</u> Percent
<u>Long description:</u> This object transmits the events on the local input terminals for the motor line. -100 = Long activation on the close input terminal. 0 = Short activation on open or close input terminal. 100 = Long activation on the open input terminal.				
<u>Address:</u> 30002	<u>Name:</u> Hand_Position_Output_Line_2	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Local input command cascade output for motor line 2	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Position_Output_Line_1				
<u>Address:</u> 30003	<u>Name:</u> Hand_Position_Output_Line_3	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Local input command cascade output for motor line 3	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Position_Output_Line_1				

<u>Address:</u> 30004	<u>Name:</u> Hand_Position_Output_Line_4	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Local input command cascade output for motor line 4	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Position_Output_Line_1				
<u>Address:</u> 30005	<u>Name:</u> Actual_Position_Line_1	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the actual position for Line 1	<u>Unit:</u> Percent
<u>Long description:</u> This object contains the actual position for the motor line. Range: 0 - 100 %				
<u>Address:</u> 30006	<u>Name:</u> Actual_Position_Line_2	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the actual position for Line 2	<u>Unit:</u> Percent
<u>Long description:</u> See Actual_Position_Line_1				
<u>Address:</u> 30007	<u>Name:</u> Actual_Position_Line_3	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the actual position for Line 3	<u>Unit:</u> Percent
<u>Long description:</u> See Actual_Position_Line_1				
<u>Address:</u> 30008	<u>Name:</u> Actual_Position_Line_4	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the actual position for Line 4	<u>Unit:</u> Percent
<u>Long description:</u> See Actual_Position_Line_1				
<u>Address:</u> 30009	<u>Name:</u> Actual_Max_Position_Line_1	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the maximum allowed position of Line 1 in percent	<u>Unit:</u> Percent
<u>Long description:</u> This object contains the actual maximum allowed position of the motor line. Any condition limiting the position is reflected on this output. Range: 0 - 100 %				
<u>Address:</u> 30010	<u>Name:</u> Actual_Max_Position_Line_2	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the maximum allowed position of Line 1 in percent	<u>Unit:</u> Percent
<u>Long description:</u> See Actual_Max_Position_Line_1				
<u>Address:</u> 30011	<u>Name:</u> Actual_Max_Position_Line_3	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the maximum allowed position of Line 1 in percent	<u>Unit:</u> Percent
<u>Long description:</u> See Actual_Max_Position_Line_1				

<u>Address:</u> 30012	<u>Name:</u> Actual_Max_Position_Line_4	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the maximum allowed position of Line 1 in percent	<u>Unit:</u> Percent
<u>Long description:</u> See Actual_Max_Position_Line_1				

Address:	Name:	Register:	Description:	Unit:
30013	Motor_Line_Status_Line_1	Analog read only points (Input Registers)	Contains the actual Motor status of Line 1	
<p><u>Long description:</u> This output object contains the status of the motor line stored in a 16 bit value. MSB.....LSB Mode of operation. Bit 3, 2, 1, 0: 0000b = Only maximum opening limit active. Both hand operation and automatic operation are disabled. 0001b = Hand operation. Automatic operation is disabled. 0010b = Only automatic operation. Hand operation is disabled. 0011b = Normal. Both hand and automatic operation are enabled. 0100b = Emergency. Motor line operated by a heat and smoke emergency input. No other operation possible. 0101b = Emergency closed. Motor line operated by a heat and smoke emergency close input. No other operation possible. 0110b = Close. Close command active. Hand and automatic operation are disabled. 0111b = Open. Open command active. Hand and automatic operation are disabled. 1000b = Position locked. Service input object active. No operation possible. 1001b = Manually operated. The motor line has been operated by hand. Time out determined by non-volatile parameter. 1010b = Disabled. The motor line is disabled by non-volatile parameter. 1011b–1111b = Reserved. Number of window actuators detected. Bit 6, 5, 4: 0 = No actuators detected on motor line. 1-7 = 1-7 Actuator(s) detected on motor line. Status. Bit 8, 7: 00b = Normal operation. 01b = Under configuration. The motor line is being configured. The actuator(s) will not move. 10b = Hand operation blocking. A hand operation blocked state is pending, but in this state hand operation is still possible. 11b = Hand operation blocked. It is not possible to operate the motor line by hand operation commands (hand operation disabled). Movement. Bit 10, 9: 00b = Normal. Actuator configuration is valid and no problems detected during last operation of the actuators. 01b = Configuration error. Inconsistency between non-volatile parameters and actual actuators detected or configuration ongoing. 10b = Obstacle detected during opening. Problem detected during last opening operation of the actuators. 11b = Obstacle detected during closing. Problem detected during last closing operation of the actuators. Locking actuator #1 Present. Bit 11: 0 = Locking actuator #1 not present. 1 = Locking actuator #1 present. Locking actuator no. 1 has been found on the motor line. Locking actuator #2 Present. Bit 12: 0 = Locking actuator #2 not present. 1 = Locking actuator #2 present. Locking actuator no. 2 has been found on the motor line. Watchdog timeout. Bit 13: 0 = No timeout. 1 = Watchdog timeout. The positioning limitation communication objects have not been updated within the configured time out. Motor line communication error. Bit 14: 0 = No motor line communication error. 1 = Motor line communication error. Error during communication with one or more actuator(s) on the motor line. Closed. Bit 15:</p>				

	0 = Not closed. 1 = Closed. All actuators at their closed position. If locking actuators are present these are also locked.			
<u>Address:</u> 30014	<u>Name:</u> Motor_Line_Status_Line_2	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the actual Motor status of Line 2	<u>Unit:</u>
	<u>Long description:</u> See Motor_Line_Status_Line_1			
<u>Address:</u> 30015	<u>Name:</u> Motor_Line_Status_Line_3	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the actual Motor status of Line 3	<u>Unit:</u>
	<u>Long description:</u> See Motor_Line_Status_Line_1			
<u>Address:</u> 30016	<u>Name:</u> Motor_Line_Status_Line_4	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Contains the actual Motor status of Line 4	<u>Unit:</u>
	<u>Long description:</u> See Motor_Line_Status_Line_1			
<u>Address:</u> 30017	<u>Name:</u> Mode_Of_Operation_Line_1	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates the actual mode of operation for line 1	<u>Unit:</u>
	<u>Long description:</u> Mode of operation for the motor line: 1. Only maximum opening limit active: Both hand operation and automatic operation are disabled. 2. Hand operation: Automatic operation is disabled. 3. Only automatic operation: Hand operation is disabled. 4. Normal: Both hand and automatic operation are enabled. 5. Emergency: Motor line operated by a heat and smoke emergency input. No other operation possible. 6. Emergency closed: Motor line operated by a heat and smoke emergency close input. No other operation possible. 7. Close: Close command active. Hand and automatic operation are disabled. 8. Open: Open command active. Hand and automatic operation are disabled. 9. Position locked: Service input object active. No operation possible. 10. Manually operated: The motor line has been operated by hand. Time out determined by non-volatile parameter. 11. Disabled: The motor line is disabled by non-volatile parameter.			
<u>Address:</u> 30018	<u>Name:</u> Mode_Of_Operation_Line_2	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates the actual mode of operation for line 2	<u>Unit:</u>
	<u>Long description:</u> See Mode_Of_Operation_Line_1			
<u>Address:</u> 30019	<u>Name:</u> Mode_Of_Operation_Line_3	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates the actual mode of operation for line 3	<u>Unit:</u>
	<u>Long description:</u> See Mode_Of_Operation_Line_1			

<u>Address:</u> 30020	<u>Name:</u> Mode_Of_Operation_Line_4	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates the actual mode of operation for line 4	<u>Unit:</u>
<u>Long description:</u> See Mode_Of_Operation_Line_1				
<u>Address:</u> 30021	<u>Name:</u> No_Of_Actuators_Detected_Line_1	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates no of actuators detected on Line 1	<u>Unit:</u>
<u>Long description:</u> This object contains the number of window actuators detected on the motor line. 0 = No actuators detected on motor line. 1-4 = 1-4 Actuator(s) detected on motor line.				
<u>Address:</u> 30022	<u>Name:</u> No_Of_Actuators_Detected_Line_2	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates no of actuators detected on Line 2	<u>Unit:</u>
<u>Long description:</u> See No_Of_Actuators_Detected_Line_1				
<u>Address:</u> 30023	<u>Name:</u> No_Of_Actuators_Detected_Line_3	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates no of actuators detected on Line 3	<u>Unit:</u>
<u>Long description:</u> See No_Of_Actuators_Detected_Line_1				
<u>Address:</u> 30024	<u>Name:</u> No_Of_Actuators_Detected_Line_4	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates no of actuators detected on Line 4	<u>Unit:</u>
<u>Long description:</u> See No_Of_Actuators_Detected_Line_1				
<u>Address:</u> 30025	<u>Name:</u> Motor_Status_Line_1	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates the Operation status for line 1	<u>Unit:</u>
<u>Long description:</u> This object contains the motor line status: 1. Normal operation. 2. Under configuration: The motor line is being configured. The actuator(s) will not move. 3. Hand operation blocking: A hand operation blocked state is pending, but in this state hand operation is still possible. 4. Hand operation blocked: It is not possible to operate the motor line by hand operation commands (hand operation disabled).				
<u>Address:</u> 30026	<u>Name:</u> Motor_Status_Line_2	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates the Operation status for line 2	<u>Unit:</u>
<u>Long description:</u> See Motor_Status_Line_1				
<u>Address:</u> 30027	<u>Name:</u> Motor_Status_Line_3	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates the Operation status for line 3	<u>Unit:</u>
<u>Long description:</u> See Motor_Status_Line_1				

<u>Address:</u> 30028	<u>Name:</u> Motor_Status_Line_4	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Indicates the Operation status for line 4	<u>Unit:</u>
<u>Long description:</u> See Motor_Status_Line_1				
<u>Address:</u> 30029	<u>Name:</u> Movement_Line_1	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> indicates Movement status for line 1	<u>Unit:</u>
<u>Long description:</u> This object contains the actuator movement status: 1. Normal: Actuator configuration is valid and no problems detected during last operation of the actuators. 2. Configuration error: Inconsistency between non-volatile parameters and actual actuators detected or configuration ongoing. 3. Obstacle detected during opening: Problem detected during last opening operation of the actuators. 4. Obstacle detected during closing: Problem detected during last closing operation of the actuators.				
<u>Address:</u> 30030	<u>Name:</u> Movement_Line_2	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> indicates Movement status for line 2	<u>Unit:</u>
<u>Long description:</u> See Movement_Line_1				
<u>Address:</u> 30031	<u>Name:</u> Movement_Line_3	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> indicates Movement status for line 3	<u>Unit:</u>
<u>Long description:</u> See Movement_Line_1				
<u>Address:</u> 30032	<u>Name:</u> Movement_Line_4	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> indicates Movement status for line 4	<u>Unit:</u>
<u>Long description:</u> See Movement_Line_1				
<u>Address:</u> 30033	<u>Name:</u> Locking_Actuators_Detected_Line_1	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> indicates the locking actuator configuration detected on line 1	<u>Unit:</u>
<u>Long description:</u> This object contains the detected locking actuator configuration: 1. No Locking actuator present. 2. 1 Locking actuator has been found on the motor line. 3. Not valid. 4. 2 Locking actuators have been found on the motor line.				
<u>Address:</u> 30034	<u>Name:</u> Locking_Actuators_Detected_Line_2	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> indicates the locking actuator configuration detected on line 2	<u>Unit:</u>
<u>Long description:</u> See Locking_Actuators_Detected_Line_1				

<u>Address:</u> 30035	<u>Name:</u> Locking_Actuators_Detected_Line_3	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> indicates the locking actuator configuration detected on line 3	<u>Unit:</u>
<u>Long description:</u> See Locking_Actuators_Detected_Line_1				
<u>Address:</u> 30036	<u>Name:</u> Locking_Actuators_Detected_Line_4	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> indicates the locking actuator configuration detected on line 4	<u>Unit:</u>
<u>Long description:</u> See Locking_Actuators_Detected_Line_1				
<u>Address:</u> 10001	<u>Name:</u> Watchdog_Timeout_Line_1	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates Watchdog timeout on line 1	<u>Unit:</u>
<u>Long description:</u> This object contains the object cyclic update monitoring watchdog timeout status. 0 = No time-out. 1 = Watchdog time-out. The positioning limitation communication objects have not been updated within the configured time out.				
<u>Address:</u> 10002	<u>Name:</u> Watchdog_Timeout_Line_2	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates Watchdog timeout on line 2	<u>Unit:</u>
<u>Long description:</u> See Watchdog_Timeout_Line_1				
<u>Address:</u> 10003	<u>Name:</u> Watchdog_Timeout_Line_3	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates Watchdog timeout on line 3	<u>Unit:</u>
<u>Long description:</u> See Watchdog_Timeout_Line_1				
<u>Address:</u> 10004	<u>Name:</u> Watchdog_Timeout_Line_4	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates Watchdog timeout on line 4	<u>Unit:</u>
<u>Long description:</u> See Watchdog_Timeout_Line_1				
<u>Address:</u> 10005	<u>Name:</u> Communication_Error_Line_1	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates communication error status for Line 1	<u>Unit:</u>
<u>Long description:</u> This object contains the motor line communication error status: 0 = No motor line communication error. 1 = Motor line communication error. Error during communication with one or more actuator(s) on the motor line.				
<u>Address:</u> 10006	<u>Name:</u> Communication_Error_Line_2	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates communication error status for Line 2	<u>Unit:</u>
<u>Long description:</u> See Communication_Error_Line_1				

<u>Address:</u> 10007	<u>Name:</u> Communication_Error_Line_3	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates communication error status for Line 3	<u>Unit:</u>
<u>Long description:</u> See Communication_Error_Line_1				
<u>Address:</u> 10008	<u>Name:</u> Communication_Error_Line_4	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates communication error status for Line 4	<u>Unit:</u>
<u>Long description:</u> See Communication_Error_Line_1				
<u>Address:</u> 10009	<u>Name:</u> Closed_Line_1	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates Closed / Not closed status for actuators on Line 1	<u>Unit:</u>
<u>Long description:</u> This object contains the all actuators closed status: 0 = Not closed. 1 = Closed. All actuators at their closed position. If locking actuators are present these are also locked.				
<u>Address:</u> 10010	<u>Name:</u> Closed_Line_2	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates Closed / Not closed status for actuators on Line 2	<u>Unit:</u>
<u>Long description:</u> See Closed_Line_1				
<u>Address:</u> 10011	<u>Name:</u> Closed_Line_3	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates Closed / Not closed status for actuators on Line 3	<u>Unit:</u>
<u>Long description:</u> See Closed_Line_1				
<u>Address:</u> 10012	<u>Name:</u> Closed_Line_4	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates Closed / Not closed status for actuators on Line 4	<u>Unit:</u>
<u>Long description:</u> See Closed_Line_1				
<u>Address:</u> 10013	<u>Name:</u> Hand_Operation_Line_1	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates Hand operation Status for line 1	<u>Unit:</u>
<u>Long description:</u> This object contains the hand operation status: 0 = Not Hand operation. 1 = Hand operation, actuators are at the moment controlled manually.				
<u>Address:</u> 10014	<u>Name:</u> Hand_Operation_Line_2	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates hand operation Status for line 2	<u>Unit:</u>
<u>Long description:</u> See Hand_Operation_Line_1				

<u>Address:</u> 10015	<u>Name:</u> Hand_Operation_Line_3	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates hand operation Status for line 3	<u>Unit:</u>
<u>Long description:</u> See Hand_Operation_Line_1				
<u>Address:</u> 10016	<u>Name:</u> Hand_Operation_Line_4	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates hand operation Status for line 4	<u>Unit:</u>
<u>Long description:</u> See Hand_Operation_Line_1				
<u>Address:</u> 10017	<u>Name:</u> Error_Line_1	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates error condition for Line 1	<u>Unit:</u>
<u>Long description:</u> This object contains information about the motor line error condition. 0 = False: No error condition detected. 1 = True: Error detected.				
<u>Address:</u> 10018	<u>Name:</u> Error_Line_2	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates error condition for Line 2	<u>Unit:</u>
<u>Long description:</u> See Error_Line_1				
<u>Address:</u> 10019	<u>Name:</u> Error_Line_3	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates error condition for Line 3	<u>Unit:</u>
<u>Long description:</u> See Error_Line_1				
<u>Address:</u> 10020	<u>Name:</u> Error_Line_4	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Indicates error condition for Line 4	<u>Unit:</u>
<u>Long description:</u> See Error_Line_1				
<u>Address:</u> 10021	<u>Name:</u> MotorController_Error	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> MotorController Error Status	<u>Unit:</u>
<u>Long description:</u> This object contains information about the overall error status. 1 = Motor controller error. Indicating any kind of error except errors related to the heat and smoke link. 0 = No error present.				

<u>Address:</u> 30037	<u>Name:</u> Heat_Smoke_Link_Status	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Heat and smoke status	<u>Unit:</u>
<u>Long description:</u> This output object contains information about the heat and smoke daisy changed communication link. Bit 0: 1 = Emergency. 1st priority emergency command active on link. 0 = No emergency command present on link. Bit 1: 1 = Emergency close. 2nd priority emergency close command active on link. 0 = No emergency close command present on link. Bit 2: 1 = Failure. Error present that affects the heat and smoke system. 0 = Ok. No error present. Bit 3: 1 = Link communication failure. Error detected in the daisy chained communication link. 0 = Link communication ok. Bit 4: 1 = Link incoming error bit. Error present in previous controller(s) in daisy chained communication link. 0 = No incoming error bit. Bit 5: 1 = Battery powered operation. The heat and smoke system is running on battery power. 0 = Mains powered operation. Bit 6: 1 = Open. A 4th priority open command is active on link. 0 = No open command present. Bit 7: 1 = Close. A 3rd priority close command is active on link. 0 = No close command present.				
<u>Address:</u> 10022	<u>Name:</u> Heat_Smoke_Emergency	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Heat and smoke Emergency	<u>Unit:</u>
<u>Long description:</u> This object contains information about the heat and smoke emergency state. 0 = False: Emergency not active. 1 = True: Emergency active. Motor controller operated by a heat and smoke emergency input. No other operation possible.				
<u>Address:</u> 10023	<u>Name:</u> Heat_Smoke_Emergency_Close	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Heat and smoke Emergency Close	<u>Unit:</u>
<u>Long description:</u> This object contains information about the heat and smoke emergency close state. 0 = False: Emergency close not active. 1 = True: Emergency close active. Motor controller operated by a heat and smoke emergency close input. No other operation possible.				

<u>Address:</u> 10024	<u>Name:</u> Heat_Smoke_Failure	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Heat and smoke failure	<u>Unit:</u>
<u>Long description:</u> This object contains information about the heat and smoke failure condition. 0 = False: No heat and smoke failure. 1 = True: Heat and smoke failure. Error detected that affects normal heat and smoke operation.				
<u>Address:</u> 10025	<u>Name:</u> Heat_Smoke_OK	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Heat and smoke ok	<u>Unit:</u>
<u>Long description:</u> This object contains information about Heat and smoke state. 0 = Heat and smoke not OK. 1 = Heat and smoke OK. No error detect that affects the heat and smoke operation.				
<u>Address:</u> 10026	<u>Name:</u> Heat_Smoke_Battery_Power_Operation	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Heat and smoke Battery Power operation	<u>Unit:</u>
<u>Long description:</u> This output object contains information about Power condition 0 = Normal Power 1 = Battery power operation				
<u>Address:</u> 30038	<u>Name:</u> Heat_Smoke_Link_State	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Heat and smoke link state	<u>Unit:</u>
<u>Long description:</u> This object contains information about the heat and smoke daisy chained communication link. 1 = No priority override. 2 = Close. 3 = Open. 4 = Open (and Close). 5 = Emergency Close. 6 = Emergency Close (and close). 7 = Emergency Close (and open). 8 = Emergency Close (and open and close). 9 = Emergency Open. 10 = Emergency Open (and close). 11 = Emergency Open (and open). 12 = Emergency Open (and open and Close). 13 = Emergency Open (and emg. close). 14 = Emergency Open (and emg. close and close). 15 = Emergency Open (and emg. close and open). 16 = Emergency Open (and emg. close and open and close).				

<u>Address:</u> 10027	<u>Name:</u> Heat_Smoke_Link_Error	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Heat and Smoke link error	<u>Unit:</u>
<u>Long description:</u> This object contains information about the heat and smoke link status. 1 = Link communication failure: Error detected in the daisy chained communication link. 0 = Link communication ok.				
<u>Address:</u> 10028	<u>Name:</u> Heat_Smoke_Link_Incoming_Error	<u>Register:</u> Digital read only points (Input Status)	<u>Description:</u> Heat and smoke link Daisy chain incoming error state	<u>Unit:</u>
<u>Long description:</u> This object contains information about the heat and smoke daisy chained link incoming error bit state: 1 = Link incoming error bit. Error present in previous controller(s) in daisy chained communication link. 0 = No incoming error bit.				
<u>Address:</u> 40017	<u>Name:</u> Expected_No_Of_Actuators_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the expected No of Actuators on the motor line	<u>Unit:</u>
<p>WBA11M examines the actual actuator configuration on the motor line. The controller in each MotorLink™ actuator includes information about how many fellow actuators that is needed in order to have a valid configuration.</p> <p>This non-volatile parameter determines how to handle discrepancies in the actuator configuration. Please note that normally actuators are exchanging actual position in order to keep synchronised positions - independent of tolerances and different loads. If the positions differ the actuators will automatically wait for the slowest one. If one or more actuators fail to respond, the operation is stopped in order to avoid damage on the window. This synchronisation feature is used if more actuators are needed in order to operate a large or heavy window. If more windows - each equipped with a single actuator (-1) are connected to the same motor line, this synchronisation feature is disabled. Depending on the demand for detection of configuration or run time failures, non-volatile parameters must be selected in order to fit the expected number of actuators or a don't care value, where no check of the number of actuators is performed.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> 1: Line disabled 2: 1 single-actuator (-1) 3: 2 not synchronised single-actuators (-1) 4: 3 not synchronised single-actuators (-1) 5: 4 not synchronised single-actuators (-1) 6-13: Normal (use value in window actuators) 14: Don't care 1 to 4 not synchronised single-actuators (-1) 15: Normal (use value in window actuators) 16: Normal (use value in window actuators, <u>if no actuators are present an error is indicated</u>) <p>Default value: "Don't care".</p> <p>Attention</p> <ol style="list-style-type: none"> 1. Windows may be damaged if the actuators mounted on them are of an invalid combination and the controller is being run with the "Don't care" parameter value. Always ensure a valid combination before switching on the power to the controller. 2. When configured with the "Don't care" value, the MotorController is unable to detect and report an error in case of invalid combinations, including the situation where no actuators are connected to the MotorLine or when some or all actuators connected malfunction. This is particularly important where the MotorController is used in Smoke panels such as the WSC xxM. Always ensure to configure the MotorController with the parameter value representing the combination of actuators actually connected to the MotorLine. 				

<u>Address:</u> 40018	<u>Name:</u> Expected_No_Of_Lock_Actuators_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the expected configuration of locking actuators	<u>Unit:</u>
<u>Long description:</u> This non-volatile parameter determines the expected configuration of locking actuators. Possible values are: 1: None: No locking actuators are expected. 2: 1 locking actuator is expected. 3: 2 locking actuators are expected. 3-13: Not used. 14: Don't care: Any number of locking actuators are accepted.				
<u>Address:</u> 40019	<u>Name:</u> Hand_Speed_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during hand operation	<u>Unit:</u> Percent
<u>Long description:</u> This non-volatile parameter determines the speed of the actuators during hand operation. Range: 0 - 100 %. 0 % means actuators minimum speed, 100 % means actuators maximum speed.				
<u>Address:</u> 40020	<u>Name:</u> Automatic_Speed_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during automatic operation	<u>Unit:</u> Percent
<u>Long description:</u> This non-volatile parameter determines the speed of the actuators during automatic operation. Range: 0 - 100 %. 0 % means actuators minimum speed, 100 % means actuators maximum speed.				
<u>Address:</u> 40021	<u>Name:</u> Heat_Smoke_Speed_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> This non-volatile parameter determines the speed of the actuators during heat and smoke operation. This speed is also used when the actuators are closed by Close_Line_X or Close_all objects, or when the actuators are moving due to a decreased value on Max_Position_Input_Line_X Range: 0 - 100 %. 0 % means actuators minimum speed, 100 % means actuators maximum speed.				
<u>Address:</u> 40022	<u>Name:</u> Max_Position_Comfort_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the maximum opening allowed during normal (comfort) operation	<u>Unit:</u> Percent
<u>Long description:</u> This non-volatile parameter determines the maximum opening allowed during normal (comfort) operation. A limitation of the stroke of the actuators can for instance be useful in cases where the actuator is a part of a heat and smoke ventilation solution, where actuators normally only are allowed to open e.g. 40 % of full stroke during comfort ventilation. Range: 0 - 100 % of full stroke.				

<u>Address:</u> 40023	<u>Name:</u> Max_Position_Heat_Smoke_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the maximum opening allowed during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> This non-volatile parameter determines the maximum opening allowed during heat and smoke operation. If 0 % is selected windows will close during a Heat and smoke scenario. Range: 0 - 100 % of full stroke.				
<u>Address:</u> 40024	<u>Name:</u> Lock_Actuator_Hand_Speed_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during hand operation	<u>Unit:</u> Percent
<u>Long description:</u> This non-volatile parameter determines the speed of the locking actuators during hand operation. Range: 0 - 100 %. 0 % means actuators minimum speed, 100 % means actuators maximum speed.				
<u>Address:</u> 40025	<u>Name:</u> Lock_Actuator_Auto_Speed_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during automatic operation	<u>Unit:</u> Percent
<u>Long description:</u> This non-volatile parameter determines the speed of the locking actuators during automatic operation. Range: 0 - 100 %. 0 % means actuators minimum speed, 100 % means actuators maximum speed.				
<u>Address:</u> 40026	<u>Name:</u> Lock_Actuator_Heat_Smoke_Speed_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> This non-volatile parameter determines the speed of the locking actuators during Heat and Smoke operation. This speed is also used when the actuators are closed by Close_Line_X or Close_all objects, or when the actuators are moving due to a decreased value on Max_Position_Input_Line_X Range: 0 - 100 %. 0 % means actuators minimum speed, 100 % means actuators maximum speed.				
<u>Address:</u> 40027	<u>Name:</u> Lock_Actuator_Service_Position_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the service position of the actuator when the locking actuator is in service position	<u>Unit:</u>
<u>Long description:</u> Some locking actuators include a feature, where a special service position can be activated. This feature is typically used in tilt and turn windows, where the locking actuation for service can activate the turn state for the window. In order to ease the disengagement of the window actuator from the sash, a position of the window actuator in service state can be selected. This non-volatile parameter determines this service position for window actuator. Range: 0 - 255 counts. The typical distance of one count is 1mm, but it depends of the type of window actuator.				

<u>Address:</u> 00020	<u>Name:</u> Lock_Actuator_Blocked_Is_Closed_Line_1	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether obstacles during locking situation must be judged as a mal function or a normal situation on line 1	<u>Unit:</u>
<u>Long description:</u> Some locking actuators include position switches for determination of the actual position. Some window hinges do however not allow the locking actuator to reach the final position but stops at a mechanical stop. This non-volatile parameter determines whether this situation must be judged as a mal function or a normal situation. Range: 0 = Use switch: Only activation of the switch indicate locked position. 1 = Use over current or switch: Activation of the switch or the mechanical stop will both be taken as indication for locked positions.				
<u>Address:</u> 00023	<u>Name:</u> Use_Local_Input_Line_1	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether local input must control motor line 1 or only transmitted	<u>Unit:</u>
<u>Long description:</u> This non-volatile parameter determines whether local input must be active for the motor line. If not active will local input only be transmitted. Range: 0 = Use and transmit. 1 = Transmit only.				
<u>Address:</u> 00024	<u>Name:</u> Retransmit_Local_Input_Line_1	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether local input for line 1 is retransmitted	<u>Unit:</u>
<u>Long description:</u> This non-volatile parameter determines whether the local input is only sent when the status is changed or also sent cyclically. Range: 0 = Do not retransmit unchanged status. 1 = Retransmit status.				
<u>Address:</u> 40028	<u>Name:</u> Hand_Time_Out_Line_1	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the duration of time after hand operation, where automatic commands are ignored	<u>Unit:</u> Minutes
<u>Long description:</u> When actuators are operated by hand the automatic operation is ignored in some time. This non-volatile parameter determines the duration of time after hand operation, where automatic commands are ignored. Hand operation can come from different input objects and local input terminals. Input objects that limits the position is still active. Range: 2 - 255 minutes.				
<u>Address:</u> 40029	<u>Name:</u> Expected_No_Of_Actuators_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the expected No of Actuators on the motor line	<u>Unit:</u>
<u>Long description:</u> See Expected_No_Of_Actuators_Line_1				

<u>Address:</u> 40030	<u>Name:</u> Expected_No_Of_Lock_Actuators_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the expected configuration of locking actuators	<u>Unit:</u>
<u>Long description:</u> See Expected_No_Of_Lock_Actuators_Line_1				
<u>Address:</u> 40031	<u>Name:</u> Hand_Speed_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during hand operation	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Speed_Line_1				
<u>Address:</u> 40032	<u>Name:</u> Automatic_Speed_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during automatic operation	<u>Unit:</u> Percent
<u>Long description:</u> See Automatic_Speed_Line_1				
<u>Address:</u> 40033	<u>Name:</u> Heat_Smoke_Speed_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> See Heat_Smoke_Speed_Line_1				
<u>Address:</u> 40034	<u>Name:</u> Max_Position_Comfort_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the maximum opening allowed during normal (comfort) operation	<u>Unit:</u> Percent
<u>Long description:</u> See Max_Position_Comfort_Line_1				
<u>Address:</u> 40035	<u>Name:</u> Max_Position_Heat_Smoke_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the maximum opening allowed during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> See Max_Position_Heat_Smoke_Line_1				
<u>Address:</u> 40036	<u>Name:</u> Lock_Actuator_Hand_Speed_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during hand operation	<u>Unit:</u> Percent
<u>Long description:</u> See Lock_Actuator_Hand_Speed_Line_1				
<u>Address:</u> 40037	<u>Name:</u> Lock_Actuator_Auto_Speed_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during automatic operation	<u>Unit:</u> Percent
<u>Long description:</u> See Lock_Actuator_Auto_Speed_Line_1				

<u>Address:</u> 40038	<u>Name:</u> Lock_Actuator_Heat_Smoke_Speed_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> See Lock_Actuator_Heat_Smoke_Speed_Line_1				
<u>Address:</u> 40039	<u>Name:</u> Lock_Actuator_Service_Position_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the service position of the actuator when the locking actuator is in service position	<u>Unit:</u>
<u>Long description:</u> See Lock_Actuator_Service_Position_Line_1				
<u>Address:</u> 00025	<u>Name:</u> Lock_Actuator_Blocked_Is_Closed_Line_2	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether obstacles during locking situation must be judged as a mal function or a normal situation on line 2	<u>Unit:</u>
<u>Long description:</u> See Lock_Actuator_Blocked_Is_Closed_Line_1				
<u>Address:</u> 00028	<u>Name:</u> Use_Local_Input_Line_2	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether local input must be active for line 2	<u>Unit:</u>
<u>Long description:</u> See Use_Local_Input_Line_1				
<u>Address:</u> 00029	<u>Name:</u> Retransmit_Local_Input_Line_2	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether local input must control motor line 2 or only transmitted	<u>Unit:</u>
<u>Long description:</u> See Retransmit_Local_Input_Line_1				
<u>Address:</u> 40040	<u>Name:</u> Hand_Time_Out_Line_2	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the duration of time after hand operation, where automatic commands are ignored	<u>Unit:</u> Minutes
<u>Long description:</u> See Hand_Time_Out_Line_1				
<u>Address:</u> 40041	<u>Name:</u> Expected_No_Of_Actuators_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the expected No of Actuators on the motor line	<u>Unit:</u>
<u>Long description:</u> See Expected_No_Of_Actuators_Line_1				

<u>Address:</u> 40042	<u>Name:</u> Expected_No_Of_Lock_Actuators_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the expected configuration of locking actuators	<u>Unit:</u>
<u>Long description:</u> See Expected_No_Of_Lock_Actuators_Line_1				
<u>Address:</u> 40043	<u>Name:</u> Hand_Speed_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during hand operation	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Speed_Line_1				
<u>Address:</u> 40044	<u>Name:</u> Automatic_Speed_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during automatic operation	<u>Unit:</u> Percent
<u>Long description:</u> See Automatic_Speed_Line_1				
<u>Address:</u> 40045	<u>Name:</u> Heat_Smoke_Speed_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> See Heat_Smoke_Speed_Line_1				
<u>Address:</u> 40046	<u>Name:</u> Max_Position_Comfort_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the maximum opening allowed during normal (comfort) operation	<u>Unit:</u> Percent
<u>Long description:</u> See Max_Position_Comfort_Line_1				
<u>Address:</u> 40047	<u>Name:</u> Max_Position_Heat_Smoke_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the maximum opening allowed during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> See Max_Position_Heat_Smoke_Line_1				
<u>Address:</u> 40048	<u>Name:</u> Lock_Actuator_Hand_Speed_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during hand operation	<u>Unit:</u> Percent
<u>Long description:</u> See Lock_Actuator_Hand_Speed_Line_1				
<u>Address:</u> 40049	<u>Name:</u> Lock_Actuator_Auto_Speed_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during automatic operation	<u>Unit:</u> Percent
<u>Long description:</u> See Lock_Actuator_Auto_Speed_Line_1				

<u>Address:</u> 40050	<u>Name:</u> Lock_Actuator_Heat_Smoke_Speed_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> See Lock_Actuator_Heat_Smoke_Speed_Line_1				
<u>Address:</u> 40051	<u>Name:</u> Lock_Actuator_Service_Position_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the service position of the actuator when the locking actuator is in service position	<u>Unit:</u>
<u>Long description:</u> See Lock_Actuator_Service_Position_Line_1				
<u>Address:</u> 00030	<u>Name:</u> Lock_Actuator_Blocked_Is_Closed_Line_3	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether obstacles during locking situation must be judged as a mal function or a normal situation on line 3	<u>Unit:</u>
<u>Long description:</u> See Lock_Actuator_Blocked_Is_Closed_Line_1				
<u>Address:</u> 00033	<u>Name:</u> Use_Local_Input_Line_3	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether local input must control motor line 3 or only transmitted	<u>Unit:</u>
<u>Long description:</u> See Use_Local_Input_Line_1				
<u>Address:</u> 00034	<u>Name:</u> Retransmit_Local_Input_Line_3	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether local input for line 3 is retransmitted	<u>Unit:</u>
<u>Long description:</u> See Retransmit_Local_Input_Line_1				
<u>Address:</u> 40052	<u>Name:</u> Hand_Time_Out_Line_3	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the duration of time after hand operation, where automatic commands are ignored	<u>Unit:</u> Minutes
<u>Long description:</u> See Hand_Time_Out_Line_1				
<u>Address:</u> 40053	<u>Name:</u> Expected_No_Of_Actuators_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the expected No of Actuators on the motor line	<u>Unit:</u>
<u>Long description:</u> See Expected_No_Of_Actuators_Line_1				

<u>Address:</u> 40054	<u>Name:</u> Expected_No_Of_Lock_Actuators_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the expected configuration of locking actuators	<u>Unit:</u>
<u>Long description:</u> See Expected_No_Of_Lock_Actuators_Line_1				
<u>Address:</u> 40055	<u>Name:</u> Hand_Speed_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during hand operation	<u>Unit:</u> Percent
<u>Long description:</u> See Hand_Speed_Line_1				
<u>Address:</u> 40056	<u>Name:</u> Automatic_Speed_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during automatic operation	<u>Unit:</u> Percent
<u>Long description:</u> See Automatic_Speed_Line_1				
<u>Address:</u> 40057	<u>Name:</u> Heat_Smoke_Speed_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the actuators during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> See Heat_Smoke_Speed_Line_1				
<u>Address:</u> 40058	<u>Name:</u> Max_Position_Comfort_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the maximum opening allowed during normal (comfort) operation	<u>Unit:</u> Percent
<u>Long description:</u> See Max_Position_Comfort_Line_1				
<u>Address:</u> 40059	<u>Name:</u> Max_Position_Heat_Smoke_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the maximum opening allowed during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> See Max_Position_Heat_Smoke_Line_1				
<u>Address:</u> 40060	<u>Name:</u> Lock_Actuator_Hand_Speed_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during hand operation	<u>Unit:</u> Percent
<u>Long description:</u> See Lock_Actuator_Hand_Speed_Line_1				
<u>Address:</u> 40061	<u>Name:</u> Lock_Actuator_Auto_Speed_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during automatic operation	<u>Unit:</u> Percent
<u>Long description:</u> See Lock_Actuator_Auto_Speed_Line_1				

<u>Address:</u> 40062	<u>Name:</u> Lock_Actuator_Heat_Smoke_Speed_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the speed of the locking actuators during Heat and Smoke operation	<u>Unit:</u> Percent
<u>Long description:</u> See Lock_Actuator_Heat_Smoke_Speed_Line_1				
<u>Address:</u> 40063	<u>Name:</u> Lock_Actuator_Service_Position_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the service position of the actuator when the locking actuator is in service position	<u>Unit:</u>
<u>Long description:</u> See Lock_Actuator_Service_Position_Line_1				
<u>Address:</u> 00035	<u>Name:</u> Lock_Actuator_Blocked_Is_Closed_Line_4	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether obstacles during locking situation must be judged as a mal function or a normal situation on line 4	<u>Unit:</u>
<u>Long description:</u> See Lock_Actuator_Blocked_Is_Closed_Line_1				
<u>Address:</u> 00038	<u>Name:</u> Use_Local_Input_Line_4	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether local input must control motor line 4 or only transmitted	<u>Unit:</u>
<u>Long description:</u> See Use_Local_Input_Line_1				
<u>Address:</u> 00039	<u>Name:</u> Retransmit_Local_Input_Line_4	<u>Register:</u> Digital read/write points (Coils)	<u>Description:</u> This non-volatile parameter sets whether local input for line 4 is retransmitted	<u>Unit:</u>
<u>Long description:</u> See Retransmit_Local_Input_Line_1				
<u>Address:</u> 40064	<u>Name:</u> Hand_Time_Out_Line_4	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the duration of time after hand operation, where automatic commands are ignored	<u>Unit:</u> Minutes
<u>Long description:</u> See Hand_Time_Out_Line_1				
<u>Address:</u> 40065	<u>Name:</u> Actual_Position_Min_Transmit_Interval	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets the minimum retransmit interval of Actual Position for each motor line	<u>Unit:</u> Seconds
<u>Long description:</u> This non-volatile parameter determines the minimum retransmit interval of the actual position for all motor lines. Actual position will be transmitted if the position has changed, but this non-volatile parameter determines how often the changes in position will be transmitted. Range: 0 = No retransmit. 1 - 255 seconds.				

<u>Address:</u> 40066	<u>Name:</u> Objects_To_Monitor	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets what object to monitor for cyclic receive	<u>Unit:</u>
<u>Long description:</u> This non-volatile parameter determines which objects to monitor for cyclic updates. 1. None: No objects are monitored. 2. Maximum position: The maximum position input object for each motor line is monitored. 3. Close: The close object for each motor line is monitored. 4. Max. position and close: The maximum position object and the close object for each motor line are monitored.				
<u>Address:</u> 40067	<u>Name:</u> Objects_Receive_Monitor_Time_Out	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter determines how often updates on monitored objects must be received	<u>Unit:</u> Minutes
<u>Long description:</u> This non-volatile parameter determines how often updates on monitored objects must be received – if monitoring is enabled by the Objects_To_Monitor object. If the time between object updates exceeds this period, actuators will be moved to closed position. Range: 2 - 255 minutes.				
<u>Address:</u> 40068	<u>Name:</u> Line_Communication_Error_Threshold	<u>Register:</u> Analog read/write points (Holding Registers)	<u>Description:</u> This non-volatile parameter sets how tolerant the WBA11M must be before a sporadic MotorLink communication error is transmitted	<u>Unit:</u>
<u>Long description:</u> Sporadic communication errors can appear in the communication between WEA11M and the MotorLink™ actuators. This non-volatile parameter determines how tolerant the WBA11M must be before an error is transmitted. Range: 1. Commissioning: Any disturbance is handled as an error. 2. Normal: Normal tolerance towards sporadic errors. 3. High: High tolerance towards sporadic errors – to be used in noisy environments. 4. Very high: Even higher tolerance towards sporadic errors – to be used in very noisy environments. 5. Disabled: No communication errors shown.				
<u>Address:</u> 30039	<u>Name:</u> BaseBoard_HW_Type	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Base board hardware type	<u>Unit:</u>
<u>Long description:</u> This object contains information about the baseboard hardware type. 17 (= 11 hex): WBA11M.				
<u>Address:</u> 30040	<u>Name:</u> BaseBoard_SW_Version	<u>Register:</u> Analog read only points (Input Registers)	<u>Description:</u> Base board software version	<u>Unit:</u>
<u>Long description:</u> This object contains information about the baseboard software version. The hexadecimal representation corresponds to the baseboard firmware version label. E.g. 160 = A0 hex, is firmware version A0.				