

# A4

## OTHER MODULES, MZEA / MZEB - INPUT/TIMER MODULES

PLC SYSTEMS  
MINICONTROL COMPONENTS



### MZEA / MZEB

- 4 Timers, 8 Digital Inputs
- Delay Time from 20 msec to 4 min
- 4 Time Ranges can be Set With Jumpers on the Module
- Fine Tuning with Potentiometer (Potentiometer on the MZEA Module, External Potentiometer connected to MZEB)
- Inputs are Galvanically Isolated
- Input Voltage 24 VDC
- LED Status Display for Inputs and Timers

TECHNICAL DATA	MZEA	MZEB
Inputs 8	8	
Electrical Isolation Input - PLC Input - Input	YES (Optocoupler) NO	YES (Optocoupler) NO
Input Voltage Nominal Minimal Maximal	24 VDC 16 VDC 30 VDC	24 VDC 16 VDC 30 VDC
Input Resistance	ca. 2.2 kΩ	ca. 2.2 kΩ
Switching Threshold log. 0 → log. 1 log. 1 → log. 0	Min. 16 VDC Max. 12 VDC	Min. 16 VDC Max. 12 VDC
Input Current at 24 VDC	ca. 10 mA	ca. 10 mA
Switching Delay log. 0 → log. 1 log. 1 → log. 0	ca. 10 msec ca. 20 msec	ca. 10 msec ca. 20 msec
Timers	4	4
Timer Setting Normal Fine	With Jumpers With Pot. on Module	With Jumpers With External Pot. (1 MΩ)
Time Range	See Table	See Table
Repeatability	< 0.1 % <sup>2)</sup>	< 0.1 % <sup>2)</sup>
Documentation German English French	Hardware Manual MINICONTROL MAHWMINI-0 MAHWMINI-E MAHWMINI-F	

SLOTS		0	1	2	3	4	5
MZEA	Base Units A and C	●	●	●	●	●	●
MZEB	Base Units A and C	●	●	●	●	●	●

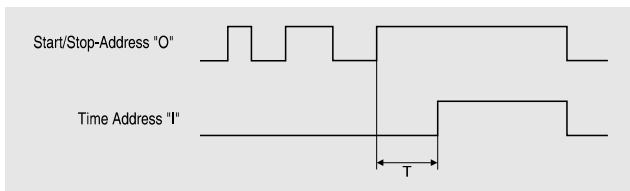
#### ORDER DATA

**MCMZEA-0** Input/Timer Module, 8 digital inputs, input voltage 24 VDC, LED status display, galvanically isolated, reference potential GND, switching delay ca. 10 msec, four definable timers (on-delay), four time ranges set with jumpers, fine tuning with potentiometers on the module, times range from 20 msec to 4 min.

**MCMZEB-0** Input/Timer Module, 8 digital inputs, input voltage 24 VDC, LED status display, galvanically isolated, reference potential GND, switching delay ca. 10 msec, four definable timers (on-delay), four time ranges set with jumpers, connections for external potentiometer, times range from 20 msec to 4 min.

#### FUNCTIONALITY

By setting the Start/Stop address "O 0xy" <sup>1)</sup> the timer is started. When the defined time (T) has elapsed, the time address is "I 0xy" <sup>1)</sup> = 1. It remains 1 until the "O" address is set. By resetting Start/Stop address "O", the timer is reset.



If Start/Stop address "O" is reset before the defined time has elapsed, the time begins at 0 again with a restart.

#### TIME RANGE SETTINGS

Two jumpers exist for each channel. These are marked on the module as jumpers A and B. These jumpers are used to set the time range. They can be inserted and removed without any tools.

	Jumper A	Jumper B	Time Range
Jumper Closed	OPEN	OPEN	740 msec to 30 sec
Jumper Open	OPEN	CLOSED	20 msec to 1 sec
Jumper Open	CLOSED	OPEN	90 msec to 4 sec
Jumper Open	CLOSED	CLOSED	6 sec to 4 min

#### CONNECTIONS

No.	MZEA	MZEB
0		Connection for ext. Pot. Timer 0
1		Connection for ext. Pot. Timer 1
2		Connection for ext. Pot. Timer 2
3		Connection for ext. Pot. Timer 3
8	Input 8	Input 8
9	Input 9	Input 9
A	Input A	Input A
B	Input B	Input B
C	Input C	Input C
D	Input D	Input D
E	Input E	Input E
F	Input F	Input F
▶	GND	GND

<sup>1)</sup> x is the slot number of the module (0 to 5), y is the timer number (0 to 3).

<sup>2)</sup> At constant environmental temperature