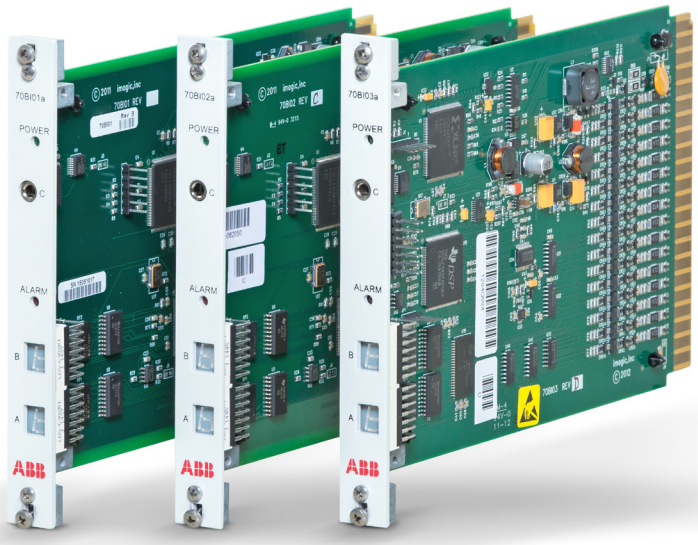
TECHNICAL DATA SHEET

Procontrol P13 I/O Modules

Output Modules for Digital Values 70BO01a & 70BO02a



The Procontrol P13 system features a comprehensive range of I/O modules for analog, digital and pulse based input and output signals. The new family of digital output modules comprises modules for driving electronic inputs of external devices, relays and lamps as typically required for process control and supervision. All existing digital output modules of the classic Procontrol P13 portfolio can be seamlessly replaced by the new module family.

The core of the P13 digital output modules is the custom local bus UART and digital signal processing engine. The output module provides 16 internally sourced outputs for driving input cards, lamps and relays or normally open relay outputs.

Using the front panel configuration port and the P13 Configurator software, the modules can be monitored and configured for different applications.

A major step forward compared to the classic P13 output modules is the possibility to use the full local bus address range with every module. In addition, each channel can be simulated/forced directly from the P13 Configurator for easy commissioning and loop checks after maintenance.

Feature Highlights

- Flexible configuration possibilities for one-to-one replacements, retrofits and extensions
- Complete parametrization and configuration in software with the P13 Configurator tool; no need to set code switches and jumpers manually
- Support for disabling of output channel via configuration tool
- Monitoring the state of individual outputs on card level with the P13 Configurator tool
- Individual forcing of output channels with the P13 Configurator tool
- All modules can use the complete local bus address range (normal and special)
- State-of-the-art technology (DSP/FPGA-based) for low maintenance and outmost durability
- Configuration cables are available with serial (DB9) or USB plug

Technical Data

		70BO01a	70BO02a
Description		Digital output, 24Vdc, 16x	Digital output, mech. relays, 16x
Predecessor Module(s)		**70AB01**	**70AB02**
I/O Interface			
No. of Channels		16	
No. of Channels		24Vdc Solid state bipolar driver	Change over contact
Output Types		Electronic module inputs,	Electronic module inputs,
Load Types		relays and lamps	relays and lamps by potential-free contacts
Output Response Time		6µs (module delay from command)	max. 3ms
Local Bus Interface			
Channel Addressing (on local bus)		1 address, normal/special range	
Input Format (Data)		16bit Binary Word	
Configuration and Maintenance			
Configuration Interface		Front panel RS232 (custom phone jack)	
Configuration Memory		EEPROM (onboard)	
Simulation Functions		Individual forcing of channels	
Fault Detection, Annunciation and Behavior			
Fault Conditions		Communications error, voltage source disruptions, over current conditions, thermal shutdown	Communications error, voltage source disruptions
Fault Annunciation			
	Visual	Master module ALARM LED	Master module ALARM LED
	I/O	SME2 Digital alarm output (+24Vdc)	SME2 Digital alarm output (+24Vdc)
	Local Bus		
Fault Behavior		Output set to “0” Last good state	Output set to “0” Last good state
Electrical Characteristics			
Power Supply		via P13 rack	
Min Operating Voltage		+19.5Vdc	
Max Operating Voltage		+30Vdc	
Power Consumption		2.1W typical 5.3W max (not including channel source current in a 70BO01a)	
Current Draw			
	Maximum source current	100 mA	
	Maximum switching current		1A
	Maximum switching voltage		60Vdc
Alarm Output Load		3mA	
Fault Output Capacity		<= 10mA (Protected against voltage back feed from other modules and against short circuit damage on load side.)	

Technical Data

	70BO01a	70BO02a
Other Module Specific Data		
Ambient Conditions and General Properties		
Operating Temperature	0 – 60° C	
Relative Humidity	0 – 95 %	
Certifications	CE	
Dimensions	P13 Standard module (3.5E, 1T)	

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