

Limit switches for liquids LS 7200 – LS 7241

... for level detection or
dry-run protection



- Optimized flow geometry
- Precise switching point
- Hygienic installation

Variable area flowmeters

Vortex flowmeters

Flow controllers

Electromagnetic flowmeters

Ultrasonic flowmeters

Mass flowmeters

Level measuring instruments

Communications technology

Engineering systems & solutions

Switches, counters, displays and recorders

Heat metering

Pressure and temperature

The hygienic conductive sensors type LS 72XX are used for level detection or dry run protection on conductive liquids. These sensors pick up the electrical resistance of the tank product when the electrode is in contact with the product. The wall of the vessel or the pipe acts as reverse potential.

Available are stump electrodes for pipe installation (LS 7200/7201) or mono or multiple rods (LS 7210-7240) for installation in tanks. The sensor rods are from stainless steel or coated, to make them insensitive for foam or product build up. Sensor rods can be shortened without special tools.

The electronics is either integrated in the electronic compartment or can be placed in the panel room (electronic modules LEM 100/200). On varying products (with different conductivities), the sensitivity can be adjusted via a contact input.

With a huge variety of hygienic process connections, a crevice free installation can be achieved. These connections are EHEDG approved regarding their simple cleanability.

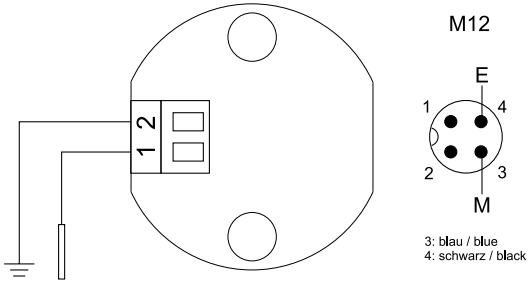
Technical data

Typ	LS 7200/ LS7201	LS 7210/ LS 7211	LS 7220/ LS 7221	LS 7230/LS 7231	LS 7240/LS 7241
Sensor type	Stump electrode	Mono rod electrode	Coated mono rod electrode	Multiple rod electrode	Multiple coated rod electrode
Operating principle	Conductive	Conductive	Conductive	Conductive	Conductive
Process conditions					
Pressure	≤ 10 bar or ≤ 145 psig	≤ 10 bar or ≤ 145 psig	≤ 10 bar or ≤ 145 psig	≤ 10 bar or ≤ 145 psig	≤ 10 bar or ≤ 145 psig
Process temperature	-20...+140°C or -4...+284°F	-20...+140°C or -4...+284°F	-20...+140°C or -4...+284°F	-20...+140°C or -4...+284°F	-20...+140°C or -4...+284°F
Materials					
Sensor	Stainless steel 1.4571	Stainless steel 1.4571	Stainless steel 1.4571, PTFE-coated	Stainless steel 1.4571	Stainless steel 1.4571, PTFE-coated
Housing	Stainless steel 1.4305	Stainless steel 1.4305	Stainless steel 1.4305	Stainless steel 1.4305	Stainless steel 1.4305
Insulating part	PEEK (FDA approved)	PEEK (FDA approved)	PEEK (FDA approved)	PEEK (FDA approved)	PEEK (FDA approved)
Process connection					
Screwed joint	G 1/2" h	G 1/2" h	G 1/2" h	G 1" h	G 1" h
Sensor diameter	-	4 mm or 0.16"	4.2 mm or 0.17"	4 mm or 0.16"	4.2 mm or 0.17"
Sensor length (mm)	-	200; 500; 850; 1000	200; 500; 850; 1000	200; 500; 850; 1000	200; 500; 850; 1000
Sensor length (inches)	-	7.9; 19.7; 31.5; 39.4	7.9; 19.7; 31.5; 39.4	7.9; 19.7; 31.5; 39.4	7.9; 19.7; 31.5; 39.4
Electronic unit					
Output	LS 7200: Electrode / Ground connection LS 7201: Active, max. 50 mA (short circuit proof)	LS 7210: Electrode / Ground connection LS 7211: Active, max. 50 mA (short circuit proof)	LS 7220: Electrode / Ground connection LS 7221: Active, max. 50 mA (short circuit proof)	LS 7230: Electrode / Ground connection LS 7231: Active, max. 50 mA (short circuit proof) Max. 1 output	LS 7240: Electrode / Ground connection LS 7241: Active, max. 50 mA (short circuit proof) Max. 1 output
Supply voltage (only for active output)	18...36 V DC; max. 10 mA	18...36 V DC; max. 10 mA	18...36 V DC; max. 10 mA	18...36 V DC; max. 10 mA	18...36 V DC; max. 10 mA
Sensitivity (kOhm) (only for active output)	0.2; 2; 20 adjustable	0.2; 2; 20 adjustable	0.2; 2; 20 adjustable	0.2; 2; 20 adjustable	0.2; 2; 20 adjustable
Electrical connection	Cable gland M16 or M12 plug	Cable gland M16 or M12 plug	Cable gland M16 or M12 plug	Cable gland M16 or M12 plug	Cable gland M16 or M12 plug
Approval	3 A	3 A	3 A	3 A	3 A
Type of protection	IP 67	IP 67	IP 67	IP 67	IP 67
Accessories	Electronic level module Hygienic process connection	Electronic level module Hygienic process connection	Electronic level module Hygienic process connection	Electronic level module Hygienic process connection	Electronic level module Hygienic process connection

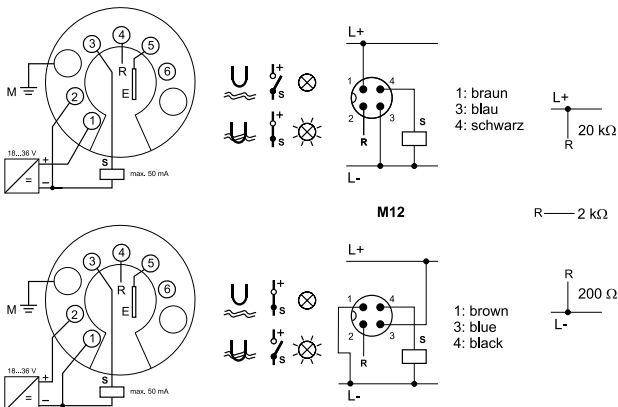
For further information see datasheet "Accessories for hygienic measuring devices"

Electrical connections and Dimensions

LS 7200 / LS 7201

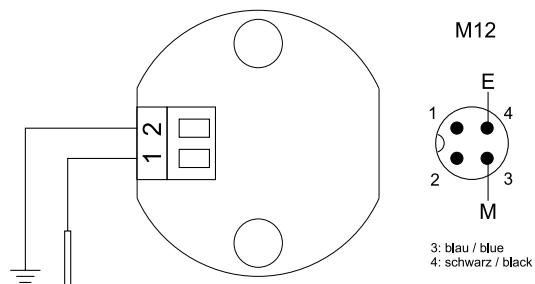


LS 7200 (electrode/ground connection)

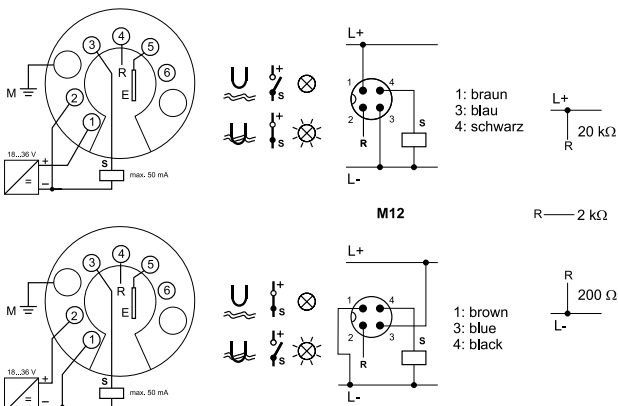


LS 7201 (contact output)

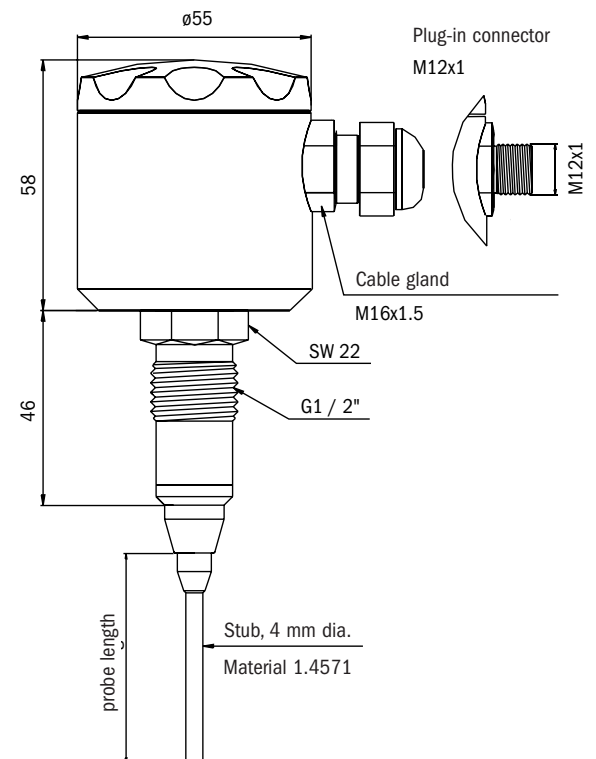
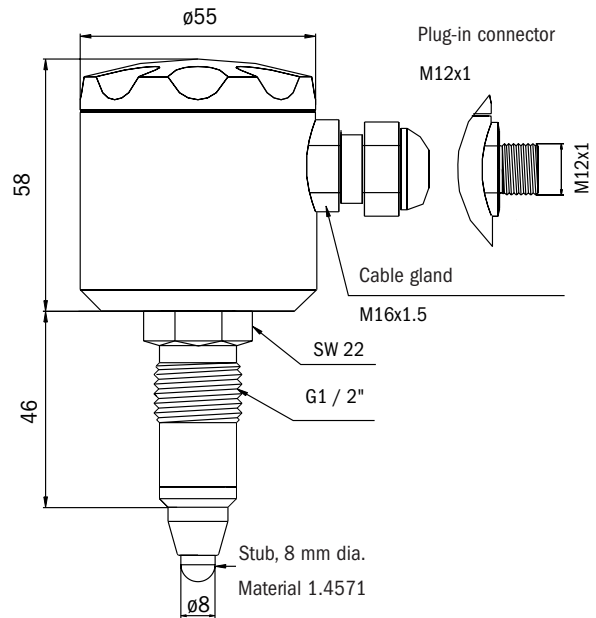
LS 7210 / LS 7211



LS 7210 (electrode/ground connection)

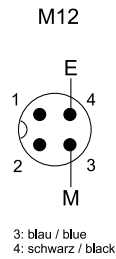
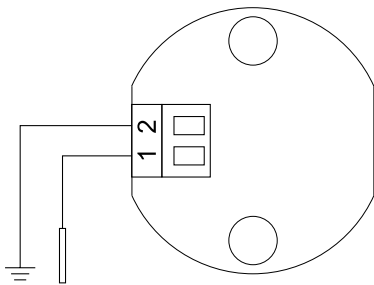


LS 7211 (contact output)

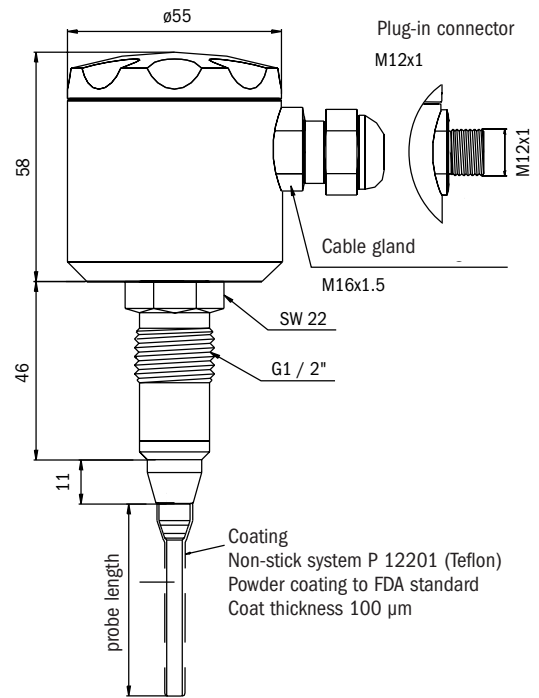
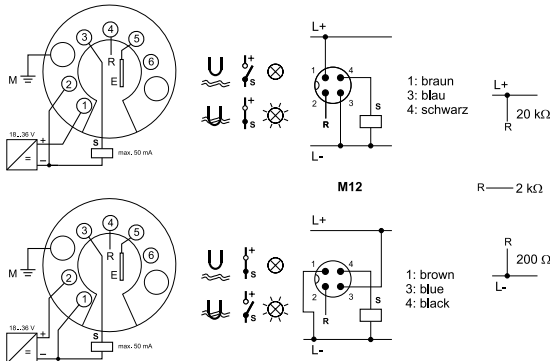


LS 7200 – LS 7241

LS 7220 / LS 7221



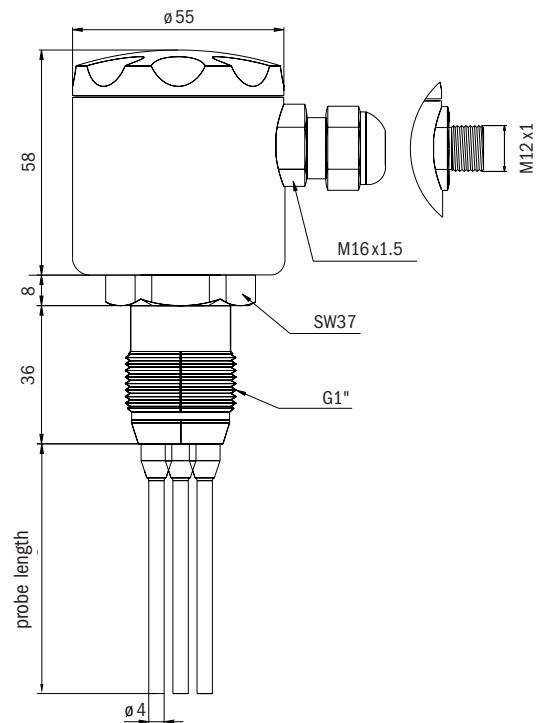
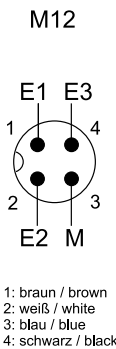
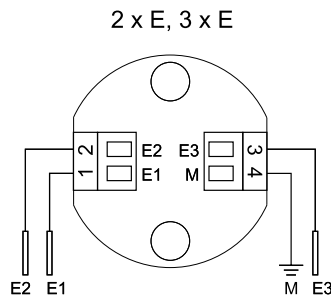
LS 7220 (electrode/ground connection)



LS 7221 (contact output)

LS 7230 / LS 7231 / LS 7240 / LS 7241

Example: 3 rod electrode



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