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Subject to change.

All dimensions in mm (inches).

All prices in Euro, excluding VAT.

All prices are EXW Betzigau, excluding packaging costs.

Valid: From 01.04.2013 until 31.03.2014, unless otherwise agreed.

By publishing this selection list all other lists become invalid.

We assume no liability for typing errors.

Different variations to those specified are possible.  
Please contact our technical consultants.

## Specifications

- Level limit detection in bulk goods / solids
- Compact unit
- Die-casted housing aluminium
- Wide range of applications, no maintenance
- Full-, demand-, empty detector
- ATEX, IEC-Ex, FM, CSA approvals (DustEx)
- GOST-R and RTN Ex approvals (DustEx)
- 1935/2004/EC Food grade materials
- Sensitivity > 30 g/l (1.9lb/ft<sup>3</sup>)

Approvals	CE	
	ATEX / IEC-Ex	Zone 20/21 (Dust Ignition Proof)
	FM / CSA	General purpose Cl. II, III Div. 1 (Dust Ignition Proof)
	GOST-R / RTN Ex	Dust Ignition Proof

Electronics	Relay DPDT	19..230V AC 19..40V DC ± 10%
	PNP	18..50V DC ± 10%

VN 4020	Length of extension	170mm (6.68")
	Ambient temperature	-40 .. +60°C (-40 .. +140°F)
	Process temperature	-40 .. +150°C (-40 .. +302°F)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection material / Extension	1.4581 (SS 316) (food grade)

VN 4030	Length of extension	300 .. 4.000mm (11.8 .. 157")
	Ambient temperature	-40 .. +60°C (-40 .. +140°F)
	Process temperature	-40 .. +150°C (-40 .. +302°F)
	Process pressure	-1 .. +16 bar (-14.5 .. +232 psi)
	Process connection material / Extension	1.4301 (SS 304) or 1.4571 (SS 316) (food grade)

**VN 4020**



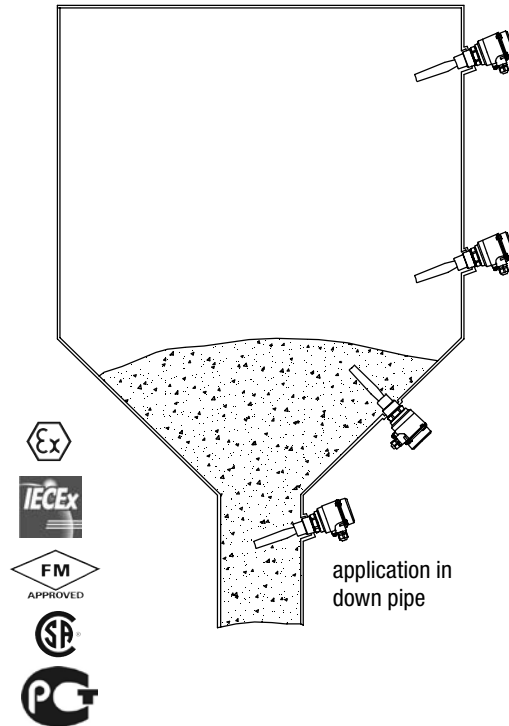
**VN 4030**



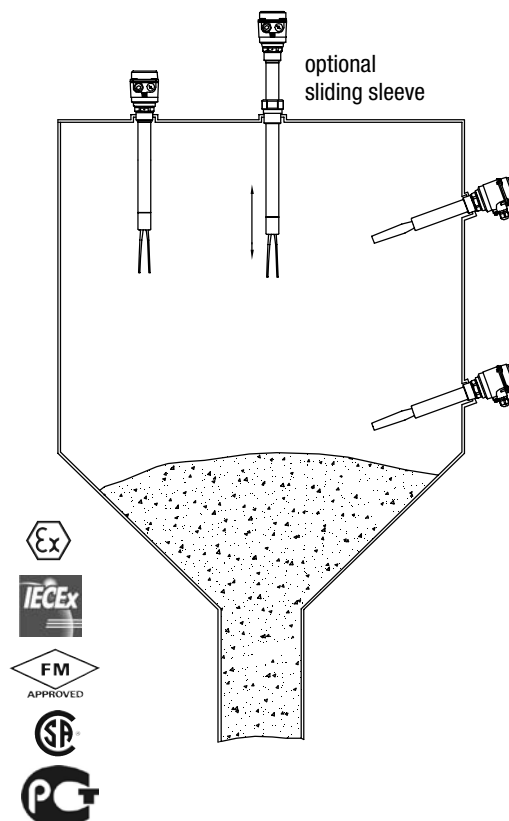
## Applications

### Detection of solids

VN 4020



VN 4030



## VN 4020 Short extension length



### Food grade materials

#### Cable entries (by default)

Depending on model selected the following cable entries are supported (options see pos 23 on page 8):

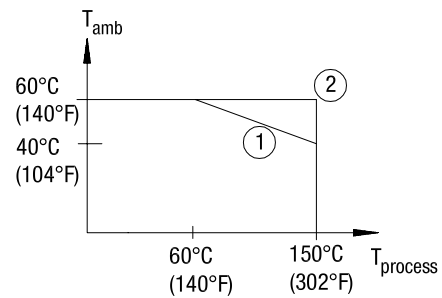
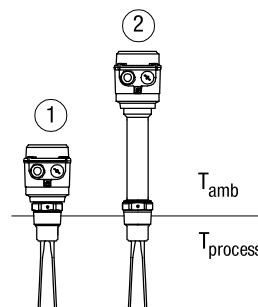
Version:	Cable entries:
CE / ATEX / IEC-Ex (pos.2 O,W, F)	M20x1,5 (1x cable gland + 1x blind plug)
FM and CSA (pos.2 M,N)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x blind plug)

**Dimensions** see page 10

pos. 3  
 Temperature extended shaft

Application up to 150°C (302°F)

- 1 without
- 2 with



## VN 4020 Short extension length

### Basic type

**VN 4020** .....

- pos. 2      **Certificate**
- 0 CE <sup>(1)</sup> .....
  - W ATEX II 1/2D <sup>(2)</sup> Ex t III C T! Da/Db IP6X .....
  - A IEC-Ex t III C T! Da/Db IP6X .....
  - M FM / CSA General Purpose .....
  - N FM / CSA DIP Cl. II, III Div.1 Groupe E, F, G and CSA DIP A20/21 .....

- pos. 3      **Temperature extended shaft**
- 1 without (up to  $T_{process} = 150^{\circ}\text{C}$  (302°F) bei  $T_{amb} < 40^{\circ}\text{C}$  (104°F)) .....
  - 2 with (up to  $T_{process} = 150^{\circ}\text{C}$  (302°F) bei  $T_{amb} > 40^{\circ}\text{C}$  (104°F)) .....

- pos. 4      **Electronic module**
- L Relay DPDT 19..230V AC 19..40V DC .....
  - D PNP 18..50V DC .....

- pos. 5      **Process connection**
- A Thread R 1½ inch, conical DIN 2999 .....
  - B Thread NPT 1½ inch, conical ANSI B1.20.1 .....
  - D Thread NPT 1 ¼ inch, conical ANSI B1.20.1 .....
  - L Flange DN 100 PN6, EN1092-1 (max. 6 bar (87psi)) .....
  - M Flange DN 100 PN16, EN1092-1 .....
  - S Flange 2" 150lbs ANSI B16.5 .....
  - T Flange 3" 150lbs ANSI B16.5 .....
  - U Flange 4" 150lbs ANSI B16.5 .....

- pos. 8      **Material of process connection / extension "L"**
- 1 Stainless steel 1.4301 (304)
  - 2 Stainless steel 1.4571 (316Ti)/1.4404 (316L)

**Further options:** see page 8

<b>VN 4020</b>	<b>A</b>					<b>3</b>	<b>1</b>		
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← Order code

position 1 2 3 4 5 6 7 8

All positions are available in special design (use code "Z").

<sup>(1)</sup> GOST-R included

<sup>(2)</sup> RTN-Ex and GOST-R included

## VN 4030 Pipe extension



### Food grade materials

#### Cable entries (by default)

Depending on model selected the following cable entries are supported (options see pos 23 on page 8):

Version:	Cable entries:
CE / ATEX / IEC-Ex (pos.2 O,W, F)	M20x1,5 (1x cable gland + 1x blind plug)
FM and CSA (pos.2 M,N)	NPT 1/2" tapered ANSI B1.20.1 (1x open conduit + 1x blind plug)

### Dimensions

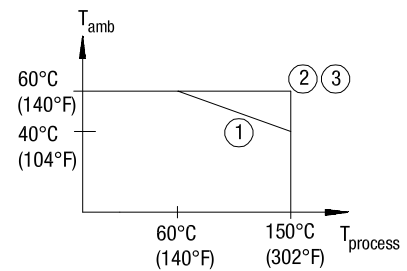
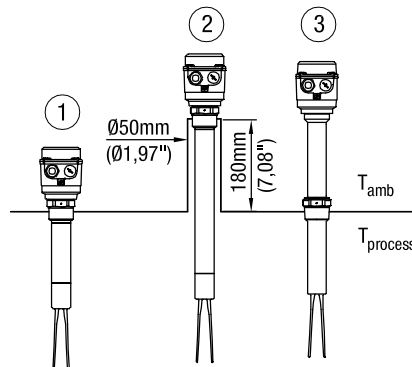
see page 10

pos. 3

Temperature extended shaft

Application up to 150°C (302°F)

- 1 without
- 2 without and with extended socket
- 3 with



## VN 4030 Pipe extension

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### Basic type

**VN 4030** .....

- pos. 2        **Certificate**
- 0 CE <sup>(1)</sup> .....
  - W ATEX II 1/2D <sup>(2)</sup> Ex t IIIIC T! Da/Db IP6X .....
  - A IEC-Ex t IIIIC T! Da/Db IP6X .....
  - M FM / CSA General Purpose .....
  - N FM / CSA DIP Cl. II, III Div.1 Groupe E, F, G and CSA DIP A20/21 .....

- pos. 3        **Temperature extended shaft**
- 1 without (up to  $T_{process} = 150^{\circ}C (302^{\circ}F)$  bei  $T_{amb} < 40^{\circ}C (104^{\circ}F)$ ) .....
  - 2 with (up to  $T_{process} = 150^{\circ}C (302^{\circ}F)$  bei  $T_{amb} > 40^{\circ}C (104^{\circ}F)$ ) .....

- pos. 4        **Electronic module**
- L Relay DPDT 19..230V AC 19..40V DC .....
  - D PNP 18..50V DC .....

- pos. 5        **Process connection**
- A Thread R 1½ inch, conical DIN 2999 .....
  - B Thread NPT 1½ inch, conical ANSI B1.20.1 .....
  - D Thread NPT 1 ¼ inch, conical ANSI B1.20.1 .....
  - L Flange DN 100 PN6, EN1092-1 (max. 6 bar (87psi)) .....
  - M Flange DN 100 PN16, EN1092-1 .....
  - S Flange 2" 150lbs ANSI B16.5 .....
  - T Flange 3" 150lbs ANSI B16.5 .....
  - U Flange 4" 150lbs ANSI B16.5 .....

- pos. 7        **Length of extension "L"**
- Z from 0mm per 100mm (3.94") and part thereof; min. 300mm (11.8"), max. 4.000mm (157") .....

- pos. 8        **Material of process connection / extension "L"**
- 1 Stainless steel 1.4301 (304)
  - 2 Stainless steel 1.4571 (316Ti)/1.4404 (316L)

**Further options:** see page 8

VN	4030	B					3	Z		-	L=		mm	←	Order code
position	1	2	3	4	5	6	7	8							

All positions are available in special design (use code "Z").

<sup>(1)</sup> GOST-R included

<sup>(2)</sup> RTN-Ex and GOST-R included

## Options

pos. 21 **Weather protection cover** .....  
 (for Ex only approved for Zone 22 or Div. 2)

### Mounting set for flange mounting

process connection flange	for counter flange with	consists of			
		screws*	nuts*	washers*	sealing**
pos. 22c L	hole ø18	4 x M16x60	4 x M16	4 pcs	1 piece
pos. 22d L	thread M16	4 x M16x40		4 pcs	1 piece
pos. 22e M	hole ø18	4 x M16x60	8 x M16	8 pcs	1 piece
pos. 22f M	thread M16	4 x M16x40		8 pcs	1 piece

\* material stainless steel A2 \*\*max. 125°C (256°F), material not food grade

### Cable entry

Selection of the following options only necessary, if a deviation from the default cable gland / conduit is required:

pos. 23x M20x1.5 2x screwed cable gland .....  
 pos. 23y M20x1.5 1x screwed cable gland +1x blind plug .....  
 pos. 23a NPT 1/2" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug) .....  
 pos. 23b NPT 3/4" tapered ANSI B1.20.1 (1x conduit + 1x Ex-d blind plug) ..... on request

### Sliding sleeve

Process connection as follows or flange as choosen

<sup>3</sup> For applications without overpressure, max. 150°C (302°F), Available not for Ex (Pos.2 W,N)

pos. 25a R 1½ inch DIN 2999 material 1.4301 (304) .....  
 pos. 25b NPT 1½ inch ANSI B1.20.1 material 1.4301 (304) .....

For applications with overpressure max. 16bar (232psi), max. 150°C (302°F)

pos. 25e R 1½ inch DIN 2999 material 1.4571 (316 TI) .....  
 pos. 25f NPT 1½ inch ANSI B1.20.1 material 1.4571 (316 TI) .....

### Signal lamp

pos. 27a Bulb in cable gland, 2W green <sup>1</sup> .....  
 pos. 27c Bulb in cable gland, 2W red <sup>1</sup> .....  
 pos. 27b LED (glass window in lid)<sup>4</sup> .....  
 pos. 29 **Plug 4-pole <sup>2</sup> (incl. PE)** .....

<sup>1</sup> Available for CE (pos. 2, 0), not in combination with weather protection cover (pos. 21) and cable entries pos.23 x,a,b.  
 For electronic module Relais DPDT (pos. 4.L) three bulbs (24V, 115V and 230V) will be delivered. For PNP (pos.4.D) a 24V bulb will be delivered.

<sup>2</sup> Available only for CE (pos. 2, 0)

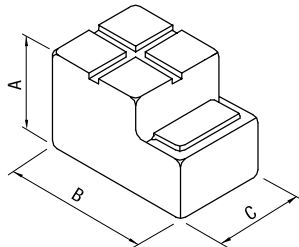
<sup>3</sup> Available for CE and FM/CSA general purpose (pos. 2, 0, M)

<sup>4</sup> Not with weather protection cover (Pos. 21)



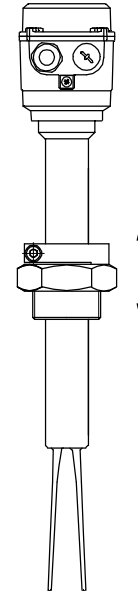
## Options

pos. 21  
**Weather protection cover**

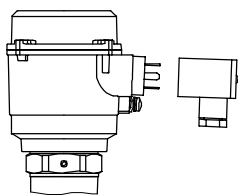


	With CE, ATEX, IEC-Ex	With FM, CSA
A	100mm (3.94")	130mm (5.12")
B	165mm (6.5")	200mm (7.87")
C	88mm (3.46")	125mm (4.92")

pos. 25  
**Sliding sleeve**

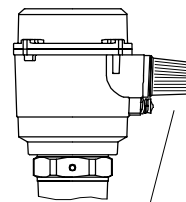


pos. 29  
**Plug 4-pole**



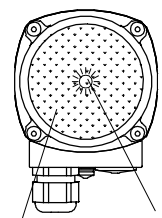
**Signal lamp**

pos. 27a, c  
 Bulb in cable gland



bulb

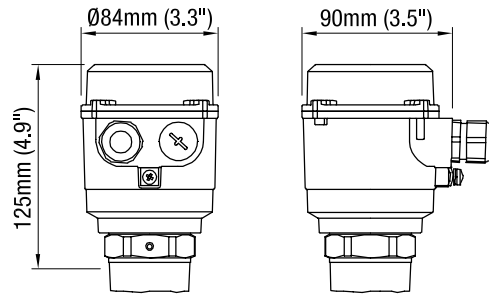
pos. 27b  
 LED (glass window in lid)



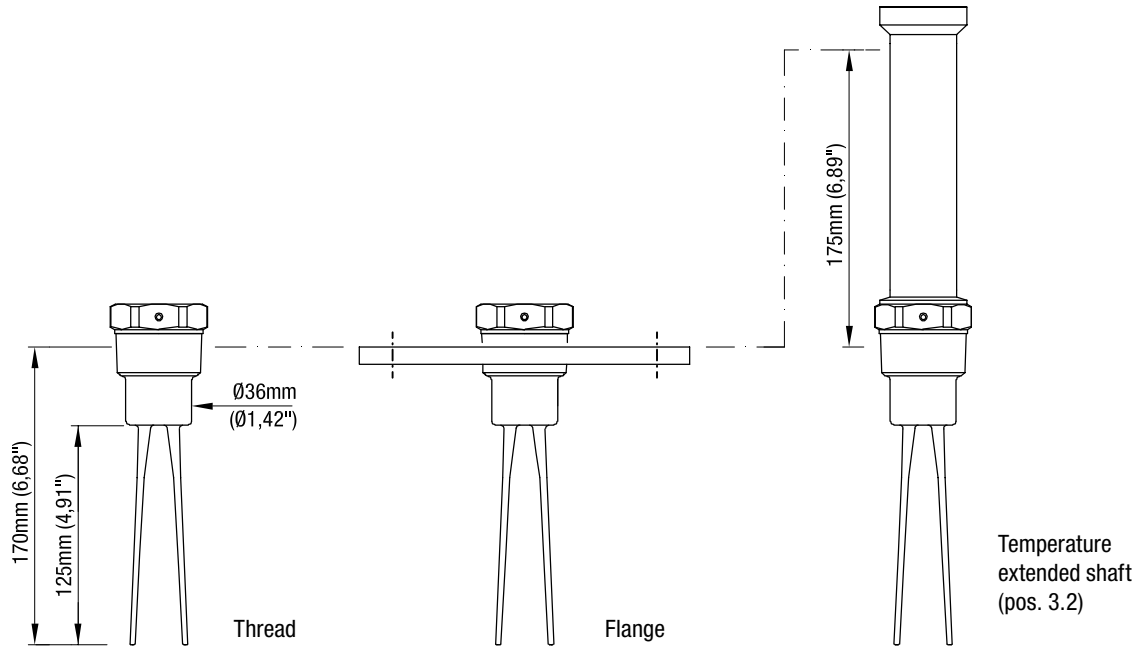
glass window

LED

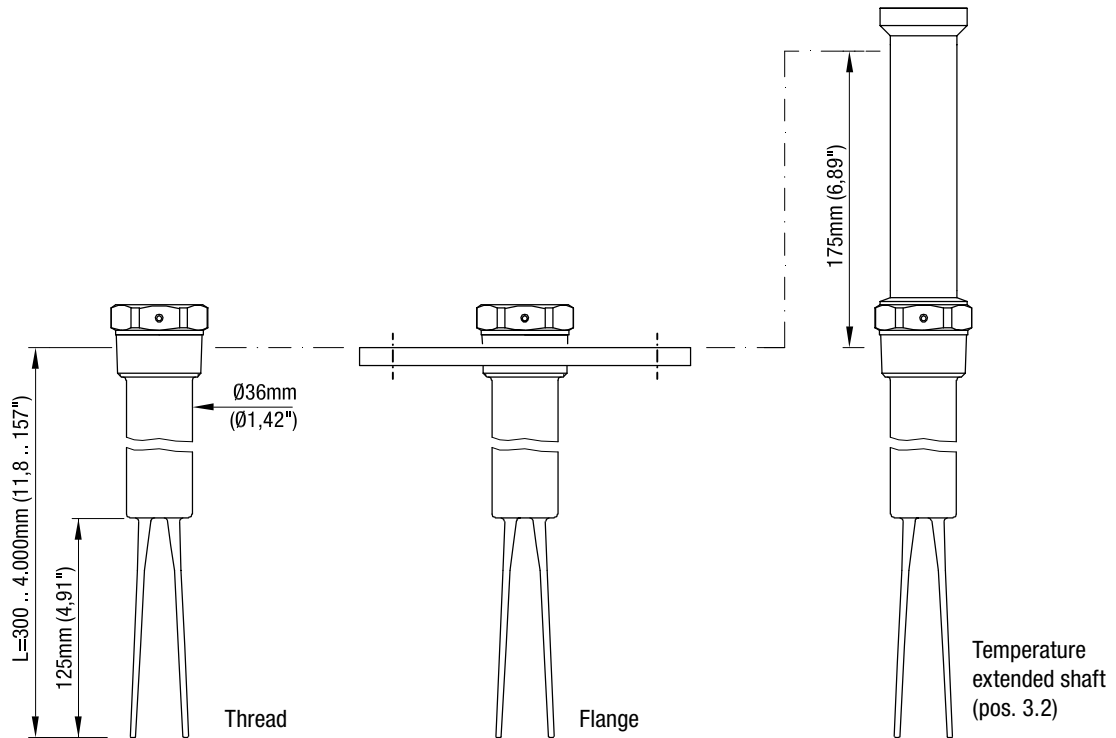
## Dimensions



### VN 4020



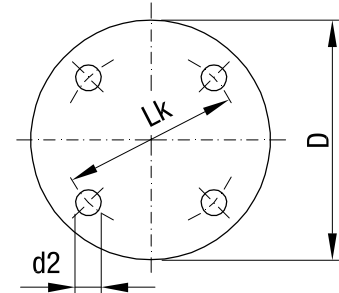
### VN 4030



## Dimensions / Spare parts

### Flanges

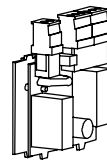
code	type	number of holes	d2	Lk	D	T (thickness)
L	flange DN100 PN6	4	18mm (0.71")	170mm (6.69")	210mm (8.27")	16mm (0.63")
M	flange DN100 PN16	8	18mm (0.71")	180mm (7.09")	220mm (8.66")	20mm (0.79")
S	flange 2" 150lbs	4	19.1mm (0.75")	120.7mm (4.75")	152.4mm (6.01")	19.1mm (0.75")
T	flange 3" 150lbs	4	19.1mm (0.75")	152.4mm (6.01")	190.5mm (7.5")	23.9mm (0.94")
U	flange 4" 150lbs	8	19.1mm (0.75")	190.5mm (7.5")	228.6mm (9")	23.9mm (0.94")



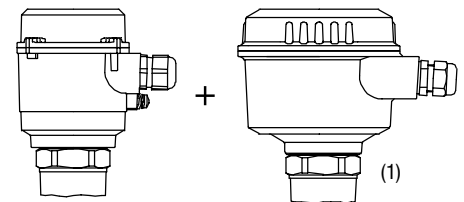
### Spare parts

Electronic board	Article number	Price
<b>Relais DPDT</b> 19..230V AC 19..50V DC	pl408265	
<b>PNP</b> 18..50V DC	pl408266	

#### Electronic board



#### Fitting for housing



(1) Adapting plate included

## Electrical installation

### Universal voltage

Relay DPDT

**Power supply:**

19..230V 50-60Hz  $\pm 10\%^*$  22VA

19..40V DC  $\pm 10\%^*$  2W

\*incl.  $\pm 10\%$  of EN 61010

**Fuse on power supply:**

max. 10A, fast or slow, HBC, 250V

**Signal output:**

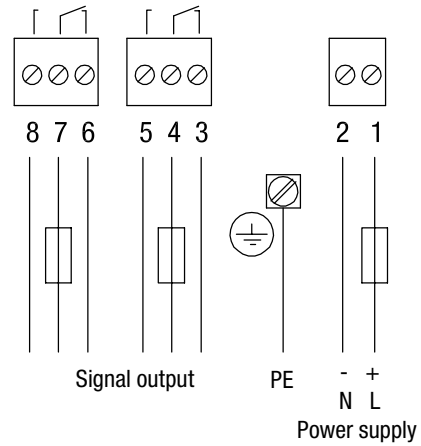
Floating relay DPDT

AC max. 250V, 8A, non inductive

DC max. 30V, 5A, non inductive

**Fuse on signal output:**

max 10A, fast or slow, HBC, 250V



### 3-wire

PNP

**Power supply:**

18 .. 50V DC  $\pm 10\%^*$

\*incl.  $\pm 10\%$  of EN 61010

Input current: max. 0.5A

**Fuse:**

max. 4A, fast or slow, 250V

**Signal output:**

max. 0.4A

Output voltage equal to input  
 voltage, drop <2.5V

**Load for example:**

PLC, relay, contactor, bulb

