6.1 General purpose level switches

Type	**HLS-15**	**LMS-Ha2**	**HLS-Ha1**
Function	SPDT	SPDT	SPDT
System	Reed switch bi-stabile	Reed switch bi-stabile	Micro switch
Max. rating	2,5A / 60W / 60VA	2,5A / 60W / 60VA	5A / 100W / 100VA
Voltage	10 – 230 V	10 – 230 V	10 – 230 V
Temp. rating	-25 … +95°C	-40… + 180°C	-50 … +350°C
Lifetime	1 x 10^9	1x 10^8	1 x 10^6
Enclosure	IP 66 / 67 and IP 68	IP 65	IP 67
Connection	5 meter cable PVC	M16 cable gland	M16 cable gland
Dimensions	65 x 25 x 15 mm	100 x 75 x 40 mm	95 x 65 x 54 mm
Material	Engineered Resin	Aluminium housing	AlSi housing
Options			M20 cable gland
			SS 316 housing
			2x SPDT
			NAMUR
			

6.2 Intrinsic safe level switches (Ex i)

Type	**HLS-25*i***	**HLS-Ha1E**	**HLS-Ha3E**
Function	SPDT	SPDT	NO or NC
System	Reed switch bi-stabile	Micro switch	Micro switch **NAMUR**
Max. rating	250mA / 1.3W	0,5A / 1.3W	
Voltage	10 – 30 V	10 – 30 V	8,2 VDC
Temp. rating	-40 … +100°C	-50 … +350°C	-50 … +350°C
Lifetime	1 x 10^9	1 x 10^6	1 x 10^6
Enclosure	IP 66 / 67 and IP 68	IP 67	IP 67
Connection	5 meter cable PVC	M20 cable gland (blue)	M20 cable gland (blue)
Dimensions	80 x 25 x 20 mm	95 x 65 x 54 mm	95 x 65 x 54 mm
Material	SS 316 housing	AlSi housing	AlSi housing
Approval	II 1 GD Exia IIC T6 Ga II 1 GD Exia IIIC T85°C IP66/67 Da	Ex i “simple apparatus“	Ex i “simple apparatus“
Options		M16 cable gland (blue)	M16 cable gland (blue)
		SS 316 housing	SS 316 housing
		Gold contacts	Gold contacts
		2x SPDT	2x micro switch
			

6.2 Flameproof level switches (Ex d)

Type	**HLS-25*d***	**HLS-HaD**
Function	SPDT	SPDT
System	Reed switch bi-stabile	Micro switch
Max. rating	24VDC / 2.5A / 60W 230VAC / 250 mA / 60W	5A / 100W / 100VA
Voltage	10 – 230 V	10 – 230 V
Temp. rating	-40 … +100°C	-50 … + 350°C
Temp. amb.	-20 … +70°C	-40 … + 60°C
Lifetime	1 x 10^9	1 x 10^6
Enclosure	IP 66 / 67 and IP 68	IP 66 / IP 68
Connection	5 meter cable PVC	¾” NPT or M20x1,5 max 1,5 mm^2
Dimensions	80 x 25 x 20 mm	130 x 130 x 90 mm
Material	SS 316 housing	Aluminium housing
Approval	II 2 GD Exd IIC T6 Gb II 2 GD Ex tb IIIC T85°C Db	II 2 G Ex db IIC T5..T1 Gb II 2 D Ex tb IIIC T100°C..T350°C Db
Options		SS 316 Housing
		2x SPDT
		Gold contacts
		

7. Reedchain for an analog output signal

By using a reedchain it is possible to become a 4-20 mA signal. The reedchain is standard mounted on the complete length of the magnetic level gauge.

Design	Standard	Ex i	Ex d
Transmitter	"SMART" type	"SMART" type	"SMART" type
Approval		II 1 G Ex ia IIC T6 Ga / II 1 D Ex ia IIIC T135 °C Da	II 2G Ex db IIC T5..T1 Gb II 2D Ex tb IIIC T100°C..T350°C
Supply	8 – 35 VDC	8 – 30 VDC	8 – 30 VDC
Temperature	-50 … +350°C	-50 … +350°C	-50 … +350°C
Material pipe	SS 316 L	SS 316 L	SS 316 L
Max. length	5,5 meter	5,5 meter	5,5 meter
Material housing	Aluminium or SS	Aluminium or SS	Aluminium or SS316
Enclosure	IP 67	IP 67	IP 66 / 67 and IP 68
Connection	M16 x 1,5	M20 x 1,5	¾" NPT, M20x1.5
Output	4 – 20 mA / 2 wire	4 – 20 mA / 2 wire	4 – 20 mA / 2 wire
Action	Reversible std. D.A.	Reversible std. D.A.	Reversible std. D.A.
Accuracy Model:			
P-15	± 7,5 mm	± 7,5 mm	± 7,5 mm
P-10	± 5 mm	± 5 mm	± 5 mm
P-05	± 2,5 mm	± 2,5 mm	± 2,5 mm

Options
High accuracy
M16x1,5; M20x1,5; ½" NPT; ¾" NPT connections
Enclosure IP 68
HART 5 or HART 7
PROFIBUS
FIELDBUS
SS 316 housing
Housing with LCD display (also optical)
Output signal (Ohm or V)

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