

## Limit switches for liquids LS 7200 – LS 7241

... for level detection or  
dry-run protection



- Optimized flow geometry
- Precise switching point
- Sanitary 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 sanitary 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 sanitary process connections, a crevice free installation can be achieved. These connections are 3 A and EHEDG approved regarding their simple cleanability.

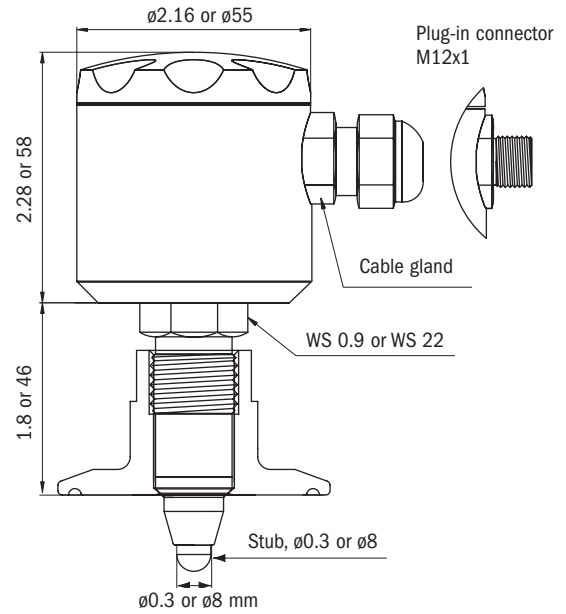
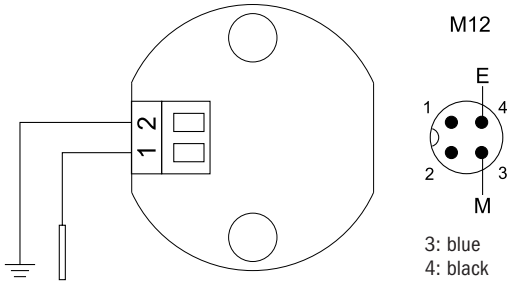
## Technical data

Typ	LS 7200/ LS7201	LS 7210/ LS 7211	LS 7220/ LS 7221	LS 7230/LS 7231	LS 7240/LS 7241
<b>Sensor type</b>	Stump electrode	Mono rod electrode	Coated mono rod electrode	Multiple rod electrode	Multiple coated rod electrode
<b>Operating principle</b>	Conductive	Conductive	Conductive	Conductive	Conductive
<b>Process conditions</b>					
Pressure	≤ 145 psig or ≤ 10 bar	≤ 145 psig or ≤ 10 bar	≤ 145 psig or ≤ 10 bar	≤ 145 psig or ≤ 10 bar	≤ 145 psig or ≤ 10 bar
Process temperature	-4...+284°F or -20...+140°C	-4...+284°F or -20...+140°C	-4...+284°F or -20...+140°C	-4...+284°F or -20...+140°C	-4...+284°F or -20...+140°C
<b>Materials</b>					
Sensor	SS 316 Ti	SS 316 Ti	Ss 316 Ti, PTFE-coated	SS 316 Ti	SS 316 Ti, PTFE-coated
Housing	SS 303	SS 303	SS 303	SS 303	SS 303
Insulating part	PEEK (FDA approved)	PEEK (FDA approved)	PEEK (FDA approved)	PEEK (FDA approved)	PEEK (FDA approved)
<b>Process connection</b>					
Screwed joint	G 1/2" h	G 1/2" h	G 1/2" h	G 1" h	G 1" h
Sensor diameter	-	0.16" or 4 mm	0.17" or 4.2 mm	0.16" or 4 mm	0.17" or 4.2 mm
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
Sensor length (mm)	-	200; 500; 850; 1000	200; 500; 850; 1000	200; 500; 850; 1000	200; 500; 850; 1000
<b>Electronic unit</b>					
Output	<b>LS 7200:</b> Electrode / Ground connection <b>LS 7201:</b> Active, max. 50 mA (short circuit proof)	<b>LS 7210:</b> Electrode / Ground connection <b>LS 7211:</b> Active, max. 50 mA (short circuit proof)	<b>LS 7220:</b> Electrode / Ground connection <b>LS 7221:</b> Active, max. 50 mA (short circuit proof)	<b>LS 7230:</b> Electrode / Ground connection <b>LS 7231:</b> Active, max. 50 mA (short circuit proof) Max. 1 output	<b>LS 7240:</b> Electrode / Ground connection <b>LS 7241:</b> 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
<b>Electrical connection</b>	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
<b>Approval</b>	3 A; EHEDG	3 A; EHEDG	3 A; EHEDG	3 A; EHEDG	3 A; EHEDG
<b>Type of protection</b>	IP 67 equiv. to NEMA 4	IP 67 equiv. to NEMA 4	IP 67 equiv. to NEMA 4	IP 67 equiv. to NEMA 4	IP 67 equiv. to NEMA 4
<b>Accessories</b>	Electronic level module Sanitary process connection	Electronic level module Sanitary process connection	Electronic level module Sanitary process connection	Electronic level module Sanitary process connection	Electronic level module Sanitary process connection

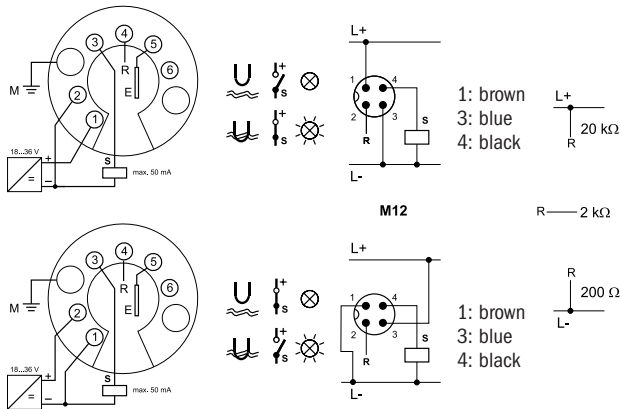
For further information see datasheet "Accessories for sanitary measuring devices"

Electrical connections and Dimensions

LS 7200 / LS 7201



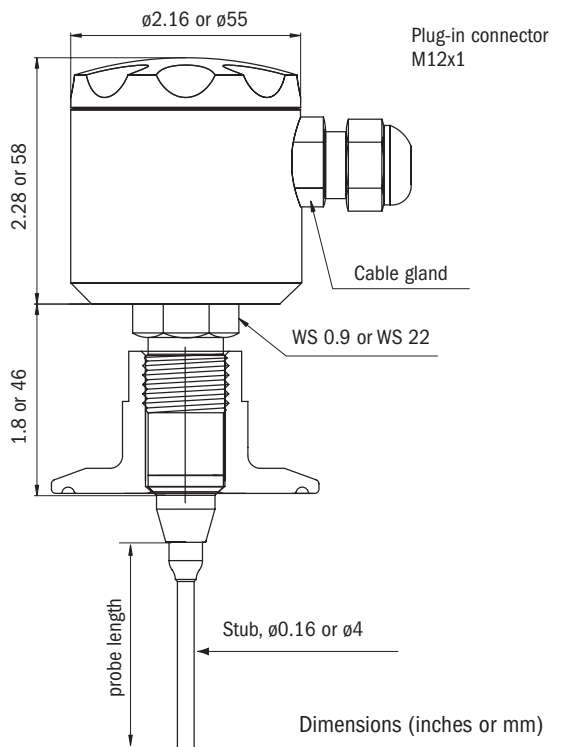
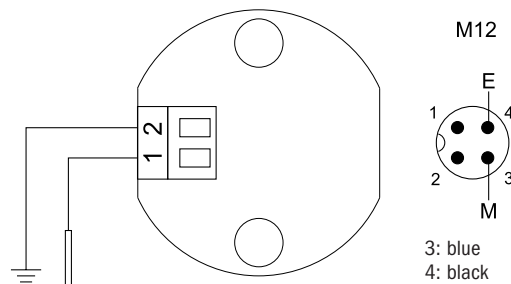
LS 7200 (electrode/ground connection)



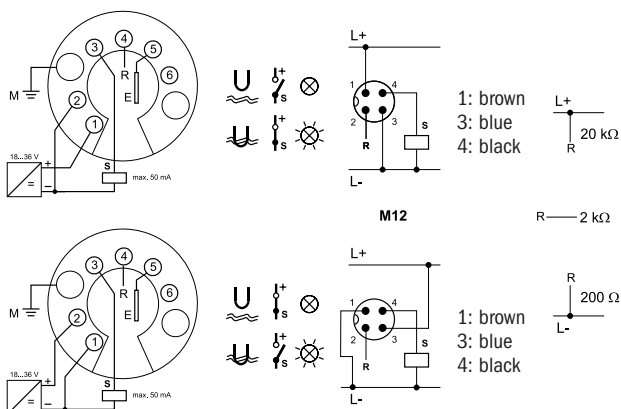
Dimensions (inches or mm)

LS 7201 (contact output)

LS 7210 / LS 7211



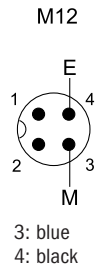
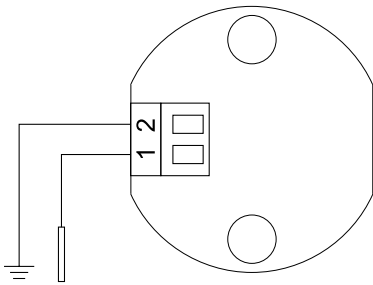
LS 7210 (electrode/ground connection)



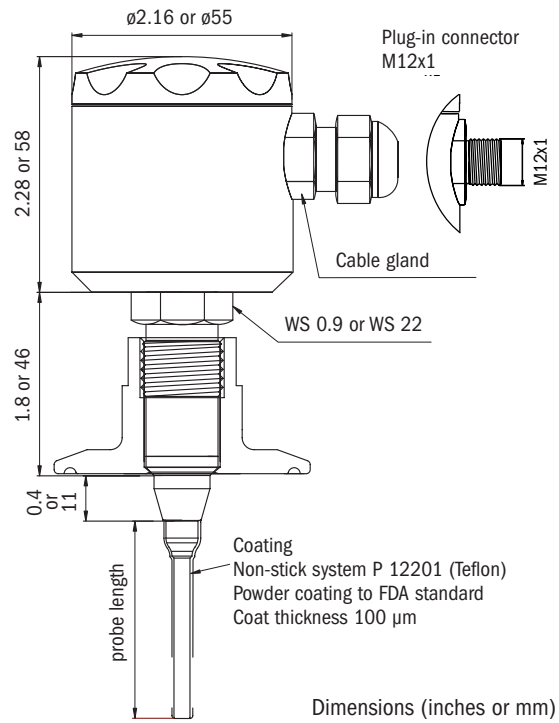
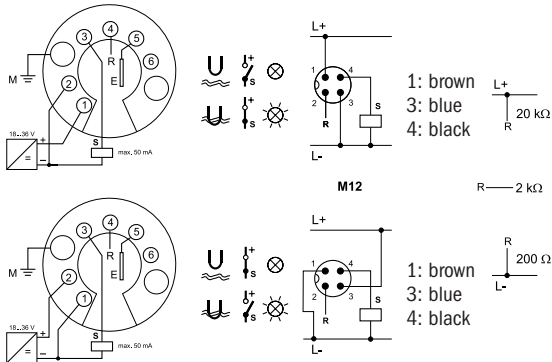
Dimensions (inches or mm)

LS 7211 (contact output)

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

