

# Industrial pressure transducers Series IDA3X0

## Description

Due to modern diaphragm and adapter technology, these transducers are intended for use in the hardest industrial applications.

Specializing in dynamic, pulsating hydraulic pressure regulation for injection moulding machines and presses, they have for more than 20 years proven their excellent accuracy and long term stability.

Automotive cranes, industrial robots, concrete pumps,

industrial test purposes and off-shore business are further installation possibilities with high demands with respect to accurate pressure, vibration and shock resistance, as well as weatherproofing.

The flush diaphragm version IDA 37X is designed for applications requiring a zero volume pressure port in measurement of gases, viscous liquids and slurries and has excellent cleanability

## Features

- Stainless steel construction withstands harsh operating environments and corrosive media
- Contoured diaphragm ensures greater accuracy, repeatability and fatigue strength
- Optimum diaphragm heat treatment contributes a longer operating life
- Internal Shunt-Calibration provides quick transducer and system calibration



## Technical Data / Operating Data

Pressure range	0 - 35 bar to 0 - 1000 bar	Burst pressure	4 x pressure range 3 x pressure range at 0 - 35 bar and 0 - 1000 bar
Accuracy	± 0,25 % f.s.v. ± 1 % for IDA370	Material in contact with media	15-5 Mat. No. 1.4545
Repeatability	± 0,1 % f.s.v.		
Resolution	infinite		
Rise time	300 µs max. IDA370 + 30 µs max.		

## Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)	Supply voltage	10 V DC, max. 12 V DC min. 6 V DC
Strain resistance	350 Ω	Internal Shunt-Calibration	80 % f.s.v. ± 0,5 %
Output signal	2,9 mV/V	Leakage resistance	1000 MΩ at 50 V DC
Zero balance	± 1 % f.s.v., adjustable ± 2 % f.s.v. for IDA370		

## Temperature influence

Max. media temperature 120 °C

Max. operating temperature 120 °C

Zero shift due to temperature change

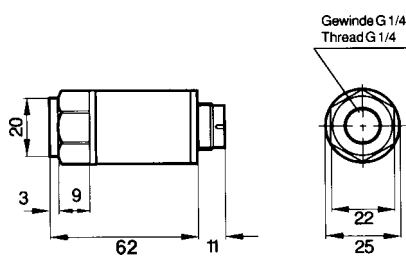
± 0,1 % f.s.v. / 10 °C  
IDA370 ± 0,4 % f.s.v. / 10 °C

Sensitivity shift due to temperature change

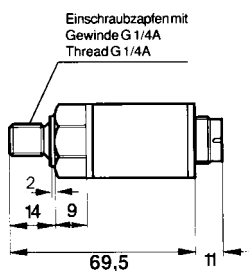
± 0,2 % f.s.v. / 10 °C  
IDA370 ± 0,4 % f.s.v. / 10 °C

## Dimensions

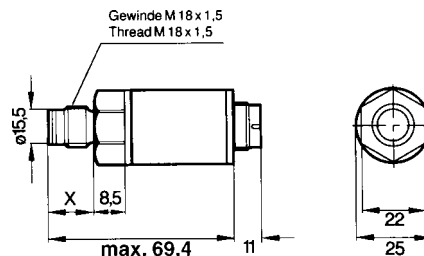
**IDA330**



**IDA350**



**IDA370**



## Order specifications

IDA3X0 - XXXX - XXX

### Pressure side connection

- 3 = Internal ISO 228/1-G1/4
- 5 = External DIN 3852-AG1/4A
- 7 = M18 x 1,5 flush diaphragm

### Pressure range

- |                    |                    |
|--------------------|--------------------|
| 35* = 0 - 35 bar   | 3,5C = 0 - 350 bar |
| 50 = 0 - 50 bar    | 5C = 0 - 500 bar   |
| 1C = 0 - 100 bar   | 7C = 0 - 700 bar   |
| 1,5C = 0 - 150 bar | 1M = 0 - 1000 bar  |
| 2C = 0 - 200 bar   |                    |

### Options

- D05 = Cable connection
- D06 = Cable connector IP65
- D21 = Bendix-Connector

# Industrial pressure transmitters

## Series IDA3X2

### 2-wire technology

#### Description

Due to modern diaphragm and amplifier technology, these transducers are intended for use in the hardest industrial applications.

Specializing in dynamic, pulsating hydraulic pressure regulation for injection moulding machines and presses, they have for more than 20 years proven their excellent accuracy and long term stability.

Automotive cranes, industrial robots, concrete pumps,

industrial test purposes and off-shore business are further installation possibilities with high demands with respect to accurate pressure, vibration and shock resistance, as well as weatherproofing.

The flush diaphragm version IDA 37X is designed for applications requiring a zero volume pressure port in measurement of gases, viscous liquids and slurries and has excellent cleanability

#### Features

- Stainless steel construction withstands harsh operating environments and corrosive media
- Contoured diaphragm ensures greater accuracy, repeatability and fatigue strength
- Optimum diaphragm heat treatment contributes a longer operating life
- Internal Shunt-Calibration provides quick transducer and system calibration
- Potted electronics resists shock and vibration



#### Technical Data / Operating Data

Pressure range	0 - 20* bar to 0 - 1000 bar	Burst pressure	4 x pressure range 3 x pressure at 0 - 20 bar and 0 - 1000 bar
Accuracy	± 0,25 % f.s.v. ± 0,5 % for IDA372	Material in contact with media	15-5 Mat. No. 1.4545
Repeatability	± 0,1 % f.s.v.		
Resolution	infinite		
Response	1,5 kHz (-3dB)		

\* 20 bar range only with 35 bar element and Option D30/20 calibration 20 bar range

#### Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)	Supply voltage	10 - 36 V DC
Strain resistance	350 $\Omega$	Internal Shunt-Calibration	80 % f.s.v. ± 0,5 %
Output signal	4 - 20 mA	Span adjustment	± 0,5 % f.s.v.
Zero adjustment	- 2 % / + 5 % f.s.v.	Leakage resistance	1000 M $\Omega$ at 50 V DC

## Temperature influence

Max. media temperature 85 °C

Max. operating temperature 85 °C

Zero shift due to temperature change

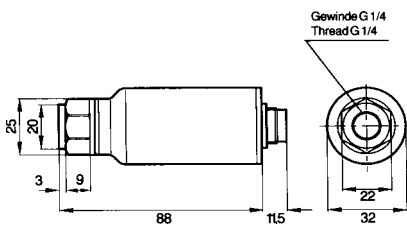
± 0,1 % f.s.v. / 10 °C  
IDA372 ± 0,4 % f.s.v. / 10 °C

Sensitivity shift due to temperature change

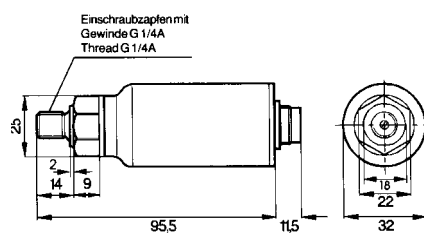
± 0,2 % f.s.v. / 10 °C  
IDA372 ± 0,4 % f.s.v. / 10 °C

## Dimensions

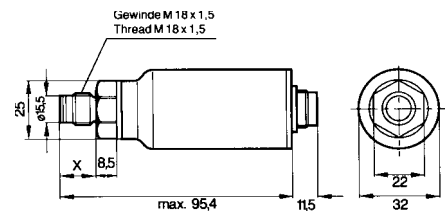
IDA332



IDA352



IDA372



## Order specifications

IDA3X2 - XXXX - XXX

### Pressure side connection

- 3 = Internal ISO 228/1-G1/4
- 5 = External DIN 3852-AG1/4A
- 7 = M18 x 1,5 flush diaphragm

### Pressure range

- |                    |                    |
|--------------------|--------------------|
| (20* = 0 - 20 bar) | 2C = 0 - 200 bar   |
| 35* = 0 - 35 bar   | 3,5C = 0 - 350 bar |
| 50 = 0 - 50 bar    | 5C = 0 - 500 bar   |
| 1C = 0 - 100 bar   | 7C = 0 - 700 bar   |
| 1,5C = 0 - 150 bar | 1M = 0 - 1000 bar  |

\* only for IDA372, 20 bar range only with option D30/20 calibration 20 bar range

### Options

- D05 = Cable connection
- D06 = Cable connector IP65
- D21 = Bendix-Connector
- D30 = Special calibration for IDA with amplifier

# Industrial pressure transmitters

## Series IDA3X3

### 3-wire technology

#### Description

Due to modern diaphragm and amplifier technology, these transducers are intended for use in the hardest industrial applications.

Specializing in dynamic, pulsating hydraulic pressure regulation for injection moulding machines and presses, they have for more than 20 years proven their excellent accuracy and long term stability.

Automotive cranes, industrial robots, concrete pumps,

industrial test purposes and off-shore business are further installation possibilities with high demands with respect to accurate pressure, vibration and shock resistance, as well as weatherproofing.

The flush diaphragm version IDA 37X is designed for applications requiring a zero volume pressure port in measurement of gases, viscous liquids and slurries and has excellent cleanability

#### Features

- Stainless steel construction withstands harsh operating environments and corrosive media
- Contoured diaphragm ensures greater accuracy, repeatability and fatigue strength
- Optimum diaphragm heat treatment contributes a longer operating life
- Internal Shunt-Calibration provides quick transducer and system calibration
- Potted electronics resists shock and vibration



#### Technical Data / Operating Data

Pressure range	0 - 20* bar to 0 - 1000 bar	Burst pressure	4 x pressure range 3 x pressure range at 0 - 20 bar and 0 - 1000 bar
Accuracy	± 0,25 % f.s.v. ± 0,5 % for IDA373	Material in contact with media	15-5 Mat. No. 1.4545
Repeatability	± 0,1 % f.s.v.		
Resolution	infinite		
Response	0,8 kHz (-3dB)		
* 20 bar range only with 35 bar element and option D30/20 calibration 20 bar range			

#### Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)	Supply voltage	10 - 32V DC / 15 - 32V DC
Strain resistance	350 $\Omega$	Internal Shunt-Calibration	80 % f.s.v. ± 5 %
Output signal	0 - 5 V DC / 1 - 6 V DC / 0 - 10 V DC / 1 - 11 V DC	Span adjustment	± 5 % f.s.v.
Zero adjustment	± 5 % f.s.v.	Leakage resistance	1000 M $\Omega$ at 50 V DC

## Temperature influence

Max. media temperature 85 °C

Max. operating temperature 85 °C

Zero shift due to  
temperature  
change

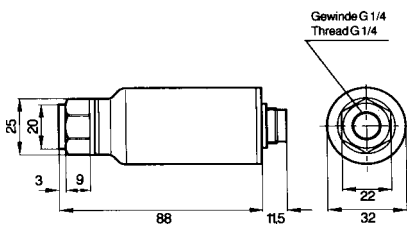
± 0,1 % f.s.v. / 10 °C  
IDA373 ± 0,4 % f.s.v. / 10 °C

Sensitivity shift  
due to temperature  
change

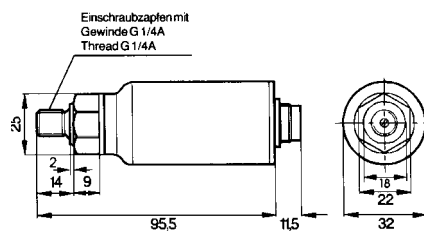
± 0,2 % f.s.v. / 10 °C  
IDA373 ± 0,4 % f.s.v. / 10 °C

## Dimensions

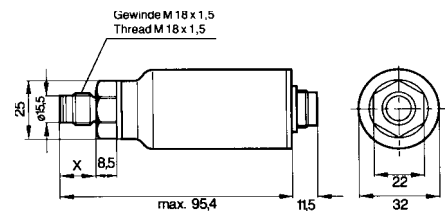
IDA333



IDA353



IDA373



## Order specifications

IDA3X3 - XXXX - XXX - XXX

### Pressure side connection

- 3 = Internal ISO 228/1-G1/4
- 5 = External DIN 3852-AG1/4A
- 7 = M18 x 1,5 flush diaphragm

### Pressure range

- |                    |                    |
|--------------------|--------------------|
| (20* = 0 - 20 bar) | 2C = 0 - 200 bar   |
| 35* = 0 - 35 bar   | 3,5C = 0 - 350 bar |
| 50 = 0 - 50 bar    | 5C = 0 - 500 bar   |
| 1C = 0 - 100 bar   | 7C = 0 - 700 bar   |
| 1,5C = 0 - 150 bar | 1M = 0 - 1000 bar  |

\* only for IDA372, 20 bar range only with option D30/20 calibration 20 bar range

### Options

- D05 = Cable connection
- D06 = Cable connector IP65
- D21 = Bendix-Connector
- D30 = Special calibration for IDA with amplifier

### Output voltage

- 5V = 0 - 5 V DC
- 6V = 1 - 6 V DC
- 10V = 0-10 V DC
- 11V = 1-11 V DC

# Industrial pressure transmitters

## Series IDA3X4

### 4-wire technology

#### Description

Due to modern diaphragm and amplifier technology, these transducers are intended for use in the hardest industrial applications.

Specializing in dynamic, pulsating hydraulic pressure regulation for injection moulding machines and presses, they have for more than 20 years proven their excellent accuracy and long term stability.

Automotive cranes, industrial robots, concrete pumps,

industrial test purposes and off-shore business are further installation possibilities with high demands with respect to accurate pressure, vibration and shock resistance, as well as weatherproofing.

The flush diaphragm version IDA 37X is designed for applications requiring a zero volume pressure port in measurement of gases, viscous liquids and slurries and has excellent cleanability

#### Features

- Stainless steel construction withstands harsh operating environments and corrosive media
- Contoured diaphragm ensures greater accuracy, repeatability and fatigue strength
- Optimum diaphragm heat treatment contributes a longer operating life
- Internal Shunt-Calibration provides quick transducer and system calibration
- Potted electronics resists shock and vibration



#### Technical Data / Operating Data

Pressure range	0 - 20* bar to 0 - 1000 bar	Burst pressure	4 x pressure range 3 x pressure range at 0 - 20 bar and 0 - 1000 bar
Accuracy	± 0,25 % f.s.v. ± 0,5 % for IDA374	Material in contact with media	15-5 Mat. No. 1.4545
Repeatability	± 0,1 % f.s.v.		
Resolution	infinite		
Response	1,5 kHz (-3dB)		

\* 20 bar range only with 35 bar element and Option D30/20 calibration 20 bar range

#### Electrical Characteristics

Configuration	4-arm Wheatstone bridge strain gauge (DMS)	Supply voltage	19 - 32V DC (unipolar) ± 10 to ± 16 V DC (bipolar)
Strain resistance	350 Ω	Internal Shunt-Calibration	80 % f.s.v. ± 5 %
Output signal	0 - 5 V DC / 0 - 10 V DC	Span adjustment	± 5 % f.s.v.
Zero adjustment	± 5 % f.s.v.	Leakage resistance	1000 MΩ at 50 V DC

## Temperature influence

Max. media temperature 85 °C

Max. operating temperature 85 °C

Zero shift due to  
temperature  
change

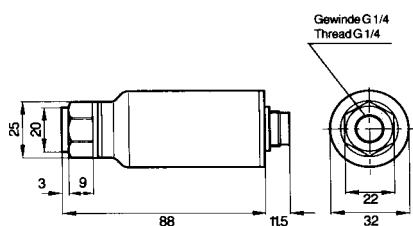
± 0,1 % f.s.v. / 10 °C  
IDA374 ± 0,4 % f.s.v. / 10 °C

Sensitivity shift  
due to temperature  
change

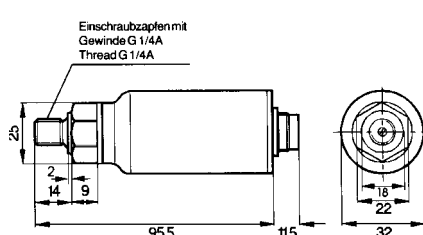
± 0,2 % f.s.v. / 10 °C  
IDA374 ± 0,4 % f.s.v. / 10 °C

## Dimensions

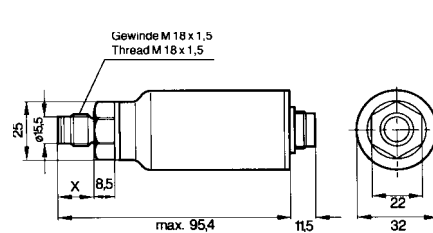
IDA334



IDA354



IDA374



## Order specifications

IDA3X4 - XXXX - XXX - XXX

### Pressure side connection

- 3 = Internal ISO 228/1-G1/4
- 5 = External DIN 3852-AG1/4A
- 7 = M18 x 1,5 flush diaphragm

### Pressure range

- |                    |                    |
|--------------------|--------------------|
| (20* = 0 - 20 bar) | 2C = 0 - 200 bar   |
| 35* = 0 - 35 bar   | 3,5C = 0 - 350 bar |
| 50 = 0 - 50 bar    | 5C = 0 - 500 bar   |
| 1C = 0 - 100 bar   | 7C = 0 - 700 bar   |
| 1,5C = 0 - 150 bar | 1M = 0 - 1000 bar  |

\* only for IDA372, 20 bar range only with option D30/20 calibration 20 bar range

### Options

- D05 = Cable connection
- D06 = Cable connector IP65
- D21 = Bendix-Connector
- D30 = Special calibration for IDA with amplifier

### Output voltage

- 5V = 0 - 5 V DC
- 10V = 0 - 10 V DC