

# Diagnostic Controller

## Main Features

- Solenoid-based partial stroke testing for 1001 systems
- Solenoid test and full stroke test
- Can be used with a Normally Open or Normally Closed solenoid valve
- 360° potentiometer, 90° working area
- Integrated pressure transmitter
- Ex d enclosure made of SS316L
- Beacon or switchbox interface

## Compatibility

- Hydraulic and pneumatic actuators
- Spring return actuators
- Interface for third party switchbox

## Communication

- 4-20mA with HART v. 7
- Modbus RTU

## Control

- Configuration via USB connection to laptop
  - o [ValConnect](#)

## Digital input function

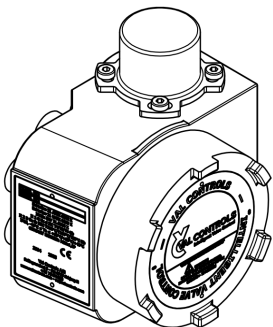
- Start Partial stroke
- Local open/close

## Digital output functions

- Diagnostic test results
- Common OK and Error
- Valve Open and Closed

## IDC24-CF with beacon for position indication

Featuring a red/green beacon for clear visual indication.



Actuator interface:

- NAMUR shaft
- 80x30 VDI/VDC 3845
- F05/F07/F08 EN ISO 5211

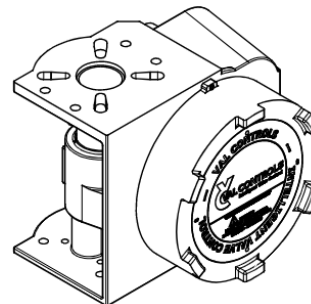


## Ordering information

Part no.	Description
<b>IDC24-CF-11</b>	0-16 bar, Beacon
<b>IDC24-CF-12</b>	0-16 bar, Switchbox mounting
<b>IDC24-CF-21</b>	0-400 bar, Beacon
<b>IDC24-CF-22</b>	0-400 bar, Switchbox mounting

## IDC24-CF with switchbox mounting interface

Can be mounted with any brand of limit switchbox that is equipped with a standard mounting form.



Actuator interface:

- NAMUR shaft
- F05/F08 EN ISO 5211

Switchbox interface:

- NAMUR shaft
- 80x30 VDI/VDC 3845
- F05/F07/F08 EN ISO 5211

# IDC24-CF



## Environmental

Protection degree: ..... IP66  
Operating temperature: ..... -40 to 80 °C  
Relative Humidity: ..... < 95% (No condensation)  
PCB coating: ..... According to G3, ISA-71.04-2013

## Mechanical

Dimensions: ..... 189x184x153mm  
Weight: ..... 8kg  
Enclosure material: ..... SS316L (ASTM A351-00 CF3M)  
Surface finish: ..... Passivated  
Gland entries: ..... 5 x M20x1.5  
Pressure connection: ..... G1/4 A

## Terminals:

Screw torque: ..... 0.4Nm (3.6Lb. in)  
Wire diameter: ..... AWG24-12 (0.2 to 2.5mm<sup>2</sup>)

## Approvals and standards

EMC according to IEC 61000  
Flameproof – ATEX/IECEX/UKCA  
II 2 GD Exd IIC T4-T6  
SIL3 (pending)



## Connections

### Modbus

Interface: ..... RS485  
Mode: ..... RTU  
Isolation: ..... Galvanic

### Analog output (Retransmitted position)

- HART v. 7
  - FSK, 1200Hz / 2200Hz 400-800mVpp

Signal: ..... 4-20mA  
Impedance: ..... < 470 Ohm at 20mA and 9.4VDC  
Linearity: ..... < 0.1%  
Temperature coefficient: ..... 0.015% / 1°C  
Warm-up: ..... 10 min  
Isolation: ..... Galvanic

### Digital Inputs

Number of inputs: ..... 3  
Cable length: ..... Max 20 meters  
Cable resistance ..... Max 100 Ohm  
Supply voltage ..... 24 VDC  
Input type: ..... Wet

### Digital outputs

Outputs for lamps/relays: ..... 3  
Total load: ..... Max 2W at 24 VDC

### Power supply

Input range: ..... 20.4 – 27.6 VDC  
Power dissipation (no auxiliary connections): ..... <2W

### Solenoid outputs

Normal open output: ..... 1  
Normal close output: ..... 1  
Load: ..... Max 30W at 24 VDC

**Note:** Connect only one solenoid

# Connections

