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ESP210



## ESP210

### Portable Combustible/Toxic Gas Detector Parameter

- Industrial portable combustible and toxic gas leak inspection equipment
- Ex-proof certificate Ex d ib IIC T4 Gb
- Active suction design

# ESP210 Portable combustible / toxic Gas Detector

## Specifications

Detected gas: combustible gas see Detectable Combustible Gas List of ESP210 for details

toxic gas see Detectable Toxic Gas List of ESP210 for details

Detection theory: catalytic combustion type/electrochemical type

Alarm error:  $\pm 3\%$ FS

Repeatability: 2%

Response time: T90 < 20S (combustible gas)

toxic gas See Detectable Toxic Gas List of ESP210 for details

Alarm: audial alarm, LED visual alarm,

Sound strength: 75dB@1m

## Electrical

Power supply: Li-polymer battery, with nominal voltage 3.6V, capacity of 1600mAh

Usage time: > 8hrs (normal atmospheric temperature)

## Structural

Main parts material: PC TPE rubber

Whole Weight: 188g

## Certificate

Ex-proof certificate: Ex d ib IIC T4 Gb

Fire safety certificate: CCCF

Standard implemented: GB 15322.3-2003, GB 3836.1-2010, GB 3836.4-2010

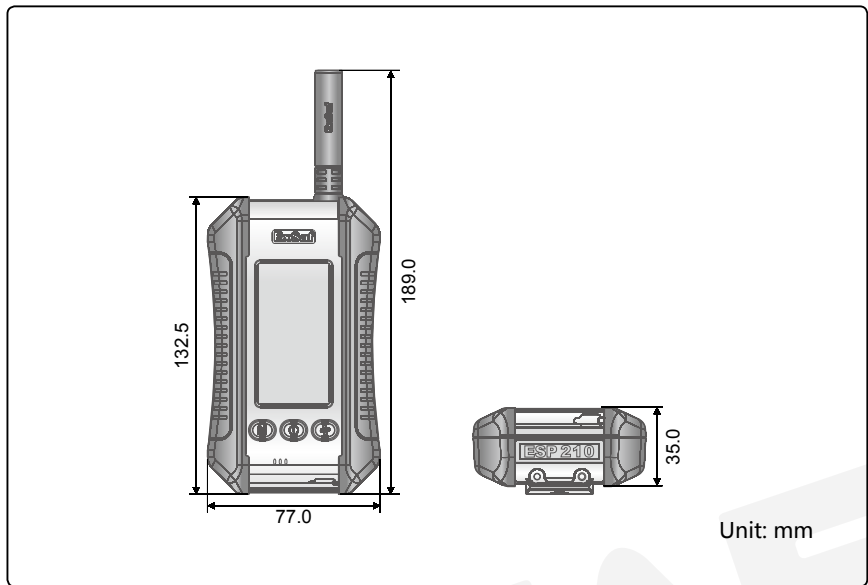
## Operating condition

IP rating: IP65

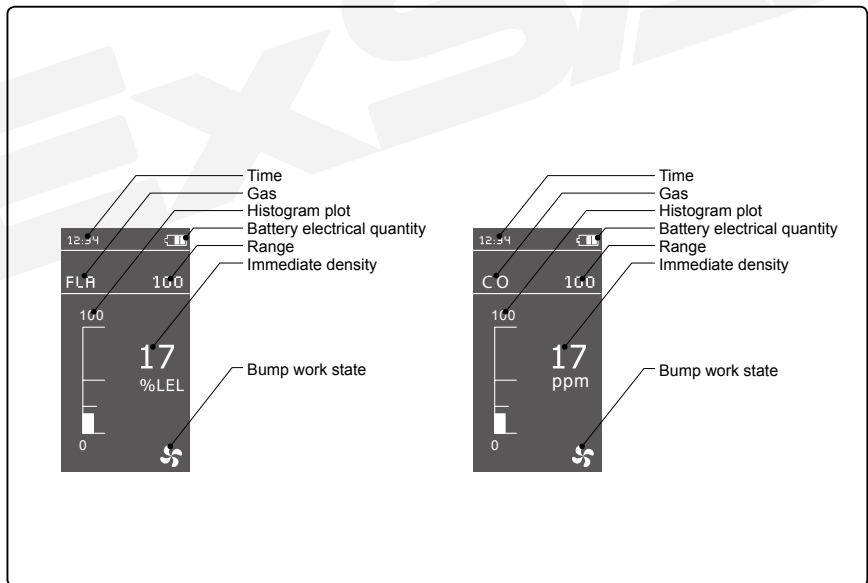
Temperature: -40°C~70°C

Humidity: 10~95%RH (Non-condensing)

## Dimension



## Display



## ESP210 Gas Detector Type Selection Table

Model	Product illustration							
ESP210	Gas detector							
Code	Sensor type code							
CK	catalytic combustion type (antipoisoning type)							
D	electrochemical type							
Code	Gas type (take the frontal 4 of formula as code)							
KXXX	Combustible gas (see combustible gas list)							
DXXX	Toxic gas (see toxic gas list)							
Code	Range							
LEL	0-100%LEL							
25V	0-25%v/v							
20P	0-20ppm							
30P	0-30ppm							
50P	0-50ppm							
1BP	0-100ppm							
2BP	0-200ppm							
5BP	0-500ppm							
1QP	0-1000ppm							
Code	Flameproof adaptor							
N	NON							
Code	Output signal							
N	NON							
Code	Enclosure material							
S	Non-flameproof enclosure							
Code	Mounting style							
N	NON							
ESP210	CK	K001	1BP	N	N	S	N	(product type selection demonstration)

## ESP210 Detectable Combustible Gas List

NO.	Gas name	Formula	Corresp. D.	Flash point (°C)	Combustible limit (V %)		Ig. TEMP (°C)	MESG (mm)	TEMP G.	Grade
					LFL	UFL				
K001	Methane	CH <sub>4</sub>	0.55	—	5	15	540	1.14	T1	IIA
K002	Toluene	C <sub>6</sub> H <sub>5</sub> CH <sub>3</sub>	3.2	4.4	1.2	7.1	480		T1	IIA
K003	Methanol	CH <sub>3</sub> OH	1.11	11	6.7	36	385	0.92	T2	IIA
K004	Methyl formate	HCOOCH <sub>3</sub>	2.07	-18.9	5	23	465		T1	IIA
K005	Ethyl formate	HCOOCH <sub>2</sub> CH <sub>3</sub>	2.65	-20	2.8	16	455	0.91		IIA
K006	Ethyl methyl Ether	CH <sub>3</sub> OCH <sub>2</sub> CH <sub>3</sub>	2.1	-37	2	10.1	190		T4	IIIB
K007	Ethane	CH <sub>3</sub> CH <sub>3</sub>	1.04	—	3	15.5	515	0.91	T1	IIA
K008	Acetylene	CH≡CH	0.9	—	2.5	100	305	0.37	T2	IIIC
K009	Ethanol	CH <sub>3</sub> CH <sub>2</sub> OH	1.59	12.8	3.3	19	422	0.91	T2	IIA
K010	Ethyl benzene	CH <sub>3</sub> CH <sub>2</sub> C <sub>6</sub> H <sub>5</sub>	3.66	15	1	6.7	430		T2	IIA
K011	Ethylene	CH <sub>2</sub> =CH <sub>2</sub>	0.97	—	2.7	36	425	0.65	T2	IIIB
K012	Methyl acetate	CH <sub>3</sub> COOCH <sub>3</sub>	2.56	-10	3.1	16	501		T1	IIA
K013	Ethyl acetate	CH <sub>3</sub> COOCH <sub>2</sub> CH <sub>3</sub>	3.04	-4.4	2.2	11	427	0.99	T2	IIA
K014	N-butyl acetate	CH <sub>3</sub> COOCH <sub>2</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>3</sub>	4.01	22	1.7	7.3	425	1.04	T2	IIA
K015	Propane	CH <sub>3</sub> CH <sub>2</sub> CH <sub>3</sub>	1.56	—	2.1	9.5	466	0.92	T1	IIA
K016	Propyl alcohol	CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub> OH	2.07	25	2.1	13.5	440	0.89	T2	IIIB
K017	Propylene	CH <sub>2</sub> =CHCH <sub>3</sub>	1.5	—	2	11.1	460	0.91	T1	IIA
K018	Acetone	(CH <sub>3</sub> ) <sub>2</sub> CO	2	-17.8	2.6	12.8	465	1.01	T1	IIA
K019	Butane	C <sub>4</sub> H <sub>10</sub>	2.05	—	1.9	8.5	405	0.9	T2	IIA
K020	Butanone	CH <sub>3</sub> CH <sub>2</sub> COCH <sub>3</sub>	2.48	1.1	1.8	10	404	0.84	T2	IIIB
K021	Butadiene	CH <sub>2</sub> =CHCH=CH <sub>2</sub>	1.87	—	2	12	420	0.79	T2	IIIB
K022	Pentane	C <sub>5</sub> H <sub>12</sub>	2.48	<-40	1.4	7.8	260	0.93	T3	IIA
K023	Hexane	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>4</sub> CH <sub>3</sub>	2.97	-22.8	1.1	7.5	225	0.93	T3	IIA
K024	Heptane	C <sub>7</sub> H <sub>16</sub>	3.46	-3.9	1.1	6.7	215	0.91	T3	IIA
K025	Octane	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>3</sub> CH <sub>3</sub>	3.93	13.3	1	6.5	220	0.94	T3	IIA
K026	Nonane	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>7</sub> CH <sub>3</sub>	4.43	31	0.7	5.6	205		T3	IIIB
K027	Carbon monoxide	CO	0.97	—	10.9	74	805	0.84	T1	IIIB
K028	Ammonia	NH <sub>3</sub>	0.59	—	15	33.6	630	3.18	T1	IIA
K029	Hydrogen	H <sub>2</sub>	0.07	—	4	75	510	0.28	T1	IIIC
K030	Benzene	C <sub>6</sub> H <sub>6</sub>	2.7	-11.1	1.3	7.1	560	0.99	T1	IIA
K031	Isobutane	(CH <sub>3</sub> ) <sub>2</sub> CHCH <sub>3</sub>	2	—	1.8	8.4	460	0.95	T1	IIA
K032	Isopropanol	(CH <sub>3</sub> ) <sub>2</sub> CHOH	2.07	11.7	2	12	399	1.00	T2	IIA
K033	1-butanol	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> OH	2.55	28.9	1.4	11.2	365	0.94	T2	IIA
K034	Cyclohexane	CH <sub>2</sub> (CH <sub>2</sub> ) <sub>4</sub> CH <sub>2</sub>	2.9	-20	1.3	8	245	0.94	T3	IIA
K035	Cyclopentane	CH <sub>2</sub> (CH <sub>2</sub> ) <sub>3</sub> CH <sub>2</sub>	2.4	<-6.7	1.4	—	380	1.01	T2	IIA
K036	Propylene oxide	CH <sub>3</sub> CHCH <sub>2</sub> O	2	-37.2	2.8	37	430	0.7	T2	IIIB
K037	Ethylene oxide	CH <sub>2</sub> CH <sub>2</sub> O	1.52	<-17.8	3.6	100	435	0.59	T2	IIIB
K038	Diethyl ether	(CH <sub>3</sub> CH <sub>2</sub> ) <sub>2</sub> O	2.55	-45	1.9	36	170	0.87	T4	IIIB
K039	Dimethyl ether	(CH <sub>3</sub> ) <sub>2</sub> O	1.59	—	3.4	27	240	0.84	T3	IIIB
K040	Xylene	C <sub>6</sub> H <sub>4</sub> (CH <sub>3</sub> ) <sub>2</sub>	3.66	25	1	7	464	1.09	T1	IIA
K041	Gasoline	C <sub>4</sub> ~C <sub>12</sub> hydrocarbon mixture	0.73	<-20	1.1	5.9	280		T3	IIA
K042	Jet fuel, kerosene	C <sub>5</sub> ~C <sub>16</sub> hydrocarbon mixture	0.8	<30	0.6	—	210		T3	IIA

## ESP210 Detectable Toxic Gas List

NO.	Gas name	Formula	Measure scope (ppm)	Response time (s)		Recover tim (s) T10
				T50	T90	
D001	Oxygen	O <sub>2</sub>	0-25%v/v	<10	<25	<20
D002	Carbon monoxide	CO	0-100/200/500/1000	<15	<25	<45
D003	Hydrogen sulfide	H <sub>2</sub> S	0-20/50/100	<10	<30	<40
D004	Hydrogen	H <sub>2</sub>	0-1000	<20	<50	<60
D005	Ammonia	NH <sub>3</sub>	0-100/500/1000	<40	<90	<120
D006	Chlorine	CL <sub>2</sub>	0-10/20	<30	<50	<60
D007	Nitric oxide	NO	0-100/500	<10	<30	<90
D009	Sulfur dioxide	SO <sub>2</sub>	0-20/100	<15	<40	<90
D010	Vinyl chloride	C <sub>2</sub> H <sub>3</sub> CL	0-20/100	<35	<90	<180
D011	Acrylonitrile	C <sub>3</sub> H <sub>3</sub> N	0-100/200	<80	<160	<180
D012	Methanol	CH <sub>3</sub> OH	0-100/200/500	<20	<80	<150
D013	Formaldehyde	CH <sub>2</sub> O	0-50/100/200/500	<25	<70	<150
D014	Ethylene oxide	C <sub>2</sub> H <sub>4</sub> O	0-20/100/200	<50	<120	<180