

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.

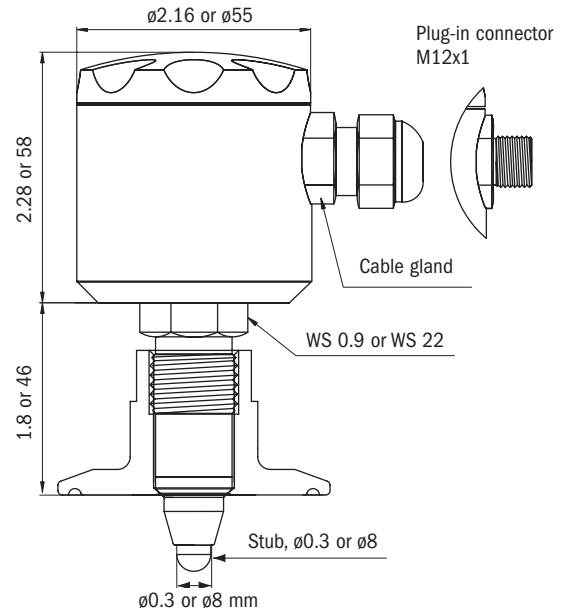
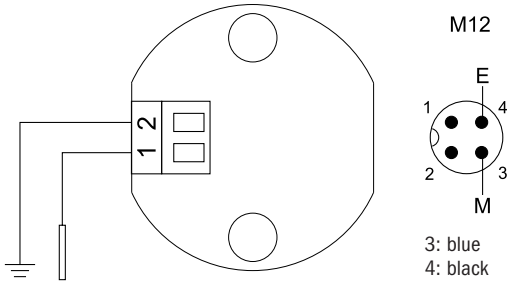
Technical data

Typ	LS 7200/ LS7201	LS 7210/ LS 7211	LS 7220/ LS 7221	LS 7230/LS 7231	LS 7240/LS 7241
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	≤ 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
Materials					
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)
Process connection					
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
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; EHEDG	3 A; EHEDG	3 A; EHEDG	3 A; EHEDG	3 A; EHEDG
Type of protection	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
Accessories	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

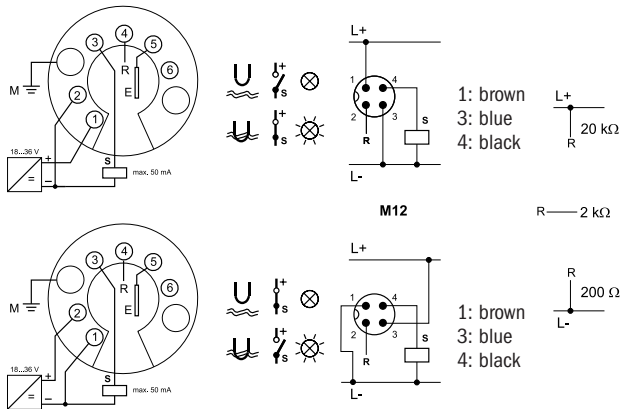
For further information see datasheet "Accessories for sanitary measuring devices"

Electrical connections and Dimensions

LS 7200 / LS 7201



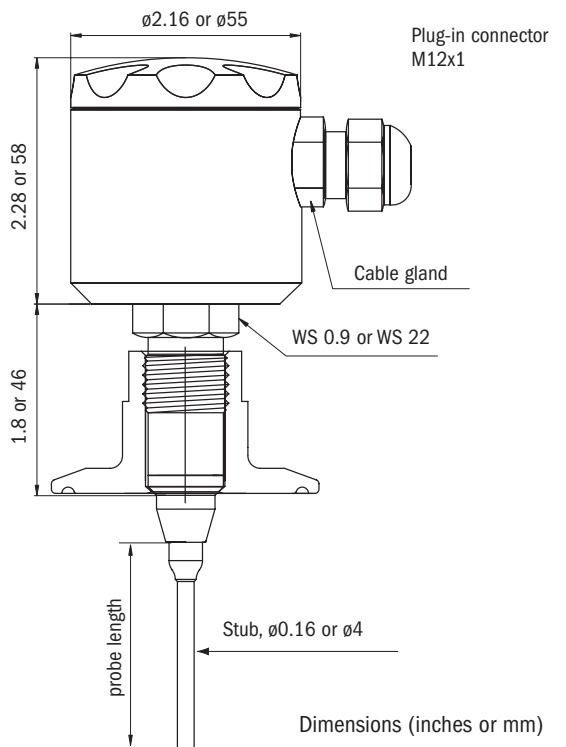
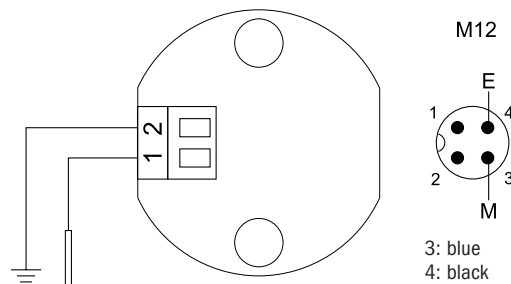
LS 7200 (electrode/ground connection)



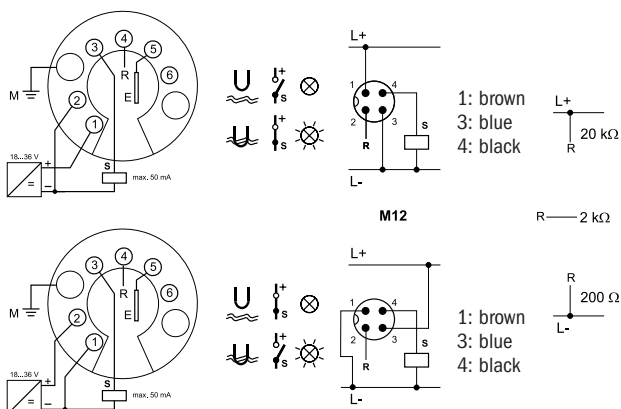
Dimensions (inches or mm)

LS 7201 (contact output)

LS 7210 / LS 7211



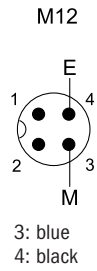
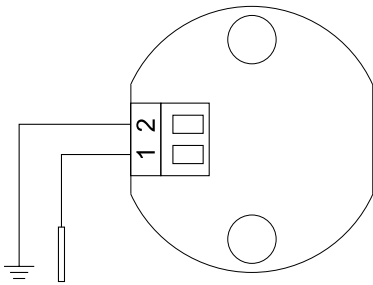
LS 7210 (electrode/ground connection)



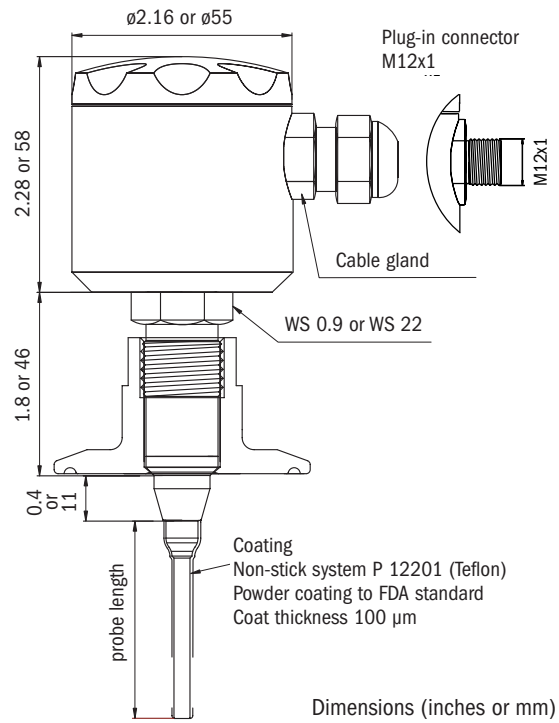
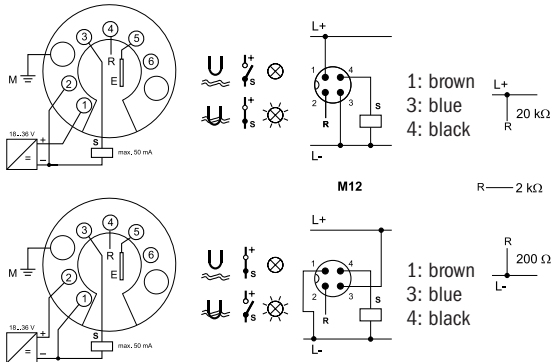
Dimensions (inches or mm)

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

