Level switches ERH®

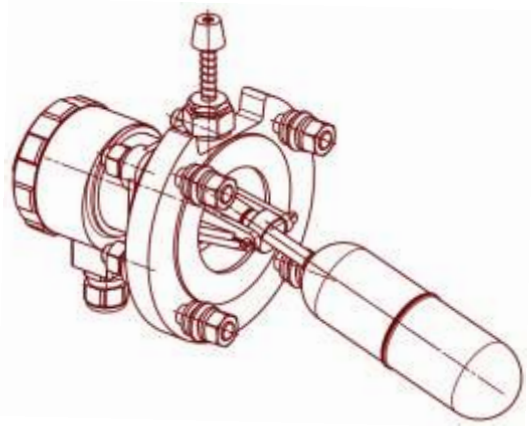
Edition 2019/2020

CONTROLMATICA®
ZAP PNEFAL

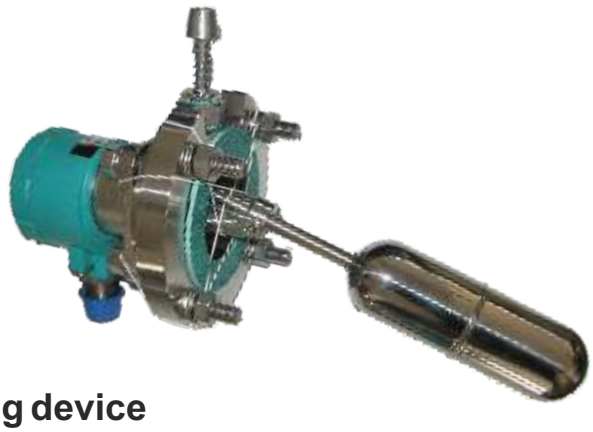
APLISENS®

Contents

From the design...



...to the device adapted to the user's requirements



Level switch integrated with the testing device type ERH-01-06-3/CON-18/179

- marine version with IP66
- histeresis 30mm
- diameter of the float Φ52
- flange JIS 5K 65A (SS 316L)

APLISENS S.A. is the leader amongst the domestic suppliers of applications in the scope of industrial control-measuring instrumentation. We produce a wide assortment of high quality devices for measurements of pressure, differential pressure, level and temperature used in many branches of industry.

Since 2008 when there was the fusion with CONTROLMATICA Ltd. Co., these devices were also widened by level switches ERH®, and also by pressure switches ERP and temperature switches ERT. This offer covers also the electric actuators, pneumatics and many other industrial automation devices. All these are produced in the Plant in Ostrów Wielkopolski, Poland.

Experience in their manufacture, supported by the technology and confirmed by the Quality System Certificate ISO 9001:2015 issued by DNV GL - Business Assurance guarantee the highest quality of the offered devices. In addition to that, our clients can rely on technical assistance of the R+D Department and post-guarantee operation rendered by the factory service.

The switches can be applied first of all in the applications used in the marine branch. They have the approvals of the Certification Associations: BV, DNV-GL, LR and PRS. In addition to that, possibilities of application are extended by the Polish National Institute of Hygiene certificate (PZH) and the ATEX release for operation in the explosion risk zones.

ERH® is protected with the trademark.


DNV·GL

CERTYFIKAT SYSTEMU ZARZĄDZANIA

Niniejszym potwierdza się, że system zarządzania organizacji

APLISENS SPÓŁKA AKCYJNA
ul. Morelowa 7, 03-192 Warszawa, Polska
oraz lokalizacji wymienionych w załączniku dołączonym do niniejszego certyfikatu

spełnia wymagania normy Systemu Zarządzania Jakością:
ISO 9001:2015

Certyfikat obejmuje następujący zakres:
Projektowanie, wytwarzanie i sprzedaż przetworników ciśnienia i różnicy ciśnień, sond poziomu, czujników temperatury, przetworników temperatury, przepływomierzy elektromagnetycznych i zwężkowych, aparatury pomiarowej oraz urządzeń automatyki przemysłowej.

IAF


DNV·GL

BUREAU VERITAS

REJESTR STATKÓW

OBAC

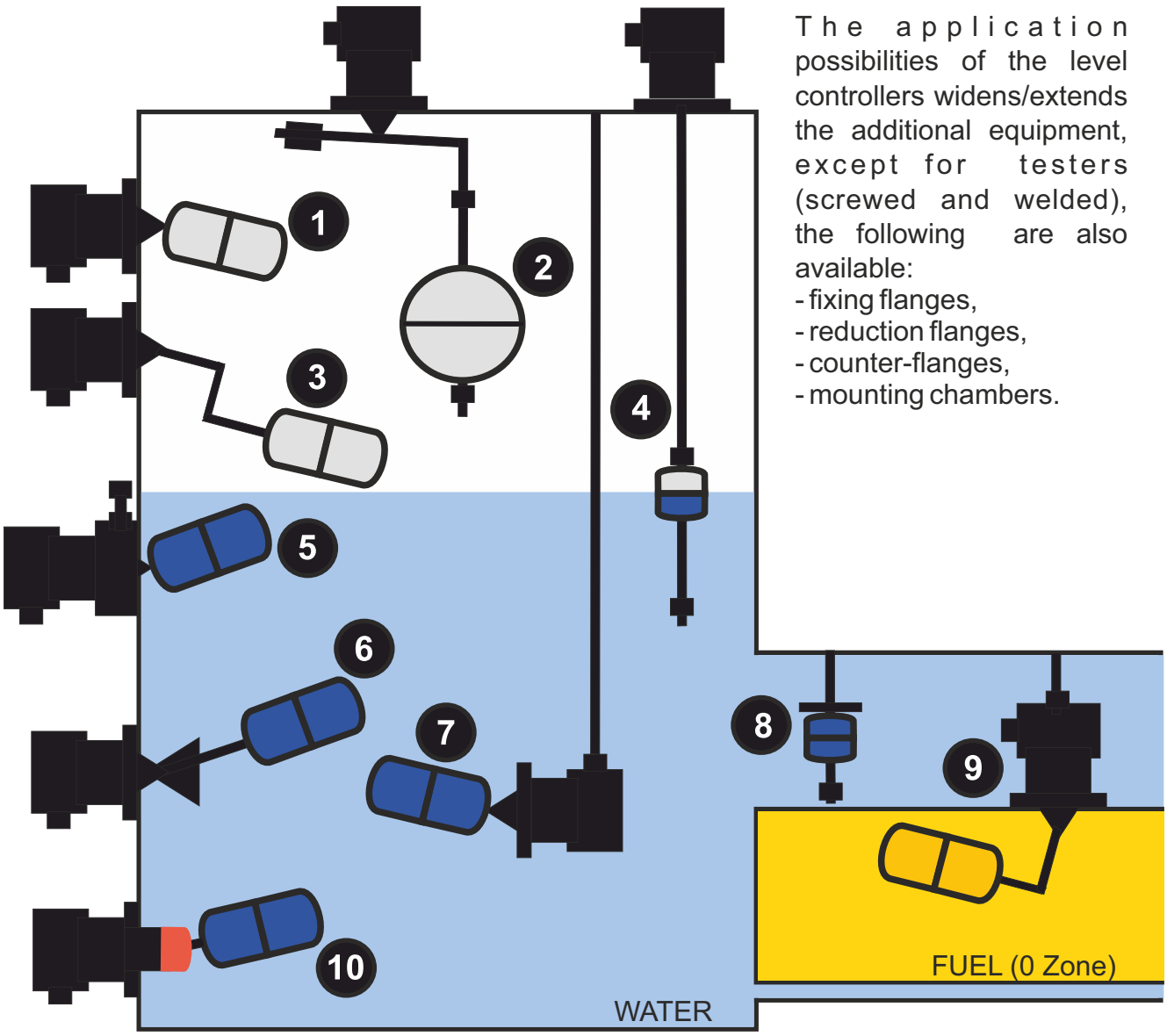
PZH

gig·KDB

Lloyd's Register

Application of level switches

1 Float level switch in standard version with steady hysteresis of switching 10, 20 or 30mm
2 Float level switch mounted from the top with hysteresis of switching in the scope of 32...1350mm (2000mm in option)
3 Float level switch with Z-type arm, making possible the shift of switching point in relation to the already existing place of mounting
4 Magnetic level switch mounted from the top with 1, 2 or 3 switching points
5 Float level switch in standard version with testing device (screwed or welded)
6 Float level switch with possibility of switching hysteresis setting in the scope of 50...250mm or 100...400mm
7 Float level switch designed for operation at full submersion
8 Magnetic level switch in mini version for places of limited space
9 Float level switch with L-type arm, making possible the mounting from the top and applying at places of limited space instead of level switch **2**; in version ERH-xx-16.1 with IP68 protection degree signalling of the media in 0 zone is possible, while the immersed device casing must be installed out of 0 zone
10 Float level switch with float arm casing protecting against contaminations



The application possibilities of the level controllers widens/extends the additional equipment, except for testers (screwed and welded), the following are also available:
- fixing flanges,
- reduction flanges,
- counter-flanges,
- mounting chambers.

Level switches (two-term level controllers) ERH-xx-04,-06,-07,-16,-16.1

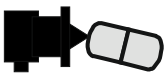
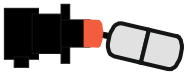
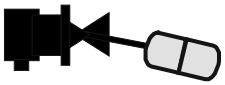
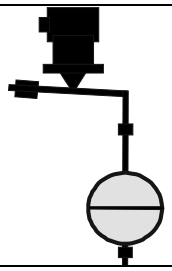
Description

The limit level signalling or two-term liquid level control in the open or closed pressure tanks. The basic versions, ERH-xx-16 and ERH-xx-16.1 are also produced in explosion-proof atmosphere, corresponding to the class II 1/2G c Ex de IIB T4 Ga/Gb. The level switches can operate in neutral liquids, or aggressive ones not acting on acidproof 1H18N9T (321) steel in marine conditions, while thanks to variety of versions and additional accessories it is possible to adapt the device to specific conditions of the concrete application.

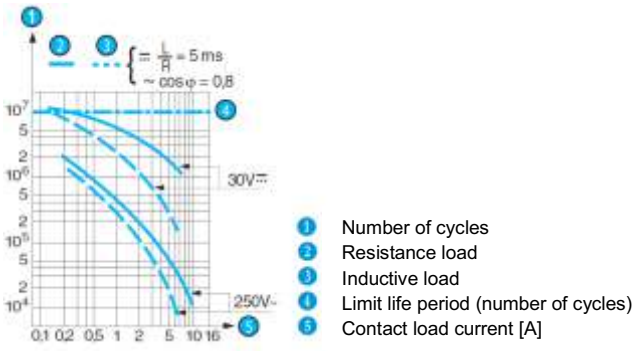
Approvals and certificates

Type	Description	Ingress Protection	ATEX	DNV-GL	LR	BV	PRS	PZH
ERH-xx-04	Standard version	IP66						●
ERH-xx-06	Marine version	IP66		●	●	●	●	●
ERH-xx-07	Marine version for operation at full submersion	IP68		●	●	●	●	
ERH-xx-16	Marine version for operation in explosion risk zones	IP66	●	●	●	●	●	
ERH-xx-16.1	Marine version for operation in explosion risk zones at full submersion	IP68	●	●	●	●	●	

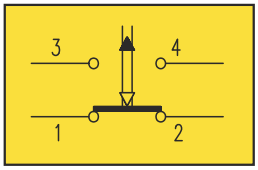
Types of the level switches

Type	Description	Visual principal drawing – kinds of versions
ERH-01-	Version with steady hysteresis of switching (10mm, 20mm or 30mm)	
ERH-02-	Version with steady hysteresis of switching (10mm, 20mm or 30mm) and protection of float stem against contamination	
ERH-03-	Version with adjusted hysteresis of switching (50…250mm or 100…400mm)	
ERH-04-	Version with adjusted hysteresis of switching (32…1350mm) mounting only from the top	

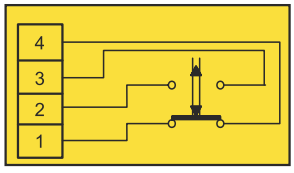
Technical data

Parameters		ERH-01-	ERH-02-	ERH-03-	ERH-04-
Hysteresis	ERH-xx-04, -06, -07	10, 20, 30 mm		50…250 mm 100…400 mm	32…1350 mm
	ERH-xx-16, -16.1			50…400 mm	
Repeatability		±15%		±15%...±2% depending on the range	
Min. medium density		0,60 g/cm^3			
Max. process pressure	ERH-xx-04, -06, -16	4,0 MPa			1,6 MPa
	ERH-xx-07, -16.1	0,2 MPa			
Max. medium temperature	ERH-xx-04, -06	250^{O}C			
	ERH-xx-16	100^{O}C			
	ERH-xx-07, -16.1	70^{O}C			
Ambient temperature		-25…+70^{O}C			
Ingress Protection	ERH-xx-04, -06, -16	IP66			
	ERH-xx-07, -16.1	IP68			
Weight	ERH-xx-yy	1,8 kg	2,0 kg	2,1 kg	3,0 kg
	ERH-xx-yy-K	2,6 kg	2,8 kg	2,9 kg	3,8 kg
	1mb kabla	0,2 kg			
Explosion-proof	ERH-xx-16, -16.1	Ex II 1/2G c Ex de IIB T4 Ga/Gb			
Application		Liquids without contaminations by solid suspensions	Liquids contaminated by solid suspensions	Liquids without contaminations by solid suspensions	Liquids without contaminations and contaminated by solid suspensions
Electric parameters	ERH-xx-04, -06, -07	AC15* U ≤ 400V; (50…60)Hz; I ≤ 10A; durability of contacts ≥ 3x10^5 DC13** U ≤ 220V; I < 0,6A; durability of contacts ≥ 0,3x10^5 Minimum voltage and switching current 5V; 5mA Cross section of connecting cables: one-wire 1…2,5mm^2 multi-wire 0,75…1,5mm^2			
	ERH-xx-16, -16.1	AC15* U ≤ 230V (50…60)Hz; I ≤ 2,5A; durability of contacts ≥ 0,85x10^5 DC13** U ≤ 220V; I < 0,3A; durability of contacts ≥ 0,3x10^5 Minimum voltage and switching current 5V; 5mA Cross section of connecting cables: one-wire 1mm^2 multi-wire 1mm^2			
		Category of usage: ** acc. to PN-EN 60947-5-1, Electromagnet control (>72VA)* *** acc. to PN-EN 60947-5-1, Electromagnet control*			
		Calculating of the contact durability for an arbitrary load  1 Number of cycles 2 Resistance load 3 Inductive load 4 Limit life period (number of cycles) 5 Contact load current [A]			

Electric circuit diagram of the controllers ERH-xx-04, ERH-xx-06 and ERH-xx-07



Microswitch type 83 140 applied in the controllers ERH-xx-04, ERH-xx-06 oraz ERH-xx-07



Electric circuit diagram of the controllers ERH-xx-16 and ERH-xx-16.1 (explosion-proof versions)

Dimensions

ERH-01-

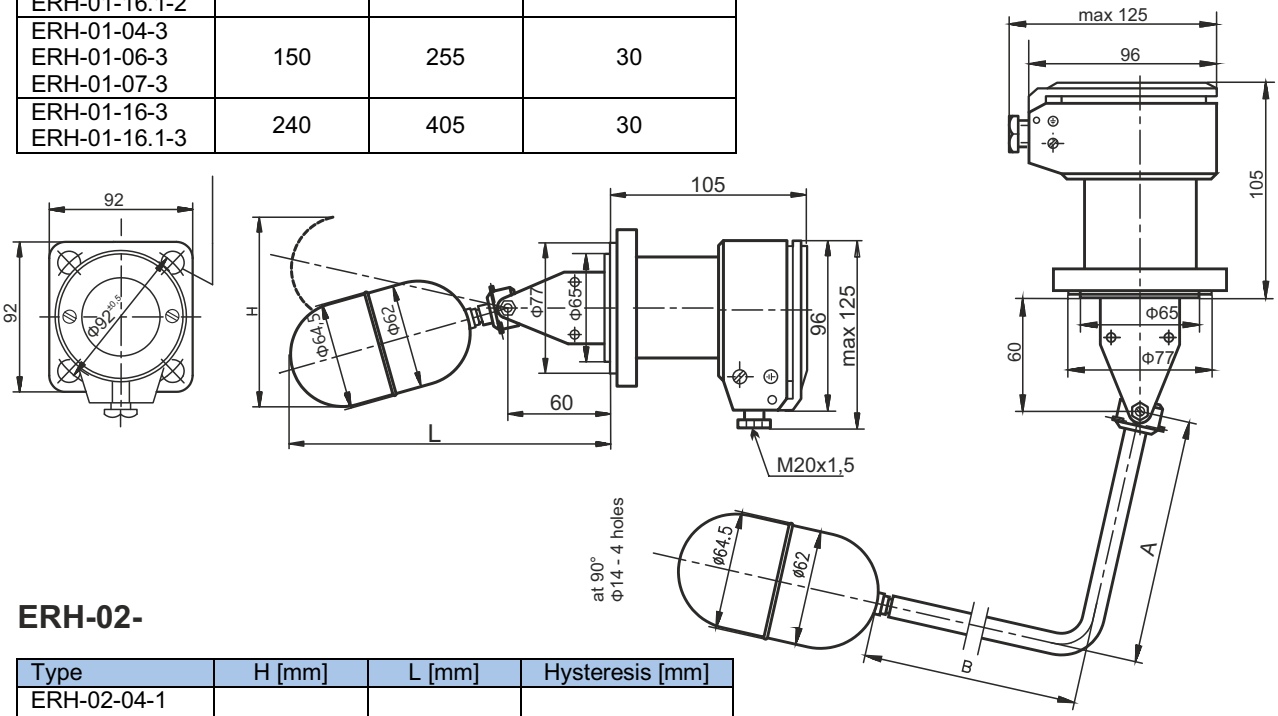
Type	H [mm]	L [mm]	Hysteresis [mm]
ERH-01-04-1 ERH-01-06-1 ERH-01-07-1	120	190	10
ERH-01-16-1 ERH-01-16.1-1	140	230	10
ERH-01-04-2 ERH-01-06-2 ERH-01-07-2	140	230	20
ERH-01-16-2 ERH-01-16.1-2	180	305	20
ERH-01-04-3 ERH-01-06-3 ERH-01-07-3	150	255	30
ERH-01-16-3 ERH-01-16.1-3	240	405	30

Controller with broken arm

single L-type (dimensions A and B)
double Z-type (dimensions A, B and C)

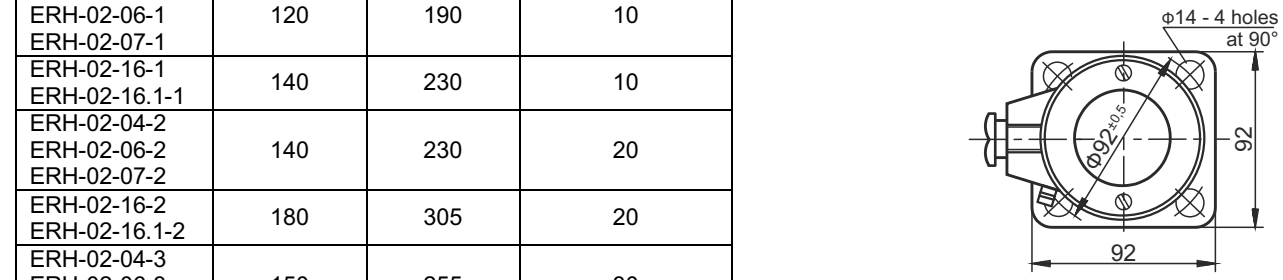
A+B=max.1000mm and A/B≤4

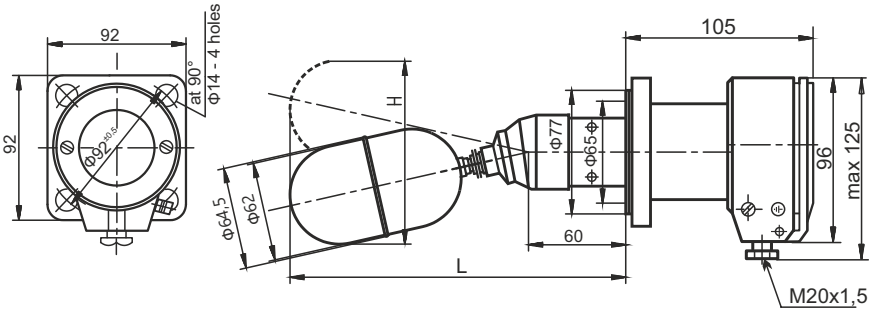
Options available for the
ERH-01- and ERH-02- versions.



ERH-02-

Type	H [mm]	L [mm]	Hysteresis [mm]
ERH-02-04-1 ERH-02-06-1 ERH-02-07-1	120	190	10
ERH-02-16-1 ERH-02-16.1-1	140	230	10
ERH-02-04-2 ERH-02-06-2 ERH-02-07-2	140	230	20
ERH-02-16-2 ERH-02-16.1-2	180	305	20
ERH-02-04-3 ERH-02-06-3 ERH-02-07-3	150	255	30
ERH-02-16-3 ERH-02-16.1-3	240	405	30





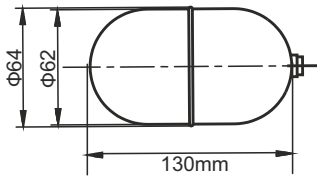
ERH-03-

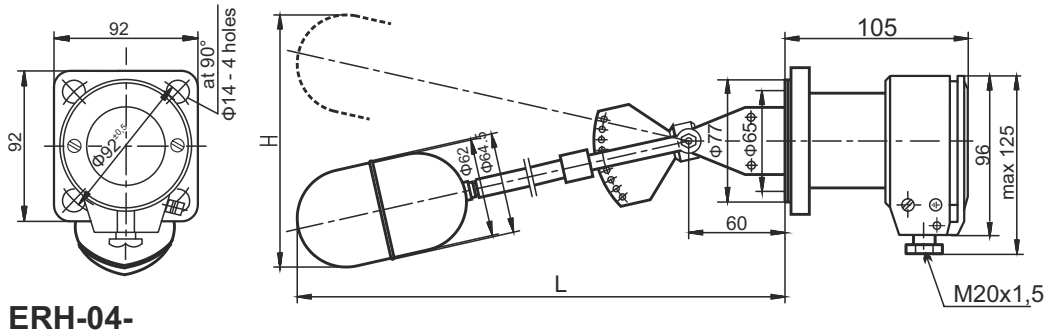
Type	H [mm]	L [mm]	Hysteresis [mm]
ERH-03-04-1 ERH-03-06-1 ERH-03-07-1	680	510	100…400
ERH-03-16 ERH-03-16.1	680	510	50…400
ERH-03-04-2 ERH-03-06-2 ERH-03-07-2	450	380	50…250

Float in standard version:

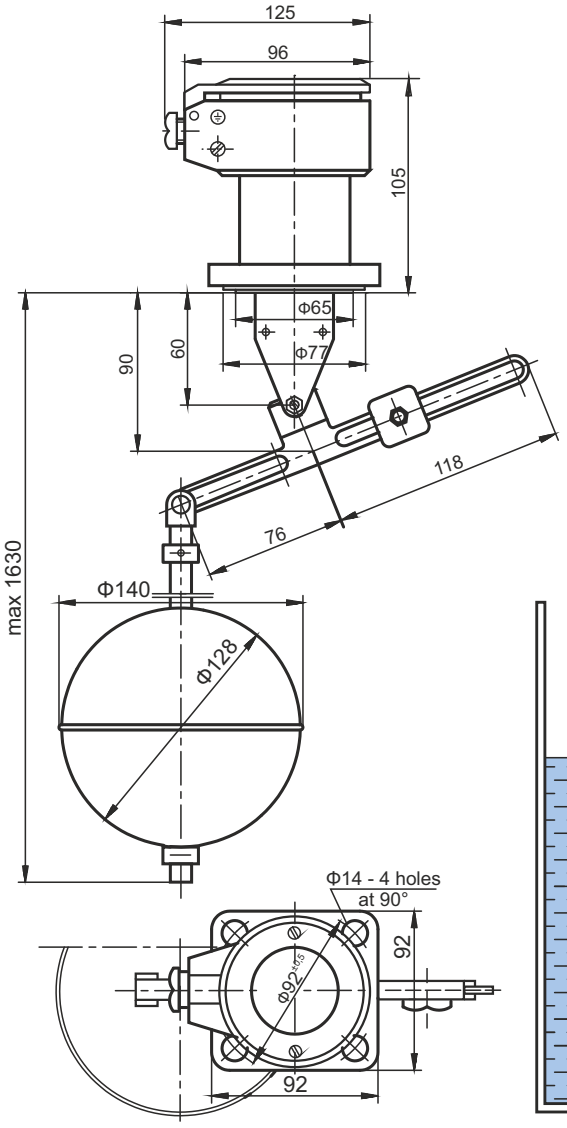
- ER2-1101 *for ERH-01(02)-04-1*
ERH-01(02)-06-1
ERH-01(02)-07-1

- ER2-1024 *for other types of ERH*





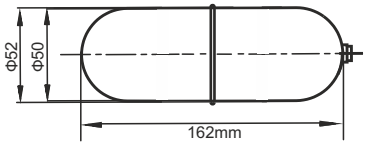
ERH-04-



Float in optional version:

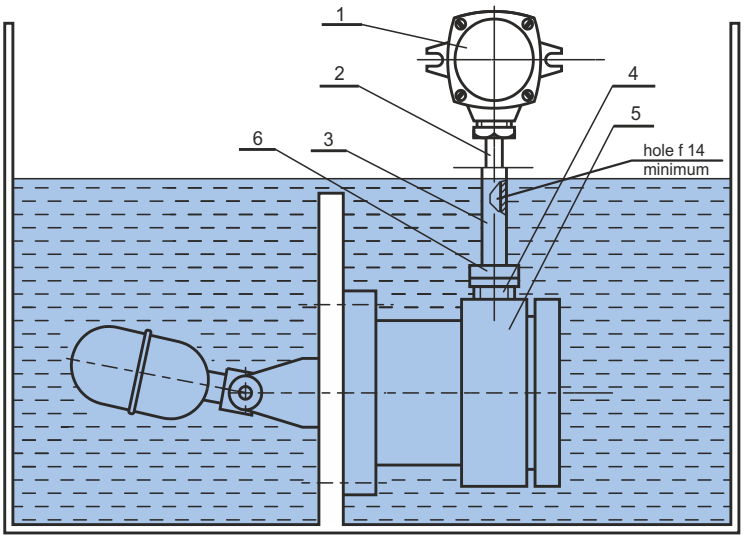
- ER2-1661-1 *for ERH-01(02)-04-1*
ERH-01(02)-06-1
ERH-01(02)-07-1

- ER2-1661-2 *for other types of ERH*



The recommended way of mounting the level switch with electric connector version without cable (ERH-xx-xx-x-1)

1 - Junction socket (it is not the equipment of controller)
2 - Wire
3 - Tube with screw connections (it is not the equipment of controller)
4 - Gland screw plug
5 - Controller
6 - End piece with conical thread R3/4"



Ordering

ERH-xx-04 *standard version with IP66*
ERH-xx-06 *marine version with IP66*

ERH-01-04	Two-term level controller	
ERH-02-04	Two-term level controller (with float arm protection against contaminations)	
ERH-01-06	Two-term level controller - marine version	
ERH-02-06	Two-term level controller (with float arm protection against contaminations) - marine version	
	-1	Hysteresis of switching 10mm
	-2	Hysteresis of switching 20mm
	-3	Hysteresis of switching 30mm
	-4-0	Broken arm of float A=125mm B=125mm
	-4-1	Broken arm of float A=185mm B=80mm
	-4-2	Broken arm of float A=250mm B=125mm
	-4-3	Broken arm of float A=140mm B=120mm
	-4-4	Broken arm of float A=100mm B=120mm
	-4-5	Broken arm of float A=120mm B=80mm
	-4-6	Broken arm of float A=150mm B=80mm
	-4-x	Broken arm of float, acc. to the client's request *
		-k Acidproof version

* the broken arm L-type one must meet the condition of A+B=max. 1000mm and A/B=max. 4; the broken arm Z-type on request

ERH-03-04	Two-term level controller	
ERH-03-06	Two-term level controller - marine version	
	-1	Adjustable hysteresis of switching in the scope of 100…400mm
	-2	Adjustable hysteresis of switching in the scope of 50…250mm
		-k Acidproof version

ERH-04-04	Two-term level controller	
ERH-04-04	Two-term level controller - marine version	
		-k Acidproof version

Example of the controller denotation

The two-term level controller with steady hysteresis of switching 10mm **ERH-01-04-1**

Ordering

ERH-xx-07 *marine version for operation at full submersion with IP68*

ERH-01-07	Two-term level controller		
ERH-02-07	Two-term level controller (with float arm protection against contaminations)		
	-1	Hysteresis of switching 10mm	
	-2	Hysteresis of switching 20mm	
	-3	Hysteresis of switching 30mm	
	-4-0	Broken arm of float A=125mm B=125mm	
	-4-1	Broken arm of float A=185mm B=80mm	
	-4-2	Broken arm of float A=250mm B=125mm	
	-4-3	Broken arm of float A=140mm B=120mm	
	-4-4	Broken arm of float A=100mm B=120mm	
	-4-5	Broken arm of float A=120mm B=80mm	
	-4-6	Broken arm of float A=150mm B=80mm	
	-4-x	Broken arm of float, acc. to the client's request *	
		-1	Without cable
		-2	With cable of 3m length **
			-k Acidproof version

* the broken arm L-type one must meet the condition of A+B=max. 1000mm and A/B=max. 4; the broken arm Z-type on request

** other cable lengths on request

ERH-03-07	Two-term level controller		
	-1	Adjustable hysteresis of switching in the scope of 100…400mm	
	-2	Adjustable hysteresis of switching in the scope of 50…250mm	
		-1	Without cable
		-2	With cable of 3m length **
			-k Acidproof version

** other cable lengths upon the order

ERH-04-07	Two-term level controller		
		-1	Without cable
		-2	With cable of 3m length **
			-k Acidproof version

** other cable lengths on request

Example of the controller denotation

The two-term level controller fully acidproof with float arm protection against contaminations with steady hysteresis of switching 30mm with cable of 15m length **ERH-02-07-3-2-k with 15m cable**

Ordering

ERH-xx-16 *marine version in explosion risk zones with IP66*
ERH-xx-16.1 *marine version for operation at full submersion and in explosion risk zones with IP68*

ERH-01-16	Two-term level controller - IP66
ERH-02-16	Two-term level controller (with float arm protection against contaminations) - IP66
ERH-01-16.1	Two-term level controller - IP68
ERH-02-16.1	Two-term level controller (with float arm protection against contaminations) - IP68

-1	Hysteresis of switching 10mm
-2	Hysteresis of switching 20mm
-3	Hysteresis of switching 30mm
-4-0	Broken arm of float A=125mm B=125mm
-4-1	Broken arm of float A=185mm B=80mm
-4-2	Broken arm of float A=250mm B=125mm
-4-3	Broken arm of float A=140mm B=120mm
-4-4	Broken arm of float A=100mm B=120mm
-4-5	Broken arm of float A=120mm B=80mm
-4-6	Broken arm of float A=150mm B=80mm
-4-x	Broken arm of float, acc. to the client's request *

* the broken arm L-type one must meet the condition of A+B=max. 1000mm and A/B=max. 4; the broken arm Z-type on request

ERH-03-16	Two-term level controller - IP66 (adjustable hysteresis 50…400mm)
ERH-03-16.1	Two-term level controller - IP68 (adjustable hysteresis 50…400mm)

ERH-04-16	Two-term level controller - IP66 (adjustable hysteresis 50…400mm)
ERH-04-16.1	Two-term level controller - IP68 (adjustable hysteresis 50…400mm)

Example of the controller denotation

The two-term level controller with adjustable hysteresis of switching 50…400mm **ERH-03-16**

Testing devices (screwed or welded)

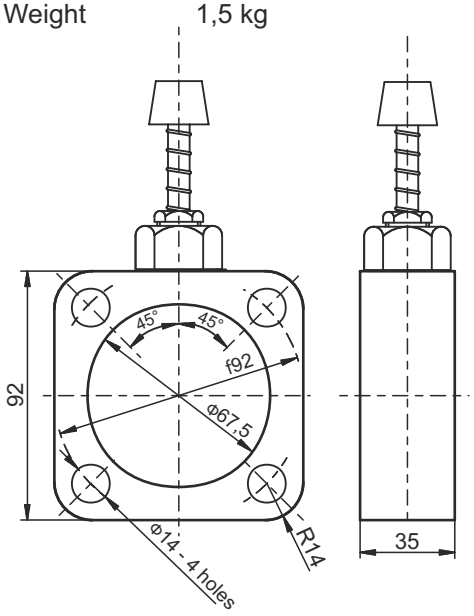
Description

The testing devices (testers) are designed for mechanical checking of the controller operation correctness, without necessity of dismounting of the device from the tank.

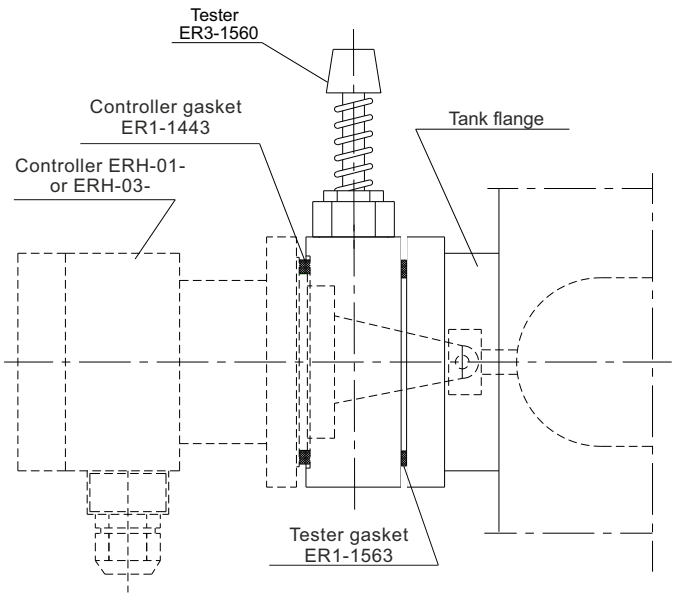
The testers can cooperate with the level switches in version ERH-01- or ERH-03-.

Tester for separable mounting (screwed) type ER3-1560

Material	St3S steel	**(ER3-1560-1)**
	316L stainless steel	**(ER3-1560-2)**
Weight	1,5 kg	

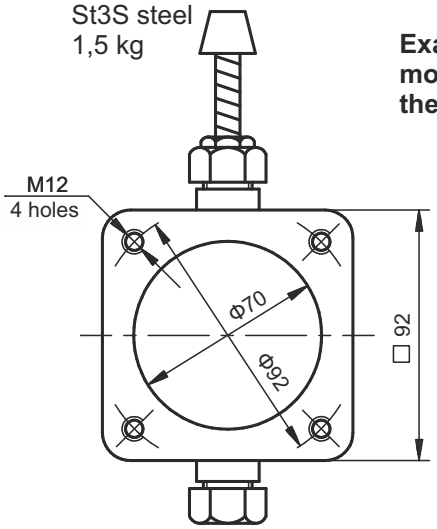


Example of the controller mounting with the tester ER3-1560

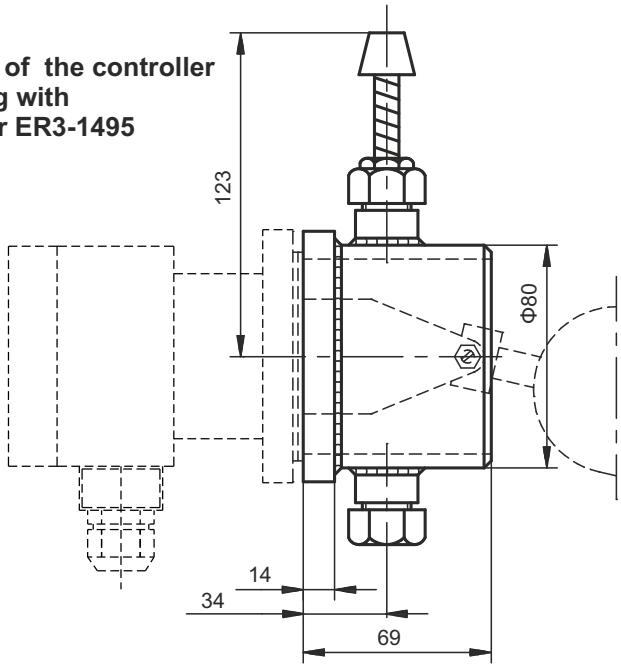


Tester for steady mounting (welded) type ER3-1495

Material	St3S steel
Weight	1,5 kg



Example of the controller mounting with the tester ER3-1495



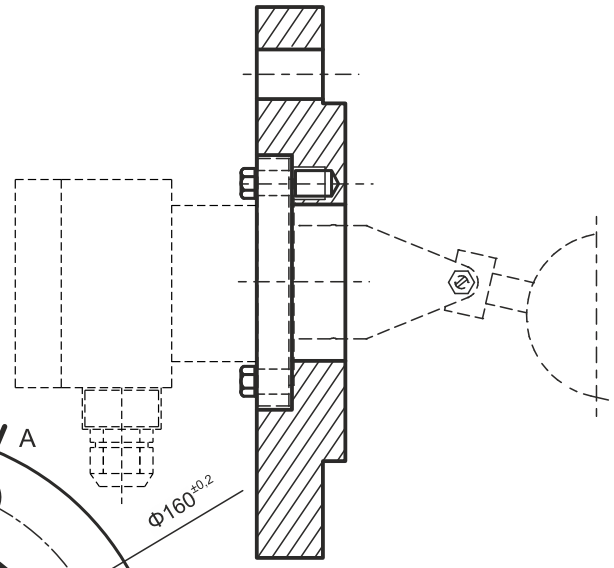
Fixing and reduction flanges

Description

The fixing flanges or reduction flanges are used in cases when the tank counter-flange has the connection dimensions different from the standard flange of controller 92x92mm. The fixing flanges can be used for all the versions of two-term controllers.

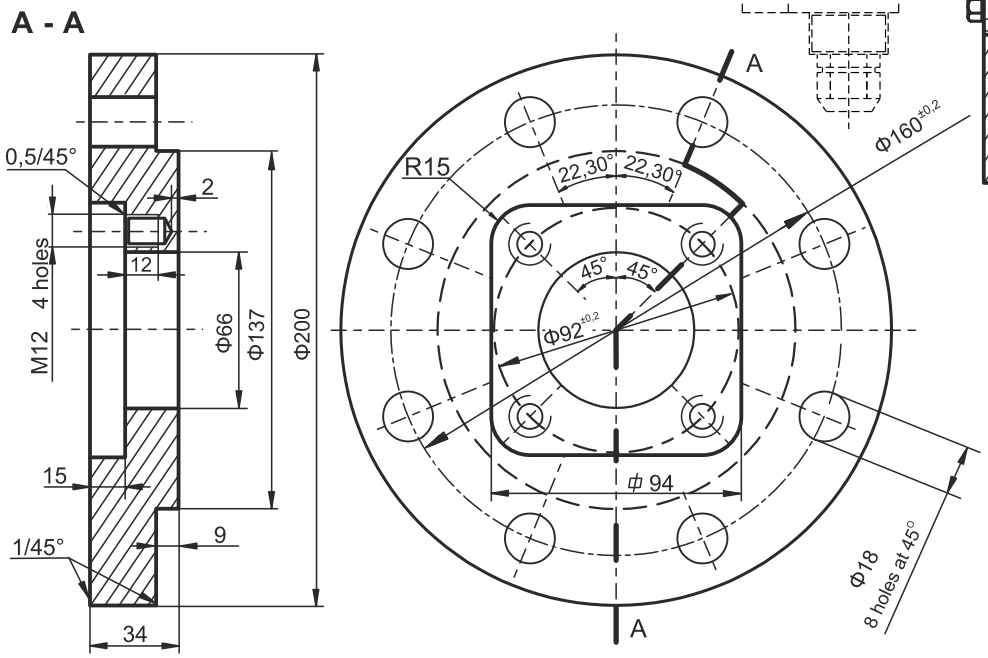
Application of the reduction flanges is limited by their width which influences the float operation range.

Example of the controller mounting with the flange ER2-1587



Fixing flange DN80 type ER2-1587

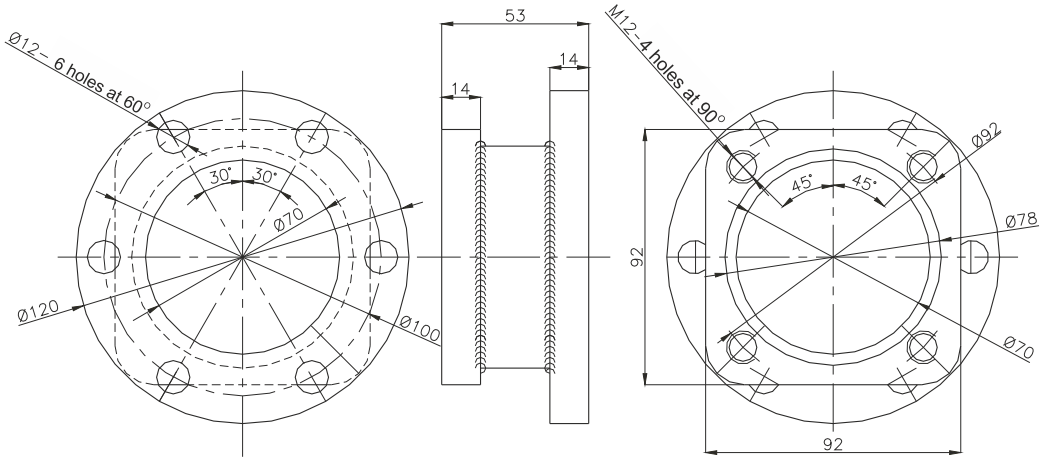
Material 1H18N9T stainless steel



It is possible to order a controller with connector, in accordance with the requirements, e. g. the flange acc. to DIN or ANSI standard.

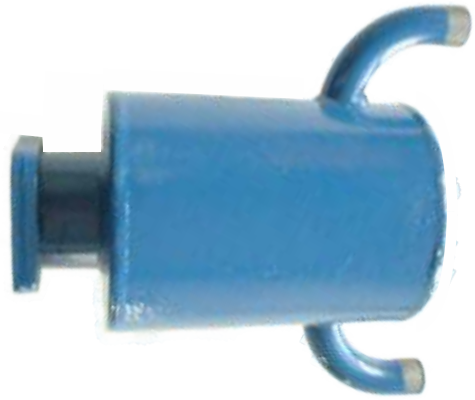
Reduction flange type ER2-1642

Material St3S steel



Counter-flange and mounting chamber

Description

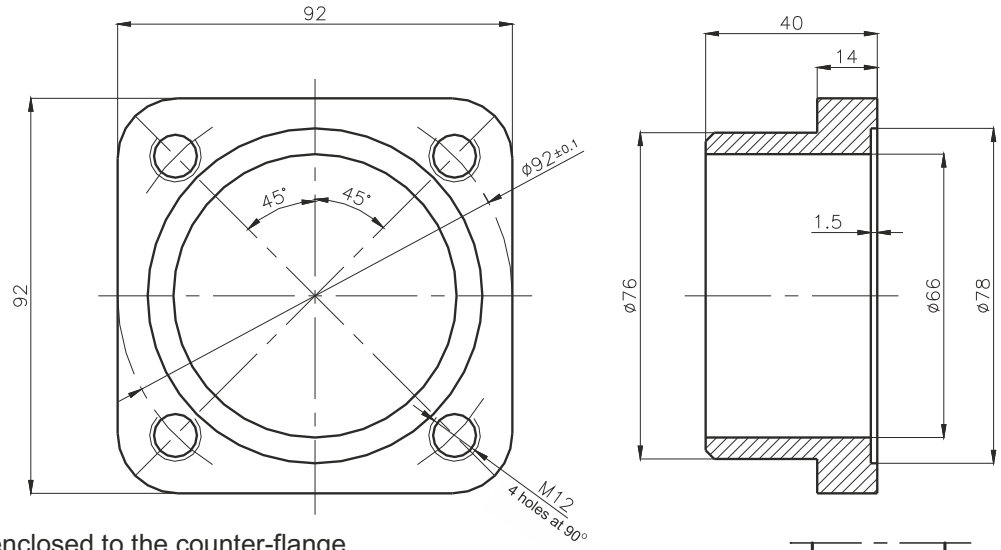


The counter-flange and the mounting chamber are the mechanical elements designed for permanent mounting to the tank and which make possible to mount the controller.

The counter-flange allows to mount the controller inside the tank. The mounting chamber is applied for installing on the pipelines and tanks of small dimensions, and also in case when presence of controller inside the tank is not indicated, or possible for example due to steady elements which can be found in a liquid and damage the controller float.

Counter-flange type ER2-1646

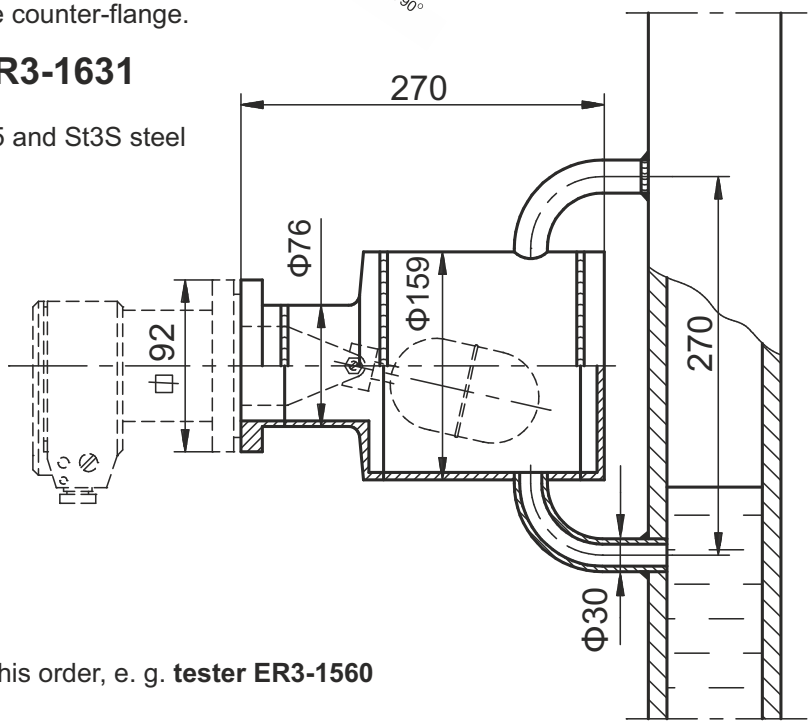
Material	St3S steel	**(ER2-1646-1)**
	1H18N9T stainless steel	**(ER2-1646-2)**



The fixing elements are enclosed to the counter-flange.

Mounting chamber type ER3-1631

Material	boiler tube R35 and St3S steel
Weight	6,5 kg



Ordering

One should give the name and type in his order, e. g. **tester ER3-1560**

Level switches ERH-xx-20

Description

Level signalling of the medium having minimum density 0,70 g/cm^3. The basic version, mounted from the top, is available with 92x92mm flange connector, head made from aluminium alloy and M20x1,5 cable gland with casing protection degree IP68. Other versions of mechanic or threaded flange connectors - according to the ordering code. There is also a possibility of ordering the level switch with connector according to the requirements, e. g. with flange acc. to DIN or ANSI standard. The level switch can also be ordered in version fully made from acidproof steel, with additional cover protecting the float, as well as with certified cable of optional length.

Technical data

Min. medium density	0,70 g/cm^3
Max. process pressure	1,0 MPa
Ambient temperature *	-25…+80°C
Medium temperature *	-25…+150°C
Switching points	1, 2 or 3
Switching rate **	230 V AC; 100VA; 1A 230 V DC; 50W; 0,5A
Hysteresis	10mm
Ingress Protection	IP68
Type of temperature sensor	Pt100
Explosion-proof	Ex II 2G Ex db IIC T3÷T6 Gb
Material of *the wet part*	acidproof steel 316L
Material of *the dry part*	aluminium alloy or 316SS
Floating element	Φ40x35mm
Protection tube	Φ60
Weight of the level switch ***	0,3...8,5 kg
Weight of the cable	0,15 kg/mb

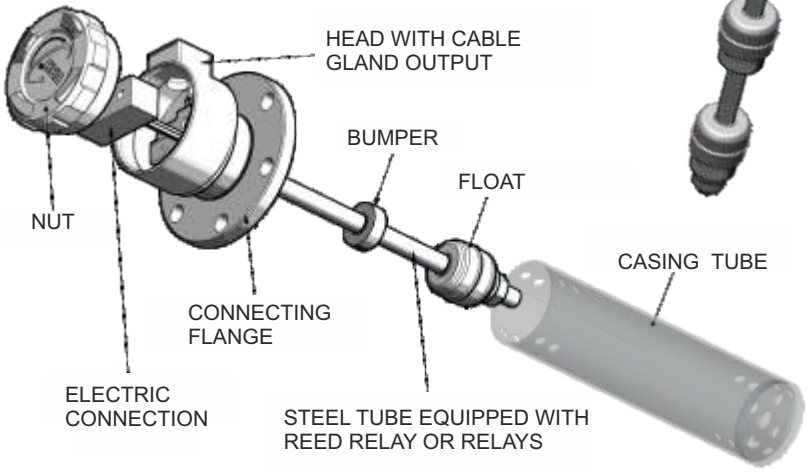
Temperatures for Ex version

Class	Ambient temp.	Medium temp.
T6	-25...+60°C	-25...+85°C
T5	-25...+65°C	-25...+100°C
T4	-25...+80°C	-25...+135°C
T3	-25...+80°C	-25...+150°C

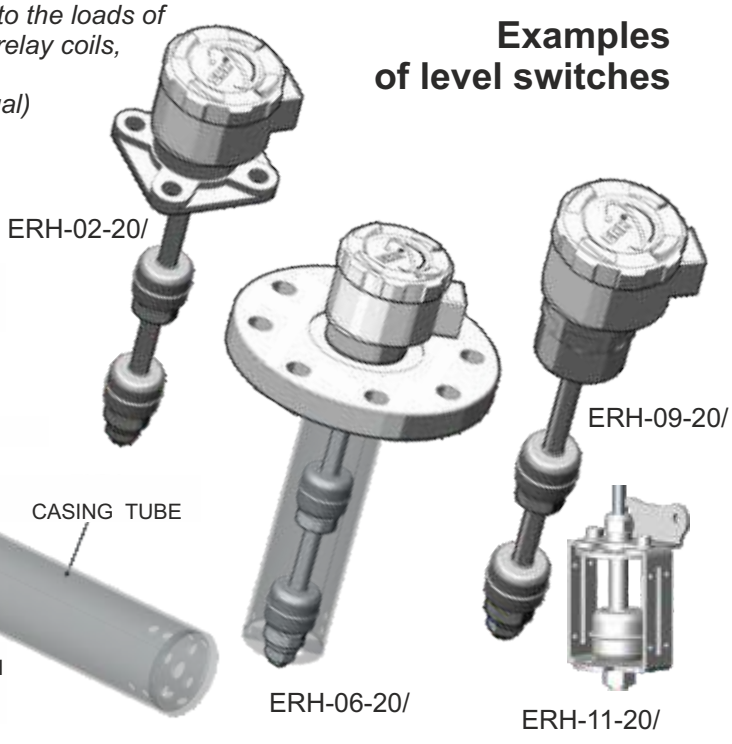
** temperatures for Ex version in the table*
*** maximum parameters of the reed relays apply to the loads of resistance character; for inductive loads such as relay coils, one should apply adequate protecting systems (detailed pieces of information in Operation Manual)*

**** it depends on the version*

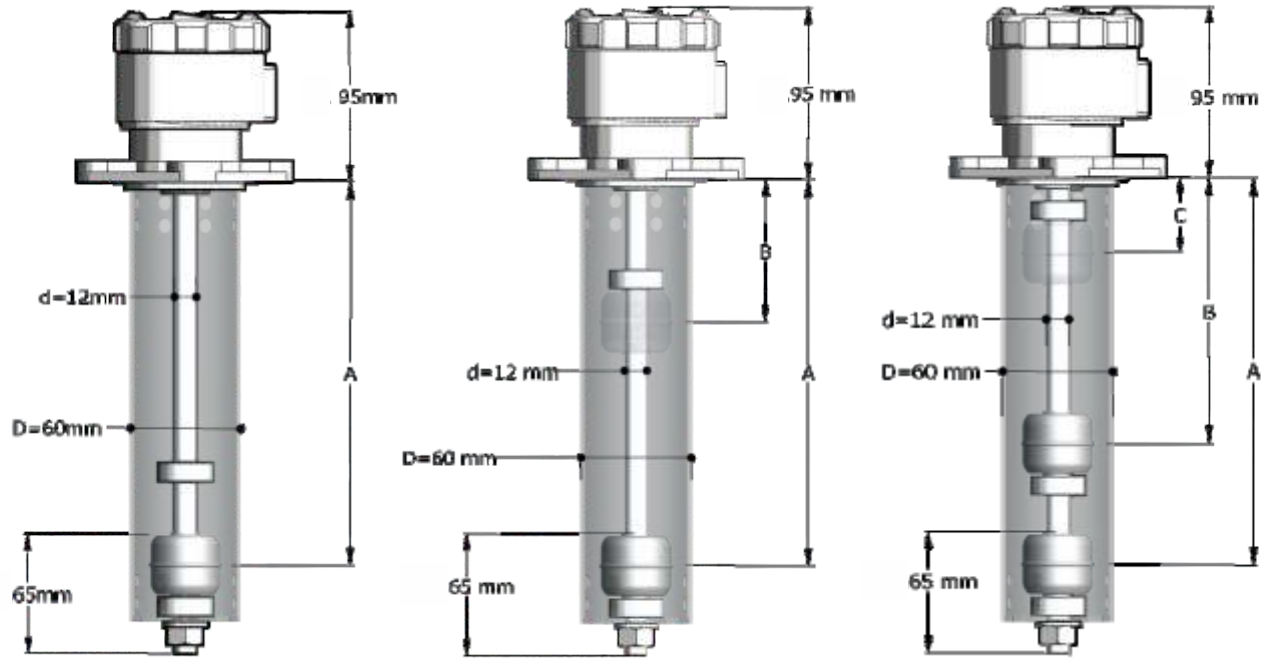
Design



Examples of level switches

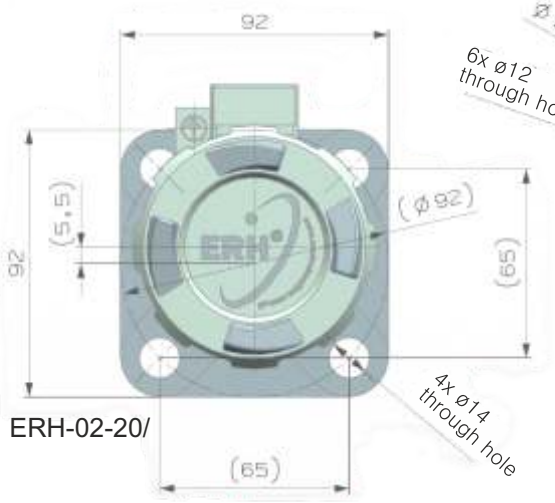


Dimensions

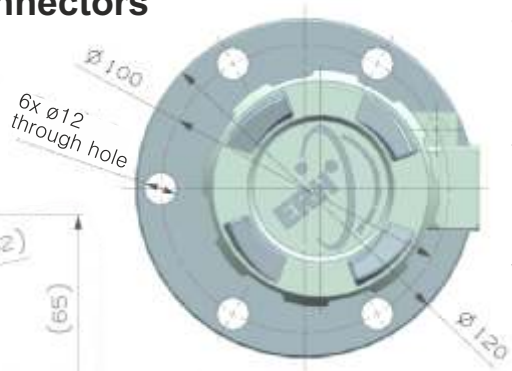


The dimensions A, B and C depend on the ordered version. For one signalling point: A min. 50mm, A max. 1000mm. For two signalling points: A min. 150mm, A max 1000mm; B min. 50mm, B max 900mm; (A – B) min. 100mm. For three signalling points: A min. 250mm, A max 1000mm; B min. 150mm, B max 900mm; C min. 50mm, C max 800mm; (A – B) min. 100mm, (B – C) min. 100mm.

Dimensions of flange connectors



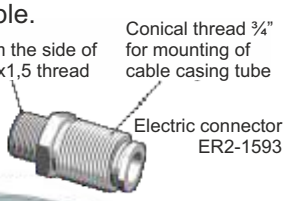
ERH-02-20/



ERH-04-20/

Electric connectors

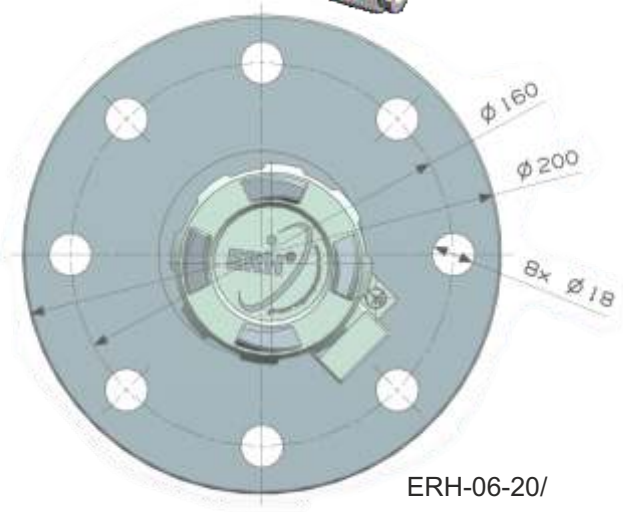
The level switch can be equipped with special gland, marked ER2-1593, which gives possibility of mounting the casing tube of cable (it is not the equipment element). In such version the controller can be ordered exclusively with cable.



Flanges for special version *

Flange marking	Outside diameter	Number of holes	Hole diameter	Spacing of holes
CON-14/340	Ô 130mm	4	Ô 15mm	Ô 105mm
CON-14/346	Ô 160mm	4	Ô 14mm	Ô 130mm
CON-14/290	Ô 170mm	8	Ô 14mm	Ô 138mm
CON-14/347	Ô 190mm	4	Ô 18mm	Ô 150mm
CON-14/348	Ô 220mm	8	Ô 18mm	Ô 180mm

** other versions of flanges after mutual agreement*

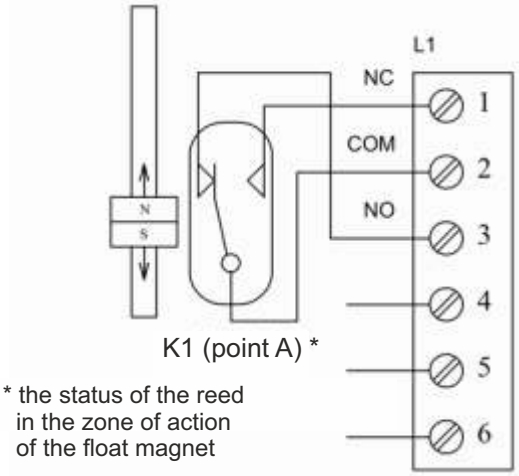


ERH-06-20/

Electric diagram

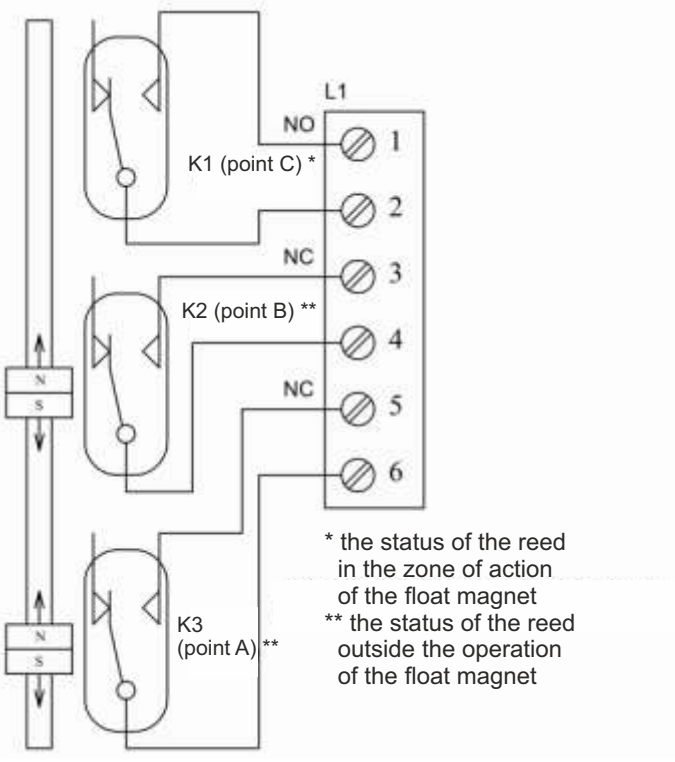
One switching point (one float)

The diagram shows state of reed relay at minimum level of medium – magnetic field of the float interacts the reed relay.
Reed relay without activation of magnetic field of the float at so-called normal state is configured as normally open NO.



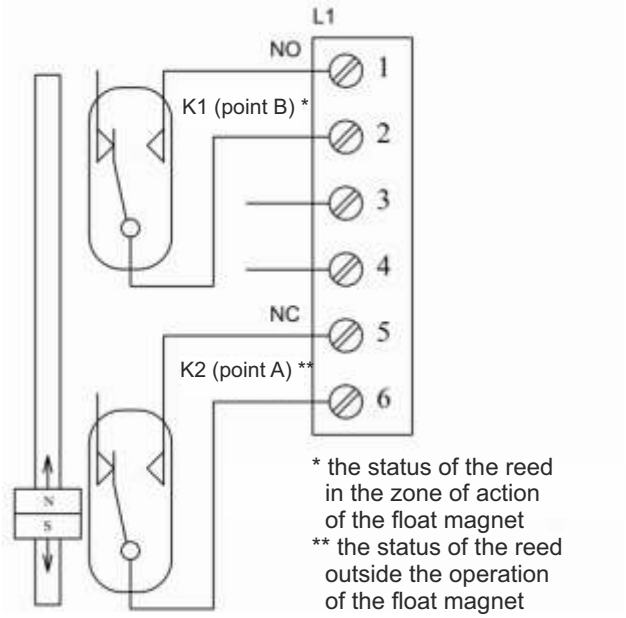
Three switching points (two floats) *

The diagram shows state of reed relays at minimum level of medium - magnetic fields of the float interact the reed relays K2 and K3.
Reed relays without activation of magnetic field of the float at so-called normal state are configured as:
K1 - normally open NO
K2 - normally closed NC
K3 - normally closed NC

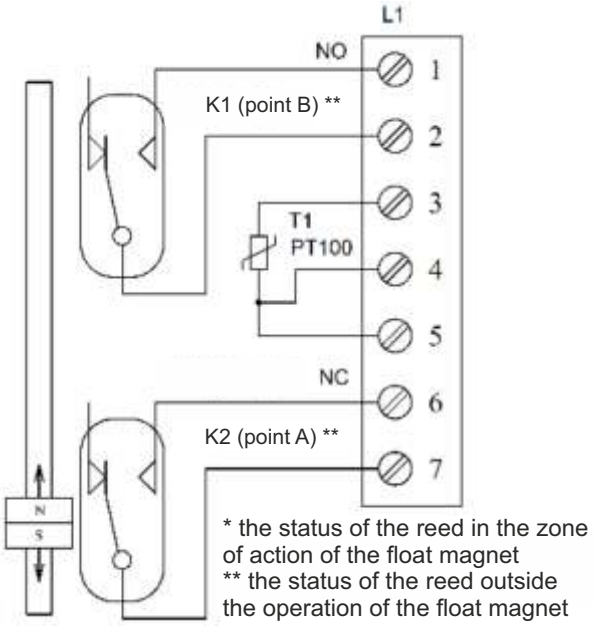


Two switching point (one float)*

The diagram shows state of reed relays at minimum level of medium - magnetic fields of the float interact the reed relay K2.
Reed relays without activation of magnetic field of the float at so-called normal state are configured as:
K1 - normally open NO
K2 - normally closed NC



Option with temperature sensor Pt100



**** there is a possibility of other than given configurations of leadouts – after agreement***

Magnetic level switch with mounting clamp in mini version

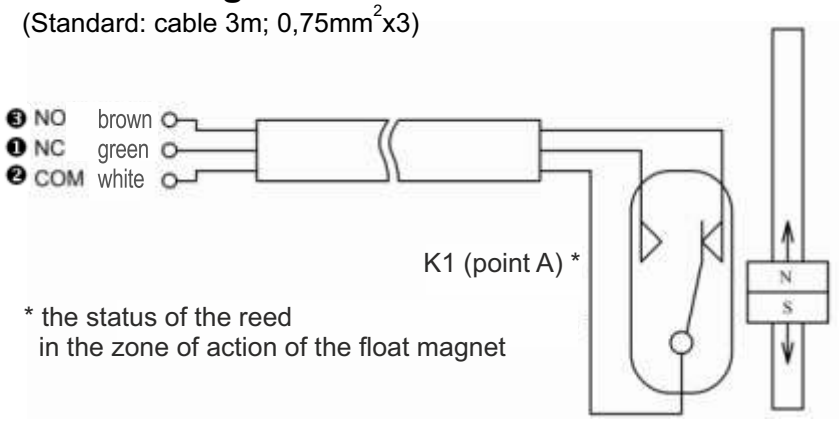
Features of level switch in mini version:

- Realized functions: close, open, switched
- Switching point - approximately in the middle of tube length
- Fully made from acidproof steel
- Possibility of easy mounting, e. g. by means of mounting clamp (2" clamp is attached to the complete set)

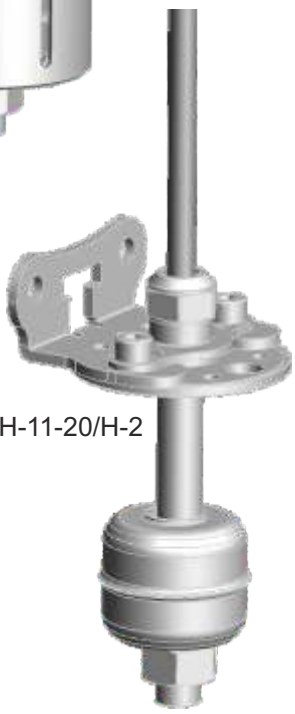
ERH-11-20/H-2-P

Electric diagram

(Standard: cable 3m; 0,75mm^{2}x3)

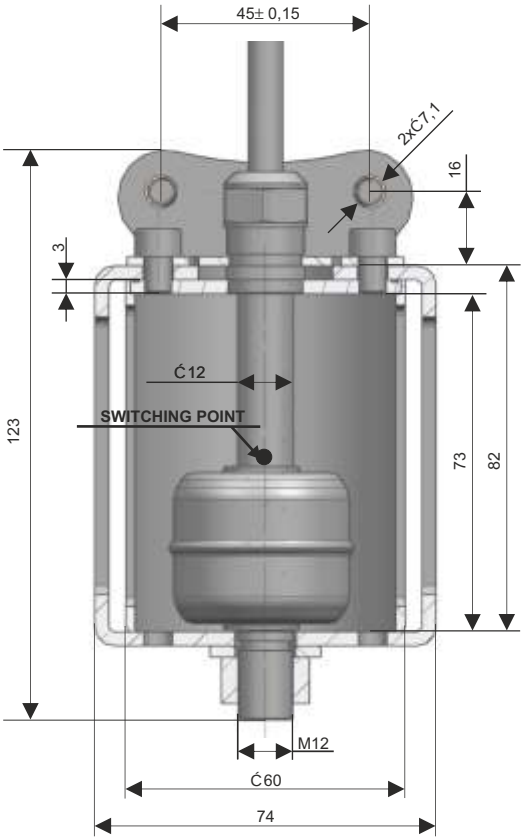


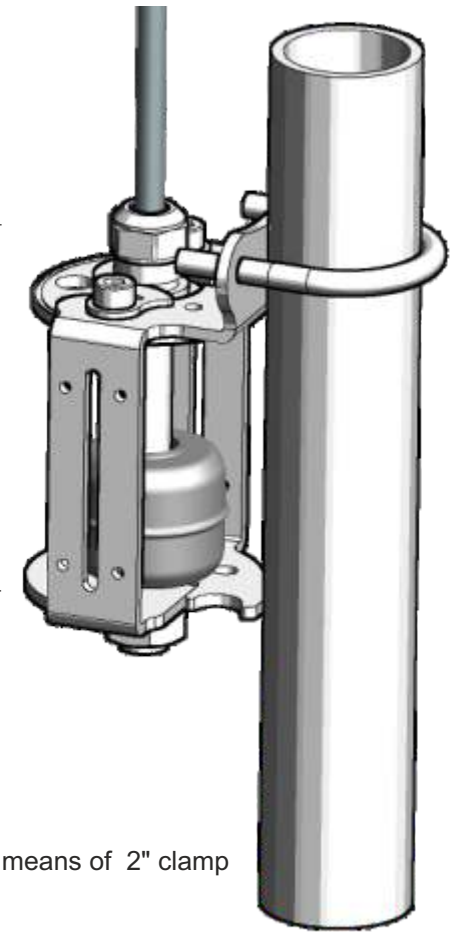
* the status of the reed
in the zone of action of the float magnet



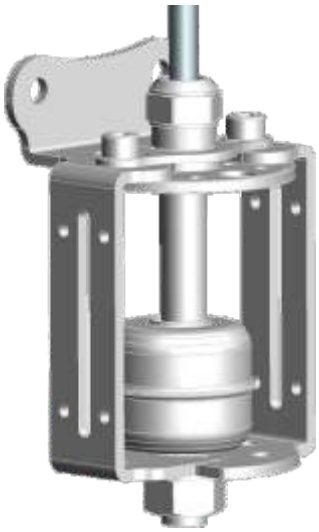
ERH-11-20/H-2

Dimensions





Fixing by means of 2" clamp



ERH-11-20/H-2-Y

Ordering

ERH-02-20	Level switch with flange connector □92mm (4 holes Ô14/Ô92mm)			
ERH-04-20	Level switch with flange connector Ô120 (6 holes Ô12/Ô100mm)			
ERH-06-20	Level switch with flange connector DN80 PN40 (8 holes Ô18/Ô160mm)			
ERH-09-20	Level switch with threaded connector 2” NPT			
ERH-XX-20	Level switch with connector according to the order			
	/A/0/0	1 switching point (give value A in mm) *		
	/A/B/0	2 switching points (give values A and B in mm) *		
	/A/B/C	3 switching points (give values A, B and C in mm) *		
		-1	Electric connector cable gland IP68 ***- not available for Ex***	
		-2	Electric connector cable gland IP68 with cable 3m length ** ***- not available for Ex***	
		-3	Electric connector ER2-1593 with cable 3m length ** ***- not available for Ex***	
		-4	Electric connector cable gland IP68 ATEX Ex D IIC	
		-5	Electric connector without cable gland (thread M20x1,5)	
			Additional options of version	
			-K	Fully acidproof steel version ***
			-P	With protection of float ***- not available for Ex***
			-T	With Pt100 sensor ***- not available for Ex***
			-PT	With Pt100 sensor and protection of float ***- not available for Ex***
			-KP	Fully acidproof steel version with protection of float ***
			-KT	Fully acidproof steel version with Pt100 sensor ***
			-KPT	Fully acidproof steel version with protection of float and Pt100 sensor ***
			/Ex	Explosion-proof version Ⓔx II 2G Ex db IIC T3÷T6 Gb

ERH-11-20	Level switch with mounting clamp (mini version - fully acidproof steel)			
	/H	1 switching point approximately in the middle of tube length		
		-2	Electric connector with cable 3m **	
			Additional options of version	
			-Y	With yoke / shackle
			-P	With protection of float
			-YP	With yoke/shackle and protection of float

** the dimensions A, B and C depend on the ordered version; for one signalling point: A min. 50mm, A max. 1000mm; for two signalling points: A min. 150mm, A max 1000mm; B min. 50mm, B max 900mm; (A – B) min. 100mm; for three signalling points: A min. 250mm, A max 1000mm; B min. 150mm, B max 900mm; C min. 50mm, C max 800mm; (A – B) min. 100mm, (B – C) min. 100mm;* ***range above 1000mm and 4 switching points on request***

*** other lengths of cable upon the order*

**** for controllers designed for operation in full submersion - we recommend fully acidproof steel versions*

Example of the level switch denotation

Magnetic level switch with flange connector Ô120 (6 holes Ô12/Ô100mm), one switch point A=200mm, electric connector IP68 with cable 3m length, fully acidproof steel version with protection tube of float

ERH-04-20/200/0/0-2-KP

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