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Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
Владимир (4922)49-43-18  
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Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89  
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Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48

Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4966)23-41-49  
Кострома (4942)77-07-48  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курган (3522)50-90-47  
Курск (4712)77-13-04  
Липецк (4742)52-20-81  
Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новосибирск (383)227-86-73  
Ноябрьск (3496)41-32-12

Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
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Петрозаводск (8142)55-98-37  
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Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35

Сыктывкар (8212)25-95-17  
Тамбов (4752)50-40-97  
Тверь (4822)63-31-35  
Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Улан-Удэ (3012)59-97-51  
Ульяновск (8422)24-23-59  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
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## СОЕДИНЕНИЯ ДЛЯ ДАТЧИКОВ

(АКСЕССУАРЫ)

КРН, КРВ, КРХ



## 1.1 Introduction

The global food industry uses a large variety of different types of hygienic process connections. In order to achieve the correct connection for all process, the adapters described in this document have to be used.

## 1.2 Description

The hygienic process connections can be used on devices for level, temperature and conductivity sensors for installation in pipelines or tanks. Adapters must be selected according to the individual thread of the measuring device; which is either 1/2" (G1/2h) or 1" (G1h) hygienic.

The special feature about this sealing concept is that the measuring device and the adapter are put together without any gasket in between.

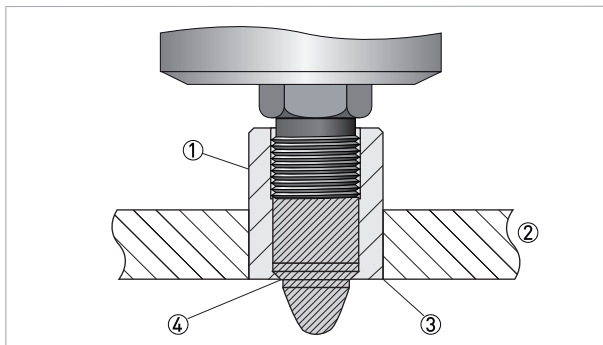


Figure 1-1: Schematic of a OPTISWITCH in a weld-in adapter

- 1 Weld-in sleeve
- 2 Tank or pipe wall
- 3 Full welded seal to wall
- 4 Conical seal

O-rings and gaskets are maintenance parts which have to be replaced after a certain time. Typically after 3000...5000 working hours, depending on the application, a replacement of the gasket is needed.

Any maintenance of the adapter principle is therefore completely unnecessary. All this in a hygienic version, free of dead spaces and crevices and the accepted material conformity to EC or FDA guidelines.

To make sure that the cable gland or the M12 plug of the measuring device is looking downwards after screwing it into the adapter, the weld-in adapters are marked with either an arrow or a 3-A logo. Make sure that the 3-A mark/arrow looks upwards during welding of the adapter into the tank or the pipe.

*The proper hygienic installation of the devices is only possible with the correct adapters. So only our adapters should be used for a correct installation of our devices!*

## 1.3 Overview of process adapters

Connection	Connection type	Sensor connection	Model code	Page
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## Weld end connection

Weld connections	Industrial weld-in sleeve	G1/2	KPW1-721	13
Weld connections	Hygienic weld-in sleeve for tanks	G1/2	KPW3-321	13
Weld connections	Hygienic with pipe extrusion DN65...100	G1/2	KPW2-327	13
Weld connections	Hygienic with pipe extrusion DN25...50	G1/2	KPW2-326	13
Weld connections	Hygienic angular mounting (ball)	G1/2	KPW2-324	14
Weld connections	Hygienic thin wall tanks	G1/2	KPW3-322	14
Weld connections	Hygienic for tanks	G1	KPW2-521	14

## Threaded connections

Threaded connections	Adapter E+H FTL G3/4	G1/2	KPH1-32BA	15
Threaded connections	Adapter E+H FTL G1	G1/2	KPH1-32CB	15
Threaded connections	Adapter E+H Rd 52	G1/2	KPH1-32A1	15
Threaded connections	Adapter Vegaswing G3/4	G1/2	KPH1-32BC	16
Threaded connections	Adapter Vegaswing G1	G1/2	KPH1-32CD	16
Threaded connections	DIN 11851 DN 25	G1/2	KPH3-3221	9
Threaded connections	DIN 11851 DN 40	G1/2	KPH3-3224	9
Threaded connections	DIN 11851 DN 50	G1/2	KPH3-3225	9
Threaded connections	DIN 11864-1 Form A DN 40	G1/2	KPH3-3254	11
Threaded connections	DIN 11864-1 Form A DN 50	G1/2	KPH3-3255	11
Threaded connections	DIN 11851 DN 40	G1	KPH3-5224	10
Threaded connections	DIN 11851 DN 50	G1	KPH3-5225	10
Threaded connections	DIN 11851 DN 65	G1	KPH3-5227	10
Threaded connections	DIN 11864-1 Form A DN 40	G1	KPH3-5254	12
Threaded connections	DIN 11864-1 Form A DN 50	G1	KPH3-5255	12
Threaded connections	SMS 1145 51mm	G1/2	KPH1-3236	8
Threaded connections	SMS 1145 38mm	G1	KPH1-5233	8
Threaded connections	SMS 1145 51mm	G1	KPH1-5236	8

## Clamp connections




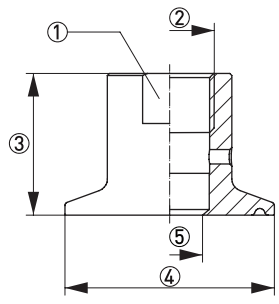
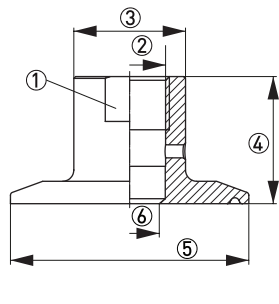
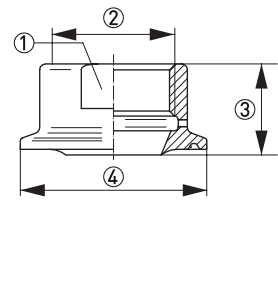
Clamp connections	DIN 32676 DN25/40 ISO 2852 25/38mm and Tri	G1/2	KPH3-3213	6
Clamp connections	DIN 32676 DN50 ISO 2852 51mm and Tri	G1/2	KPH3-3216	6
Clamp connections	DIN 32676 DN25/40 ISO 2852 25/38mm and Tri	G1	KPH1-5213	6
Clamp connections	DIN 32676 DN50 ISO 2852 51mm and Tri	G1	KPH1-5216	7
Clamp connections	VARIVENT™ type N	G1/2	KPH3-324E	7
Clamp connections	VARIVENT™ type N	G1	KPH1-524E	7




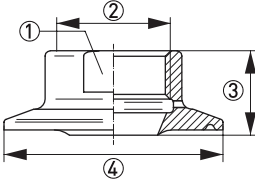
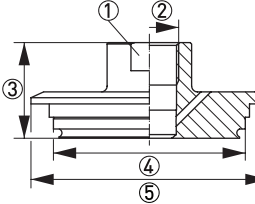
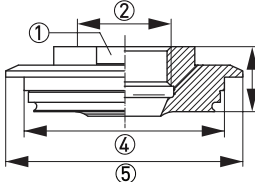
Connection	Connection type	Sensor connection	Model code	Page
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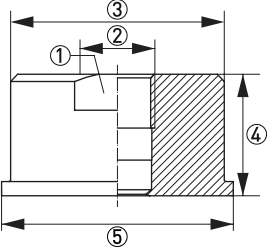
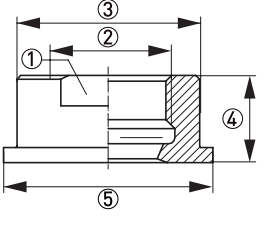
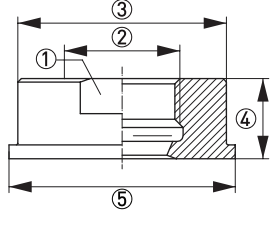
## Accessories




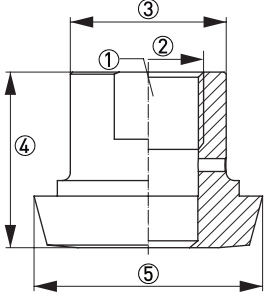
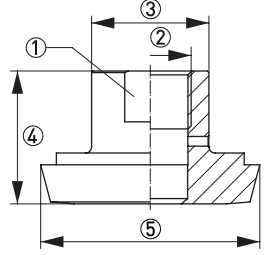
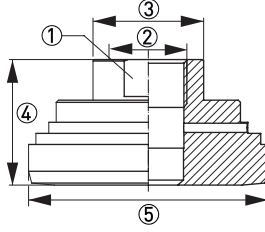
	Blanking plug	G1/2	KPX5-32	17	
	Blanking plug	G1	KPX5-62	17	
	Closure clamp ISO 2852	38	KPX4-310	19	
		51	KPX4-610	19	
	Gaskets for ISO and DIN clamps				
	Ring nut DIN 11851	DN25	KPX4-140	19	
	Ring nut DIN 11851	DN40	KPX4-440	19	
	Ring nut DIN 11851	DN50	KPX4-540	19	
	Ring nut DIN 11851	DN65	KPX4-740	19	
	Ring nut SMS 1145	38	KPX4-330	19	
	Ring nut SMS 1145	51	KPX4-630	19	
	Welding mandrel (for welding connection)	G1/2	KPX6-36	18	
	Welding mandrel (for welding connection)	G1	KPX6-66	18	

1.4 Technical data of hygienic process adapters and accessories




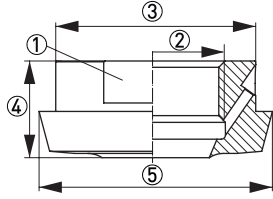
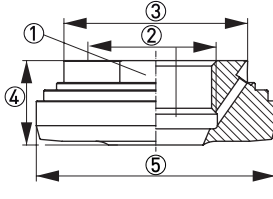
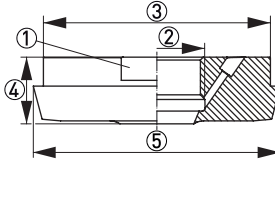
Description	Hygienic clamp adapters according to ISO 2852, DIN 32676 and Tri Clover	Hygienic clamp adapters according to ISO 2852, DIN 32676 and Tri Clover	
			
Type / order code	KPH3-3213	KPH3-3216	KPH1-5213
Process connection	1 1/2" Tri clamp DN25/40 DIN 32676 25/38mm	2" Tri clamp DN50 DIN 32676 51mm	1 1/2" Tri clamp DN25/40 DIN 32676 25/38mm
Device connection	G1/2B hygienic	G1/2B hygienic	G1B hygienic
Device series	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600	OPTISYS IND 8100 BM 500
Material	AISI 316L / 1.4404	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [µm]	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	40 bar / 580 psi	40 bar / 580 psi	40 bar / 580 psi
Approval	3-A, EHEDG	3-A, EHEDG	3-A, EHEDG
EHEDG for ISO and DIN clamps only in combination with seals from Combifit Int'l BV, The Netherlands.			
Order code Clamp ring DN38, DN51	KPX4-310	KPX4-610	KPX4-310
Order code Gasket EPDM (3-A, FDA) EPDM (EHEDG)	KPX3-7232 KPX3-7234	KPX3-7262	KPX3-7232
Drawing / dimensions			
	1 WS27 2 G1/2 3 34 mm / 1.3" 4 Ø50.5 mm / Ø2" 5 Ø15.9 mm / Ø0.6"	1 WS27 2 G1/2 3 Ø30 mm / Ø1.2" 4 34 mm / 1.3" 5 Ø64 mm / Ø2.5" 6 Ø15.9 mm / Ø0.6"	1 WS36 2 G1 3 24.5 mm / 0.96" 4 Ø50.5 mm / Ø2"



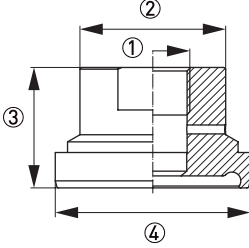
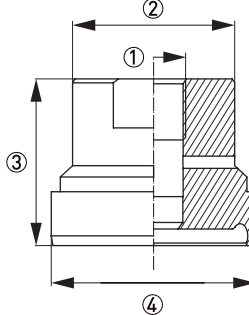
Description	Hygienic clamp adapters according to ISO 2852, DIN 32676 and Tri Clamp	Hygienic VARIVENT® adapters	
			
Type / order code	KPH1-5216	KPH3-324E	KPH1-524E
Process connection	2" Tri clamp DN50 DIN 32676 51mm ISO 2852	VARIVENT® type N	VARIVENT® type N
Device connection	G1B hygienic	G1/2B hygienic	G1B hygienic
Device series	OPTISYS IND 8100 BM 500	OPTISWITCH 6500 / 6600	OPTISYS IND 8100 BM 500
Material	AISI 316L / 1.4404	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [ $\mu\text{m}$ ]	$R_a \leq 0.8$	$R_a \leq 0.8$	$R_a \leq 0.8$
Max. pressure	40 bar / 580 psi	10 bar / 145 psi	10 bar / 145 psi
Approval	3-A, EHEDG  EHEDG for ISO and DIN clamps only in combination with seals from Combifit Int'l BV, The Netherlands.	3-A, EHEDG  -	3-A, EHEDG
Order code Clamp ring	KPX4-610	-	-
Order code Gasket EPDM (3-A, FDA) EPDM (EHEDG)	KPX3-7262	-	-
O-ring	-	KPX2-323	KPX2-323
Drawing / dimensions			
	1 WS36 2 G1 3 24.5 mm / 0.96" 4 $\text{\O}64$ mm / $\text{\O}2.5$ "	1 WS27 2 G1/2 3 34 mm / 1.3" 4 $\text{\O}68$ mm / $\text{\O}2.7$ " 5 $\text{\O}84$ mm / $\text{\O}3.3$ "	1 WS46 2 G1 3 23 mm / 0.9" 4 $\text{\O}71$ mm / $\text{\O}2.8$ " 5 $\text{\O}84$ mm / $\text{\O}3.3$ "



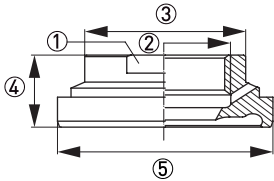
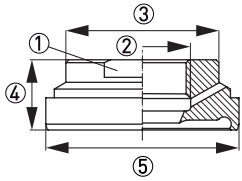
Description	Hygienic adapters according to SMS 1145		
			
Type / order code	KPH1-3236	KPH1-5233	KPH1-5236
Process connection	51mm SMS conical ferrule	38mm SMS conical ferrule	51mm SMS conical ferrule
Device connection	G1/2B hygienic	G1B hygienic	G1B hygienic
Device series	OPTISWITCH 6500 / 6600	OPTISYS IND 8100 BM 500	OPTISYS IND 8100 BM 500
Material	AISI 316L / 1.4404	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [ $\mu\text{m}$ ]	$R_a \leq 0.8$	$R_a \leq 0.8$	$R_a \leq 0.8$
Max. pressure	25 bar / 362 psi	40 bar / 580 psi	25 bar / 362 psi
Approval	-	-	-
Order code Union nut SMS	KPX4-630	KPX4-330	KPX4-630
Order code Gasket NBR	KPX3-8160	KPX3-8130	KPX3-8160
Drawing / dimensions			
	1 WS55 2 G1/2 3 $\text{\O}60 \text{ mm} / 2.4''$ 4 $\text{\O}34 \text{ mm} / 1.3''$ 5 $\text{\O}65 \text{ mm} / 2.6''$	1 WS41 2 G1 3 $\text{\O}48 \text{ mm} / 1.9''$ 4 $\text{\O}23 \text{ mm} / 0.9''$ 5 $\text{\O}55 \text{ mm} / 2.2''$	1 WS55 2 G1 3 $\text{\O}60 \text{ mm} / 2.4''$ 4 $\text{\O}23 \text{ mm} / 0.9''$ 5 $\text{\O}65 \text{ mm} / 2.6''$




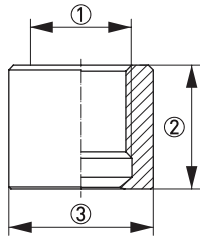
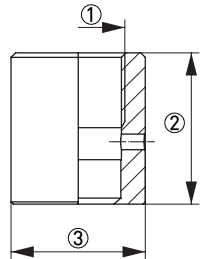
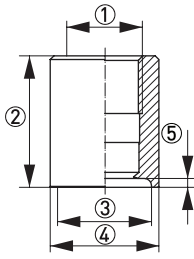
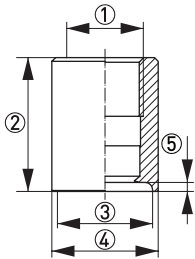
Description	Hygienic adapters according to DIN 11851		
			
Type / order code	KPH3-3221	KPH3-3224	KPH3-3225
Process connection	DN25 conical ferrule	DN40 conical ferrule	DN50 conical ferrule
Device connection	G1/2B hygienic	G1/2B hygienic	G1/2B hygienic
Device series	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600
Material	AISI 316L / 1.4404	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [ $\mu\text{m}$ ]	$R_a \leq 0.8$	$R_a \leq 0.8$	$R_a \leq 0.8$
Max. pressure	40 bar / 580 psi	40 bar / 580 psi	10 bar / 145 psi
Approval	3-A, EHEDG only in combination with special gasket from S.K.S. BV, The Netherlands or ASEPTO-Star K-flex from Kieselmann, Germany.		
Order code Union nut	KPX4-140	KPX4-440	KPX4-540
Order code Gasket	KPX3-9110	KPX3-9140	KPX3-9150
Drawing / dimensions	 <p>           ① WS27            ② G1/2            ③ <math>\varnothing 30 \text{ mm} / 1.2''</math>            ④ <math>\varnothing 34 \text{ mm} / 1.3''</math>            ⑤ <math>\varnothing 44 \text{ mm} / 1.7''</math> </p>	 <p>           ① WS27            ② G1/2            ③ <math>\varnothing 30 \text{ mm} / 1.2''</math>            ④ <math>\varnothing 34 \text{ mm} / 1.3''</math>            ⑤ <math>\varnothing 56 \text{ mm} / 2.2''</math> </p>	 <p>           ① WS27            ② G1/2            ③ <math>\varnothing 30 \text{ mm} / 1.2''</math>            ④ <math>\varnothing 34 \text{ mm} / 1.3''</math>            ⑤ <math>\varnothing 65 \text{ mm} / 2.6''</math> </p>




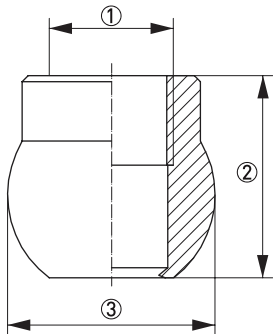
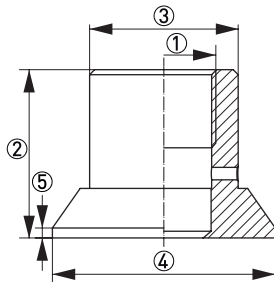
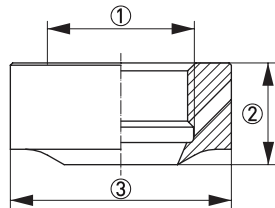





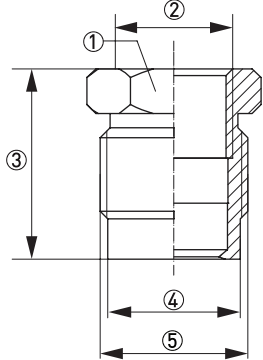
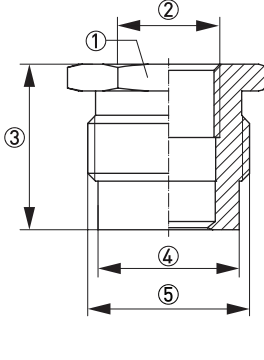
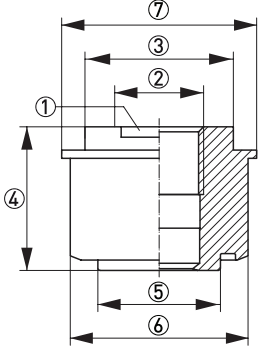
Description	Hygienic adapters according to DIN 11851		
			
Type / order code	KPH3-5224	KPH3-5225	KPH3-5227
Process connection	DN40 conical ferrule	DN50 conical ferrule	DN65 conical ferrule
Device connection	G1B hygienic	G1B hygienic	G1B hygienic
Device series	OPTISYS IND 8100 BM 500	OPTISYS IND 8100 BM 500	OPTISYS IND 8100 BM 500
Material	AISI 316L / 1.4404	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [ $\mu\text{m}$ ]	$R_a \leq 0.8$	$R_a \leq 0.8$	$R_a \leq 0.8$
Max. pressure	40 bar / 580 psi	25 bar / 362 psi	25 bar / 362 psi
Approval	3-A, EHEDG only in combination with special gasket from S.K.S. BV, The Netherlands or ASEPTO-Star K-flex from Kieselmann, Germany.		
Order code Union nut	KPX4-440	KPX4-540	KPX4-740
Order code Gasket NBR	KPX3-9140	KPX3-9150	-
Drawing / dimensions			
	1 WS41 2 G1 3 $\text{\O}48 \text{ mm} / 1.9''$ 4 $\text{\O}23 \text{ mm} / 0.9''$ 5 $\text{\O}56 \text{ mm} / 2.2''$	1 WS46 2 G1 3 $\text{\O}50 \text{ mm} / 1.97''$ 4 $\text{\O}23 \text{ mm} / 0.9''$ 5 $\text{\O}65 \text{ mm} / 2.6''$	1 WS75 2 G1 3 $\text{\O}79 \text{ mm} / 3.1''$ 4 $\text{\O}23 \text{ mm} / 0.9''$ 5 $\text{\O}86 \text{ mm} / 3.4''$



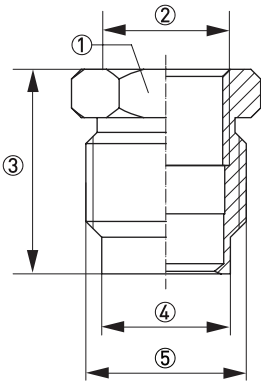
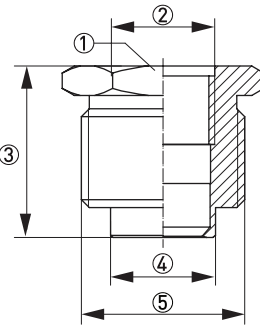
Description	Hygienic adapters according to DIN 11864-1 Form A	
		
Type / order code	KPH3-3254	KPH3-3255
Process connection	DN40 conical ferrule	DN50 conical ferrule
Device connection	G1/2B hygienic	G1/2B hygienic
Device series	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600
Material	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [ $\mu\text{m}$ ]	$R_a \leq 0.8$	$R_a \leq 0.8$
Max. pressure	40 bar / 580 psi	25 bar / 362 psi
Approval	3-A, EHEDG	3-A, EHEDG
Order code Union nut	KPX4-440	KPX4-540
Order code Gasket	KPX3-9140	KPX3-9150
Drawing / dimensions		
	1 G1/2 2 $\text{\O}41 \text{ mm} / 1.6''$ 3 $\text{\O}34 \text{ mm} / 1.3''$ 4 $\text{\O}54.9 \text{ mm} / 2.16''$	1 G1/2 2 $\text{\O}53 \text{ mm} / 2.1''$ 3 $\text{\O}34 \text{ mm} / 1.3''$ 4 $\text{\O}66.9 \text{ mm} / 2.6''$



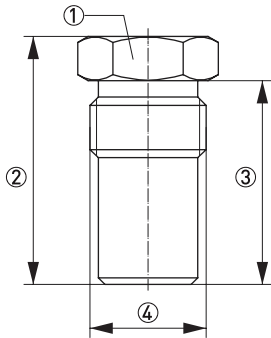
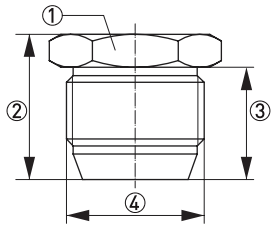
Description	Hygienic adapters according to DIN 11864-1 Form A	
		
Type / order code	KPH3-5254	KPH3-5255
Process connection	DN40 conical ferrule	DN50 conical ferrule
Device connection	G1B hygienic	G1B hygienic
Device series	OPTISYS IND 8100 BM 500	OPTISYS IND 8100 BM 500
Material	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [ $\mu\text{m}$ ]	Ra $\leq$ 0.8	Ra $\leq$ 0.8
Max. pressure	40 bar / 580 psi	25 bar / 362 psi
Approval	3-A, EHEDG	3-A, EHEDG
Order code Union nut	KPX4-440	KPX4-540
Order code Gasket NBR	KPX3-9140	KPX3-9150
Drawing / dimensions		
	1 WS36 2 G1 3 $\text{\O}41$ mm / 1.6" 4 $\text{\O}24$ mm / 0.9" 5 $\text{\O}54.9$ mm / 2.16"	1 WS46 2 G1 3 $\text{\O}53$ mm / 2.09" 4 $\text{\O}24$ mm / 0.9" 5 $\text{\O}66.9$ mm / 2.63"

Description	Industrial weld-in sleeves	Hygienic weld-in sleeves		
				
Type / order code	KPW1-721	KPW3-321	KPW2-327	KPW2-326
Process connection	Tank, pipes	Tank with inspection hole	Pipe extrusion DN65...150	Pipe extrusion DN25...50
Device connection	G1/2B	G1/2B hygienic	G1/2B hygienic	G1/2B hygienic
Device series	OPTISWITCH 6500 / 6600 non hygienic	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600
Material	AISI 316L / 1.4404	AISI 316L / 1.4404	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [µm]	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	100 bar / 1450 psi	100 bar / 1450 psi	40 bar / 580 psi	40 bar / 580 psi
Approval	-	3-A, EHEDG	-	-
Drawing / dimensions				
	1 G1/2 2 26 mm / 1.0" 3 Ø30 mm / 1.2"	1 G1/2 2 34 mm / 1.3" 3 Ø30 mm / 1.2"	1 G1/2 2 36.5 mm / 1.4" 3 26 mm / 1.0" 4 Ø30 mm / 1.2" 5 2.5 mm / 0.1"	1 G1/2 2 36.5 mm / 1.4" 3 26 mm / 1" 4 Ø29 mm / 1.1" 5 2.5 mm / 0.1"



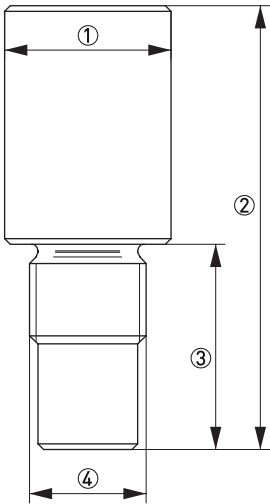
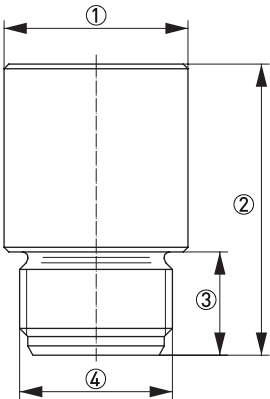
Description	Hygienic weld-in sleeves		
			
Type / order code	KPW2-324	KPW3-322	KPW2-521
Process connection	Tank, pipes	Thin walled tanks, pipes	Tanks
Device connection	G1/2B hygienic	G1/2B hygienic	G1B hygienic
Device series	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600	OPTISYS IND 8100 BM 500
Material	AISI 316L / 1.4404	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [ $\mu\text{m}$ ]	Ra $\leq$ 0.8	Ra $\leq$ 0.8	Ra $\leq$ 0.8
Max. pressure	-	40 bar / 580 psi	100 bar / 1450 psi
Approval	-	3-A, EHEDG	3-A, EHEDG
Drawing / dimensions			
	1 G1/2 2 34 mm / 1.3" 3 Ø35 mm / 1.4"	1 G1/2 2 34 mm / 1.3" 3 10 mm / 0.4" 4 Ø45 mm / 1.8" 5 2 mm / 0.08"	1 G1 2 23 mm / 0.9" 3 Ø50 mm / 2"





Description	Vibronic level switch replacement		
			
Type / order code	KPH1-32BA	KPH1-32CB	KPH1-32A1
Process connection	E+H FTL G3/4B Ø23.7 G3/4" hygienic	E+H FTL G1B Ø29 G1" hygienic	E+H Rd52
Device connection	G1/2B hygienic	G1/2B hygienic	G1/2B hygienic
Device series	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600
Material	AISI 316L / 1.4404	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [ $\mu\text{m}$ ]	Ra $\leq$ 0.8	Ra $\leq$ 0.8	Ra $\leq$ 0.8
Max. pressure	40 bar / 580 psi	40 bar / 580 psi	40 bar / 580 psi
Approval	-	-	-
Drawing / dimensions			
	1 WS27 2 G1/2 3 34 mm / 1.3" 4 Ø23.7 mm / 0.9" 5 G3/4A	1 WS36 2 G1/2 3 34 mm / 1.3" 4 Ø29 mm / 1.1" 5 G1A	1 WS30 2 G1/2 3 35 mm / 1.4" 4 34 mm / 1.3" 5 Ø29 mm / 1.1" 6 Ø42 mm / 1.7" 7 Ø46 mm / 1.8"

Description	Vibronic level switch replacement	
		
Type / order code	KPH1-32BC	KPH1-32CD
Process connection	Vegaswing G3/4B, Ø21.3 G3/4" hygienic	Vegaswing G1B, Ø21.3 G1" hygienic
Device connection	G1/2B hygienic	G1/2B hygienic
Device series	OPTISWITCH 6500 / 6600	OPTISWITCH 6500 / 6600
Material	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [µm]	Ra ≤ 0.8	Ra ≤ 0.8
Max. pressure	40 bar / 580 psi	40 bar / 580 psi
Approval	-	-
Drawing / dimensions	 <p data-bbox="464 1375 663 1496">                     1 WS27                      2 G1/2                      3 34 mm / 1.3" 4                      Ø21.3 mm / 0.8" 5                      G3/4A                 </p>	 <p data-bbox="959 1375 1158 1496">                     1 WS36                      2 G1/2                      3 35 mm / 1.4" 4                      Ø21.3 mm / 0.8" 5                      G1A                 </p>

Description	Blanking plugs	
		
Type / order code	KPX5-32	KPX5-62
Process connection	Blanking plug	Blanking plug
Device connection	G1/2B hygienic	G1/2B hygienic
Device series	OPTISWITCH 6500 / 6600	OPTISYS IND 8100 BM 500
Material	AISI 316L / 1.4404	AISI 316L / 1.4404
Surface roughness [ $\mu\text{m}$ ]	$R_a \leq 0.8$	$R_a \leq 0.8$
Max. pressure	100 bar / 1450 psi	70 bar / 1015 psi
Approval	-	-
Drawing / dimensions		
	1 WS22 2 45 mm / 1.8" 3 37 mm / 1.5" 4 G1/2A	1 WS36 2 35.2 mm / 1.4" 3 27.2 mm / 1.1" 4 G1A



Description	Welding mandrels for threaded hygienic welded connections	
		
Type / order code	KPX6-36	KPX6-66
Process connection	Welding mandrel	Welding mandrel
Device connection	G1/2B hygienic	G1B hygienic / G1B cone
Device series	-	-
Material	Brass	Brass
Approval	-	-
Drawing / dimensions	 <p data-bbox="464 1339 646 1435">                     1 Ø30 mm / 1.2"                      2 80 mm / 3.1"                      3 37 mm / 1.5"                      4 G1/2A                 </p>	 <p data-bbox="959 1339 1157 1435">                     1 Ø40 mm / 1.6"                      2 63.5 mm / 2.5"                      3 22.5 mm / 0.9"                      4 G1A                 </p>

Description	Additional parts for hygienic clamp connections according to ISO 2852, DIN 32676		Additional parts for hygienic threaded connections according to SMS 1145, DIN 11851	
				
Type / order code	KPX4-x10	KPX3-7xxx	KPX4-xx0	KPX3-x1x0
Process connection	Closure clamp ISO 2852	Gasket ISO 2852	Ring nut SMS 1145 DIN 11851	Union gasket SMS 1145 DIN 11851
Material	AISI 304 / 1.4301	EPDM	AISI 304 / 1.4301	NBR
Max. pressure	DN38: 100 bar / 1450 psi DN51: 100 bar / 1450 psi DN76: 90 bar / 1305 psi	-	-	-
Approval	-	-	-	-
Dimensions / material / order code	38 / KPX4-310 51 / KPX4-610	FDA: 38 / EPDM / KPX3-7232 51 / EPDM / KPX3-7262	SMS, 38 / KPX4-330 SMS, 51 / KPX4-630 DIN, DN25 / KPX4-140 DIN, DN40 / KPX4-440 DIN, DN50 / KPX4-540 DIN, DN65 / KPX4-740	SMS, 38 / NBR / KPX3-8130 SMS, 51 / NBR / KPX3-8160 DIN, DN25 / NBR / KPX3-9110 DIN, DN40 / NBR / KPX3-9140 DIN, DN50 / NBR / KPX3-9150 DIN, DN65 / NBR / KPX3-9170

## 2.1 Description of the configuration tool

The configuration tool is the dedicated configuring tool for

- OPTISWITCH 6500
- OPTISWITCH 6600
- OPTISYS IND 8100

The configuration tool is basically operated from a standard PC with a USB connector. It can be disconnected from the PC and brought to the remote site (non Ex area) for monitoring and re-configuration of the specific product. In this case the configuration tool and the device is powered by the internal battery.



Figure 2-1: Configuration tool

The FDT based communication offers the possibility to upload and store the actual settings. Also the existing setting can be changed for example to adjust the device for an interface detection or a selective detection only for one specific liquid. A so-called teach-in method is also available for adjusting the device with actual application conditions.



Figure 2-2: Setup screen

The integrated LC display enables the user to monitor the actual configuration of a product for control purposes. The software is FDT based and each product is having a DTM based software driver. In case a customer prefers to use an FDT container software all the DTMs can be run by this software. The selected configuration can be stored under a file name determined by the user. A print facility is available for hard copy records. The "measure" function makes it easy for the user to monitor events in a test circuit.

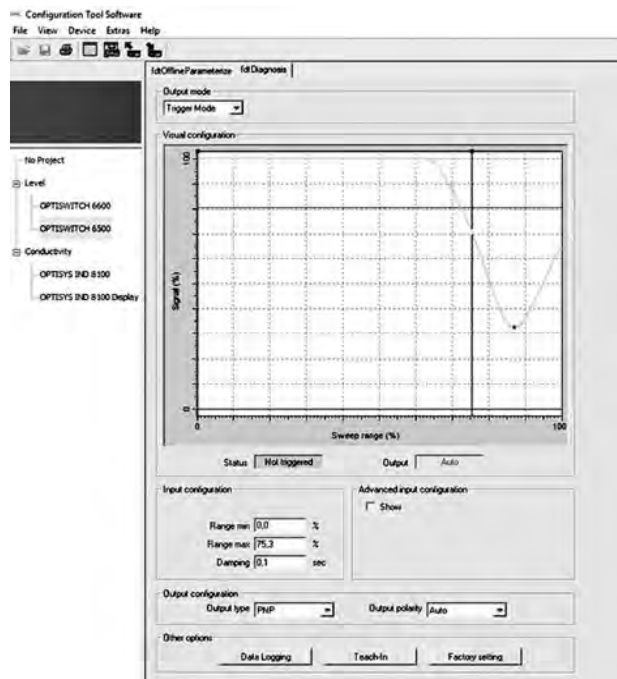


Figure 2-3: Example of the actual measuring mode (trigger mode)

## 2.2 Technical data of the configuration tool

### Supply voltage

Internal battery	NiMH 2.4 V; 450
External	Supply and battery charge from USB

### Data transfer

Data input	US
Firmware	Updated from homepage

### Operating conditions

Operating temperature	0...+50°C / +32...+122°
Humidity	<90% RH, non-
Protection class	IP4
Conformity	According to EU directives, RoHS
Disposal	According to national laws and WEEE

### Approval

E	Configuration of Ex products outside of zone 0, 1 or 2
EM	Immunity: EN 61326
C	Emission: EN 61326

## 2.3 Order code of configuration tool

The order code for the configuration tool is: ~~XXXXXXXXXXXX~~ (incl. interface unit + USB cable + CD with driver + alligator clips/M12 connection cable)

**Алматы** (7273)495-231  
**Ангарск** (3955)60-70-56  
**Архангельск** (8182)63-90-72  
**Астрахань** (8512)99-46-04  
**Барнаул** (3852)73-04-60  
**Белгород** (4722)40-23-64  
**Благовещенск** (4162)22-76-07  
**Брянск** (4832)59-03-52  
**Владивосток** (423)249-28-31  
**Владикавказ** (8672)28-90-48  
**Владимир** (4922)49-43-18  
**Волгоград** (844)278-03-48  
**Вологда** (8172)26-41-59  
**Воронеж** (473)204-51-73  
**Екатеринбург** (343)384-55-89  
**Иваново** (4932)77-34-06  
**Ижевск** (3412)26-03-58  
**Иркутск** (395)279-98-46  
**Казань** (843)206-01-48

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**Калуга** (4842)92-23-67  
**Кемерово** (3842)65-04-62  
**Киров** (8332)68-02-04  
**Коломна** (4966)23-41-49  
**Кострома** (4942)77-07-48  
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**Курск** (4712)77-13-04  
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**Магнитогорск** (3519)55-03-13  
**Москва** (495)268-04-70  
**Мурманск** (8152)59-64-93  
**Набережные Челны** (8552)20-53-41  
**Нижний Новгород** (831)429-08-12  
**Новокузнецк** (3843)20-46-81  
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**Ноябрьск** (3496)41-32-12

**Омск** (3812)21-46-40  
**Орел** (4862)44-53-42  
**Оренбург** (3532)37-68-04  
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**Пермь** (342)205-81-47  
**Петрозаводск** (8142)55-98-37  
**Псков** (8112)59-10-37  
**Ростов-на-Дону** (863)308-18-15  
**Рязань** (4912)46-61-64  
**Самара** (846)206-03-16  
**Санкт-Петербург** (812)309-46-40  
**Саранск** (8342)22-96-24  
**Саратов** (845)249-38-78  
**Севастополь** (8692)22-31-93  
**Симферополь** (3652)67-13-56  
**Смоленск** (4812)29-41-54  
**Сочи** (862)225-72-31  
**Ставрополь** (8652)20-65-13  
**Сургут** (3462)77-98-35

**Сыктывкар** (8212)25-95-17  
**Тамбов** (4752)50-40-97  
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**Тольятти** (8482)63-91-07  
**Томск** (3822)98-41-53  
**Тула** (4872)33-79-87  
**Тюмень** (3452)66-21-18  
**Улан-Удэ** (3012)59-97-51  
**Ульяновск** (8422)24-23-59  
**Уфа** (347)229-48-12  
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