

Jinbo Marine

Marine & Offshore Equipment Datasheet

PRODUCT DATASHEET

MONITORING AND ALARMING DEVICE

ESD500 Combustible/Toxic Gas Detector

ISO9001 Supplier

Class Certificate

Export Supply

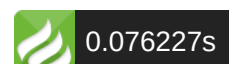
Introduction •Combustible and toxic gas leakage inspection instrument in industrial application •Ex-proof certificate Exd IIC T6 Gb/Ex d ib IIC T6 Gb •Dust Ex-proof certificate Ex tD A21 IP66 T8...



Key Highlights

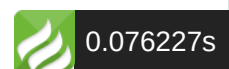
Category	Monitoring And Alarming Device
Standard	ISO
Material	Items ESD500 1 Display No 12 Screw connection M20X1.5, 1/2NPT internal t...
Weight / Size	Items ESD500 1 Display No 12 Screw connection M20X1.5, 1/2NPT internal t...
Certificate	ABS, LR, BV, DNVGL, NK, KR, IRS, RMRS, CCS

We can supply according to your requirement, drawings, class certificate needs, and delivery schedule.



Technical Specifications

Category	Monitoring And Alarming Device	Model / SKU	ESD500-Combustible-Toxic-Gas-Detector
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Standard	ISO	Material	<p>Items ESD500 1 Display No 12 Screw connection M20X1.5, 1/2NPT internal thread (select G3/4 or G1/2 or 3/4NPT) 2 Detected gases combustible gas/toxic gas 13 Weight 1.5kg (aluminum alloy, with audial & visual alarm) 1.42kg (aluminum alloy, without audial& visual alarm) 3.48k g (aluminum alloy, with audial & visual alarm) 3.4k g (stainless, without audial& visual alarm) 3 Detecting principle Catalytic/electrochemical 4 Measurement Range 0 ~ 100%LEL (combustible gas) see appendix for toxic gas measure scope 14 Explosion proof certificate Exd IIC T6 Gb/Ex tD A21 IP66 T80°C (combustible gas detector) Ex d ib IIC T6 Gb/Ex t D ibD A21 IP66 T80°C (toxic gas detector) 5 Accuracy $\pm 3\%$LEL (combustible gas)/$\pm 3\%$FS (toxic gas) 15 Fire safety certificate CCCF 6 Repeatability $\pm 2\%$ 16 China metrology certification CMC 7 Response time T90 < 20S(Catalytic) see appendix for toxic gas response time 17 Standard GB 15322.1-2003, GB 3836.1-2010, GB 3836.2-2010, GB 3836.4-2010, GB 12476.1-2013, GB 12476.4-2010, GB 12476.5-2 013, JJF 1363-2012, JJF 1368- 2012, JJF 1421-2013, JJF 1364- 2012 8 Power supply 24VDC (normal work voltage scope : 10 ~ 30VDC) 9 Power consumption < 2.5W (combustible gas) < 1.5W (toxic gas) 18 IP rating IP66 10 Output signal RS485 BUS output RS485 BUS output+relay (1A@24VDC) RS485 BUS output+relay (1A@24VDC)+audial & visual alarm(96dB@0.1m away) 19 Temperature scope -40°C ~ 70°C 11 Main material ADC12 aluminum alloy/316 stainless steel 20 Humidity scope 10 ~ 95%RH(non-condensing) 21 Atmospheric pressure  0.076227s</p>
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106KPa Flammable Gases
Detectable by ESD500 No.



Weight / Size

Items ESD500 1 Display No 12
 Screw connection M20X1.5,
 1/2NPT internal thread (select
 G3/4 or G1/2 or 3/4NPT) 2
 Detected gases combustible
 gas/toxic gas 13 Weight 1.5kg
 (aluminum alloy, with audial &
 visual alarm) 1.42kg (aluminum
 alloy, without audial& visual alarm)
 3.48k g (aluminum alloy, with
 audial & visual alarm) 3.4k g
 (stainless, without audial& visual
 alarm) 3 Detecting principle
 Catalytic/electrochemical 4
 Measurement Range 0 ~ 100%LEL
 (combustible gas) see appendix
 for toxic gas measure scope 14
 Explosion proof certificate Exd IIC
 T6 Gb/Ex tD A21 IP66 T80°C
 (combustible gas detector) Ex d ib
 IIC T6 Gb/Ex t D ibD A21 IP66
 T80°C (toxic gas detector) 5
 Accuracy $\pm 3\%$ LEL (combustible
 gas)/ $\pm 3\%$ FS (toxic gas) 15 Fire
 safety certificate CCCF 6
 Repeatability $\pm 2\%$ 16 China
 metrology certification CMC 7
 Response time T90 <
 20S(Catalytic) see appendix for
 toxic gas response time 17
 Standard GB 15322.1-2003, GB
 3836.1-2010, GB 3836.2-2010,
 GB 3836.4-2010, GB 12476.1-
 2013, GB 12476.4-2010, GB
 12476.5-2 013, JJF 1363-2012,
 JJF 1368-2012, JJF 1421-2013,
 JJF 1364-2012 8 Power supply
 24VDC (normal work voltage
 scope : 10 ~ 30VDC) 9 Power
 consumption < 2.5W (combustible
 gas) < 1.5W (toxic gas) 18 IP
 rating IP66 10 Output signal
 RS485 BUS output RS485 BUS
 output+relay (1A@24VDC) RS485
 BUS output+relay
 (1A@24VDC)+audial & visual
 alarm(96dB@0.1m away) 19
 Temperature scope -40°C ~ 70°C
 11 Main material ADC12 aluminum
 alloy/316 stainless steel 20
 Humidity scope 10 ~ 95%RH(non-
 condensing) 21 Atmospheric

Certificate

ABS, LR, BV, DNVGL, NK, KR,
 IRS, RMRS, CCS

	pressure 86 ~ 106KPa Flammable Gases Detectable by ESD500 No.		
Warranty	12 Months unless specified otherwise	Origin	China

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- Toxic Gases Detectable by ESD500

Introduction

- Combustible and toxic gas leakage inspection instrument in industrial application
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- Dust Ex-proof certificate Ex tD A21 IP66 T80°C/Ex tD ibD A21 IP66 T80°C
- RS485 Bus
- Changeable sensor design

Specifications

No.	Items	ESD500	No.	Items	ESD500
1	Display	No	12	Screw connection	M20X1.5, 1/2NPT internal thread (select G3/4 or G1/2 or 3/4NPT)
2	Detected gases	combustible gas/toxic gas	13	Weight	1.5kg (aluminum alloy, with audial & visual alarm)
3	Detecting principle	Catalytic/electrochemical			1.42kg (aluminum alloy, without audial & visual alarm)
					3.48k g (aluminum alloy, with audial & visual alarm)
					3.4k g (stainless, without audial & visual alarm)
4	Measurement Range	0 ~ 100%LEL (combustible gas) see appendix for toxic gas measure scope	14	Explosion proof certificate	Exd IIC T6 Gb/Ex tD A21 IP66 T80°C (combustible gas detector) Ex d ib IIC T6 Gb/Ex t D ibD A21 IP66 T80°C (toxic gas detector)
5	Accuracy	±3%LEL (combustible gas)/±3%FS (toxic gas)	15	Fire safety certificate	CCCF
6	Repeatability	±2%	16	China metrology certification	CMC



7	Response time	T90 < 20S(Catalytic) see appendix for toxic gas response time	17	Standard	GB 15322.1-2003, GB 3836.1-2010, GB 3836.2-2010, GB 3836.4-2010, GB 12476.1-2013, GB 12476.4-2010, GB 12476.5-2 013, JJF 1363-2012, JJF 1368-2012, JJF 1421-2013, JJF 1364-2012
8	Power supply	24VDC (normal work voltage scope : 10 ~ 30VDC)			
9	Power consumption	< 2.5W (combustible gas) < 1.5W (toxic gas)	18	IP rating	IP66
10	Output signal	RS485 BUS output RS485 BUS output+relay (1A@24VDC) RS485 BUS output+relay (1A@24VDC)+audial & visual alarm(96dB@0.1m away)	19	Temperature scope	-40°C ~ 70°C
11	Main material	ADC12 aluminum alloy/316 stainless steel	20	Humidity scope	10 ~ 95%RH(non-condensing)
			21	Atmospheric pressure	86 ~ 106KPa

Flammable Gases Detectable by ESD500

No.	Description	Formula	No.	Description	Formula
K001	Methane	CH ₄	K022	Pentane	C ₅ H ₁₂
K002	Methylbenzene	C ₆ H ₅ CH ₃	K023	Hexane	CH ₃ (CH ₂) ₄ CH ₃
K003	Methanol	CH ₃ OH	K024	Heptane	C ₇ H ₁₆
K004	Methyl formate	HCOOCH ₃	K025	Octane	CH ₃ (CH ₂) ₃ CH ₃
K005	Ethyl formate	HCOOCH ₂ CH ₃	K026	Nonane	CH ₃ (CH ₂) ₇ CH ₃
K006	Ethyl methyl ether	CH ₃ OCH ₂ CH ₃	K027	Carbon monoxide	CO
K007	Ethane	CH ₃ CH ₃	K028	Ammonia	NH ₃



0.076227s

K008	Ethyne	$\text{CH}\equiv\text{CH}$	K029	Hydrogen	H_2
K009	Ethanol	$\text{CH}_3\text{CH}_2\text{OH}$	K030	Benzene	C_6H_6
K010	Ethylbenzene	$\text{CH}_3\text{CH}_2\text{C}_6\text{H}_5$	K031	Iso-butane	$(\text{CH}_3)_2\text{CH}$ CH_3
K011	Ethylene	$\text{CH}_2=\text{CH}_2$	K032	Isopropanol	$(\text{CH}_3)_2\text{CH}$ OH
K012	Methyl acetate	$\text{CH}_3\text{COOCH}_3$	K033	1-Butanol	$\text{CH}_3(\text{CH}_2)_2$ CH_2OH
K013	Ethyl acetate	$\text{CH}_3\text{COOCH}_2\text{CH}_3$	K034	Cyclohexane	$\text{CH}_2(\text{CH}_2)_4$ CH_2
K014	N-butyl acetate	$\text{CH}_3\text{COOCH}_2(\text{CH}_2)_2\text{CH}_3$	K035	Cyclopentane	$\text{CH}_2(\text{CH}_2)_3$ CH_2
K015	Propane	$\text{CH}_3\text{CH}_2\text{CH}_3$	K036	Epoxypropane	CH_3CHCH $_2\text{O}$
K016	Propanol	$\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$	K037	Ethylene oxide	$\text{CH}_2\text{CH}_2\text{O}$
K017	Propylene	$\text{CH}_2=\text{CHCH}_3$	K038	Diethyl ether	$(\text{CH}_3\text{CH}_2)_2$ O
K018	Acetone	$(\text{CH}_3)_2\text{CO}$	K039	Dimethyl ether	$(\text{CH}_3)_2\text{O}$
K019	Butane	C_4H_{10}	K040	Xylene	$\text{C}_6\text{H}_4(\text{CH}_3)_2$
K020	Butanone	$\text{CH}_3\text{CH}_2\text{COCH}_3$	K041	Gasoline	$\text{C}_4\sim\text{C}_{12}$ hyd rocarbon mixture
K021	Butadiene	$\text{CH}_3\text{CH}_2\text{COCH}_3$	K042	Jet fuel, kerosene	$\text{C}_9\sim\text{C}_{16}$ hyd rocarbon mixture

Toxic Gases Detectable by ESD500

No.	Description	Formula	Measurement Range(ppm)
D001	oxygen	O_2	0-25%v/v
D002	Carbon monoxide	CO	0-100/200/500/1000
D003	Hydrogen sulfide	H_2S	0-20/50/100



0.076227s

D004	Hydrogen	H ₂	0-1000
D005	Ammonia	NH ₃	0-100/500/1000
D006	Chlorine	CL ₂	0-10/20
D007	Nitric oxide	NO	0-100/500
D008	Nitrogen dioxide	NO ₂	0-20/50
D009	Sulfur dioxide	SO ₂	0-20/100
D010	Vinyl Chloride	C ₂ H ₃ CL	0-20/100
D011	Acrylonitrile	C ₃ H ₃ N	0-100/200
D012	Methanol	CH ₃ OH	0-100/200/500
D013	Formaldehyde	CH ₂ O	0-50/100/200/500
D014	Ethylene oxide	C ₂ H ₄ O	0-20/100/200
D015	Hydrogen chloride	HCL	0-30/50
D016	Hydrogen fluoride	HF	0-10
D017	Hydrogen cyanide	HCN	0-30
D038	Tetrahydrothiophene	C ₄ H ₈ S	0-25