OptiLevel Level Sensor

Honeywell Enraf

The leading system for liquid level measurement in smaller storage tanks.

Honeywell Enraf's OptiLevel HLS 3010HF tank gauging system is the best choice for above and underground storage facilities. The OptiLevel tank gauging system can be used for all applications in petroleum and petrochemical installations. The state of the art HLS 3010HF level sensor and designed system architecture enable open interfacing to Honeywell Enraf's Entis inventory systems and other protocols. A microprocessor inside the head of the level sensor calculates reliable liquid level and temperature data and calculates the tank volume. The sensor can also be interfaced directly to a PC or fuel island terminal.

Technical specifications OptiLevel Atmospheric version

Measuring specifications		High accuracy version (Pos 1 = H)
Level measuring accuracy	:	±1 mm (0.08”)
Level measuring resolution	:	0.1 mm
Relative permittivity	:	$2 < \varepsilon_r < 3$ (petroleum, diesel fuel, kerosene ...)
Measuring range bottom	:	23 mm above sensor bottom
Temperature measuring	:	0 - 100 °C (± 1 °C)
		-20 - 100 °C (± 2 °C)
Water level measuring	:	in the lowest 100 mm of sensor from sensor bottom

Measuring specifications		Industrial version (Pos 1 = I)
Level measuring accuracy	:	±10 mm
Level measuring resolution	:	0.1 mm
Relative permittivity	:	$1.5 < \varepsilon_r < 80$
Measuring range bottom	:	23 mm above sensor bottom
Temperature measuring	:	0 - 100 °C (± 1 °C)
		-20 - 120 °C (± 2 °C)

Environmental		
Operating pressure	:	1.5 bar standard
Operating temperature	:	-25 °C to 60 °C for electronics
		-25 °C to 100 °C for sensor
Protection class sensor	:	IP 68
Explosion protection		
- Protection class	:	EEx ia IIB T4 (PTB)
- Sensor circuits	:	Intrinsically safe - Zone 0

Electrical		
Supply voltage	:	12 VDC via OptiLevel supply unit (to be ordered separately)

Transmission			
Protocol	:	Enraf fieldbus (GPU protocol)	HEC protocol, ASCII (compatible to the OptiLevel system)
Baudrate	:	300,7,O,1	300,8,N,1 (standard)
		1200,7,O,1	1200,8,N,1

Options		
Connection cable HLS 3010HF level sensor to OptiLevel supply unit		
Type	: 3x 0.75 mm^2 shielded	
Length	: per meter	3881.754
	25 m - spooled	3881.755
	50 m - spooled	3881.756
	100 m - spooled	3881.757
	> 100 m - spooled	3881.758
Mounting flange 2” 150 lbs r.f. Stock finish Acc. to ANSI B 16.5 ASTM A105		
with G 1½” Acc. to DIN ISO 228/1 threaded mounting hole		0189.101
Mounting flange B 50 ND 16 Acc. to DIN 2527		
with G 1½” Acc. to DIN ISO 228/1 threaded mounting hole		0189.100

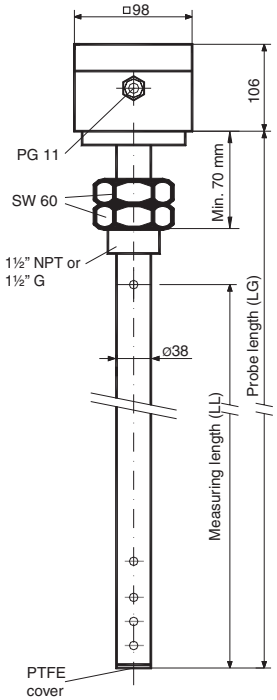
The PET comes complete with	
Carrying case	
Battery charger	For type to be selected see Identification code
IR-adaptor	Part number 0847.380
EN bus adapter	Part number 1847.812

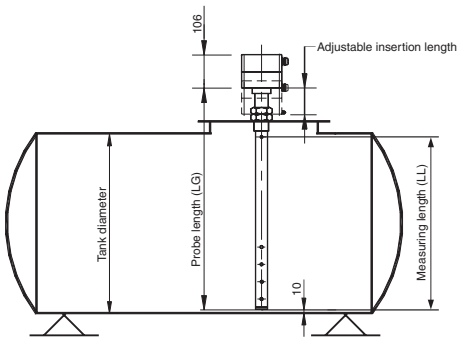
Identification code OptiLevel Atmospheric version

Pos 1 Version																
H	High accuracy															
I	Industrial															
	Pos 2 Operating pressure															
	A	1.5 bar atmospheric conditions														
		Pos 3 Process connection														
		N	1½" NPT													
		G	1½" G													
			Pos 4 Data transmission													
			G	Enraf GPU protocol												
			H	Hectronic Heclevel protocol												
				Pos 5, 6, 7 Data transmission												
				3	0	1	OptiLevel Atmospheric version									
							Pos 8 Probe length (standard)									
							A	Standard length	LG = 2100	LL = 1600						
							B	Standard length	LG = 2500	LL = 2000						
							C	Standard length	LG = 3000	LL = 2500						
							D	Standard length	LG = 3400	LL = 2900						
							E	Standard length	LG = 3500	LL = 3000						
							S	Special length	0800 < LG < 6000 (see also Pos 9 ... 16)							
								Pos 9, 10, 11, 12 Special probe length LG in steps of 100 mm								
								*	*	0	0	Range 0800 - 6000 (if Pos 8 = S)				
												Pos 13, 14, 15, 16 Measuring length LL in steps of 100 mm				
												*	*	0	0	Range 0600 - LG-200 (if Pos 8 = S) *)
H	A	N	G	3	0	1	S	2	7	0	0	1	6	0	0	Typical identification code
	A			3	0	1				0	0			0	0	Your identification code

Note

*) - Minimum length: LL = 0600 mm and LG = 0800 mm
- Maximum length: LL = 5800 mm and LG = 6000 mm
- Minimum difference between LL and LG: 200 mm
- Maximum difference between LL and LG: n.a.





Technical specifications OptiLevel High pressure version

Measuring specifications		High accuracy version (Pos 1 = H)
Level measuring accuracy	:	±1 mm (0.08”)
Level measuring resolution	:	0.1 mm
Relative permittivity	:	$2 < \varepsilon_r < 3$ (petroleum, diesel fuel, kerosene ...)
Measuring range bottom	:	23 mm above sensor bottom
Temperature measuring	:	0 - 100 °C (± 1 °C)
		-20 - 100 °C (± 2 °C)

Measuring specifications		Industrial version (Pos 1 = I)
Level measuring accuracy	:	±10 mm
Level measuring resolution	:	0.1 mm
Relative permittivity	:	$1.5 < \varepsilon_r < 80$
Measuring range bottom	:	23 mm above sensor bottom
Temperature measuring	:	0 - 100 °C (± 1 °C)
		-20 - 120 °C (± 2 °C)

Environmental		
Operating pressure	:	25 bar standard
Operating temperature	:	-25 °C to 60 °C for electronics
		-25 °C to 100 °C for sensor
Protection class sensor	:	IP 68
Explosion protection		
- Protection class	:	EEx ia IIB T4 (PTB)
- Sensor circuits	:	Intrinsically safe - Zone 0

Electrical		
Supply voltage	:	12 VDC via OptiLevel supply unit (to be ordered separately)

Transmission			
Protocol	:	Enraf fieldbus	HEC protocol, ASCII
		(GPU protocol)	(compatible to the OptiLevel system)
Baudrate	:	300,7,O,1	300,8,N,1 (standard)
		1200,7,O,1	1200,8,N,1

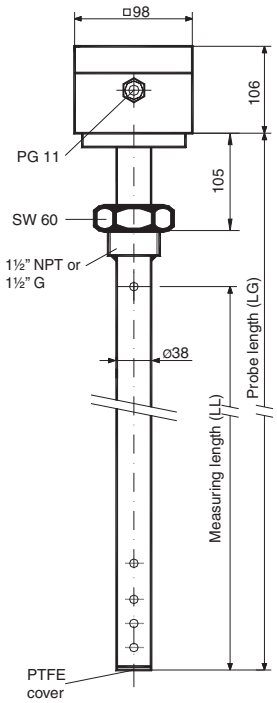
Options		
Connection cable HLS 3010HF level sensor to OptiLevel supply unit		
Type	: 3x 0.75 mm^2 shielded	
Length	: per meter	3881.754
	25 m - spooled	3881.755
	50 m - spooled	3881.756
	100 m - spooled	3881.757
	> 100 m - spooled	3881.758
Mounting flange 2” 300 lbs r.f. Stock finish Acc. to ANSI B 16.5 ASTM A105		
with G 1½” Acc. to DIN ISO 228/1 threaded mounting hole		0189.103
Mounting flange B 50 ND 40 Acc. to DIN 2527		
with G 1½” Acc. to DIN ISO 228/1 threaded mounting hole		0189.102

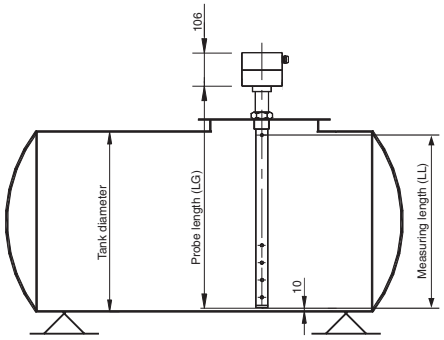
Identification code OptiLevel High pressure version

Pos 1 Version															
H	High accuracy														
I	Industrial														
	Pos 2 Operating pressure														
	H	25 bar pressurized conditions													
		Pos 3 Process connection													
		N	1½" NPT												
		G	1½" G												
			Pos 4 Data transmission												
			G	Enraf GPU protocol											
			H	Hectronic Heclevel protocol											
				Pos 5, 6, 7 Data transmission											
				3 0 2	OptiLevel High pressure version										
					Pos 8 Probe length (standard)										
					A	Standard length	LG = 1800	LL = 1600							
					B	Standard length	LG = 2200	LL = 2000							
					C	Standard length	LG = 2700	LL = 2500							
					D	Standard length	LG = 3100	LL = 2900							
					E	Standard length	LG = 3200	LL = 3000							
					S	Special length	0800 < LG < 6000 (see also Pos. 9 ... 16)								
						Pos 9, 10, 11, 12 Special probe length LG in steps of 100 mm									
						*** * 0 0**	Range 0800 - 6000 (if Pos 8 = S)								
							Pos 13, 14, 15, 16 Measuring length LL in steps of 100 mm								
							*** * 0 0**	Range 0600 - LG-200 (if Pos 8 = S) *)							
H	**H**	**N**	**G**	**3**	**0**	**2**	**S**	**4**	**0**	**0**	**0**	**3**	**8**	**0**	**0**	**Typical identification code**
	H			**3**	**0**	**2**				**0**	**0**			**0**	**0**	**Your identification code**

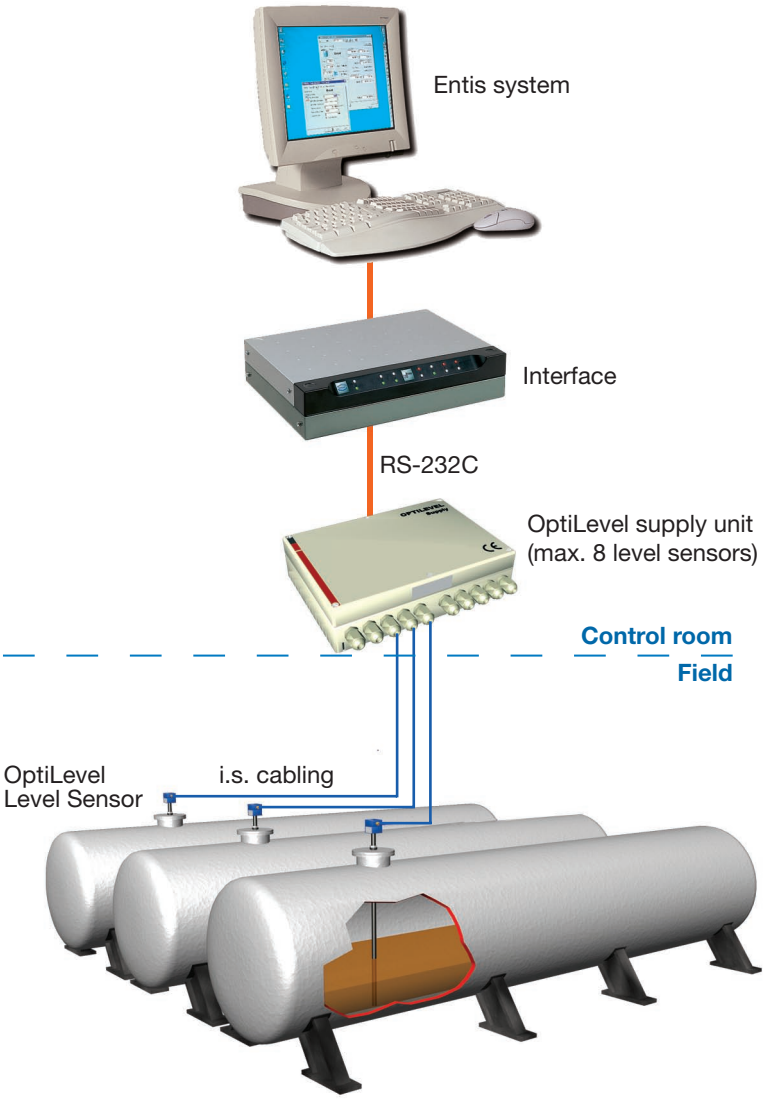
Note

*) -Minimum length: LL = 0600 mm and LG = 0800 mm
-Maximum length: LL = 5800 mm and LG = 6000 mm
-Difference between LL and LG fixed on 200 mm





System configuration



For More Information

To learn more about Honeywell Enraf's solutions, contact your Honeywell Enraf account manager or visit www.honeywellenraf.com

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