

MOMENT LIMITER

2. Error code table

(Remarks) 1. When an error is detected, the applicable error code is shown on the numerical display.

2. If multiple errors occur, those error codes are sequentially displayed.

3. If multiple errors occur at the same time, the error codes are displayed in order.

Error code	Name	Criteria	Monitoring time	Error history	Neutral check when recovery	Prohibited operation										Stop	Return condition	Monitoring unit	Remarks		
						Upper Remote control	Upper Manual control	XYZ Remote control	Lower Manual control	Upper	Lower	OR operation	Lower hydraulic pressure outlet	Sudden stop	Slow stop						
Indeter- minate	CPU error	Error detection by watch dog timer																			
001	ROM sum check error	Error of sum check value	Power ON															Power OFF	AML		
002	AML hardware configuration error	Execution environment failure such as RAM error, connection failure of extension board	Power ON																Power OFF	AML	
003	EEPROM error	Error and writing failure of sum check value, ID code discrepancy	Power ON																Power OFF	AML	
004	Input power voltage error	Power voltage supplied from outside is out of the specified range.	Always	o	o														Automatic return	AML	
005	Internal power voltage error	Voltage regulated inside is out of the specified range.	Always	o	o														Automatic return	AML	No error shall be set while error 4 occurs.
006	Capacity select error	Settings with rotary switch and EPROM are different.	Always	o	o														Power OFF	AML	
007	AML calculation error	The AML cannot calculate.	Always	o	Δ														Automatic return	AML	Except OR and lower hydraulic pressure outlet operations, perform neutral check at error cancel.
008	UPP error	No writing from AD converter of UPP for more than a specified period. (Input/output of the analog value to CPU is impossible.)	Always	o	o														Power OFF	AML	
009	Upper adjustment mode	The upper adjustment mode is set.	Always																Automatic return	AML	The operation shall not be restricted.
010	Communication time out error from upper to AML	No communication from upper is received. (No interruption for more than a specified period.)	Always		o														Automatic return	AML	Equivalent to upper emergency stop status
011	Communication frame error from upper to AML	Receiving interruption is present. However, because of the parity error or BCC error, the frame cannot be updated within the specified period.	Always	o	Δ														Automatic return	AML	No error is set while error 10 occurs. Perform neutral check of the upper input at error cancel.
014	Time out error from OR indicator to AML	No communication from OR indicator is received. (No interruption is present for more than a specified period.)	Always	o	o														Automatic return	AML	
015	Frame error from OR indicator to AML	Receiving interruption is present. However, because of the parity error or BCC error, the frame cannot be updated within the specified period.	Always	o	o														Automatic return	AML	No error is set while error 14 occurs.
016	Communication time out error from AML to upper	The time out error flag from upper is "1".	Always	o	o														Automatic return	Upper STM	The upper booster does not work.
017	Communication frame error from AML to upper	The frame error flag from upper is "1".	Always	o	Δ														Automatic return	Upper STM	No error is set while error 16 occurs. The upper booster does not work.
018	Time out error from AML to OR indicator	The time out error flag from OR indicator is "1".	Always	o	Δ														Automatic return	O/R indicator	Except OR and lower hydraulic pressure outlet operations, perform neutral check at error cancel.
019	Frame error from AML to OR indicator	The frame error flag from OR indicator is "1".	Always	o	Δ														Automatic return	O/R indicator	No error is set while error 18 occurs.
020	Upper configuration error	The error flag of the hardware (AD conversion, etc.) is sent from upper.	Always	o	Δ														Automatic return	Upper STM	Perform neutral check of the upper input at error cancel.
021	Upper controls power voltage error	The power voltage supplied from outside is out of the specified range.	Always	o	Δ														Automatic return	Upper STM	No error is set while error 20 occurs. Perform neutral check of the upper input at error cancel.
022	Upper controls internal voltage error	The voltage regulated inside is out of the specified range.	Always	o	Δ														Automatic return	Upper STM	No error is set while error 20 occurs. Perform neutral check of the upper input at error cancel.
030	Boom length detector error	The output voltage of the boom length detector is out of the specified range.	Always	o	Δ														Automatic return	AML	Except lower hydraulic pressure outlet operations, perform neutral check at error cancel.
031	Boom angle detector error	The output voltage of the elevating angle detector is out of the specified range.	Always	o	Δ														Automatic return	AML	Except OR and lower hydraulic pressure outlet operations, perform neutral check at error cancel.
032	Swing angle detector error	The output voltage of the swing angle detector is out of the specified range.	Always	o	Δ														Automatic return	AML	Except OR and lower hydraulic pressure outlet operations, perform neutral check at error cancel.
038	Elevating moment detector error	The output voltage of the elevating moment detector is out of the specified range.	Always	o	Δ														Automatic return	AML	Except OR and lower hydraulic pressure outlet operations, perform neutral check at error cancel.
039	Leveling moment detector error	The output voltage of the leveling moment detector is out of the specified range.	Always	o	Δ														Automatic return	AML	Except OR and lower hydraulic pressure outlet operations, perform neutral check at error cancel.

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Error code	Name	Criteria	Monitoring time	Error history	Neutral recovery	Prohibited operation										Return condition	Monitoring unit	Remarks		
						Upper Remote Control	Upper Manual	XY	Remote Control	Lower Manual	Upper	Lower	OR	Lower operation	Lower out				Sudden stop	Slow stop
052	Upper automatic stowing operation SW input neutral error	The automatic stowing operation SW is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	Automatic return	AML	
-052	Upper automatic stowing operation SW input neutral error	The automatic stowing operation SW is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	At error return, perform neutral check except lower hydraulic pressure outlet operation input.
053	Operation toward the safe side 1 neutral error	The operation toward the safe side 1 SW is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
-053	Operation toward the safe side 1 neutral error	The operation toward the safe side 1 SW is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
054	Operation toward the safe side 2 input neutral error	The operation toward the safe side 2 SW is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
-054	Operation toward the safe side 2 input neutral error	The operation toward the safe side 2 SW is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
055	Operation toward the safe side 3 input neutral error	The operation toward the safe side 3 SW is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
-055	Operation toward the safe side 3 input neutral error	The operation toward the safe side 3 SW is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
056	Operation toward the dangerous side 1 input neutral error	The operation toward the dangerous side 1 SW is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
-056	Operation toward the dangerous side 1 input neutral error	The operation toward the dangerous side 1 SW is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
057	Operation toward the dangerous side 2 input neutral error	The operation toward the dangerous side 2 SW is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
-057	Operation toward the dangerous side 2 input neutral error	The operation toward the dangerous side 2 SW is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	When AML less than 100%, operation check except lower hydraulic pressure outlet operation input.
058	Booster input neutral error	The booster ON SW is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
-058	Booster input neutral error	The booster ON SW is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	At error return, perform neutral check of the input limit SW input.
060	Upper interference cancel SW input neutral error	The upper interference restriction cancel SW is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
070	Upper telescoping operation lever neutral error	The upper telescoping operation lever is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
-070	Upper telescoping operation lever neutral error	The upper telescoping operation lever is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	At error return, perform neutral check of the input limit SW input.
071	Upper elevating operation lever neutral error	The upper elevating operation lever is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
-071	Upper elevating operation lever neutral error	The upper elevating operation lever is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	At error return, perform neutral check of the input limit SW input.
072	Upper swing operation lever neutral error	The upper swing operation lever is not at neutral.	When power ON/ emergency stop operation	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
-072	Upper swing operation lever neutral error	The upper swing operation lever is not at neutral.	When prohibited simultaneous operation	△	△	△	△	△	△	△	△	△	△	△	△	△	△	○	AML	At error return, perform neutral check of the input limit SW input.
080	Upper telescoping operation lever voltage range error	The communication value is out of the specified range.	Always	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
081	Upper elevating operation lever voltage range error	The communication value is out of the specified range.	Always	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
082	Upper swing operation lever voltage range error	The communication value is out of the specified range.	Always	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
090	Upper telescoping LS neutral error	Correlation error between operation Pot and neutral LS	Always	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
091	Upper elevating LS neutral error	Correlation error between operation Pot and neutral LS	Always	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.
092	Upper swing LS neutral error	Correlation error between operation Pot and neutral LS	Always	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	AML	At error return, perform neutral check of the input limit SW input.