



# Probes Compact models Amplifiers






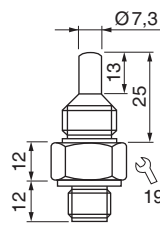
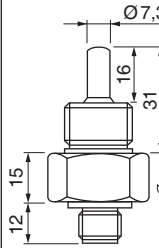
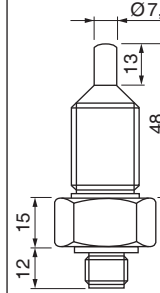
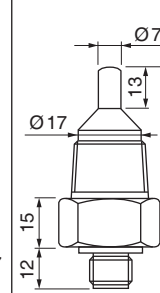
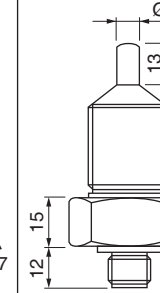
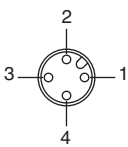
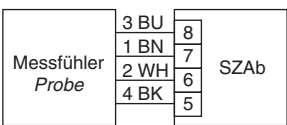
**Ex-Probe** | Device category 1G, 1G/2G und 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b> 					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	plug	plug	plug	plug	plug
ID-No.	P11164	P11165	P11166	P11167	P11169
Type	STS 101 S	STS 102 S	STS 103 S	STS 104 S	STS 106 S
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20				
Certificate No.	TÜV 98 ATEX 1298 X				
Ex marking	Gas: $\text{Ex}$ II 1 G Ex ia IIC T6...T3 Ga $\text{Ex}$ II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: $\text{Ex}$ II 1 D Ex ia IIIC T125 °C Da				
Ambient temperature and medium temperature [°C]	Gas: T6: $-20 \leq T_a \leq +40$ T5: $-20 \leq T_a \leq +55$ T4: $-20 \leq T_a \leq +85$ T3: $-20 \leq T_a \leq +85$ Dust: $-20 \leq T_a \leq +85$				
Maximum values	$U_i = 13.65 \text{ V}$ / $I_i = 200 \text{ mA}$ / $P_i = 0.69 \text{ W}$ / $C_i = 0.27 \text{ nF}$ / $L_i = 1.30 \text{ }\mu\text{H}$				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	M12 connector				
					
Note:	Observe specific conditions for use in section "Technique and application" on page 1.13 for the connection to amplifier SZAb..., page 1.104-1.105				



**Ex-Probe** | Device category 1G, 1G/2G und 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b>  					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	fixed cable	fixed cable	fixed cable	fixed cable	fixed cable
ID-No.	P11140	P11141	P11142	P11143	P11168
Type	STS 101 K	STS 102 K	STS 103 K	STS 104 K	STS 106 K
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20				
Certificate No.	TÜV 98 ATEX 1298 X				
Ex marking	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da				
Ambient temperature and medium temperature [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85				
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	2 m PUR-cable 4x0.25 mm <sup>2</sup>				
Note:	Observe specific conditions for use in section "Technique and application" on page 1.13 for the connection to amplifier SZAb..., page 1.104-1.105				



**Ex-Probe** | Device category 1G, 1G/2G und 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

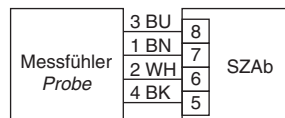
**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Extended temperature range  
up to 120 °C



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b>					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	fixed cable	fixed cable	fixed cable	fixed cable	fixed cable
ID-No.	P11409	P11410	P11411	P11412	P11413
Type	STS 101 KH	STS 102 KH	STS 103 KH	STS 104 KH	STS 106 KH
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20				
Certificate No.	TÜV 98 ATEX 1298 X				
Ex marking	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da				
Ambient temperature and medium temperature [°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85				
Maximum values	Ui = 13.65 V / Ii = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	2 m FEP-cable 4x0.25 mm <sup>2</sup>				



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 2G and 2D

**Ex-Device category 2G**  
Installation in Zone 1 (gas)

**Ex-Device category 2D**  
Installation in Zone 21 (dust)



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b> 					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	plug	plug	plug	plug	plug
ID-No.	P11170	P11171	P11172	P11173	P11175
Type	ST 101 S	ST 102 S	ST 103 S	ST 104 S	ST 106 S
Ex area of use	Gas: Zone 1 / Dust: Zone 21				
Certificate No.	TÜV 97 ATEX 1218				
Ex marking	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db				
Ambient temperature and medium temperature [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85				
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	M12 connector				
<p>1: BN 2: WH 3: BU 4: BK</p>	<p>Messfühler Probe</p> <p>3 BU 8 1 BN 7 2 WH 6 4 BK 5</p> <p>SZAb</p>				
Note:	(probes with cable length > 2 m are available on request) for the connection to amplifier SZAb..., page 1.104-1.105				



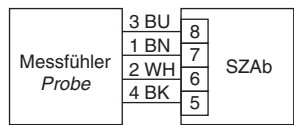
**Ex-Probe** | Device category 2G and 2D

**Ex**-Device category 2G  
Installation in Zone 1 (gas)

**Ex**-Device category 2D  
Installation in Zone 21 (dust)



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b>					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	fixed cable	fixed cable	fixed cable	fixed cable	fixed cable
ID-No.	P11144	P11145	P11146	P11147	P11174
Type	ST 101 K	ST 102 K	ST 103 K	ST 104 K	ST 106 K
Ex area of use	Gas: Zone 1 / Dust: Zone 21				
Certificate No.	TÜV 97 ATEX 1218				
Ex marking	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db				
Ambient temperature and medium temperature [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85				
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	2 m PUR-cable 4x0.25 mm <sup>2</sup>				



(probes with cable length > 2 m are available on request)

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 2G and 2D

**Ex**-Device category 2G  
Installation in Zone 1 (gas)

**Ex**-Device category 2D  
Installation in Zone 21 (dust)

Extended temperature range  
up to 120 °C



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b> 					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	fixed cable	fixed cable	fixed cable	fixed cable	fixed cable
ID-No.	P11176	P11178	P11180	P11182	P11184
Type	ST 101 KH	ST 102 KH	ST 103 KH	ST 104 KH	ST 106 KH
Ex area of use	Gas: Zone 1 / Dust: Zone 21				
Certificate No.	TÜV 97 ATEX 1218				
Ex marking	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db				
Ambient temperature and medium temperature [°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85				
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	2 m FEP-cable 4x0.25 mm <sup>2</sup>				
	(probes with cable length > 2 m are available on request)				
Note:	for the connection to amplifier SZAb..., page 1.104-1.105				



**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

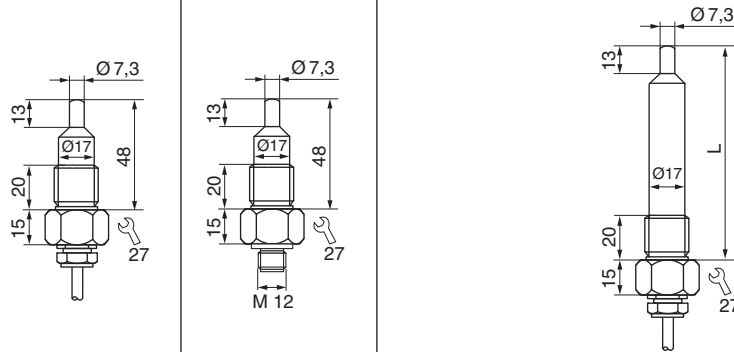
**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)

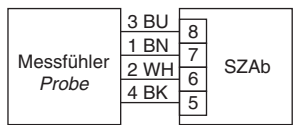
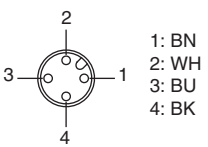


**Design** **G1/2**

**Dimensions**



<b>Detection range</b>	[cm/s]	water 1...100 / oil 3...200				
<b>Sensor length L</b>	[mm]	48	48	80	110	140
<b>Connection</b>		fixed cable	plug	fixed cable	fixed cable	fixed cable
<b>ID-No.</b>		P11186	P11187	P11188	P11189	P11190
<b>Type</b>		STS 110 K	STS 110 S	STS 110 K-L80	STS 110 K-L110	STS 110 K-L140
<b>Ex area of use</b>		Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20				
<b>Certificate No.</b>		TÜV 98 ATEX 1298 X				
<b>Ex marking</b>		Gas: $\text{Ex}$ II 1 G Ex ia IIC T6...T3 Ga $\text{Ex}$ II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: $\text{Ex}$ II 1 D Ex ia IIIC T125 °C Da				
<b>Ambient temperature and medium temperature</b>	[°C]	Gas: T6: $-20 \leq T_a \leq +40$ T5: $-20 \leq T_a \leq +55$ T4: $-20 \leq T_a \leq +85$ T3: $-20 \leq T_a \leq +85$ Dust: $-20 \leq T_a \leq +85$				
<b>Maximum values</b>		$U_i = 13.65 \text{ V}$ / $I_i = 200 \text{ mA}$ / $P_i = 0.69 \text{ W}$ / $C_i = 0.27 \text{ nF}$ / $L_i = 1.30 \mu\text{H}$				
<b>Start-up time typ.</b>	[s]	8 (2...18)				
<b>Reaction time typ.</b>	[s]	2 (1...13)				
<b>Compressive strength</b>	[bar]	60				
<b>Housing material</b>		AISI 316 Ti • different materials on request				
<b>Protection</b>	[EN 60529]	IP 67				
<b>Connection</b>		...K: 2 m PUR-cable 4x0.25 mm <sup>2</sup> ...S: M12 connector				



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105





**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

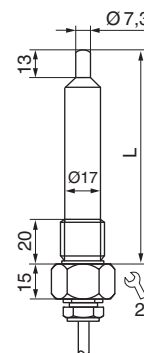
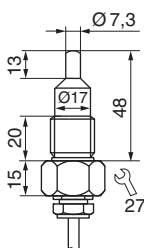
**Ex**-Device category 1D  
Installation in Zone 20 (dust)

Extended temperature range up to 120 °C

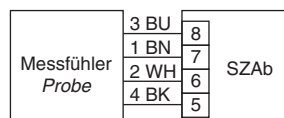


**Design** **G1/2**

**Dimensions**



Detection range	[cm/s]	water 1...100 / oil 3...200			
Sensor length L	[mm]	48	80	110	140
Connection		fixed cable	fixed cable	fixed cable	fixed cable
ID-No.		P11414	P11415	P11416	P11417
Type		STS 110 KH	STS 110 KH-L80	STS 110 KH-L110	STS 110 KH-L140
Ex area of use		Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20			
Certificate No.		TÜV 98 ATEX 1298 X			
Ex marking		Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da			
Ambient temperature and medium temperature	[°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85			
Maximum values		Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH			
Start-up time typ.	[s]	8 (2...18)			
Reaction time typ.	[s]	2 (1...13)			
Compressive strength	[bar]	60			
Housing material		AISI 316 Ti • different materials on request			
Protection	[EN 60529]	IP 67			
Connection		2 m FEP-cable 4x0.25 mm <sup>2</sup>			



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 2G and 2D

**Ex**-Device category 2G  
Installation in Zone 1 (gas)

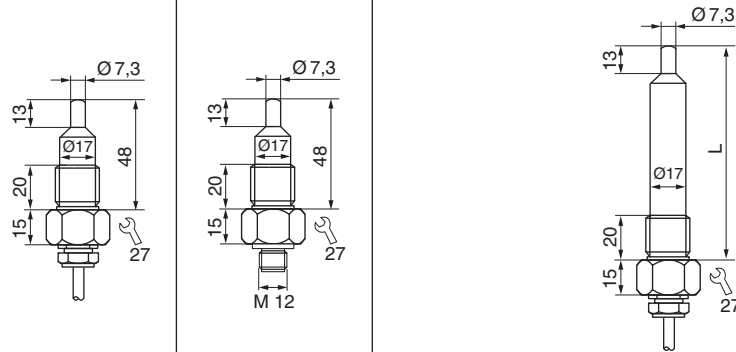
**Ex**-Device category 2D  
Installation in Zone 21 (dust)



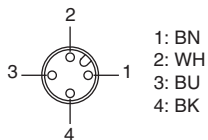
**Design**

**G1/2**

**Dimensions**



<b>Detection range</b> [cm/s]	water 1...100 / oil 3...200				
<b>Sensor length L</b> [mm]	48	48	80	110	140
<b>Connection</b>	fixed cable	plug	fixed cable	fixed cable	fixed cable
<b>ID-No.</b>	P11192	P11193	P11194	P11195	P11196
<b>Type</b>	ST 110 K	ST 110 S	ST 110 K-L80	ST 110 K-L110	ST 110 K-L140
<b>Ex area of use</b>	Gas: Zone 1 / Dust: Zone 21				
<b>Certificate No.</b>	TÜV 97 ATEX 1218				
<b>Ex marking</b>	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db				
<b>Ambient temperature and medium temperature</b> [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85				
<b>Maximum values</b>	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
<b>Start-up time typ.</b> [s]	8 (2...18)				
<b>Reaction time typ.</b> [s]	2 (1...13)				
<b>Compressive strength</b> [bar]	60				
<b>Housing material</b>	AISI 316 Ti • different materials on request				
<b>Protection</b> [EN 60529]	cable ...K: IP 67 / plug ...S: IP 67				
<b>Connection</b>	...K: 2 m PUR-cable 4x0.25 mm² / ...S: M12 connector				



(probes with cable length > 2 m are available on request)

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 2G and 2D

**Ex-Device category 2G**  
Installation in Zone 1 (gas)

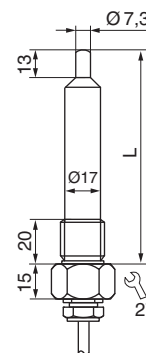
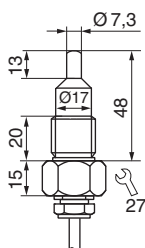
**Ex-Device category 2D**  
Installation in Zone 21 (dust)

Extended temperature range  
up to 120 °C

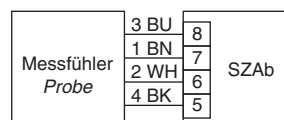


**Design** **G1/2**

**Dimensions**



Detection range	[cm/s]	water 1...100 / oil 3...200			
Sensor length L	[mm]	48	80	110	140
Connection		fixed cable	fixed cable	fixed cable	fixed cable
ID-No.		P11198	P11200	P11201	P11202
Type		ST 110 KH	ST 110 KH-L80	ST 110 KH-L110	ST 110 KH-L140
Ex area of use		Gas: Zone 1 / Dust: Zone 21			
Certificate No.		TÜV 97 ATEX 1218			
Ex marking		Gas: $\text{Ex II 2 G Ex ib IIC T6 Gb}$ Dust: $\text{Ex II 2 D Ex ib IIIC T125 °C Db}$			
Ambient temperature and medium temperature	[°C]	Gas: T6: $+10 \leq T_a \leq +40$ T5: $+10 \leq T_a \leq +55$ T4: $+10 \leq T_a \leq +90$ T3: $+10 \leq T_a \leq +120$ Dust: $-20 \leq T_a \leq +85$			
Maximum values		$U_i = 13.65 \text{ V} / I_i = 200 \text{ mA} / P_i = 0.69 \text{ W} / C_i = 0.27 \text{ nF} / L_i = 1.30 \mu\text{H}$			
Start-up time typ.	[s]	8 (2...18)			
Reaction time typ.	[s]	2 (1...13)			
Compressive strength	[bar]	60			
Housing material		AISI 316 Ti • different materials on request			
Protection	[EN 60529]	IP 67			
Connection		2 m FEP-cable 4x0.25 mm <sup>2</sup>			



(probes with cable length > 2 m are available on request)

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

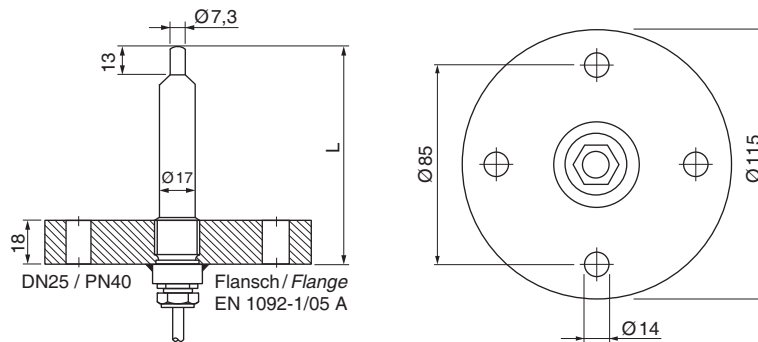
**Ex**-Device category 1D  
Installation in Zone 20 (dust)

With welded standard flange



**Design** DN25 / PN40 (EN 1092-1/05 A)

**Dimensions**



Detection range	[cm/s]	water 1...100 / oil 3...200		
Sensor length L	[mm]	80	110	140
Connection		fixed cable	fixed cable	fixed cable
ID-No.		P11191	P11148	P11149
Type		STS 111 K-L80	STS 111 K-L110	STS 111 K-L140
Ex area of use		Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20		
Certificate No.		TÜV 98 ATEX 1298 X		
Ex marking		Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga	<b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb	
		Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da		
Ambient temperature and medium temperature	[°C]	Gas:	T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85	
		Dust:	-20 ≤ Ta ≤ +85	
Maximum values		Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH		
Start-up time typ.	[s]	8 (2...18)		
Reaction time typ.	[s]	2 (1...13)		
Compressive strength	[bar]	probe: 60 / flange: PN40		
Housing material		AISI 316 Ti • different materials on request		
Protection	[EN 60529]	IP 67		
Connection		2 m PUR-cable 4x0.25 mm <sup>2</sup>		



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



With welded standard flange  
Extended temperature range up to 120 °C

Design	DN25 / PN40 (EN 1092-1/05 A)		
<b>Dimensions</b>			
<b>Detection range</b> [cm/s]	water 1...100 / oil 3...200		
<b>Sensor length L</b> [mm]	80	110	140
<b>Connection</b>	fixed cable	fixed cable	fixed cable
<b>ID-No.</b>	P11418	P11419	P11420
<b>Type</b>	STS 111 KH-L80	STS 111 KH-L110	STS 111 KH-L140
<b>Ex area of use</b>	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20		
<b>Certificate No.</b>	TÜV 98 ATEX 1298 X		
<b>Ex marking</b>	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da		
<b>Ambient temperature and medium temperature</b> [°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85		
<b>Maximum values</b>	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH		
<b>Start-up time typ.</b> [s]	8 (2...18)		
<b>Reaction time typ.</b> [s]	2 (1...13)		
<b>Compressive strength</b> [bar]	probe: 60 / flange: PN40		
<b>Housing material</b>	AISI 316 Ti • different materials on request		
<b>Protection</b> [EN 60529]	IP 67		
<b>Connection</b>	2 m FEP-cable 4x0.25 mm <sup>2</sup>		
	Observe specific conditions for use in section "Technique and application" on page 1.13		
<b>Note:</b>	for the connection to amplifier SZAb..., page 1.104-1.105		



**Ex-Probe** | Device category 2G and 2D

**Ex**-Device category 2G  
Installation in Zone 1 (gas)

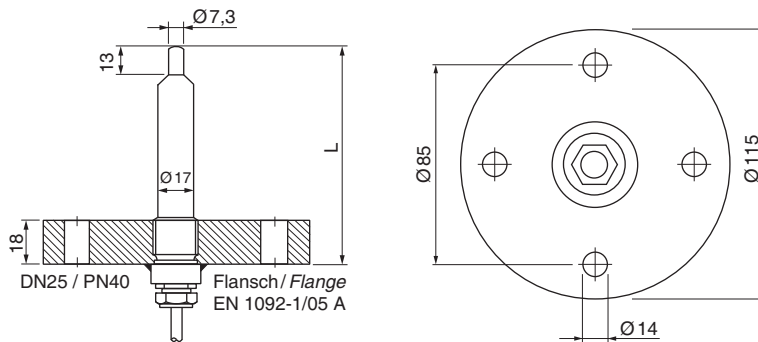
**Ex**-Device category 2D  
Installation in Zone 21 (dust)

With welded standard flange

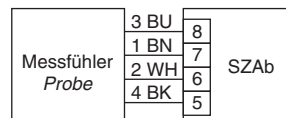


**Design** **DN25 / PN40 (EN 1092-1/05 A)**

**Dimensions**



<b>Detection range</b>	[cm/s]	water 1...100 / oil 3...200		
<b>Sensor length L</b>	[mm]	80	110	140
<b>Connection</b>		fixed cable	fixed cable	fixed cable
<b>ID-No.</b>		<b>P11197</b>	<b>P11150</b>	<b>P11151</b>
<b>Type</b>		ST 111 K-L80	ST 111 K-L110	ST 111 K-L140
<b>Ex area of use</b>		Gas: Zone 1 / Dust: Zone 21		
<b>Certificate No.</b>		TÜV 97 ATEX 1218		
<b>Ex marking</b>		Gas:	Ex II 2 G Ex ib IIC T6 Gb	
		Dust:	Ex II 2 D Ex ib IIIC T125 °C Db	
<b>Ambient temperature and medium temperature</b>	[°C]	Gas:	T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85	
		Dust:	-20 ≤ Ta ≤ +85	
<b>Maximum values</b>		Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH		
<b>Start-up time typ.</b>	[s]	8 (2...18)		
<b>Reaction time typ.</b>	[s]	2 (1...13)		
<b>Compressive strength</b>	[bar]	60		
<b>Housing material</b>		AISI 316 Ti • different materials on request		
<b>Protection</b>	[EN 60529]	IP 67		
<b>Connection</b>		2 m PUR-cable 4x0.25 mm <sup>2</sup>		



(probes with cable length > 2 m and different flanges are available on request)

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 2G and 2D


**Ex**-Device category 2G  
Installation in Zone 1 (gas)

**Ex**-Device category 2D  
Installation in Zone 21 (dust)

With welded standard flange

Extended temperature range up to 120 °C



Design	DN25 / PN40 (EN 1092-1/05 A)		
<p><i>Dimensions</i></p> 			
Detection range [cm/s]	water 1...100 / oil 3...200		
Sensor length L [mm]	80	110	140
Connection	fixed cable	fixed cable	fixed cable
ID-No.	P11203	P11204	P11205
Type	ST 111 KH-L80	ST 111 KH-L110	ST 111 KH-L140
Ex area of use	Gas: Zone 1 / Dust: Zone 21		
Certificate No.	TÜV 97 ATEX 1218		
Ex marking	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db		
Ambient temperature and medium temperature [°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85		
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH		
Start-up time typ. [s]	8 (2...18)		
Reaction time typ. [s]	2 (1...13)		
Compressive strength [bar]	60		
Housing material	AISI 316 Ti • different materials on request		
Protection [EN 60529]	IP 67		
Connection	2 m FEP-cable 4x0.25 mm <sup>2</sup>		
	(probes with cable length > 2 m and different flanges are available on request)		
Note:	for the connection to amplifier SZAb..., page 1.104-1.105		



**Ex-Probe** | Device category 1G, 1G/2G and 1D

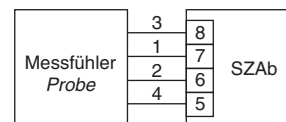
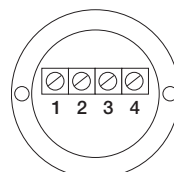
**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design	G3/4	NPT3/4
<b>Dimensions</b> 		
Detection range [cm/s]	water 1...100 / oil 3...200	water 1...100 / oil 3...200
Sensor length [mm]	68	68
Connection	terminal clamps	terminal clamps
ID-No.	P11268	P11269
Type	STSEX 01	STSEX 02
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20	
Certificate No.	TÜV 98 ATEX 1298 X	
Ex marking	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da	
Umgebungstemperatur und Mediumtemperatur [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85	
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH	
Start-up time typ. [s]	8 (2...18)	
Reaction time typ. [s]	2 (1...13)	
Cable gland [mm]	clamping range 5.5...8.5	
Housing material	AISI 316 Ti • different materials on request	
Protection [EN 60529]	IP 67	
Connection cable	2 m PVC 4x0.75 mm <sup>2</sup> (number 1-4)	



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105





**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design	G1/2	
<p><b>Dimensions</b></p>		
Detection range [m/s]	air 2...25	
Sensor length [mm]	65	
Connection	fixed cable	plug
ID-No.	P11152	P11206
Type	STS 212 K	
STS 212 S		
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20	
Certificate No.	TÜV 98 ATEX 1298 X	
Ex marking	Gas: <b>Ex</b> II 1 G Ex ia IIC T4...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T4...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T145 °C Da	
Ambient temperature and medium temperature [°C]	Gas: T4: -20 ≤ Ta ≤ +70 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85	
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH	
Start-up time typ. [s]	10...40	
Reaction time typ. [s]	5 (2...30)	
Compressive strength [bar]	10	
Housing material	AISI 316 Ti • different materials on request	
Protection [EN 60529]	IP 67	
Connection	2 m PUR-cable 4x0.25 mm <sup>2</sup>	M12 connector
<b>Note:</b>	Observe specific conditions for use in section "Technique and application" on page 1.13 for the connection to amplifier SZAb..., page 1.104-1.105	



**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

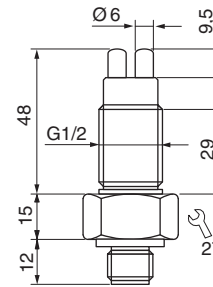
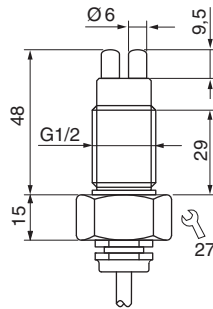
**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)

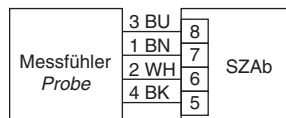
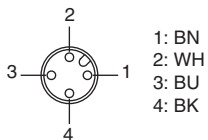


**Design** **G1/2**

**Dimensions**



Detection range	[m/s]	air 2...25	air 2...25
Sensor length	[mm]	48	48
Connection		fixed cable	plug
ID-No.		P11153	P11207
Type		STS 215 K	STS 215 S
Ex area of use		Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20	
Certificate No.		TÜV 98 ATEX 1298 X	
Ex marking		Gas: $\text{Ex}$ II 1 G Ex ia IIC T6...T3 Ga	$\text{Ex}$ II 1/2 G Ex ia IIC T6...T3 Ga/Gb
		Dust: $\text{Ex}$ II 1 D Ex ia IIIC T130 °C Da	
Ambient temperature and medium temperature	[°C]	Gas:	T6: $-20 \leq T_a \leq +35$ T5: $-20 \leq T_a \leq +50$ T4: $-20 \leq T_a \leq +85$ T3: $-20 \leq T_a \leq +85$
		Dust:	$-20 \leq T_a \leq +85$
Maximum values		$U_i = 13.65 \text{ V}$ / $I_i = 200 \text{ mA}$ / $P_i = 0.69 \text{ W}$ / $C_i = 0.27 \text{ nF}$ / $L_i = 1.30 \mu\text{H}$	
Start-up time typ.	[s]	5...20	
Reaction time typ.	[s]	3 (2...30)	
Compressive strength	[bar]	10	
Housing material		AISI 316 Ti • different materials on request	
Protection	[EN 60529]	IP 67	
Connection		2 m PUR-cable 4x0.25 mm <sup>2</sup>	M12 connector



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 1G, 1G/2G and 1D


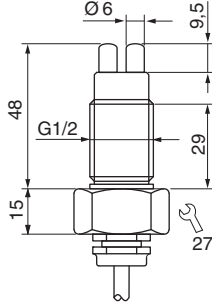
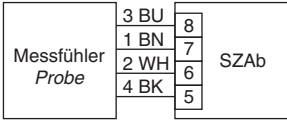
**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Extended temperature range up to 120 °C

Design	G1/2	
<p><i>Dimensions</i></p> 		
Detection range	[m/s]	air 2...25
Sensor length	[mm]	48
Connection		fixed cable
ID-No.		P11212
Type		STS 215 KH
Ex area of use		Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20
Certificate No.		TÜV 98 ATEX 1298 X
Ex marking		Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T130 °C Da
Ambient temperature and medium temperature	[°C]	Gas: T6: - 20 ≤ Ta ≤ +35 T5: - 20 ≤ Ta ≤ +50 T4: - 20 ≤ Ta ≤ +85 T3: - 20 ≤ Ta ≤ +120 Dust: - 20 ≤ Ta ≤ +85
Maximum values		U <sub>i</sub> = 13.65 V / I <sub>i</sub> = 200 mA / P <sub>i</sub> = 0.69 W / C <sub>i</sub> = 0.27 nF / L <sub>i</sub> = 1.30 μH
Start-up time typ.	[s]	5...20
Reaction time typ.	[s]	3 (2...30)
Compressive strength	[bar]	10
Housing material		AISI 316 Ti • different materials on request
Protection	[EN 60529]	IP 67
Connection		2 m FEP-cable 4x0.25 mm <sup>2</sup>
		
		Observe specific conditions for use in section "Technique and application" on page 1.13
Note:		for the connection to amplifier SZAb..., page 1.104-1.105



**Ex**-Amplifiers AC/DC | Relay

Ex II (1) G [Ex ia Ga] IIC  
 Ex II (1) D [Ex ia Da] IIIC

AC 230 V • AC 115 V • DC 24 V

Relay output

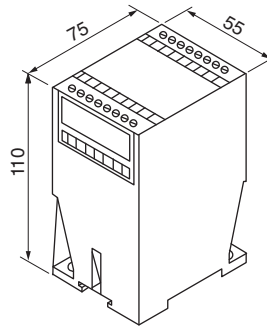
Cable break and short circuit monitoring

Turn off delay



**Design** **SZAb 400 EX...**

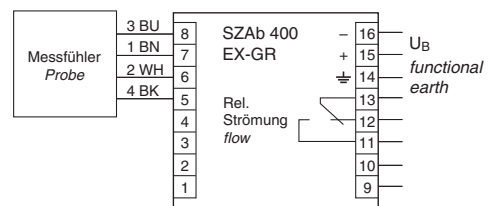
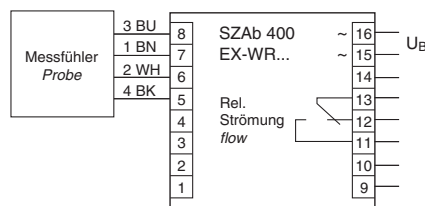
**Dimensions**



ID-No.	P11400	P11399	P11398
Type	SZAb 400 EX-WR230	SZAb 400 EX-WR115	SZAb 400 EX-GR
Output			
Supply voltage [V]	230 AC ±10%	115 AC ±10%	24 DC ±15%
Ex marking	Gas: Ex II (1) G [Ex ia Ga] IIC		Dust: Ex II (1) D [Ex ia Da] IIIC
Certificate No.	EPS 19 ATEX 1 009		IECEx EPS 19.0001
Maximum values	U <sub>o</sub> = 13.65 V I <sub>o</sub> = 200 mA P <sub>o</sub> = 683 mW IIC: C <sub>o</sub> = 0.35 µF; L <sub>o</sub> = 1.1 mH IIB: C <sub>o</sub> = 1.8 µF; L <sub>o</sub> = 6.2 mH IIA: C <sub>o</sub> = 5.7 µF; L <sub>o</sub> = 11.0 mH		
Turn off delay [s]	0...25		
Output	relay / change-over		
Switching voltage [V]	250 AC / 60 DC / 24 DC		
Switching current [A]	4 AC / 0.8 DC / 4 DC		
Switching power	cos φ >0,7 / L/R <200 ms		
Ambient temperature [°C]	-20 ≤ T <sub>a</sub> ≤ +60		
Protection [EN 60529]	IP 20		
Connection	terminal screws		

**Note:**

The Ex-amplifier must be mounted outside hazardous areas (gas or dust).





**Ex -Amplifier DC | Analog**

Ex II (1) G [Ex ia Ga] IIC  
 Ex II (1) D [Ex ia Da] IIIC

DC 24 V

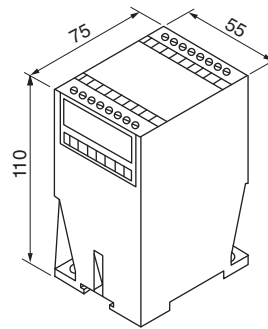
Analog output

Cable break and short circuit monitoring



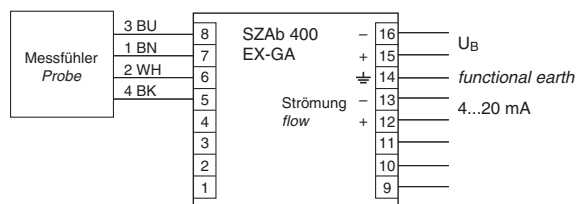
**Design SZAb 400 EX-GA**

**Dimensions**



ID-No.	P11401	
Type	SZAb 400 EX-GA	
Output	 4...20 mA	
Supply voltage [V]	24 DC ±15%	
Ex marking	Gas: Ex II (1) G [Ex ia Ga] IIC	Staub: Ex II (1) D [Ex ia Da] IIIC
Certificate No.	EPS 19 ATEX 1 009	IECEx EPS 19.0001
Maximum values	U <sub>o</sub> = 13.65 V I <sub>o</sub> = 200 mA P <sub>o</sub> = 683 mW IIC: C <sub>o</sub> = 0.35 µF; L <sub>o</sub> = 1.1 mH IIB: C <sub>o</sub> = 1.8 µF; L <sub>o</sub> = 6.2 mH IIA: C <sub>o</sub> = 5.7 µF; L <sub>o</sub> = 11.0 mH	
Output	analog, non linear	
Current output [mA]	4...20	
Load R <sub>L</sub> [Ω]	0...500	
Ambient temperature [°C]	-20 ≤ T <sub>a</sub> ≤ +60	
Protection [EN 60529]	IP 20	
Connection	terminal screws	

Note:  
 The Ex-amplifier must be mounted outside hazardous areas (gas or dust).





**Ex**-Compact model | Device category 3G and 3D


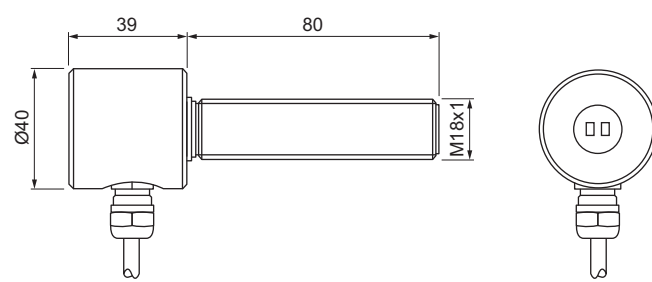

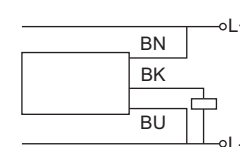
**Ex**-Device category 3G  
Installation in Zone 2 (gas)

**Ex**-Device category 3D  
Installation in Zone 22 (dust)

DC 24 V

PNP output



Design	M18x1	
<p><i>Dimensions</i></p> 		
Detection range	[m/s]	gaseous media 0.5...20
Sensor length L	[mm]	80
Output		 PNP
ID-No.		<b>P11404</b>
Type		LC 518 GSP-Ex22
Ex area of use		Gas: Zone 2 / Dust: Zone 22
Certificate of conformity		EGE 20.0010 X
Ex marking	Gas:	<b>Ex</b> II 3 G Ex ic mc IIC T4...T3 Gc
	Dust:	<b>Ex</b> II 3 D Ex ic mc IIIC T135 °C Dc
Ambient temperature and medium temperature	Gas:	T3, T4: -10 ≤ Ta ≤ +60
	Dust:	-10 ≤ Ta ≤ +60
Supply voltage	[V]	24 DC ±10%
Current consumption	[mA]	≤ 35
Switching current	[mA]	≤ 200
Start-up time typ.	[s]	20
Reaction time typ.	[s]	< 5
Compressive strength	[bar]	1
Housing material		AISI 316 Ti, PBT-GF30, PUR, ceramic Al <sub>2</sub> O <sub>3</sub>
Display flow		three-colour-illuminated dot red/yellow/green
Protection	[EN 60529]	IP 67
Connection		2 m PUR-cable 3x0.5 mm <sup>2</sup>
		



**Ex**-Compact model | Device category 3G and 3D

**Ex**-Device category 3G  
Installation in Zone 2 (gas)

**Ex**-Device category 3D  
Installation in Zone 22 (dust)

DC 24 V

Analog output



Design	M18x1	
<p><i>Dimensions</i></p>		
Detection range	[m/s]	gaseous media 0.5...20
Sensor length L	[mm]	80
Output		 4...20 mA
ID-No.		P11421
Type		LC 518 GA-Ex22
Ex area of use		Gas: Zone 2 / Dust: Zone 22
Certificate of conformity		EGE 20.0010 X
Ex marking	Gas:	<b>Ex</b> II 3 G Ex ic mc IIC T4...T3 Gc
	Dust:	<b>Ex</b> II 3 D Ex ic mc IIIC T135 °C Dc
Ambient temperature and medium temperature	Gas:	T3, T4: -10 ≤ Ta ≤ +60
	Dust:	-10 ≤ Ta ≤ +60
Supply voltage	[V]	24 DC ±10%
Current consumption	[mA]	≤35
Current output	[mA]	4...20
Start-up time typ.	[s]	20
Reaction time typ.	[s]	<5
Compressive strength	[bar]	1
Housing material		AISI 316 Ti, PBT-GF30, PUR, ceramic Al <sub>2</sub> O <sub>3</sub>
Display flow		two-colour-illuminated dot red/green
Protection	[EN 60529]	IP 67
Connection		2 m PUR-cable 3x0.5 mm <sup>2</sup>



**Ex-Compact model** | Device category 3G and 3D

**Ex-Device category 3G**  
Installation in Zone 2 (gas)

**Ex-Device category 3D**  
Installation in Zone 22 (dust)

DC 24 V

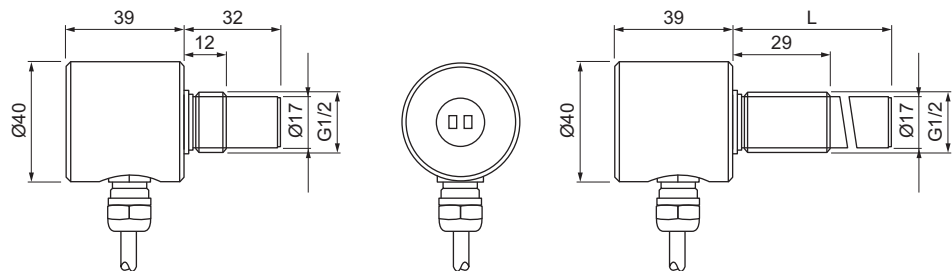
PNP output



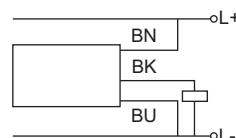
**Design**

**G1/2**

**Dimensions**



Detection range	[m/s]	gaseous media 0.5...20			
Sensor length L	[mm]	32	49	101	151
Output		 PNP			
ID-No.		<b>P11405</b>	<b>P11406</b>	<b>P11407</b>	<b>P11408</b>
Type		LC 521 GSP-Ex22	LC 521/1 GSP-Ex22	LC 521/2 GSP-Ex22	LC 521/3 GSP-Ex22
Ex area of use		Gas: Zone 2 / Dust: Zone 22			
Certificate of conformity		EGE 20.0010 X			
Ex marking		Gas:	II 3 G Ex ic mc IIC T4...T3 Gc		
		Dust:	II 3 D Ex ic mc IIIC T135 °C Dc		
Ambient temperature and medium temperature	[°C]	Gas:	T3, T4: -10 ≤ Ta ≤ +60		
		Dust:	-10 ≤ Ta ≤ +60		
Supply voltage	[V]	24 DC ±10%			
Current consumption	[mA]	≤ 35			
Switching current	[mA]	≤ 200			
Start-up time typ.	[s]	20			
Reaction time typ.	[s]	< 5			
Compressive strength	[bar]	1			
Housing material		AISI 316 Ti, PBT-GF30, PUR, ceramic AL <sub>2</sub> O <sub>3</sub>			
Display flow		three-colour-illuminated dot red/yellow/green			
Protection	[EN 60529]	IP 67			
Connection		2 m PUR-cable 3x0.5 mm <sup>2</sup>			







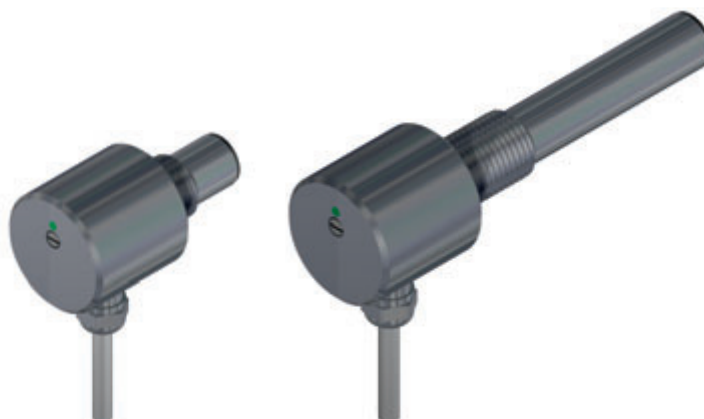
**Ex**-Compact model | Device category 3G and 3D

**Ex**-Device category 3G  
Installation in Zone 2 (gas)

**Ex**-Device category 3D  
Installation in Zone 22 (dust)

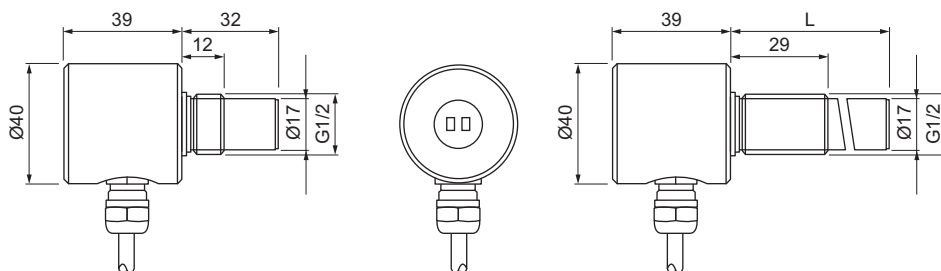
DC 24 V

Analog output

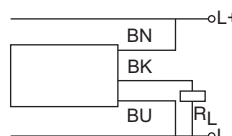


**Design** **G1/2**

**Dimensions**



Detection range	[m/s]	gaseous media 0.5...20			
Sensor length L	[mm]	32	49	101	151
Output		 4...20 mA			
ID-No.		<b>P11422</b>	<b>P11423</b>	<b>P11424</b>	<b>P11425</b>
Type		LC 521 GA-Ex22	LC 521/1 GA-Ex22	LC 521/2 GA-Ex22	LC 521/3 GA-Ex22
Ex area of use		Gas: Zone 2 / Dust: Zone 22			
Certificate of conformity		EGE 20.0010 X			
Ex marking		Gas:	Ex II 3 G Ex ic mc IIC T4...T3 Gc		
		Dust:	Ex II 3 D Ex ic mc IIIC T135 °C Dc		
Ambient temperature and medium temperature	[°C]	Gas:	T3, T4: -10 ≤ Ta ≤ +60		
		Dust:	-10 ≤ Ta ≤ +60		
Supply voltage	[V]	24 DC ±10%			
Current consumption	[mA]	≤ 35			
Current output	[mA]	4...20			
Start-up time typ.	[s]	20			
Reaction time typ.	[s]	< 5			
Compressive strength	[bar]	1			
Housing material		AISI 316 Ti, PBT-GF30, PUR, ceramic Al <sub>2</sub> O <sub>3</sub>			
Display flow		two-colour-illuminated dot red/green			
Protection	[EN 60529]	IP 67			
Connection		2 m PUR-cable 3x0.5 mm <sup>2</sup>			





**Ex**-Junction box | Device category 2G and 2D

For the connection of supply and signal lines in explosion hazardous areas of zone 1 and zone 21

Clamp fastening



Design	GK E...		
<p><b>Dimensions</b></p>			
<b>ID-No.</b>	Z01222	Z01232	Z01246
<b>Type</b>	GK E 060 K M	GK E 080 K M	GK E 100 K M
<b>Number of clamps</b>	4	2 x 4	3 x 4
<b>Dimensions (BxTxH) [mm]</b>	58x64x36	98x64x36	150x64x36
<b>Ignition protection type</b>	Gas: increased safety		
<b>Ex marking</b>	Dust: protection through enclosure		
	Gas: $\text{Ex II 2G Ex eb IIC T6 Gb}$		
	Dust: $\text{Ex II 2D Ex tb IIIC T 80 °C Db}$		
<b>Certificate No.</b>	TÜV 16 ATEX 152979 X		
<b>Ambient temperature [°C]</b>	Gas: T3, T4, T5, T6: $-20 \leq T_a \leq +75$		
<b>Voltage [V]</b>	Dust: $-20 \leq T_a \leq +75$		
<b>Current [A]</b>	$U_m \leq 275$		
<b>Type of terminal</b>	$I_m \leq 2$		
<b>Rated cross-section</b>	terminal with no screws		
<b>Clamping range of cable gland [mm]</b>	„e+t“ single wire: 0.20...2.5 mm <sup>2</sup> / flexible: 0.20...2.5 mm <sup>2</sup>		
	flexible: 0.20...2.5 mm <sup>2</sup> (with wire end ferrule)		
<b>Material</b>	5.0...10.0		
<b>Protection [EN 60529]</b>	2.0...6.0 (with reduction insert RDE 16)		
<b>Connection</b>	housing: aluminium powder coated / cable gland: Br-Ni / PA / EPDM		
	IP 65		
	terminal compartment		

Note:

The Ex-junction box type GK E... is designed for the connection of non-intrinsically safe circuits in explosion-hazardous areas of zone 1 and zone 21. Outside of the housing, the lines must be installed permanently; further provisions must be observed if required.

Additional housings, additional terminals and plastic cable glands are available on request.

Accessories	reduction insert RDE 16 (part of delivery)
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**Ex-Junction box** | Device category 2G and 2D

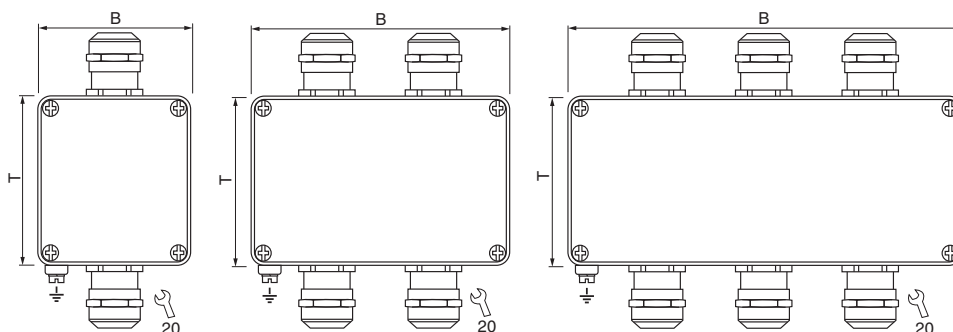
For the connection of supply and signal lines in explosion hazardous areas of zone 1 and zone 21

Clamp fastening



**Design** **GK I...**

*Dimensions*



ID-No.	Z01224	Z01234	Z01248
Type	GK I 060 K M	GK I 080 K M	GK I 100 K M
Number of clamps	4	2 x 4	3 x 4
Dimensions (BxTxH) [mm]	58x64x36	98x64x36	150x64x36
Ignition protection type	Gas: intrinsic safety Dust: intrinsic safety		
Ex marking	Gas: Ex II 2G Ex ib/ia IIC T6 Gb Dust: Ex II 2D Ex ib/ia IIIC T80 °C Db		
Certificate No.	TÜV 16 ATEX 152979 X		
Ambient temperature [°C]	Gas: T3, T4, T5, T6: -20 ≤ Ta ≤ +75 Dust: -20 ≤ Ta ≤ +75		
Voltage [V]	Ui = 90		
Current [A]	Ii = 2.0		
Type of terminal	terminal with no screws		
Rated cross-section	„I“ single wire: 0.08...2.5 mm <sup>2</sup> / flexible: 0.08...2.5 mm <sup>2</sup> flexible: 0.08...2.5 mm <sup>2</sup> (with wire end ferrule)		
Clamping range of cable gland [mm]	5.0...10.0 2.0...6.0 (with reduction insert RDE 16)		
Material	housing: aluminium powder coated / cable gland: Br-Ni / PA / EPDM		
Protection [EN 60529]	IP 65		
Connection	terminal compartment		

Note:

The Ex-junction box type GK I... is designed for the connection of intrinsically safe circuits in explosion-hazardous areas of zone 1 and zone 21. Outside of the housing, the lines must be installed permanently; further provisions must be observed if required.

Additional housings, additional terminals and plastic cable glands T5 are available on request.

Accessories	reduction insert RDE 16 (part of delivery)
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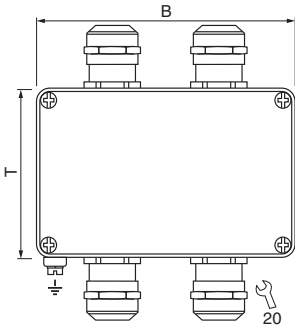
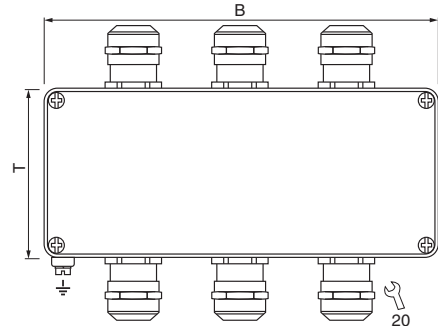


**Ex**-Junction box | Device category 2G and 2D

For the connection of supply and signal lines in explosion hazardous areas of zone 1 and zone 21

Clamp fastening



Design	GK EI...	GK EEI...	GK EII...
<p><i>Dimensions</i></p> 			
ID-No.	Z01236	Z01250	Z01252
Type	GK EI 080 K M	GK EEI 100 K M	GK EII 100 K M
Number of clamps	4 / 4	4 + 4 / 4	4 / 4 + 4
Dimensions (BxTxH) [mm]	98x64x36	150x64x36	150x64x36
Ignition protection type	Gas: increased safety / intrinsic safety		
Ex marking	Dust: protection through enclosure / intrinsic safety		
	Gas: $\text{Ex II 2G Ex eb ib/ia IIC T6 Gb}$		
Certificate No.	Dust: $\text{Ex II 2D Ex tb ib/ia IIIC T 80 °C Db}$		
	TÜV 16 ATEX 152979 X		
Ambient temperature [°C]	Gas: T3, T4, T5, T6: $-20 \leq T_a \leq +75$		
	Dust: $-20 \leq T_a \leq +75$		
Voltage [V]	$U_m \leq 275 / U_i = 90$		
Current [A]	$I_m \leq 2 / I_i = 2.0$		
Type of terminal	terminal with no screws		
Rated cross-section	„i“ single wire: 0.08...2.5 mm <sup>2</sup> / flexible: 0.08...2.5 mm <sup>2</sup>		
	flexible: 0.08...2.5 mm <sup>2</sup> (with wire end ferrule)		
Clamping range of cable gland [mm]	„e+t“ single wire: 0.20...2.5 mm <sup>2</sup> / flexible: 0.20...2.5 mm <sup>2</sup>		
	flexible: 0.20...2.5 mm <sup>2</sup> (with wire end ferrule)		
Material	housing: aluminium powder coated / cable gland: Br-Ni / PA / EPDM		
Protection [EN 60529]	IP 65		
Connection	terminal compartment		

Note:

The Ex-junction box type GK... is designed for the connection of intrinsically safe and / or non-intrinsically safe circuits in explosion-hazardous areas of zone 1 and zone 21. Outside of the housing, the lines must be installed permanently; further provisions must be observed if required.

Additional housings, additional terminals and plastic cable glands are available on request.

Zubehör	Reduziereinsatz RDE 16 (im Lieferumfang enthalten)
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# Accessories | IO-Link-Master

Parametrization of IO-Link-devices

Version 1.1 - Universally usable

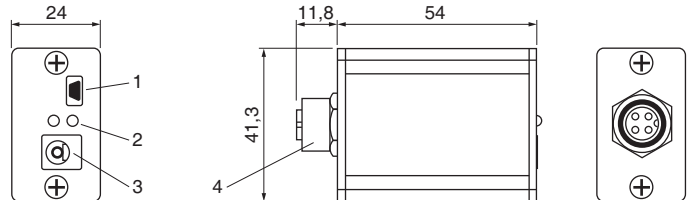
Easy configurable software



Design	USB
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**Dimensions**

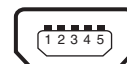
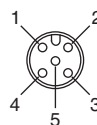
- 1: mini USB
- 2: LED operating state / fault display
- 3: 24 V DC Ø 5.5/2.1 mm
- 4: M12 type A connector



Application area	parametrization of devices with IO-Link-functions and monitoring of process data
Communications protocol	COM 1 (4.8 kBit/s), COM 2 (38.4 kBit/s), COM 3 (230 kBit/s)
Related software	Port and Device Configuration Tool 1
Output	
ID-No.	<b>Z01216</b>
Type	IO-Link-USB-Master-Set v1.1
Input voltage [V]	USB: 5 DC / external power supply: 24 DC (EN 60950)
Input current [mA]	USB: < 500 / external power supply: < 600
Output voltage [V]	USB: 24 DC / external power supply: see input voltage
Output current [mA]	USB: < 65 / external power supply: < 500
LED displays	
Green	continuous: Master ready for operation, flashes: IO-Link-communication active
Red	continuous and green LED off: fault
Material	aluminium, eloxed
Protection [EN 60529]	IP 20
Connection	M12 connector / type A / socket

1Download of iqPDCT-software from [www.iq2-development.de/downloads](http://www.iq2-development.de/downloads).

- 1: +24 V
- 2: not used
- 3: GND
- 4: IO-Link: CH1 (C/Q)
- 5: not used



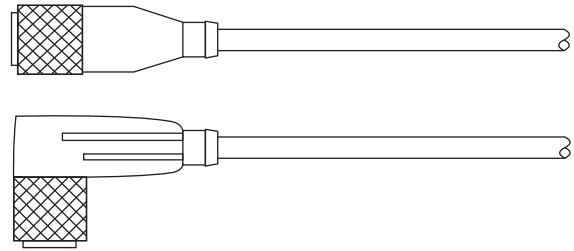
- 1: +5 V
- 2: D-
- 3: D+
- 4: not used
- 5: GND

Accessories (incl. at delivery)	USB-connecting cable, M12-sensor-connecting cable 2 m, power supply 230 V AC / 24 V DC
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# Accessories | M12 connector

Finished cable plug housing  
Self locking screw plug  
Protection IP 67

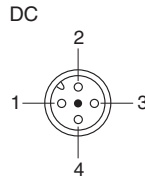
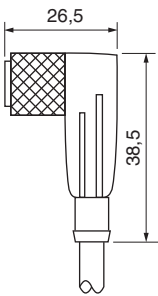
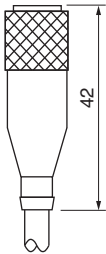


## Cable plug housing

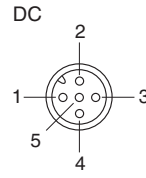
## Pin-assignment

straight

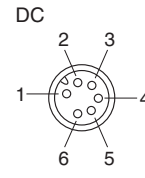
angular



- |               |               |
|---------------|---------------|
| <b>3-wire</b> | <b>4-wire</b> |
| 1: BN         | 1: BN         |
| 2: -          | 2: WH         |
| 3: BU         | 3: BU         |
| 4: BK         | 4: BK         |



- |               |
|---------------|
| <b>5-wire</b> |
| 1: BN         |
| 2: WH         |
| 3: BU         |
| 4: BK         |
| 5: GY         |



- |               |
|---------------|
| <b>6-wire</b> |
| 1: BN         |
| 2: WH         |
| 3: BU         |
| 4: BK         |
| 5: GY         |
| 6: PK         |

SLG...

SLW...

DC

TYPE	ID-NO.	DESIGN
SLG 3-2	Z01076	Cable plug housing straight, 2 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A
SLG 3-5	Z01077	Cable plug housing straight, 5 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A
SLW 3-2	Z01078	Cable plug housing angular, 2 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A
SLW 3-5	Z01079	Cable plug housing angular, 5 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A
SLW 3-2-LED	Z00052	Cable plug housing angular, 2 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A PNP with LED
SLG 4-2	Z00445	Cable plug housing straight, 2 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A
SLG 4-5	Z00449	Cable plug housing straight, 5 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A
SLW 4-2	Z00446	Cable plug housing angular, 2 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A
SLW 4-5	Z00450	Cable plug housing angular, 5 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A
SLW 4-2-LED	Z01157	Cable plug housing angular, 2 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A PNP with LED
SLG 5-2	Z01150	Cable plug housing straight, 2 m cable 5x0.34 mm <sup>2</sup> max. 60 V / 2 A
SLW 5-2	Z01151	Cable plug housing angular, 2 m cable 5x0.34 mm <sup>2</sup> max. 60 V / 2 A
SLG 6-2	Z01197	Cable plug housing straight, 2 m cable 6x0.25 mm <sup>2</sup> max. 36 V / 2 A
SLW 6-2	Z01198	Cable plug housing angular, 2 m cable 6x0.25 mm <sup>2</sup> max. 36 V / 2 A

### DATA

Thread	M12x1	Contact resistance	≤ 5 mΩ
Material	PVC	Insulation resistance	>10 <sup>9</sup>
Protection	IP 67	Testing voltage	2.0 KV eff. / 5 and 6 pol. 1.5 KV eff.
Temperature range	-25...+80 °C		

### Note:

Sensors with NC output are connected to 4 pole cable plug housings. In this case, the break output is connected to the white lead (connection 2).

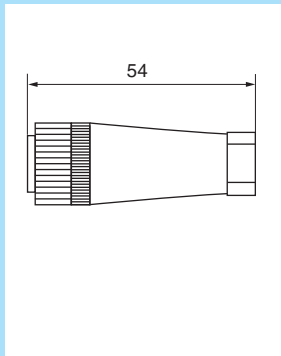


## Accessories | M12 connector

Cable plug user-assembled  
Great variety of cables  
Protection IP 67

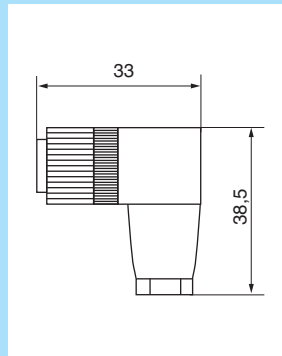


**Cable plug housing straight**

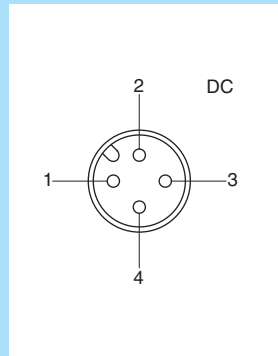


**SBG...**

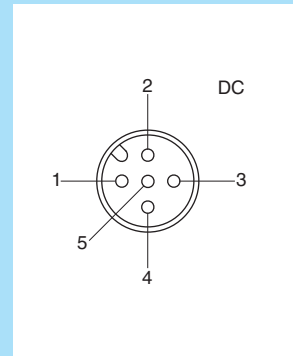
**Cable plug housing angular**



**SBW...**



**SBG.../SBW...**



**SBG 5.../SBW 5...**

TYPE	ID-NO.	DESIGN
SBG-DC	Z01060	DC-Cable plug housing M12x1, straight 4-pol user assembled 30 VDC, 3 A
SBW-DC	Z00038	DC-Cable plug housing M12x1, angular 4-pol user assembled 30 VDC, 3 A
SBG 5-DC	Z01146	DC-Cable plug housing M12x1, straight 5-pol user assembled 30 VDC, 1 A
SBW 5-DC	Z01147	DC-Cable plug housing M12x1, angular 5-pol user assembled 30 VDC, 1 A

**PREFERRED CABLE**

PVC 205	Z01061	PVC-cable 2x0.5 mm <sup>2</sup>	Lead colour coding: BN/BU
PVC 205B	Z01062	PVC-cable 2x0.5 mm <sup>2</sup> , blue cable covering	Lead colour coding: BN/BU
PVC 305	Z01063	PVC-cable 3x0.5 mm <sup>2</sup>	Lead colour coding: BN/BU/BK
PVC 434	Z01066	PVC-cable 4x0.34 mm <sup>2</sup>	Lead colour coding: BN/BU/BK/WH
PVC 405	Z01067	PVC-cable 4x0.5 mm <sup>2</sup>	Lead colour coding: BN/BU/BK/WH
PVC 505	Z01116	PVC-cable 5x0.5 mm <sup>2</sup>	Lead colour coding: BN/BU/BK/WH/GY
PUR 425S	Z01069	PUR-cable 4x0.25 mm <sup>2</sup> , shielded	Lead colour coding: BN/BU/BK/WH
PUR 425BS	Z01070	PUR-cable 4x0.25 mm <sup>2</sup> , shielded, blue cable covering	Lead colour coding: BN/BU/BK/WH
	Z01074	Finishing of cable plug housing	
	Z01075	Finishing of cable plug housing and cable extremity	

**Note**

Different cables on request.



Code: BK = black BN = brown BU = blue GN = green YE = yellow GY = grey PK = pink WH = white



TYPE	ID-NO.	MATERIAL/SHEAT	Ø <sub>A</sub> [mm]*	WIRE SPECIFICATION	COLOUR
PVC205	Z01061	PVC, grey	5.2	2x0.5 mm <sup>2</sup>	BU, BN
PVC205B	Z01062	PVC, blue	5.1	2x0.5 mm <sup>2</sup>	BU, BN
PVC275	Z01086	PVC, grey	6.0	2x0.75 mm <sup>2</sup>	BU, BN
PVC275BS	Z01108	PVC, blue	6.3	2x0.75 mm <sup>2</sup> shielded	numbered cable
PVC334	Z01109	PVC, grey	4.5	3x0.34 mm <sup>2</sup>	BU, BN, BK
PVC305E	Z01064	PVC, grey	5.2	3x0.5 mm <sup>2</sup>	BU, BN, GN/YE
PVC305	Z01063	PVC, grey	5.2	3x0.5 mm <sup>2</sup>	BU, BN, BK
PVC305B	Z01167	PVC, blue	5.2	3x0.5 mm <sup>2</sup>	BU, BN, BK
PVC375	Z01065	PVC, grey	6.0	3x0.75 mm <sup>2</sup>	numbered cable
PVC375E	Z01111	PVC, grey	6.0	3x0.75 mm <sup>2</sup>	BU, BN,GN/YE
PVC425	Z01110	PVC, grey	4.3	4x0.25 mm <sup>2</sup>	BU, BN, BK, WH
PVC434	Z01066	PVC, grey	4.5	4x0.34 mm <sup>2</sup>	BU, BN, BK, WH
PVC405	Z01067	PVC, grey	5.5	4x0.5 mm <sup>2</sup>	BU, BN, BK, WH
PVC475E	Z01113	PVC, grey	6.5	4x0.75 mm <sup>2</sup>	BU, BN, BK, GN/YE
PVC475BS	Z01114	PVC, blue	7.3	4x0.75 mm <sup>2</sup> shielded	numbered cable
PVC505	Z01116	PVC, grey	5.8	5x0.5 mm <sup>2</sup>	BU, BN, WH, BK, GY
PVC705	Z01117	PVC, grey	6.6	7x0.5 mm <sup>2</sup>	BU, BN, WH, GN/YE, GY, PK
PUR334	Z01156	PUR, grey	5.0	3x0.34 mm <sup>2</sup>	BU, BN, BK
PUR375	Z01068	PUR, black	6.0	3x0.75 mm <sup>2</sup> -40°C	BU, BN, BK
PUR425S	Z01069	PUR, grey	5.0	4x0.25 mm <sup>2</sup> shielded	BU, BN, WH, BK
PUR425BS	Z01070	PUR, blue	5.0	4x0.25 mm <sup>2</sup> shielded	BU, BN, WH, BK
PUR405	Z01112	PUR, black	5.0	4x0.5 mm <sup>2</sup>	BU, BN, WH, BK
PUR405BS	Z01173	PUR, blue	6.2	4x0.5 mm <sup>2</sup> shielded	BU, BN, WH, BK
PUR475SE	Z01118	PUR, grey	9.0	4x0.75 mm <sup>2</sup> shielded	numbered cable
PUR410E	Z01119	PUR, orange	8.0	4x1.0 mm <sup>2</sup>	BU, BN, BK, GN/YE
FEP375S	Z01126	FEP, red	5.0	3x0.75 mm <sup>2</sup> shielded	BU, BN, BK
FEP334	Z01071	FEP, red	3.8	3x0.34 mm <sup>2</sup>	BU, BN, BK
FEP425S	Z01073	FEP, red	4.1	4x0.25 mm <sup>2</sup> shielded	BU, BN, BK, WH
FEP425	Z01072	FEP, red	3.7	4x0.25 mm <sup>2</sup>	BU, BN, BK, WH
FEP425BS	Z01125	FEP, blue	4.1	4x0.25 mm <sup>2</sup> shielded	BU, BN, BK, WH
FEP375	Z01165	FEP, red	4.2	3x0.75 mm <sup>2</sup>	BU, BN, GN/YE
Silikon375E	Z01121	Silicone, red	6.0	3x0.75 mm <sup>2</sup>	BU, BN, GN/YE
Silikon475E	Z01122	Silicone, red	6.3	4x0.75 mm <sup>2</sup>	BU, BN, BK, GN/YE
Silikon475SE	Z01115	Silicone, red	8.8	4x0.75 mm <sup>2</sup> shielded	BU, BN, BK, GN/YE
Silikon305	Z01143	Silicone, red	5.5	3x0.5 mm <sup>2</sup>	BU, BN, BK
PVC705SE	Z01123	PVC-transparent	9.2	7x0.5 mm <sup>2</sup> shielded	numbered cable, GN/YE

\*Tolerance of diameter ±0,4 mm

Code: BK = black BN = brown BU = blue GN = green YE = yellow GY = grey PK = pink WH = white





Accessories | Product section 1

TYPE	ID-NO.	DIMENSIONS	DESIGN
Flange - Ø 20	Z01106		Plastic - flange with drilled hole Ø 20 mm  for sensors type LN 520
Flange DN25/PN40	Z01001		Flange AISI 316 Ti (1.4571) EN 1092-1/05 A (DIN 2527) with central thread G1/2  for sensors type ST... with G1/2
A501	Z01033		Thread sleeve of brass, nickel-plated L=50 mm, G1  for sensors type LN...
A502	Z01034		Thread sleeve of brass, nickel-plated L=50 mm, G1  for sensors type LN...
A503	Z01035		Welding sleeve of FE 360 B (1.0037), L=50 mm, G1  for sensors type LN...



Accessories | Product section 1

TYPE	ID-NO.	DIMENSIONS	DESIGN
SIA G1/4 - 1/4 - 1/4	Z01018		<p>Adapter for G1/4-sensors with G1/4-pipe connections</p> <p>Material: AISI 316 Ti                      Sensors: STK 412...</p> <p>Massflow down to 10 ml/min</p> <p>(additional models on request)</p>
SDA-SCS-G1/4	Z01200 L = 39 mm		<p>Screw-in adapter G1/4 for flow sensors SCS, SNS, SNTS and ST418</p> <p>Material: AISI 316 Ti</p>
SDA-SCS-G1/2	Z01201 L = 30 mm		<p>Screw-in adapter G1/2 for flow sensors SCS, SNS, SNTS and ST418</p> <p>Material: AISI 316 Ti</p>
SDA-SCS-G1/2-L37	Z01208 L = 37 mm		
SDA G1/4-Ø10-L050	Z01175		<p>Adapter G1/4 for flow sensors inline-digital display SDN 5.../1..., SDV 652..., SDI 852/1...</p>
SDA G1/2-Ø18-L068	Z01176		<p>Adapter G1/2 for flow sensors inline-digital display SDN 552/3...</p>

## Level sensors

- For level monitoring  $-230...+230\text{ }^{\circ}\text{C}$
- Steam proof at a pressure of up to 30 bar
- For hot motor oil
- For liquid nitrogen
- For chemically aggressive media

## Ultrasonic sensors

- Switching distance up to 6000 mm
- Level monitoring
- Watertight housing
- Teach-in functions

## Pressure sensors

- Monitoring in pipes and containers
- Pressure up to 16 bar
- Level up to 10 m ( $\pm 1\text{ cm}$ )
- Compact models
- Programmable

## Temperature sensors

- Monitoring in pipes and containers
- Temperature  $-40...+120\text{ }^{\circ}\text{C}$  ( $\pm 0,3\text{ }^{\circ}\text{C}$ )
- Pressure up to 100 bar
- Compact models
- Multi use output NO/NC + analog

## Infrared detectors

- Measurement of temperature
- Monitoring of hot media
- Position control

## Metal detectors

- Detection of metal parts
- For harsh environment
- Large sensing range up to 400 mm
- Monitoring of bulk materials
- Machine protection



# Sales partners, wholesalers and representatives



ARGENTINA, Lomas de Zamora  
AUSTRALIA, Warabrook NSW 2304  
AUSTRIA, Wien  
BELGIUM, Aalst  
BRAZIL, Sao Paulo  
CANADA, Oldcastle – Ontario  
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USA, Gastonia  
VIETNAM, Ho Chi Minh City



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**We look forward to your enquiry.  
Please contact us!**

EGE-Elektronik  
Spezial-Sensoren GmbH  
Ravensberg 34 • 24214 Gettorf • Germany  
T +49 (0) 4346-41580 F +49 (0) 4346-5658  
[info@ege-elektronik.com](mailto:info@ege-elektronik.com)  
**[ege-elektronik.com](http://ege-elektronik.com)**

