

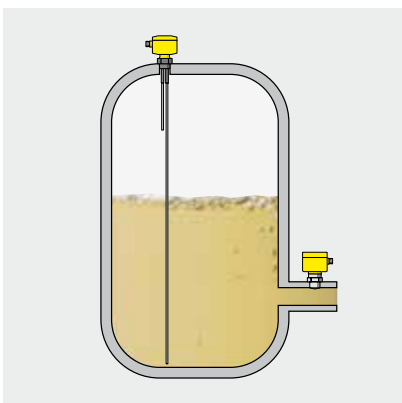


## Conductive

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## Overview Conductive



### Area of application

The conductive point level sensors of the VEGAKON series are used in conductive liquids as overflow protection, pump control or dry run protection in vessels and pipelines.



### Measuring principle




When the electrodes of the sensor come in contact with a conductive liquid, a small alternating current begins to flow. The electronics responds by triggering a switching command.



### Advantages

The simple, robust mechanical construction of the sensors ensures maintenance-free, cost-effective and reliable point level detection in all areas of industrial instrumentation. The sensors, which can be installed in any position, provide a direct switching output. All measuring instruments offer the possibility of detection several switching points in a vessel. The VEGAKON sensors are designed as compact level switches, while the EL probes are designed to be used in combination with signal conditioning instruments of the VEGATOR series.



	VEGAKON 61	VEGAKON 66
		
Application	Conductive liquids	Conductive liquids
Version	Compact level switch with front-flush partly insulated electrode and one switching point of 316L, PTFE	Compact level switch with partly insulated rod electrodes and max. two switching points of PPN
Probe length	–	0.12 ... 4 m
Process fitting	Thread G1, 1 NPT, cone DN 25	Thread G1½
Process temperature	-40 ... +150 °C	-40 ... +100 °C
Process pressure	-1 ... +25 bar (-100 ... +2500 kPa)	-1 ... +6 bar (-100 ... +600 kPa)
Signal output	Relay, transistor output	Relay, transistor output
Approvals	–	–

	EL 1	EL 3	EL 4
			
Application	Conductive liquids	Conductive liquids	Conductive liquids
Probe length	up to 4 m	up to 6 m	up to 4 m
Version	Partly insulated rod with one switching point of 316Ti, PTFE	Partly insulated rod with max. four switching points of 316Ti, PTFE	Partly insulated rod with max. four switching points of 316Ti, PP
Process fitting	Thread G1½	Thread G1½	Thread G1½
Process temperature	-50 ... +130 °C	-50 ... +130 °C	-20 ... +100 °C
Process pressure	-1 ... +63 bar (-100 ... +6300 kPa)	-1 ... +63 bar (-100 ... +6300 kPa)	-1 ... +6 bar (-100 ... +600 kPa)
Signal output	VEGATOR 256C, VEGATOR 632	VEGATOR 256C, VEGATOR 632	VEGATOR 256C, VEGATOR 632
Approvals	ATEX, Overfill protection	ATEX, Overfill protection	–

	EL 6	EL 8
		
	Conductive liquids	Conductive liquids
	up to 50 m	up to 3 m
	Partly insulated cable with max. four switching points of 316Ti, PP/FEP	Partly insulated rod with one switching point of 316Ti, PE
	Thread G1½	Thread G½
	-20 ... +100 °C	-10 ... +60 °C
	-1 ... +6 bar (-100 ... +600 kPa)	-1 ... +6 bar (-100 ... +600 kPa)
	VEGATOR 256C, VEGATOR 632	VEGATOR 256C, VEGATOR 632
	-	-

# VEGAKON 61

## Conductive limit switch for liquids for front-flush mounting



### Application area

The VEGAKON 61 is a conductive limit switch for conductive liquids. The instrument is best suited as full and empty detector in pipelines.

### Your benefit

- Time and cost-saving setup without adjustment with medium
- Optimum cleanability through front-flush mounting
- Maintenance-free operation through probe insensitive to buildup

### Technical data

Version: compact limit switch  
 Process fitting: thread G1, 1 NPT  
 cone DN 25  
 Materials: 316L, PTFE  
 Process temperature: -40 ... +150 °C  
 Process pressure: -1 ... +25 bar (-100 ... +2500 kPa)

Delivery time: SPEED

### Approval

.X without .....

#### Process fitting

G1 Thread G1 PN25, DIN3852-A .....

K1 Cone DN25 PN25 .....

#### Electronics

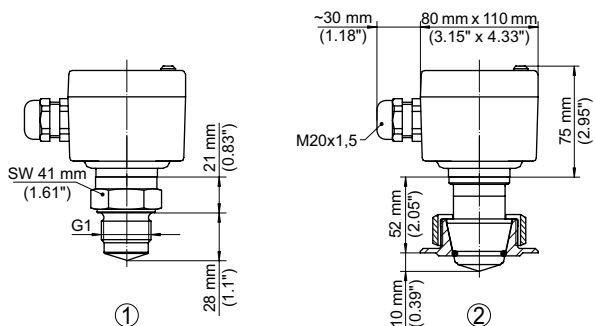
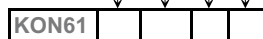
R Relay (DPDT) 20...72V DC / 20...250V AC (3A) .....

T Transistor (NPN/PNP) 10...55V DC .....

#### Process temperature

X -40...+100°C .....

Z -40...+150°C (with temperature adapter) .....



① Threaded version

② Cone version

# Welded socket for VEGAKON 61

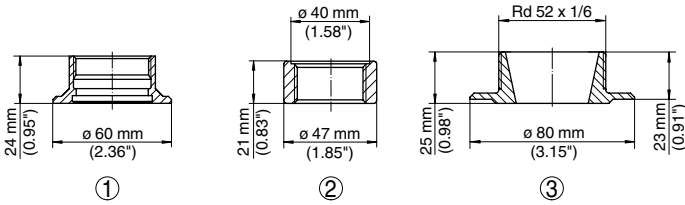
Delivery time:  **SPEED**



suitable for

- 1 VEGAKON 61 .....
- Version / Material**
- GA** Thread G1, DIN3852-A / 316Ti .....
- GL** Thread G1, DIN3852-A; suitable for foodstuffs / 316Ti .....
- KA** Conus DN25 / 316L .....
- Test certificate**
- X** without .....
- A** (H) 2.2-Factory certification for material (EN 10204) .....
- B** (C) 3.1-Inspection certificate for material (EN 10204) .....

**ESTKN.**



- ① Thread G1 suitable for foodstuffs
- ② Thread G1
- ③ Cone DN 25

# VEGAKON 66

## Conductive multiple rod limit switch for liquids

### Application area

The VEGAKON 66 is a conductive limit switch for conductive liquids. The instrument is suitable as full or empty detector in pipelines.

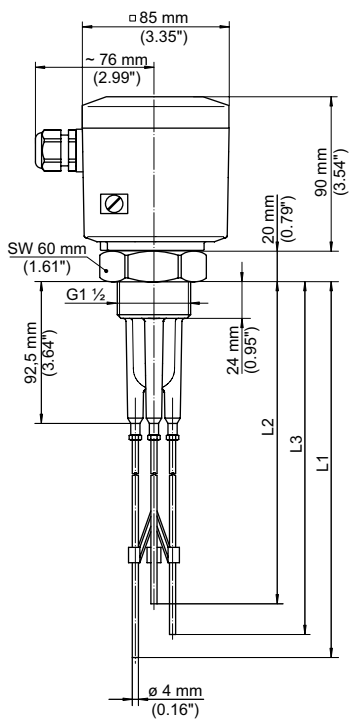
### Your benefit

- Reliable pump control through multiple rod probe
- High flexibility through shortenable rod probes
- Reduced stock-keeping through exchangeable rod probes

### Technical data

Version:	compact limit switch
Probe length:	up to 4 m
Process fitting:	thread G1½
Material:	PPN
Process temperature:	-40 ... +100 °C
Process pressure:	-1 ... +6 bar (-100 ... +600 kPa)

Delivery time:  **SPEED**



Lmin. = 120 mm  
Lmax. = 4.000 mm



**Approval**

- X** without .....
- Process fitting / Material**
- G** Thread G1½, DIN3852-A / PPN .....
- Number of rod electrodes**
- 2** 2 rod electrodes .....
- 3** 3 rod electrodes .....
- X** without .....
- Material rod electrodes**
- V** 316Ti .....
- Housing / Protection**
- P** Plastic / IP66 .....
- M** Aluminium plastic-coated / IP66/IP67 .....
- Electronics**
- R** Relay (DPDT) 20...72V DC/20...250V AC (5A) .....
- T** Transistor (NPN/PNP) 10...55V DC .....

**KON66**

- Rod length L1 in mm (longest electrode)**  
316Ti (120-4000 mm) per 500 mm
- Rod length L2 in mm (shortest electrode)**  
316Ti (120-4000 mm) per 500 mm
- Rod length L3 in mm**  
316Ti (120-4000 mm) per 500 mm

# EL 1

## Conductive rod electrode

### Application area

The rod electrode EL 1 is a universal level switch for conductive liquids. The instrument is ideal as overflow and dry run protection in conjunction with VEGATOR 256C or VEGATOR 632 signal conditioning instruments.

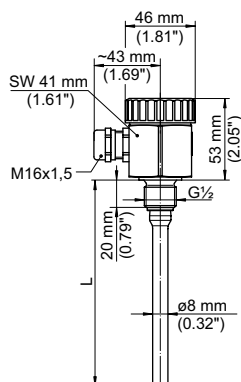
### Your benefit

- Simple installation in narrow space applications through small sensor dimensions
- Low maintenance costs through robust design
- High flexibility through shortenable probe

### Technical data

Version:	partly insulated rod
Probe length:	up to 4 m
Process fitting:	thread G $\frac{1}{2}$
Materials:	316Ti, PE
Process temperature:	-50 ... +130 °C
Process pressure:	-1 ... +63 bar (-100 ... +6300 kPa)

Delivery time:  **SPEED**



**Approval**

Without .....

**EX.X** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 .....

**EX.A** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + WHG .....

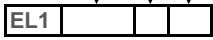
**Number of rod electrodes**

**1** 1 rod electrode .....

**Line break monitoring**

without .....

**M** Line break monitoring for VEGATOR 632 .....



**Rod length in mm**

316Ti (40-4000 mm) per 250 mm

## EL 3

### Conductive multiple rod electrode

#### Application area

The multiple rod electrode EL 3 is a universal level switch for conductive liquids. The instrument is ideal as overflow and dry run protection or pump control in conjunction with VEGATOR 256C or VEGATOR 632 signal conditioning instruments.

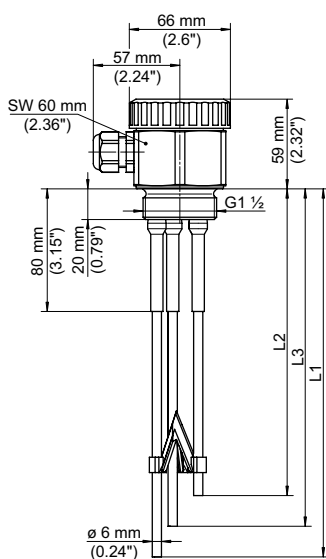
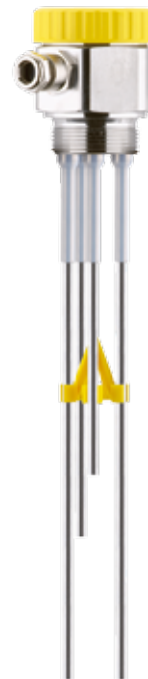
#### Your benefit

- Simple setup with minimum time and cost expenditure
- High flexibility through shortenable probe
- Maintenance-free through robust design

#### Technical data

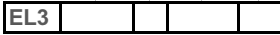
Version:	partly insulated rod
Probe length:	up to 6 m
Process fitting:	thread G1½
Materials:	316Ti, PTFE
Process temperature:	-50 ... +130 °C
Process pressure:	-1 ... +63 bar (-100 ... +6300 kPa)

Delivery time:  **SPEED**



**Approval**

- Without .....
  - EX.X** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 .....
  - EX.A** ATEX II 1G, 1/2G, 2G Ex ia IIC T6 + WHG .....
- Number of rod electrodes**
- 2** 2 rod electrodes .....
  - 3** 3 rod electrodes .....
  - 4** 4 rod electrodes .....
  - 5** 5 rod electrodes .....
- Material rod**
- VTV** 316Ti .....
- Line break monitoring**
- without .....
  - M** Line break monitoring for VEGATOR 632 .....



- L1 in mm (longest)**  
316L (50-6000 mm) per 500 mm
- L2 in mm (shortest)**  
316L (35-6000 mm) per 500 mm
- L3 in mm**  
316L (50-6000 mm) per 500 mm
- L4 in mm**  
316L (50-6000 mm) per 500 mm
- L5 in mm**  
316L (50-6000 mm) per 500 mm

## EL 4

### Conductive multiple rod electrode

#### Application area

The multiple rod electrode EL 4 is a universal level switch for conductive liquids. The instrument is ideal as overflow and dry run protection or pump control in conjunction with VEGATOR 256C or VEGATOR 632 signal conditioning instruments.

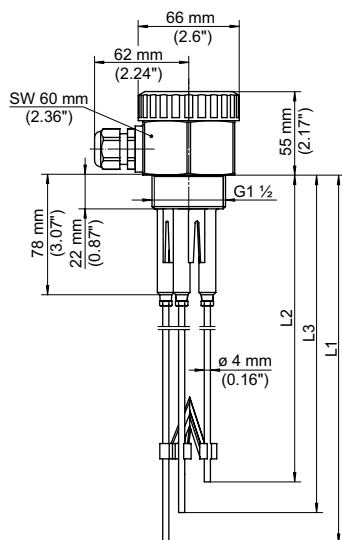
#### Your benefit

- Reliable pump control through multiple rod probe
- High flexibility through shortenable probe
- Reduced stockkeeping through exchangeable rod probes

#### Technical data

Version:	partly insulated rod
Probe length:	up to 4 m
Process fitting:	thread G1½
Materials:	316Ti, PP
Process temperature:	-20 ... +100 °C
Process pressure:	-1 ... +6 bar (-100 ... +600 kPa)

Delivery time:  **SPEED**



**Approval**

- Without .....
- Number of rod electrodes**
- 2 2 rod electrodes .....
- 3 3 rod electrodes .....
- 4 4 rod electrodes .....
- 5 5 rod electrodes .....
- Material rod**
- VTK 316Ti .....
- Line break monitoring**
- without .....
- M** Line break monitoring for VEGATOR 632 .....



- L1 in mm (longest)**  
316Ti (100-4000 mm) per 500 mm
- L2 in mm (shortest)**  
316Ti (100-4000 mm) per 500 mm
- L3 in mm**  
316Ti (100-4000 mm) per 500 mm
- L4 in mm**  
316Ti (100-4000 mm) per 500 mm
- L5 in mm**  
316Ti (100-4000 mm) per 500 mm

## EL 6

### Conductive multiple cable electrode

#### Application area

The multiple cable electrode EL 6 is a universal level switch for conductive liquids. The instrument is ideal as overflow and dry run protection or pump control in conjunction with VEGATOR 256C or VEGATOR 632 signal conditioning instruments.

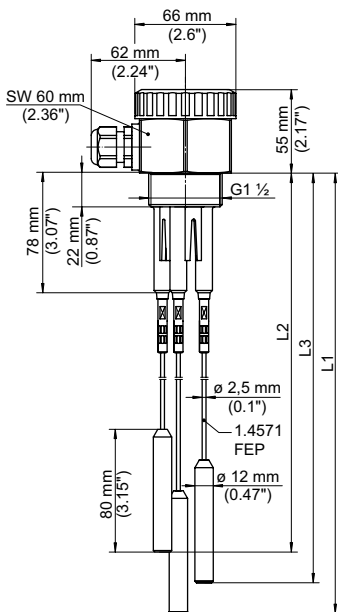
#### Your benefit

- Economical pump control through multiple cable probe
- High flexibility through shortenable cable probes
- Reduced stockkeeping through exchangeable cable probes

#### Technical data

Version:	partly insulated cable
Probe length:	up to 50 m
Process fitting:	thread G1½
Materials:	316Ti, PP/FEP
Process temperature:	-20 ... +100 °C
Process pressure:	-1 ... +6 bar (-100 ... +600 kPa)

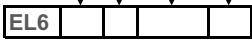
Delivery time:  **SPEED**





**Approval**

- Without .....
- Number of cable electrodes**
- 2** 2 wire electrodes .....
- 3** 3 wire electrodes .....
- 4** 4 wire electrodes .....
- 5** 5 wire electrodes .....
- Material cable and gravity weight**
- VAK** 316Ti .....
- Line break monitoring**
- without .....
- M** Line break monitoring for VEGATOR 632 .....



- L1 in mm (longest)**  
316Ti/FEP insulated (220-50000 mm) per 1000 mm
- L2 in mm (shortest)**  
316Ti/FEP insulated (220-50000 mm) per 1000 mm
- L3 in mm**  
316Ti/FEP insulated (220-50000 mm) per 1000 mm
- L4 in mm**  
316Ti/FEP insulated (220-50000 mm) per 1000 mm
- L5 in mm**  
316Ti/FEP insulated (220-50000 mm) per 1000 mm

# EL 8

## Conductive rod electrode

### Application area

The rod electrode EL 8 is a universal level switch for conductive liquids. The instrument is ideal as overflow or dry run protection in conjunction with VEGATOR 256C or VEGATOR 632 signal conditioning instruments.

### Your benefit

- Price-favourable level detection
- Simple installation in narrow space applications through small sensor dimensions

### Technical data

Version:	partly insulated rod
Probe length:	up to 3 m
Process fitting:	thread G $\frac{1}{2}$
Materials:	316Ti, PE
Process temperature:	-10 ... +60 °C
Process pressure:	-1 ... +6 bar (-100 ... +600 kPa)

Delivery time:  **SPEED**



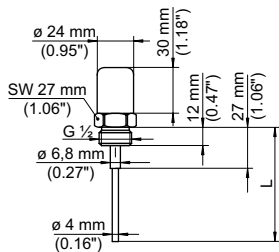
### Approval

.X	Without .....
	<b>Number of rod electrodes</b>
1	1 rod electrode .....
	<b>Material rod</b>
VEG	316Ti .....



### Rod length in mm

316Ti (27-3000 mm) per 250 mm



	VEGATOR 256C	VEGATOR 632
		
Application	Signal conditioning instrument for conductive probes	Signal conditioning instrument for conductive probes
Input	1 x level detection or 1 x pump control	Double channel
Hysteresis	1 ... 200 kOhm adjustable	1 ... 200 kOhm adjustable
Output	1 x relay output	2 x relay output
Operating voltage	20 ... 250 V AC, 50/60 Hz	85 ... 253 V AC, 50/60 Hz or 20 ... 30 V AC, 50/60 Hz, 20 ... 60 V DC
Mounting	Wall mounting Carrier rail 35 x 7.5 acc. to EN 50022	Carrier rail 35 x 7.5 acc. to EN 50022
Display	LED	1x LED supply 1x LED switching signal 1x LED false signal
Approvals	–	ATEX, WHG

# VEGATOR 256C

## Signal conditioning instrument for conductive electrodes

### Application area

The VEGATOR 256C is a signal conditioning instrument for conductive electrodes EL 1 ... EL 8. Applications are simple level detections or pump controls.

### Your benefit

- Compact unit of voltage supply and processing of a conductive probe
- Simple adjustment of the switching point via a potentiometer
- Simple installation through carrier rail mounting



### Technical data

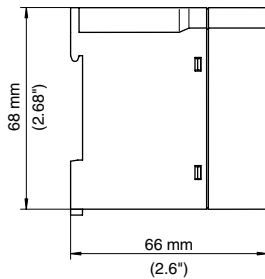
Input:	1 x level detection or 1 x pump control
Output:	1 x relay output
Response sensitivity:	1 ... 200 kOhm adjustable
Switching hysteresis:	approx. 20 %
Operating voltage:	20 ... 250 V AC, 50/60 Hz
Mounting:	wall mounting carrier rail 35 x 7.5 acc. to EN 50022

Delivery time: **SPEED**

### Operating voltage

- E** 24V AC .....
- B** 100...130V AC .....
- A** 200...250V AC .....

TOR256C.X



# VEGATOR 632

## Signal conditioning instrument for conductive electrodes

### Application area

The VEGATOR 632 is a double channel signal conditioning instrument for conductive electrodes type EL. Applications are level detections and pump controls. In conjunction with multiple rod or cable electrodes several VEGATOR 632 can be combined with the probe.

### Your benefit

- Two independent level detections or one min./max. control (two-point control)
- Integrated fault monitoring with LED indication detects shortcircuit and line break
- Simple mounting through carrier rail

### Technical data

Input: double channel  
 Output: 2 x relay output  
 Response sensitivity: 1 ... 200 kOhm adjustable  
 Operating voltage: 85 ... 253 V AC, 50/60 Hz or  
 20 ... 30 V AC, 50/60 Hz, 20 ... 60 V DC  
 Mounting: carrier rail 35 x 7.5 acc. to EN 50022

Delivery time:  **SPEED**



### Approval

- XX without .....
  - CX ATEX II (1) G [Ex ia] IIC/IIB + II (1) D [Ex iaD] .....
  - CA ATEX II (1) G [Ex ia] IIC/IIB + II (1) D [Ex iaD] + WHG .....
- Version**
- D 20...30V AC / 20...60V DC .....
  - A 85...253V AC .....

TOR632.      

