Overview: PC measurement for the ISA bus Digital input and output boards and counter board



The isolated digital boards of the ADDINUM range by ADDI-DATA are perfectly suited for the use in the industrial automation and process control engineering.

They are used in the industrial I/O control, signal switching, as interface to automatic test installations or machines, for on-off monitoring of electric consumers. This allows the connection of devices such as ventilators, valves, pumps, electromechanical relays, ...

All input channels of ADDI-DATA digital boards correspond to the industrial standard +24V for "logical" 1. A direct connection to PLC controlling is therefore possible.

The input and output channels have been equipped with numerous protecting measures in order to ensure the noise immunity of the boards. To prevent your hardware equipment from any incidental harm, power surges or any other electrical anomalies, all input and output channels are isolated from the system side through optical couplers.

Protection against fast transients, electrostatic discharge and highfrequency EMI is also implemented. Interruptible input channels increase the availability of the PC. Routine monitoring and interpretation tasks are relieved through interrupt routines. Interrupts are generated through a change in the state of the digital input channels. These interrupt functions release the CPU from the work of polling all input channels, enabling the PC to handle other boards with higher performance.

A high signal dynamic is achieved through a special input circuitry. Timers and counters are also available with the possibility to use a timer as a programmable watchdog to reset to output channels. On some boards, a readable status register allows to detect if a shortcircuit occurred or if there is no external 24 V.

On boards with digital output channels, all output channels are set to status "0" after power ON/reset.

	Digital input		Digital input and outpu	Digital output and relays			
	PA 1000	PA 1500	PA 1508	PA 1610	PA 2200	PA 2000	
Bus	ISA	ISA	ISA	ISA	ISA	ISA	
Filter/Protection circuitry	yes	yes	yes	yes	yes	yes	
Inputs	32	16	8*		8 AC		
Optical isolation 1000 V	yes	yes	yes		yes		
Interruptible inputs	14	14		A			
Nominal voltage (V)	24 (17-30)	24 (17-30)	24 (17-30)		5-24		
Input current at 24 V (mA)	6	6	6		23		
Outputs		16	8	128 TTL		32	
Relays				I/O	8/16 relays		
Optical isolation 1000 V	yes	yes	yes		yes	yes	
Nominal voltage (V)		24 (10-36)	24 (10-36)		60 DC/ 48 AC	24 (10-36)	
Output current (A) for one channel		0.5 (1)	0.5 (1)	↓ ↓	1	0.5 (2)	
Watchdog		yes	yes		yes	yes	
Timer	yes	yes				yes	
Interrupts	yes	yes				yes	
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Software	Driver for Windows XP/2000/NT/98, Win 3.11/Dos + Samples Current driver list see on the web www.addi-data.com						

⁽¹⁾ Limited to 3A for all output channels, self-resetting fuse against short-circuits

 $^{\scriptscriptstyle (2)}$ Limited to 2 x 3A for all output channels, self-resetting fuse against short-circuits

* Each channel is optically isolated from the others

Incremental encoder/SSI/pulse counting board/timer											
board	Channels	Connection	Counter frequency	Inputs	Clear	Interrupts	Bemerkungen				
PA 1700-2	3 or 6	3/6 increm. encoder TTL or diff. inputs	 single, double, quadruple mode: 2.5 MHz 	 3 reference 3 error 6 external strobe	softwarehardware	Generated after external strobe	 Line break detection in differential mode 3 timers, 24 TTL/IO 				
Page 80			Direct mode: 10 MHz								