
USER MANUAL

Modbus

ILB24-A

ILB24-AF

General

This manual covers software version:

Software ID : DHP-SW-016

Software Version: 3.08

Safety instructions

For a safe installation of a positioner, the following must be observed. The module must only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this product as well as all instructions in this manual.

The information in this user manual is subject to changes without notice.

Purpose

It is the purpose of this document, to list specifications, protocol commands and functions, the MODBUS communication protocol in Val Control products.

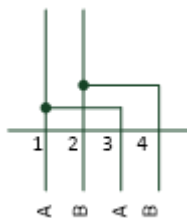
Specifications

MODBUS specification version V1.1b 2006

Electrical specifications for standard configuration

MODBUS	
Interface	RS485
Communication Settings	Default: 57600 Stop bit:1 Data size: 8 bit Parity: Even Others: 57600 Stop bit:2 Data size: 8 bit Parity: None 9600 Stop bit:2 Data size: 8 bit Parity: None 9600 Stop bit:1 Data size: 8 bit Parity: Even Bit Length is 10 bits for each data block.
Node ID	1-247 (Software selectable)
Response time	Max. 2 sec from slave
MODBUS mode	RTU with CRC16
Galvanic isolated	

Terminals



The ILB24 does not contain any internal termination resistors on the RS485 bus.

Termination resistors should have the value of 120 ohm. The termination resistors can be applied across terminal 3 and 4. Terminal 1 is internally connected to terminal 3 and terminal 2 is internally connected to terminal 4.

A maximum of 247 nodes can be connected on the same daisy chain bus.

Shielding

Typical shielding of the RS485 bus cable is done on the master side of the cable. Note the RS485 circuit is galvanic isolated in the slave.

Registeres

Command

Register	Len	Access	Type	Name	Parameter Range/Units/Notes
46651	1	WO	U16	Command	1: Set line breaker online 2: Set line breaker offline 21: Open valve 22: Close valve 40: Reset line breaker

Live

Register	Len	Access	Type	Name	Parameter Range/Units/Notes
40300	1	RO	U16	Position	0 – 10000: 0% – 100%
40261	1	RO	U16	Upstream pressure	0 – 65000: 0.00 bar – 650.00 bar
40271	1	RO	U16	Downstream pressure	0 – 65000: 0.00 bar – 650.00 bar
46603	1	RO	U16	Rate of drop	0 – 65000: 0.00 bar – 650.00 bar
46604	1	RO	U16	Rate of rise	0 – 65000: 0.00 bar – 650.00 bar
46605	1	RO	U16	Differential pressure	0 – 65000: 0.00 bar – 650.00 bar

Linebreaker

Register	Len	Access	Type	Name	Parameter Range/Units/Notes
46608	1	RO	U16	Line breaker status	55: Online 56: Offline 75: Reset lock
46600	1	RO	U16	Upstream pressure monitor	50: Normal 51: High pressure error 52: High pressure warning 53: High low warning 54: High low error 56: Pause
46601	1	RO	U16	ROD monitor	50: Normal 51: High error 52: High warning 56: Pause
46606	1	RO	U16	ROR monitor	50: Normal 51: High error 52: High warning 56: Pause
46607	1	RO	U16	Differential pressure monitor	50: Normal 51: High pressure error 52: High pressure warning 53: High low warning 54: High low error 56: Pause

Configuration

Upstream pressure

Register	Len	Access	Type	Name	Parameter Range/Units/Notes
46521	1	RW	U16	High pressure major limit	0 – 65000: 0.00 bar – 650.00 bar
46522	1	RW	U16	High pressure minor limit	0 – 65000: 0.00 bar – 650.00 bar
46523	1	RW	U16	Low pressure minor limit	0 – 65000: 0.00 bar – 650.00 bar
46524	1	RW	U16	Low pressure major limit	0 – 65000: 0.00 bar – 650.00 bar

Rate of drop

Register	Len	Access	Type	Name	Parameter Range/Units/Notes
46511	1	RW	U16	Rate of drop minor limit	0 – 65000: 0.00 bar – 650.00 bar
46512	1	RW	U16	Rate of drop major limit	0 – 65000: 0.00 bar – 650.00 bar

Rate of rise

Register	Len	Access	Type	Name	Parameter Range/Units/Notes
46581	1	RW	U16	Rate of rise minor limit	0 – 65000: 0.00 bar – 650.00 bar
46582	1	RW	U16	Rate of rise major limit	0 – 65000: 0.00 bar – 650.00 bar

Differential pressure

Register	Len	Access	Type	Name	Parameter Range/Units/Notes
46551	1	RW	U16	High differential pressure major limit	0 – 65000: 0.00 bar – 650.00 bar
46552	1	RW	U16	High differential pressure minor limit	0 – 65000: 0.00 bar – 650.00 bar
46553	1	RW	U16	Low differential pressure minor limit	0 – 65000: 0.00 bar – 650.00 bar
46554	1	RW	U16	Low differential pressure major limit	0 – 65000: 0.00 bar – 650.00 bar