Atek Alfa

CAPACITIVE LEVEL SENSOR

CLS 211

"Suitable for use in mineral oils, Sink (NPN) or Source (PNP) output, IP67 protection"

- Suitable for mineral oils
- Alarm delay time: Standard 10 sn (or a value between 0…40 sn can be selected at the order stage according to customer demand)
- 40 Bar pressure resistance
- Sink (NPN) or source (PNP) output type
- High accuracy and stability
- IP67 protection class
- Precise oil level measurement in engines

The CLS 211 capacitive level sensor is a device designed to give an alarm signal if the liquid falls below or rises above a predetermined level. It can be specified with a delay according to customer request to eliminate false alarms due to turbulence. Provides sink or source output. Its small footprint and limited entry into the tank means the risk of damage is reduced, and a wide range of customer-specifiable options make it suitable for most applications. For high accuracy, it is ideally mounted horizontally at the point where the alarm or control signal is required. However, it can also be mounted vertically.

APPLICATIONS

Mineral oils compatible with brass, PTFE and FVMQ, typically used in motors or hydraulic actuators.

- Deck and Mobile Cranes
- Firefighting Equipment
- Forwarders
- Hydraulic Presses
- Marine Steering Units
- Power Packs
- Waste Management
- Dump and Fork Lift Trucks
- Excavators
- Waste Balers
- Reach Stackers
- Wheeled Loaders
- Drilling Equipment
- Industrial Power Units

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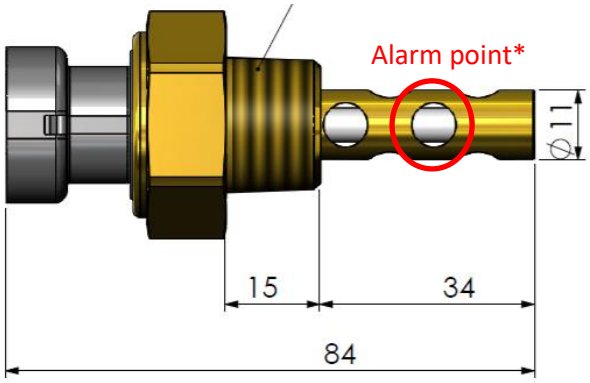
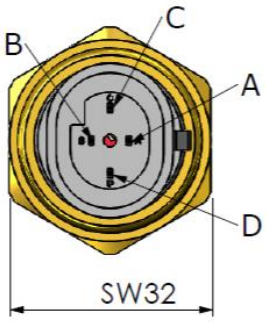
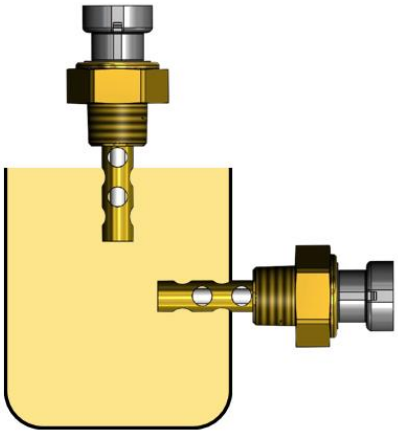
MECHANICAL DIMENSIONS (mm) and ALARM POINT

Recommended Mounting Tightening Torques	
G1/4	9 Nm
1/4” NPTF	9 Nm
3/8” NPTF	11 Nm
1/2” NPTF	20 Nm
1/2” BSPP	15 Nm
1/2” BSPT	20 Nm
M14x1.5	10 Nm
M18x1.5	15 Nm







*The sensor gives an alarm when the liquid reaches this point. The sensor can be mounted horizontally or vertically.

TECHNICAL FEATURES

ELECTRICAL DATA	
Detectable Liquids	Suitable for liquids with density less than 13.6 g/cm^3
Supply Voltage	9-36VDC
Supply Current	<9mA
Max. Load current	1A (sink) or 20mA (source)
Alarm delay time	Standard: 10 sn Optional: Can be selected by the customer at the ordering stage between 0…40 sn
Connection	4 way Delphi Packard Metri-Pack 150 series connector
Power up delay	0…10sn (factory set)
Control time (test time)	10sn (ask for other options)
Short circuit protection	Yes
Reverse polarity protection	Yes
Overload protection	Yes
Output type	Sink (NPN) or source (PNP)
Output pin	Pin D (sink) or Pin A (source)
Output state	Sink (NPN): normally open / normally closed (in liquid) (factory set) Source (PNP): normally open / normally closed (in liquid) (factory set)
MECHANICAL DATA	
Body	Brass
Probe	PTFE
Terminals	Brass, tin plated
Seals	FVMQ
Connector	PA66 %30 glass filled nylon
Mechanical Connection	1/4”NPTF, 3/8”NPTF, 1/2”NPTF, 1/2”BSPP, 1/2”BSPT, M14x1.5, M18x1.5, G1/4
ENVIRONMENTAL DATA	
Protection	IP67 (with mating connector fitted)
Max. Pressure	40 Bar
Vibration	15.3 Grms
Temperature Range	Fluid: -40°C ... +130°C
	Storage: -40°C ... +140°C

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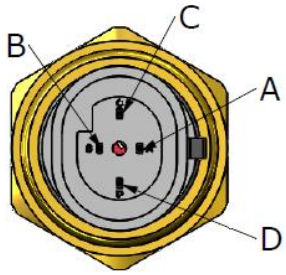
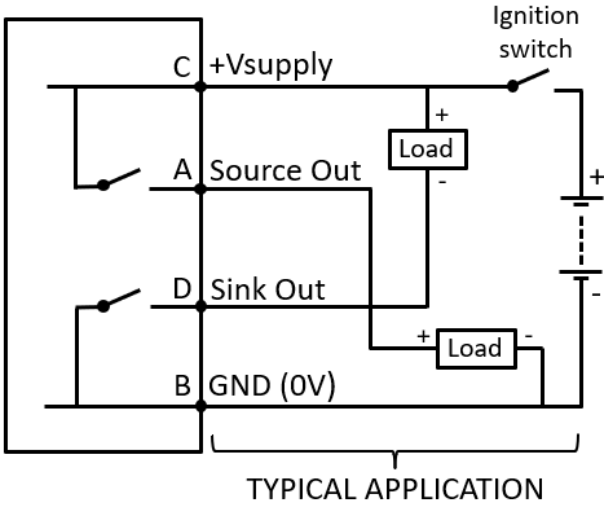
ELECTRICAL CONNECTION

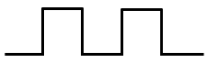
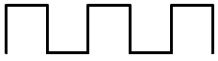
4 way Delphi Packard Metri-Pack 150 Connector



PIN	SOURCE (PNP) OUPUT SIGNAL	SINK (NPN) OUTPUT SIGNAL
A	SOURCE (PNP) OUTPUT	N/C
B	GND (0V)	GND (0V)
C	+VSUPPLY	+VSUPPLY
D	N/C	SINK (NPN) OUTPUT

CLS 211



		NO (Normally Open)	NC (Normally Closed)
Liquid Detection		Presence / Nothing	Presence / Nothing
Load Current		Presence / Nothing	Presence / Nothing
Output Voltage	**NPN Output**	H / L	H / L
	PNP Output	H / L 	H / L 

WARNINGS

- Care should be taken not to damage the measurement probe. If the measuring probe is damaged, accurate measurement cannot be made.
- It should be checked whether the connector/cable pins are straight and clean.
- Connector/cable connection must be made as specified in the technical data.
- To avoid damaging the sensor, attention should be paid to the supply directions and voltage specified in the technical data.
- Test liquid must be grounded in common with power supply

ORDER CODE

Process Connection
G1/4
1/4”NPTF
3/8”NPTF
1/2”NPTF
1/2”BSPP
1/2”BSPT
M14x1.5
M18x1.5
*Ask for other options

Output State
NO : Normally open
NC : Normally closed

Model

CLS 211	-	XXX	-	XX	-	XX	-	XXXX	-	XXXX

Output Type
SNK : Sink (NPN)
SRC : Source (PNP)

Alarm Delay Time
10sn (standard)
*Optionally, a different time can be selected between 0…40 sn

Connector Type
S155 : 4 way Delphi Packard Metri-Pack 150
*Ask for other options

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