Issue 2004-08-04

auma®
Quality Management System
AUMA-Group

Abbreviated MSP numbering system
AUMA MATIC Types AM

Only for internal use

EWH-25 GB-10

Distributor:

Distributor to
– subsidiaries
– representatives
according to separate list

Uncontrolled copy!

Issue 13 dated 2001-06-12				
	Dept.	Name	Date	Reference
issued	PM	Mr Rist		
checked	AUM Actuators Inc.	Mr Matthis		
checked	EE	Mr Th. Weber		
checked	AA	Mr Kempf		

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In general:

Deviations to the regulations in EWH-01:

- This specification is not released by AL-QW
- In case of revisions single pages can be exchanged
- The summary of changes to the previous issue is attached as appendix 1
- All pages of this procedure are informal with the ‘auma’ logo
- The procedure is copied according to the distributor
- The document is not signed by SCK, SCM and WOF

Notes:

1. The wiring diagrams MSP and the ordering codes are valid for the version AUMA MATIC
   AM 01.1 and AM 02.1 (AUMA MATIC)
   AM Ex (C) 01.1 and AM Ex 02.1 (AUMA MATIC Ex)
   AM FM 01.1 and AM FM 02.1 (AUMA MATIC FM)

2. Specials which are required for certain projects/ plants are registered under the ordering codes XX.100 etc. (e.g. 41.100, 41.101 etc.)

= Wiring diagram number				**Explanations**
	1. Digit: Housing			
	Housing	Wall Bracket XM connection	XA connection	
1	Water tight	-	Plug / Socket	
3	Ex	-	Plug / Socket	
5	Water tight	Plug / Socket	Plug / Socket	
6	Water tight	Plug / Socket and Terminals	Terminals	
8	Water tight	Plug / Socket and Terminals	Plug / Socket	
9	Factory Mutual	-	Plug / Socket	
D	ExIIC	Plug / Socket, Wire Bung and Terminals	Terminals	
E	ExIIC	-	Terminals	

= Wiring diagram number		Explanations
	2. Digit: Customer connections	
1	Plug / socket without torque switch bypass	
A	Plug / socket with torque switch bypass, both directions	
4	Terminals without torque switch bypass	
0	Terminals with torque switch bypass, both directions	
3	Terminals (explosion proof) without torque switch bypass	
9	Special	
2	Integral Circuit Breaker, plug / socket with torque switch bypass, both directions	
7	Integral Disconnect Switch, plug / socket with torque switch bypass, both directions	

= Wiring diagram number		Explanations
	3. Digit: Type of motor	
1	3-phase AC motors	
3	Single phase motors type SK	SG.1 actuator
7	Single phase motors type CSIR 230V (Leeson)	Integral capacitors
8	Single-phase motors type PSC (ME and Leeson)	Integral capacitors
9	Single-phase motors type CSIR 115V (Leeson)	Integral capacitors
E	Single phase motors type SE	SG.3 actuator

= Wiring diagram number		Explanations
	4. Digit: Type of interface	
0	Standard interface board	
7	Positioner board	
-	Profibus-DP or Modbus-RTU	
6	Timer board	

= Wiring diagram number		Explanations
	5. Digit: Input signals to interface board	
K	OPEN-STOP-CLOSE	
C	OPEN-STOP-CLOSE/EMERGENCY-CLOSE (NC contact)	EMERGENCY-CLOSED independent from selector switch position
A	OPEN-CLOSE	STOP button not shown in wiring diagram
D	OPEN-STOP-CLOSE/EMERGENCY-OPEN (NC contact)	EMERGENCY-OPEN independent from selector switch position

= Wiring diagram number		Explanations
	5. Digit: Input signals to positioner board	
0	E1 and E2 E1 = command signal, E2 = feedback signal	Refer to digit 7 for input range

= Wiring diagram number		**Explanations**
	6. Digit: Output signals from interface board	
C	OPEN-CLOSE-LOCAL-REMOTE	
A	OPEN-CLOSE	Choose this for Timer Board

Wiring diagram number		Explanations
	6. Digit: Feedback signal (E2) to positioner	
0	Potentiometer with no customer feedback or RWG for shared customer feedback.	
0	Potentiometer to positioner. RWG for feedback to customer.	Dual potentiometer with RWG
0	Potentiometer to positioner. Potentiometer for feedback to customer	Dual potentiometer

Wiring diagram number		Explanations
	7. Digit: Input signals to interface board	
3	24 Volt DC internal or external supply	
5	110 - 125 V AC internal or external supply	

Wiring diagram number		Explanations
	7. Digit: Input range for positioner board	
-	Current Input (e.g., 4 - 20 mA)	
1	Voltage Input (i.e., 0 - 5 V)	

Wiring diagram number		Explanations
	8. Digit: -	
-	Choose this for standard interface board or positioner board	
1	Profibus-DP	
2	Modbus-RTU	

Wiring diagram number		Explanations
	9. Digit: Power supply	
-	Standard, Interface Board 24 V DC / 24 V DC for customer Interface Board 115 V AC / 115 V AC for customer Positioner Board / no voltage for customer	
1	Interface Board 24 V DC / 115 V AC for customer Positioner Board / 115 V AC for customer	
2	Positioner Board / 24 V DC for remote command board, 24 V AC for customer	
3	Interface Board 24 V DC / 24 V DC for control commands, 24 V AC for customer	

Wiring diagram number		Explanations
	10. Digit: Motor controls	
A	Thyristor unit (module) for 3-ph AC motors	208V – 240V max. 0.37kW (0.5hp) 380V – 500V max. 1.5kW (2hp)
G	Thyristor unit (4 single blocks) for 3-ph-AC motors	208V – 240V max. 1.5kW (2hp) 380V – 500V max. 5.5kW (7.5hp)
D	Thyristor unit (2 single blocks) for 1-ph AC motors Main power connected to L1 and N (1 fuse on A21)	ME/SE/SK motors: max. 0.37kW (0.5hp) Leeson PSC 230V motors: max. 0.75kW (1hp) Leeson PSC 110V motors: max. 0.75kW (1hp)
L	Thyristor unit (2 single blocks) for 1-ph AC motors Main power connected to L1 and L2 (2 fuses on A21)	ME/SE/SK motors: max. 0.37kW (0.5hp) Leeson PSC 230V motors: max. 0.75kW (1hp)
F	with contactors up to 7.5 kW	380 – 690V max. 7.5kW (10hp) 208 – 240V max. 3.0kW (4hp)
H	with contactors up to 7.5 kW, with auxiliary contacts - for each contactor 1 NO and 1 NC, wired to customer's plug/socket connector	380 – 690V max. 7.5kW (10hp) 208 – 240V max. 3.0kW (4hp)
R	with contactors up to 7.5 kW, with auxiliary contacts - for each contactor 1 NO, wired to customer's plug/socket connector	380 – 690V max. 7.5kW (10hp) 208 – 240V max. 3.0kW (4hp)
W	With contactors for 1-ph AC motors Main power connected to L1 and L2	

Wiring diagram number		Explanations
	11. Digit: Selector Switch	
0	No switch	
X	No switch. Remote command board included.	
1	Three position switch with no auxiliary contacts. Remote command board not included.	
2	Three position switch with auxiliary contacts. Remote command board not included.	NO contact in both local and remote
4	Three position switch with auxiliary contacts. Remote command board included.	NO contact in both local and remote
F	Three position switch with no auxiliary contacts. Reset function for PTC tripping device. Remote command board not included.	For Ex actuators
G	Three position switch with auxiliary contacts. Reset function for PTC tripping device. Remote command board not included.	For Ex actuators. NO contact in both local and remote
P	Three position switch with auxiliary contacts. Reset function for PTC tripping device. Remote command board included.	For Ex actuators. NO contact in both local and remote
H	Two position switch with auxiliary contacts. Remote command board included.	NO contact in both local and remote
J	Two position switch with auxiliary contacts.	NO contact in both local and remote

Wiring diagram number		Explanations
	12. Digit: Pushbuttons and indication lights	
0	without pushbuttons and indication lights	
7	pushbuttons OPEN, STOP, CLOSE without indication lights	
8	pushbuttons OPEN, STOP, CLOSE indication lights OPEN: green, FAULT: red, CLOSE: yellow	
A	pushbuttons OPEN, CLOSE, LOCK-OUT STOP indication lights OPEN: green, FAULT: red, CLOSE: yellow	Not possible with thyristors
J	pushbuttons OPEN, STOP, CLOSE indication lights OPEN: red, FAULT: yellow, CLOSE: green	
P	pushbuttons OPEN, CLOSE, LOCK-OUT STOP indication lights OPEN: red, FAULT: yellow, CLOSE: green	Not possible with thyristors
Q	pushbuttons OPEN, CLOSE indication lights OPEN: green, FAULT: yellow, CLOSE: red	
S	pushbuttons OPEN, CLOSE, LOCK-OUT STOP indication lights OPEN: green, FAULT: yellow, CLOSE: red	Not possible with thyristors

Wiring diagram number		Explanations
	13. Digit: Heater and blinker transmitter	
E	If **None** are required or if the following are needed: If Blinker Switch - not wired to customer connections If Control Unit Heater – not powered by the customer If Motor Heater – powered by customer	
H	Blinker Switch - wired to customer connections Control Unit Heater – not powered by the customer	
F	Motor Heater not powered by the customer and Blinker Switch - not wired to customer connections Control Unit Heater – not powered by the customer	
T	Motor Heater not powered by the customer and Blinker Switch - wired to customer connections Control Unit Heater – not powered by the customer	
J	Motor Heater – powered by customer Control Unit Heater –powered by the customer No Blinker Switch	

Wiring diagram number		Explanations
	14. Digit: Motor protection	
1	Thermoswitch	
2	Thermoswitch and thermal overload relay	
C	PTC tripping device	Mandatory for modulating Ex actuators with/without controls