

# CMS210 Series Microwave Level Switch



## 1. Working principle

The CMS210 series microwave level switch is a level switch consisting of an emitting unit (CMS210T) and a receiving unit (CMS210R) installed face to face. The emitting unit emits a continuous, low power microwave beam towards the receiving unit. If there is medium between emitting unit and receiving unit, the signal is damped. This change is detected by the built-in electronics module and converted into a switching command.

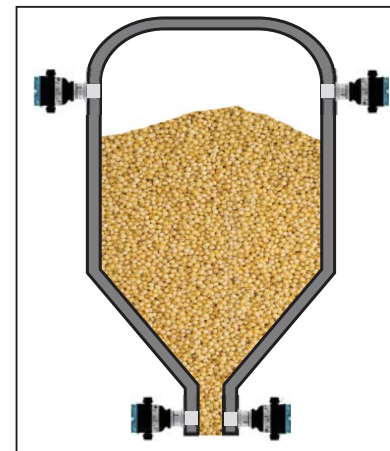
## 2. Benefit

- Apply the design of high performance PLL based on VOC
- With the microwave energy and frequency monitoring and predicting system
- With functions of adherence warning, electronic components temperature monitoring, hardware breakdown self-checking
- Multi-band output. Each couple of switches can be set microwave frequency separately to avoid interfere of multi couple of switches used at close range
- With IV level EMC capability
- Connectable to LCD display unit and support remote display of history temperature curve and energy curve
- Gas ex-proof and dust ignition-proof
- Digital energy display and human-computer interaction design (key plus menu)

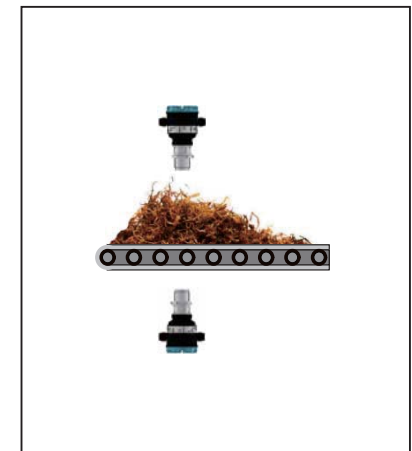
## 3. Application

- The level switch has wide application across all areas of industry where highly reliable, non-contact level detection is required. For example, monitoring presence/absence of product, fill/empty conditions and point level detection in bins and silos.
- The level switch may also be used as a proximity switch for detection of vehicles such as dump trucks and rail cars.
- It can also measure from the lightest to the heaviest bulk solids with absolute reliability, even in the presence of dust and noise, without being affected by buildup or condensation.

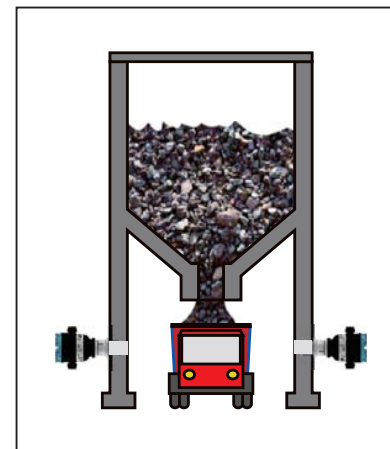
## 4. Application cases



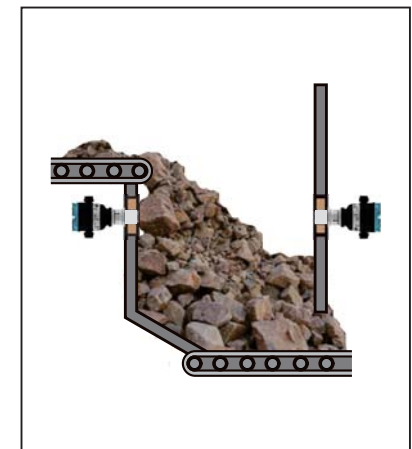
Bulk solid vessels



Conveyor belt



Object detection



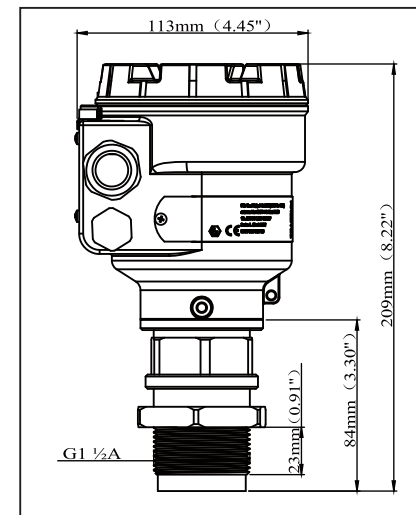
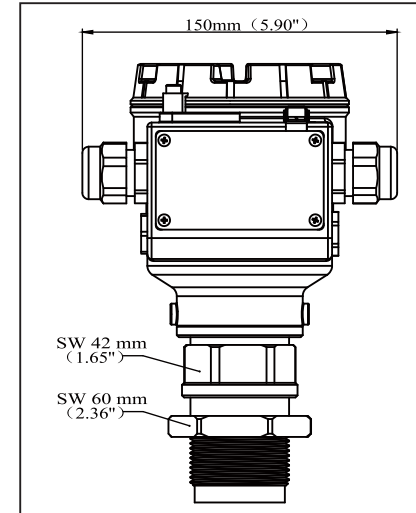
Limit detection

## 5.Specification



Model	CMS210
Application	Powder, granule, bulk solid, floccule
Measuring range	0-200m ( optional antenna )
Power supply	AC 100~240V±10% , 50/60Hz or DC 11V~32V
Frequency	24-26GHz
Beam angle	±30°
Delay	0-99S adjustable
Power	< 3W
Channel no.	8
Frequency accuracy	±50KHz
Output	DPDT
Contact rating	250VAC 2A
Process fitting	Thread or flange
Sealing	FKM ( Viton )
Antenna material	PTFE
Process temperature	-40 ~ 120°C (up to 500°C with adapter)
Process pressure	-1 ~ 4bar ( up to 40bar with adapter )
Ambient temperature	-40 ~ 70°C
Protection	IP67
Cable entry	2xM20*1.5 (diameter 9~13mm) 2xM16*1.5 ( diameter 6 ~ 9mm )
Ex certificate	Ex d IIC T6 Gb , Ex tD A21 IP67 T80°C
Dimension	130*240*265mm
Weight	5Kg

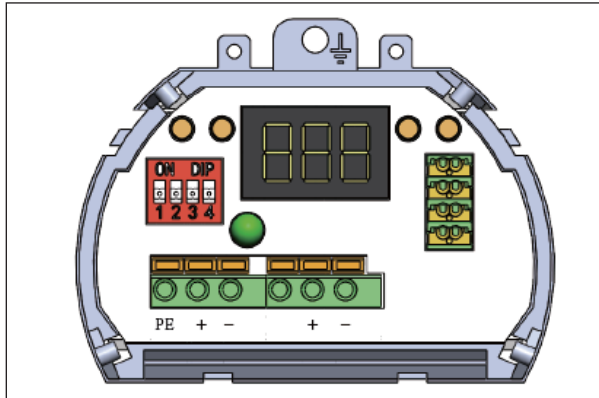
## 6.Dimension



## 7.Wiring plan

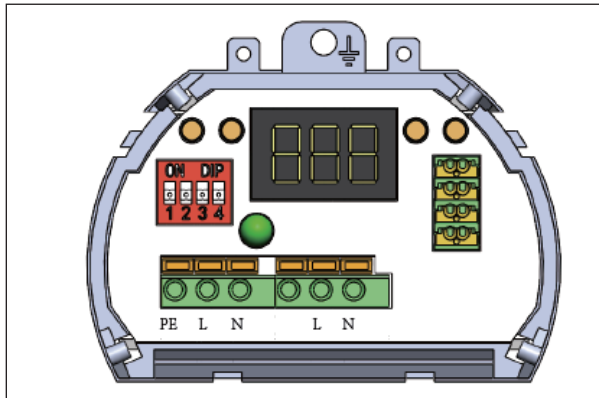
### Emitting unit

#### Wiring plan-24VDC



PE : Earth wire  
 "+" left : 24V voltage supply positive pole  
 "-" left : 24V voltage supply negative pole  
 "+" right is short circuited with supply "+"  
 "-" is short circuited with supply "-"

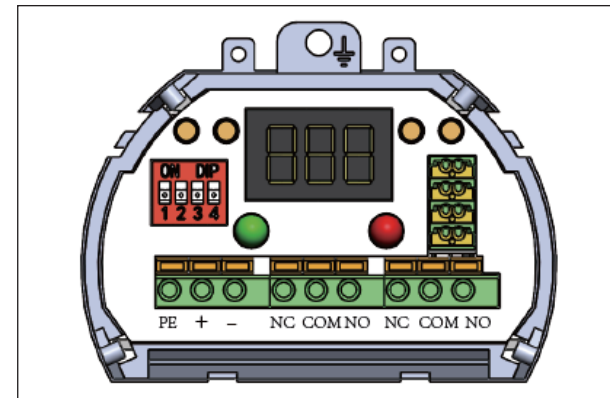
#### Wiring plan -220V/110VAC



PE : Earth wire  
 "L" left : 220V/110VAC voltage supply live wire  
 "N" left : 220V/110VAC voltage neutra line  
 "L" right is short circuited with supply "L"  
 "N" right is short circuited with supply "N"

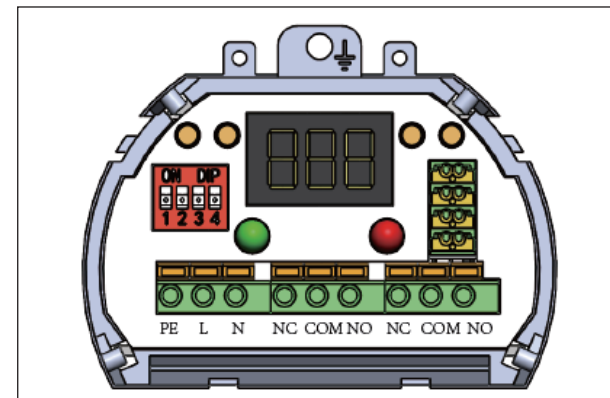
### Receiving unit

#### Wiring plan-24VDC



PE : Earth wire  
 "+" : 24V voltage supply positive pole  
 "-" : 24V voltage supply negative pole  
 "NC" : Normally closed contact  
 "COM" : Common contact  
 "NO" : Normally closed

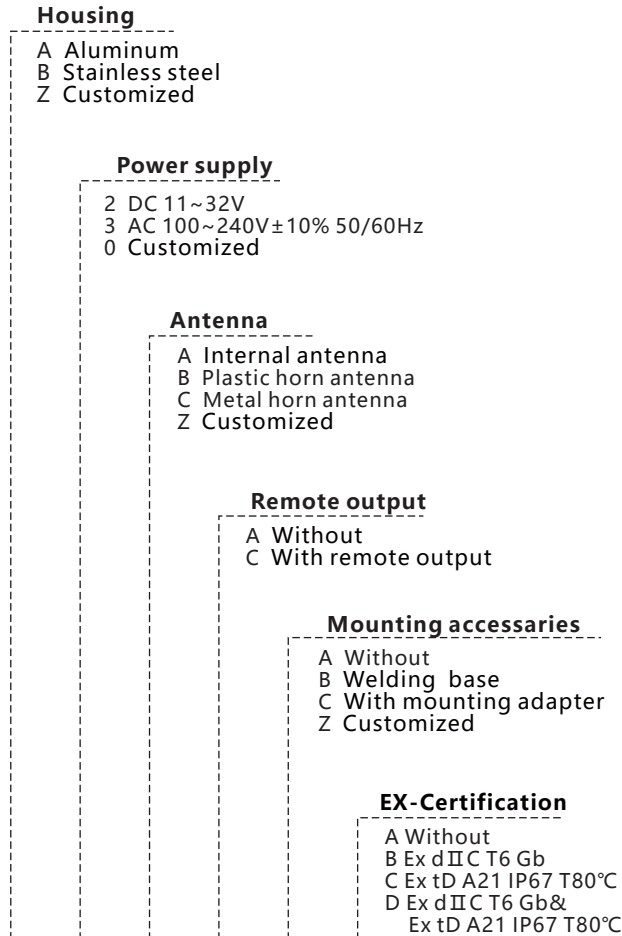
#### Wiring plan -220V/110VAC



PE : Earth wire  
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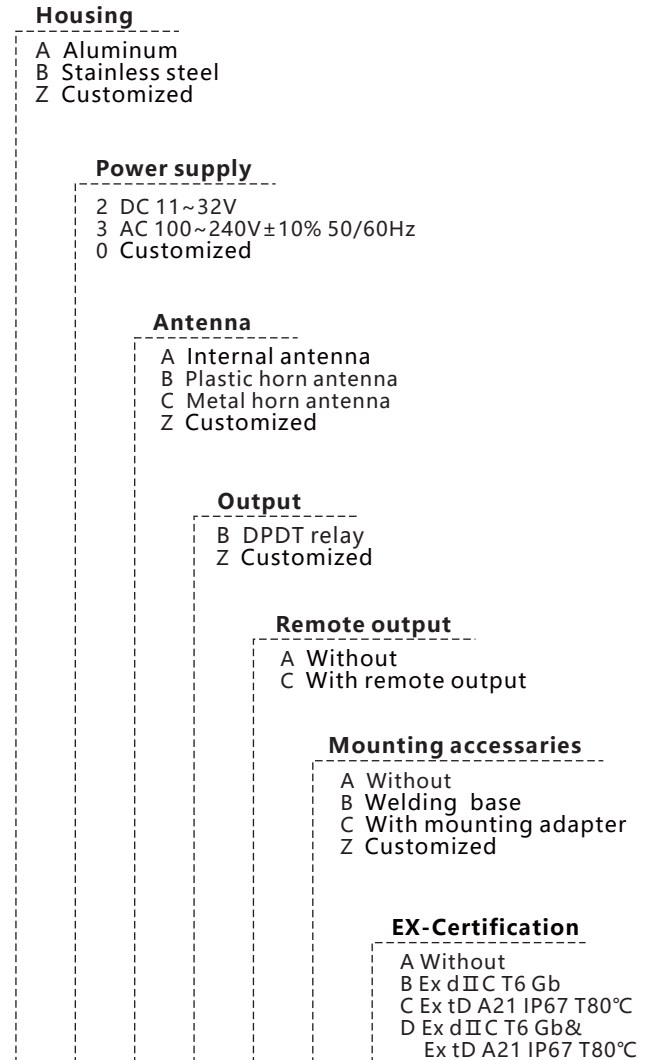
# 8.Ordering code

## CMS210T emitting unit



Model								
CMS210	T	A	2	A	C	B	A	

## CMS210R receiving unit



Model								
CMS210	R	A	2	A	B	C	A	A