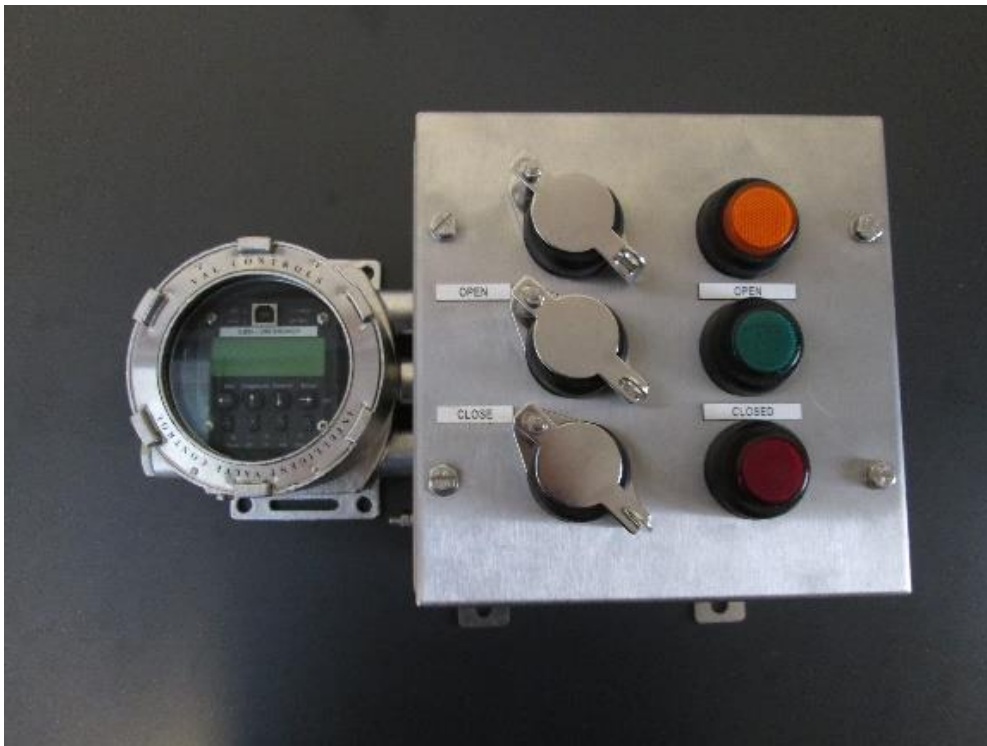


VAL CONTROLS

Intelligent Valve Control



ILB24

Intelligent Line Breaker

DLB-PL-002-01

Val Controls A/S

Intelligent valve control based on the latest know-how concerning digital technology for advanced valve control, monitoring and testing suited for pneumatic and hydraulic actuators. Our key task is to assist valve and actuator manufactures in finding the optimal solution for control, monitoring or testing of their products. We discover the best solutions for hazardous areas and harsh environments combined with cost reduction potentials.

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Presentation

The ILB24 from Val Controls is an Intelligent Line Break controller. To be used for pipeline controlling and shutdown. It has an integrated microprocessor with very flexible software, so the controller fits almost any hydraulic and pneumatic actuator on the market.

ILB24 Intelligent Line Breaker

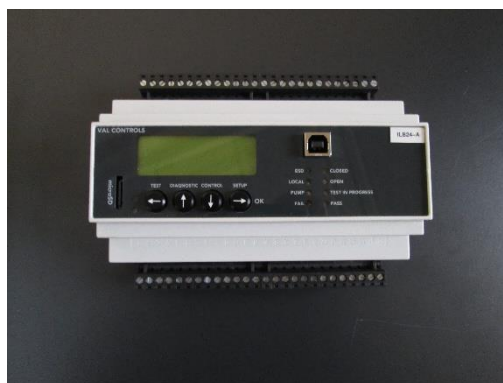
ILB24-AF

This model is for customers with very high demands for performance and connection possibilities. This unit is very flexible and can be configured to almost any customer's needs and can be easily expanded, e.g. with a backup battery or other advanced features. The Advanced Flameproof model is designed around a SS316L flameproof enclosure.



ILB24-A

This model is for customers with very high demands for performance and connection possibilities. This unit is very flexible and can be configured to almost any customer's needs and can be easily expanded, e.g. with a backup battery or other advanced features. The ILB24-A is intended for already installed systems or customers who have their own housing and installation.



Diagnostic

The ILB24 gives 24/7 monitoring and surveillance. All data is saved for later review.

- **Full logging capabilities: Online, event and alarm logging**
- **Minor and major alarms for high and low pressure**
- **ROD alarm with alarm delay**

ILB24 has dynamic logging, so the update rate changes according to the changes in the position and pressure.

All diagnostic functions are fully configurable using the display or VCDC.

Val Controls Diagnostic Centre VCDC

Val Controls Diagnostic Centre for evaluating and monitoring the pipeline.

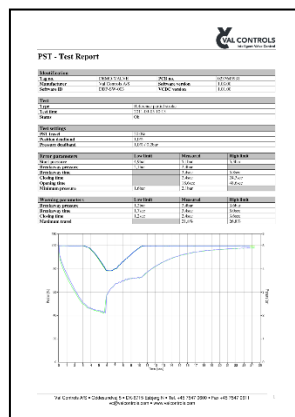
By using Val Controls Diagnostic Centre it is possible to:

- Live control and monitoring of the valve system
- See stored data for evaluation
- Generate reports

VCDC can be configured for different languages and all text can be customized. VCDC can also show both metric and imperial values.



The ILB24 records all events and together with the valve information these can be compiled to reports. The reports are easy to customise with the needed data as well as logo and customised header and footer.



VCDC can also monitor the battery backup and solar power.

VCDC can be used with the following communication types:

ILB24 Intelligent Line Breaker

- HART and WirelessHART, delivered with certified DTM and DD
- Modbus
- Bluetooth Ex mobile phone/tablet
- USB
- Offline
- Memorycard

HART
COMMUNICATION PROTOCOL

WirelessHART



Modbus



Bluetooth



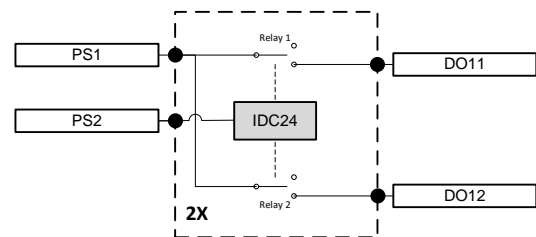
Safety Integrity Level

The ILB24 is designed to be used in safety instrument systems for emergency shutdown valves with no negative impact on the safety function. The ILB24 does not adversely affect the execution of the safety function.



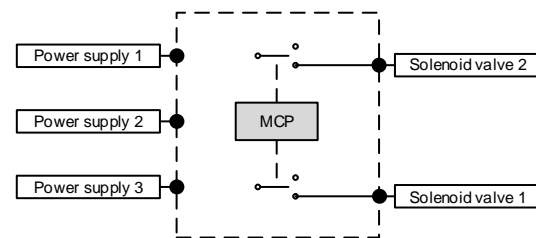
ILB24-AF - standard

ILB24 can control 2 SIL solenoid valves. More non SIL solenoids can also be controlled.



ILB24-AF custom and ILB24-A

The ILB24-AF custom has the option to control up to two solenoid valves. It can have up to three power supplies, one for each solenoid valve and a separate for powering the unit. Both relays controlling the solenoids valve can be configured to be either NO or NC.



Standard functions

The standard functions are:

- **Internal memory up to 30 years data**
- **Watch with battery backup**
- **Advanced protection with password and several levels**

User interface

Model AF and A has the following features in the user interface:

- **USB connection**
- **Graphical display**
- **4 button keyboard**
- **Status indicators:**
 - **Open/closed**
 - **ESD**
 - **Local**
 - **MT locked (only AF)**
 - **Alarm**



MTControl

When ILB24-AF are installed in hazardous area, opening of the enclosure is not allowed. Therefore, it is not possible to operate the unit using the keyboard. By adding MTControl, it is now possible to operate the keyboard through the enclosure glass window using a magnetic pen. MTControl locks automatically when not used, to prohibit unattended use. MTControl can be configured so it only can be activated by pressing a 4 digit code.



Control stations

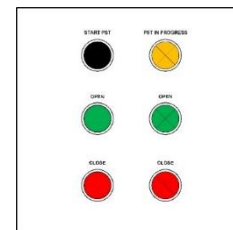
Integrated or stand-alone

All control stations can be installed directly on the terminal box or as stand-alone.

Standard control station

standard control system for Line Break system.

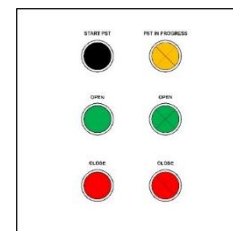
Button 1: Reset	Lamp 1: Alarm
Button 2: Open	Lamp 2: Open
Button 3: Close	Lamp 3: Close



Customized control station

Control station can be fully customized to customer specifications.

All control stations is available with unlimited number of buttons and lamps.



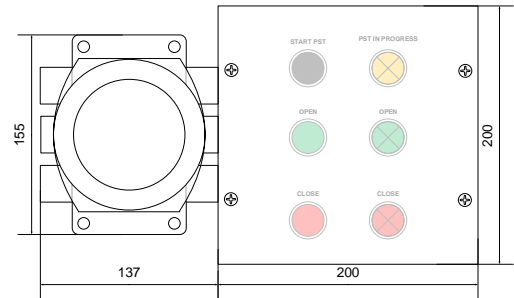
Specifications

ILB24-AF standard

Dimensions l_wxh: 337x200x160mm

Weight: 7kg

Ex approval: ATEX/IECEX - II 2 GD Exd IIC T4-T6

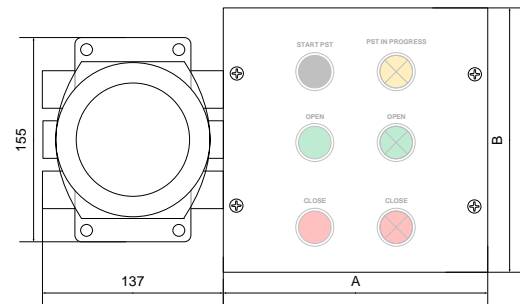


ILB24-AF custom

Dimensions l_wxh: custom

Weight: custom

Ex approval: custom

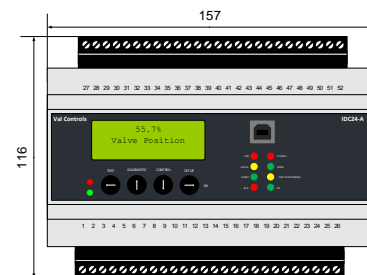


ILB24-A

Dimensions l_wxh: 157x116x58mm

Weight: 0,5kg

Ex approval: None



ILB24 Intelligent Line Breaker

Model	AF Standard	AF Custom	A
Valve control			
Hydraulic or pneumatic - Spring Return or Double Acting actuator	•	•	•
Automatic intelligent or manual calibration	•	•	•
Error and event log	•	•	•
Standard diagnostic			
24/7 event and data logging	•	•	•
Internal memory up to 30 years data	•	•	•
Watch with battery backup	•	•	•
Advanced protection with password and several levels	•	•	•
Diagnostic software			
Val Controls Diagnostic Centre - HART/Modbus/USB/offline/memory card	○	○	○
VCDC scheduler	○	○	○
Certified DTM and DD	○	○	○
SIL			
SIL 4	•	•	•
ESD detection and data storing – 2x24VDC power supply	○	○	○
Separated power supply for solenoids - 3x24VDC power supply	○	○	○
Local user interface			
Display with menu	•	•	•
Indication LEDs	•	•	•
USB connection	•	•	•
MTControl	•	•	•
Communication			
AO: 4-20mA transmitter loop (position or pressure)	○	○	○
AO: 4-20mA transmitter loop (position or pressure) with HART v.7	○	○	○
Modbus RTU – RS-485	○	○	○
Wireless HART	○	○	○
Bluetooth V2.0	○	○	○
Other communication protocols on request	○	○	○
Local control panel functions			
Remote/local-open/close operation	○	○	○
Local position indicator: Open/close	○	○	○
Local reset: Ready to reset and reset	○	○	○
In and outputs			
AI: 4-20mA position transmitter	1	1	1
AI: 4-20mA pressure transmitter	1	1	1
Power supply – unit power consumption <2W	1-2	1-3	1-3
Solenoid drivers	2	2	2
DO: Digital output	3	6	6
DI: Digital input	3	4(17)	4(17)
AI: 4-20mA control loop		1	1
AO: 4-20mA output		(2)	(2)
AI: 4-20mA sensors		3	3
3-wire potentiometer		1	1
Design			
Temperature range	-30°-+60°	-50°-+80°	-40°-+85°
Ingress protection	IP66	IP65-68	IP20
Flameproof – ATEX and IECEx	•	•	•
Enclosure material	SS316L	-	Plastic
EMC according to IEC 61000	•	•	•
Vibration and transportation according to IEC 68000	•	•	•
Radio disturbance according to EN 55022	•	•	•
Design life	10 years	10 years	10 years
Obsolescence management plan – 20 year	20 years	20 years	20 years
Configuration software			
Configurable by ValConnect software using USB or Bluetooth*	•	•	•

Standard = •

optional = ○

contact Val Controls = *

Model selector – ILB24-AF

Product name	Type	Terminal box	Control station	Communication 1	Communication 2	Expansion card	Software features
ILB24	- AF	A1	A2	- B1	B2	C1	- D

AF - standard	
A1	Terminal box
-	Standard terminal box
A2	Control station
-	None
S	Standard control station
B1	Communication 1
00	None
11	HART – Transmitter loop
21	Modbus RTU
B2	Communication 2
00	None
10	Bluetooth Intern antenna
12	Bluetooth external antenna – Ex d
C1	SIL expansion card
34	SIL 4 approved + SOV separate power supplies – NO/NC
D	Software features
-	None
D	Stand alone

Model example: ILB24-AF-110034-D

AF - custom	
A1	Terminal box
-	Customized terminal box
A2	Control station
L	Customized Control station
B1	Communication 1
00	None
10	HART – Control loop
11	HART – Transmitter loop
12	Wireless HART
21	Modbus RTU
B2	Communication 2
00	None
10	Bluetooth Intern antenna
12	Bluetooth external antenna – Ex d
C1	Expansion card
00	None
01	2 x AO (4-20mA - active) and 2 x DI
02	4 x DI
03	2 x AO (4-20mA - passive) and 2 x DI
1X*	SIL 4 approved
2X*	SIL 4 approved + ESD signature
3X*	SIL 4 approved + SOV separate power supplies
4X*	SIL 4 approved + ESD signature + SOV separate power supplies
D	Software features
-	None
D	Stand alone
E	Pump controller
H	HIPPS integration
E	Custom identification
XX	To identify custom made units

Model example: ILB24-AFL-110034-D-JA

Model selector – ILB24-A

Product name		Type		Communication 1	Communication 2	Expansion card 1		Software features
ILB24	-	A	-	B1	B2	C1	-	D

B1	Communication 1
00	None
10	HART – Control loop
11	HART – Transmitter loop
12	Wireless HART
21	Modbus RTU
B2	Communication 2
00	None
10	Bluetooth
12	Bluetooth external antenna – Ex d
C1	Expansion card
00	None
01	2 x AO (4-20mA - active) and 2 x DI
02	4 x DI
03	2 x AO (4-20mA - passive) and 2 x DI
1X*	SIL 4 approved
2X*	SIL 4 approved + ESD signature
3X*	SIL 4 approved + SOV separate power supplies
4X*	SIL 4 approved + ESD signature + SOV separate power supplies
D	Software features
-	None
D	Stand alone
E	Pump controller
H	HIPPS integration
E	Custom identification
XX	To identify custom made units

Model example: ILB24-A-110034-D