

GROUTING ELECTROMAGNETIC

FLOW METER



APPLICATION

Cement slurry, sludge, gypsum slurry, paper pulp, juice, syrup, ore slurry, coal slurry, etc.



Oil Field



Ore Slurry



Cement Slurry



Paper Pulp



Gypsum Slurry

PRODUCT DETAILS

Special design grouting type converter

Special converter can eliminate the interference between the sharp wave noise generated by solid particles

The concentration ratio of slurry can reach 55%, and the variation range is usually less than 5%



Excitation Method

Square wave excitation (4 kinds of square waves) improves flow measurement stability.



Excitation Frequency

25Hz/30Hz excitation frequency for choose. High excitation frequency has high anti-interference ability, ensures accurate measurement of viscous medium.

Accurate
measurement:
up to $\pm 0.5\%$

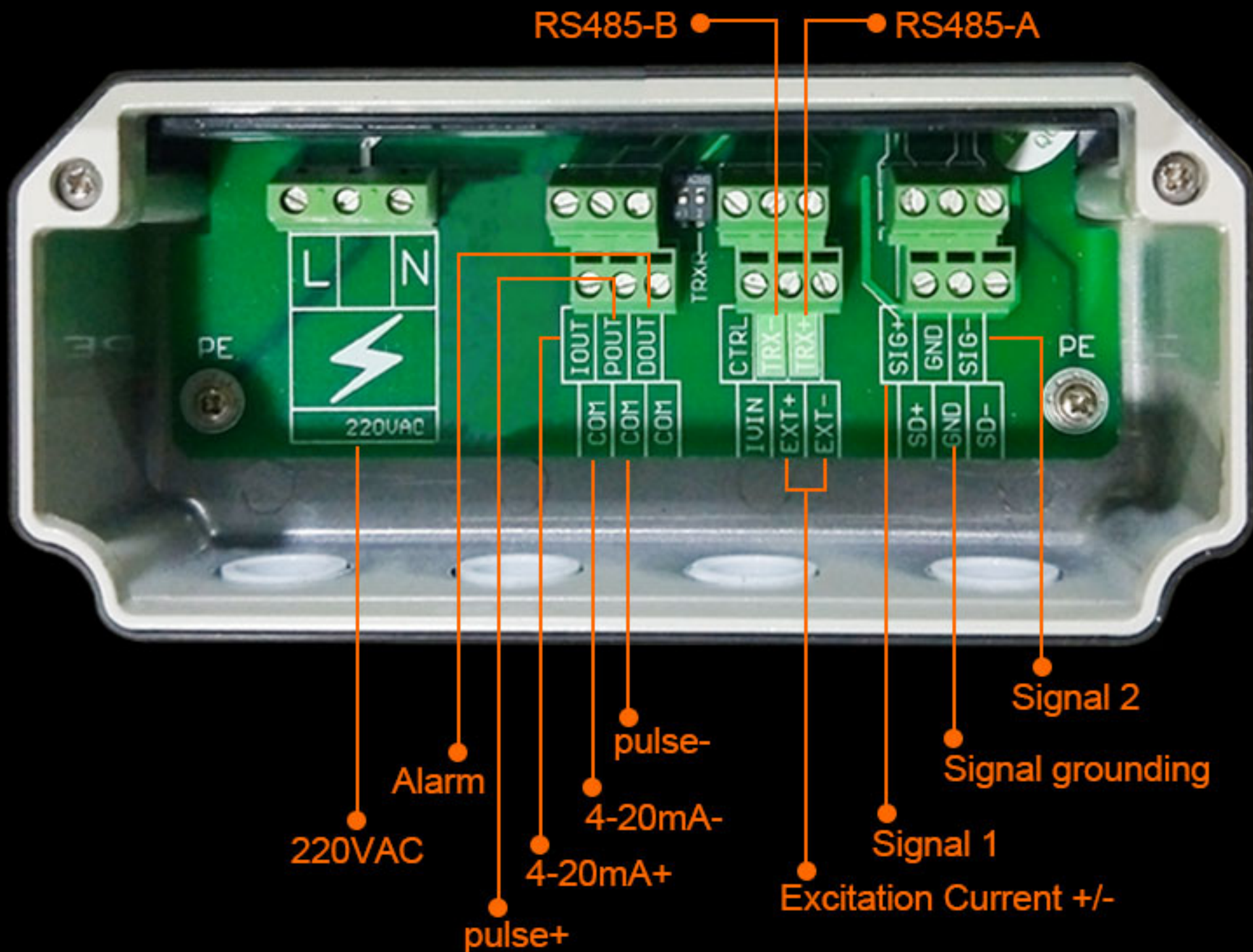


LCD Backlight Display

LCD backlight display: instantaneous flow, total flow, flow velocity, percentage flow, etc



Modular Design and Multifunctional Outputs



Sensor

No movable parts, suitable for solid-liquid two-phase medium measurement



Quality Liner

Quality rubber/PU/PTFE/PFA liner, anti-wear, long working life, easy to maintain.

Applied to high pressure working condition



It can withstand **42MPa** high pressure

flange-42MPa, wafer-1.6MPa, tri-clamp-1.6MPa, thread-4.0MPa, Union-42MPa

Integral Display and Remote Display are Optional



MORE PRODUCTS



Wafer



Thread



Tri-clamp



Union

PARAMETER

Accurate Measurement	Up to $\pm 0.5\%$
Excitation Current	125mA , 187mA and 250mA
Flow velocity	Flow velocity range: 0.1-15m/s Flow velocity resolution: 0.5mm/s
Power supply	AC 85V-250V, DC 20V-36V
Output	4-20mA, pulse, frequency, alarm
Communication	MODBUS, GPRS, PROFIBUS, HART
Power consumption	<20W
Electrode	SUS316L, HC, HB, Ti, Ta, Platinum-iridium alloy, etc
Liner	Rubber, PU, PTFE, PFA
Protection Class	IP65/IP67/IP68
Accuracy	0.5%(standard) 0.3%(optional) 0.2%(optional)
Structure	Compact, remote
Velocity Range	0.1-15 m/s
Process Connection	Flange, Wafer, Thread, Tri-clamp, etc.

Main Performances Of The Electrode Materials

Electrode Material	Applications & Properties
SUS316L	Applicable to industrial/municipal water, wastewater and low corrosive mediums. Widely used in petroleum, chemical industries.
Hastelloy B	Strong resistance to hydrochloric acids below the boiling point. Resist against oxidable acids, alkali and non-oxidable salts. For instance, vitriol, phosphate, hydrofluoric acids, and organic acids.
Hastelloy C	Exceptional resistance to strong solutions of oxidizing salts and acids. For example, Fe ⁺⁺⁺ , Cu ⁺⁺ , Nitric acids, mixed acids
Titanium	Titanium can withstand corrosive mediums such as seawater, chloride salt solutions, hypochlorite salts, oxidable acids(including fuming nitric acids), organic acids, and alkali. Not resistant to high purity reducing acids such as sulphuric acids, hydrochloric acids.
Tantalum	Highly resistant to corrosive mediums. Applicable to all chemical mediums except Hydrofluoric Acids, Oleum and Alkali.

Velocity-Flow Range Table

Size	Flow Range & Velocity Table							
(mm)	0.1m/s	0.2m/s	0.5m/s	1m/s	4m/s	10m/s	12m/s	15m/s
3	0.003	0.005	0.013	0.025	0.102	0.254	0.305	0.382
6	0.01	0.020	0.051	0.102	0.407	1.017	1.221	1.526
10	0.028	0.057	0.141	0.283	1.130	2.826	3.391	4.239
15	0.064	0.127	0.318	0.636	2.543	6.359	7.630	9.538
20	0.113	0.226	0.565	1.130	4.522	11.304	13.56	16.956
25	0.177	0.353	0.883	1.766	7.065	17.663	21.2	26.494
32	0.289	0.579	1.447	2.894	11.575	28.938	34.73	43.407
40	0.452	0.904	2.261	4.522	18.086	45.216	54.26	67.824
50	0.707	1.413	3.533	7.065	28.260	70.650	84.78	105.98
65	1.19	2.39	5.97	11.94	47.76	119.40	143.3	179.10
80	1.81	3.62	9.04	18.09	72.35	180.86	217.0	271.30
100	2.83	5.65	14.13	28.26	113.04	282.60	339.1	423.90
125	4.42	8.83	22.08	44.16	176.63	441.56	529.9	662.34
150	6.36	12.72	31.79	63.59	254.34	635.85	763.0	953.78
200	11.3	22.61	56.52	113.04	452.16	1130.40	1356	1696
250	17.66	35.33	88.31	176.53	706.50	1766.25	2120	2649
300	25.43	50.87	127.2	254.34	1017	2543.40	3052	3815
350	34.62	69.24	173.1	346.19	1385	3461.85	4154	5193
400	45	90	226.1	452	1809	4522	5426	6782
450	57	114	286.1	572	2289	5723	6867	8584
500	71	141	353.3	707	2826	7065	8478	10598
600	102	203	508.7	1017	4069	10174	12208	15260
700	138	277	692.4	1385	5539	13847	16617	20771
800	181	362	904.3	1809	7235	18086	21704	27130
900	229	458	1145	2289	9156	22891	27469	34336
1000	283	565	1413	2826	11304	28260	33912	42390
1200	407	814	2035	4069	16278	40694	48833	61042
1400	554	1108	2769	5539	22156	55390	66468	83084
1600	723	1447	3617	7235	28938	72346	86815	108518
1800	916	1831	4578	9156	36625	91562	109875	137344
2000	1130	2261	5652	11304	45216	113040	135648	169560
2200	1368	2736	6839	13678	54711	136778	164134	205168
2400	1628	3256	8139	16278	65111	162778	195333	244166
2600	1910	3821	9552	19104	76415	191038	229245	286556
2800	2216	4431	11078	22156	88623	221558	265870	332338
3000	2543	5087	12717	25434	101736	254340	305208	381510

Remark: Recommend flow velocity range 0.5m/s - 15m/s

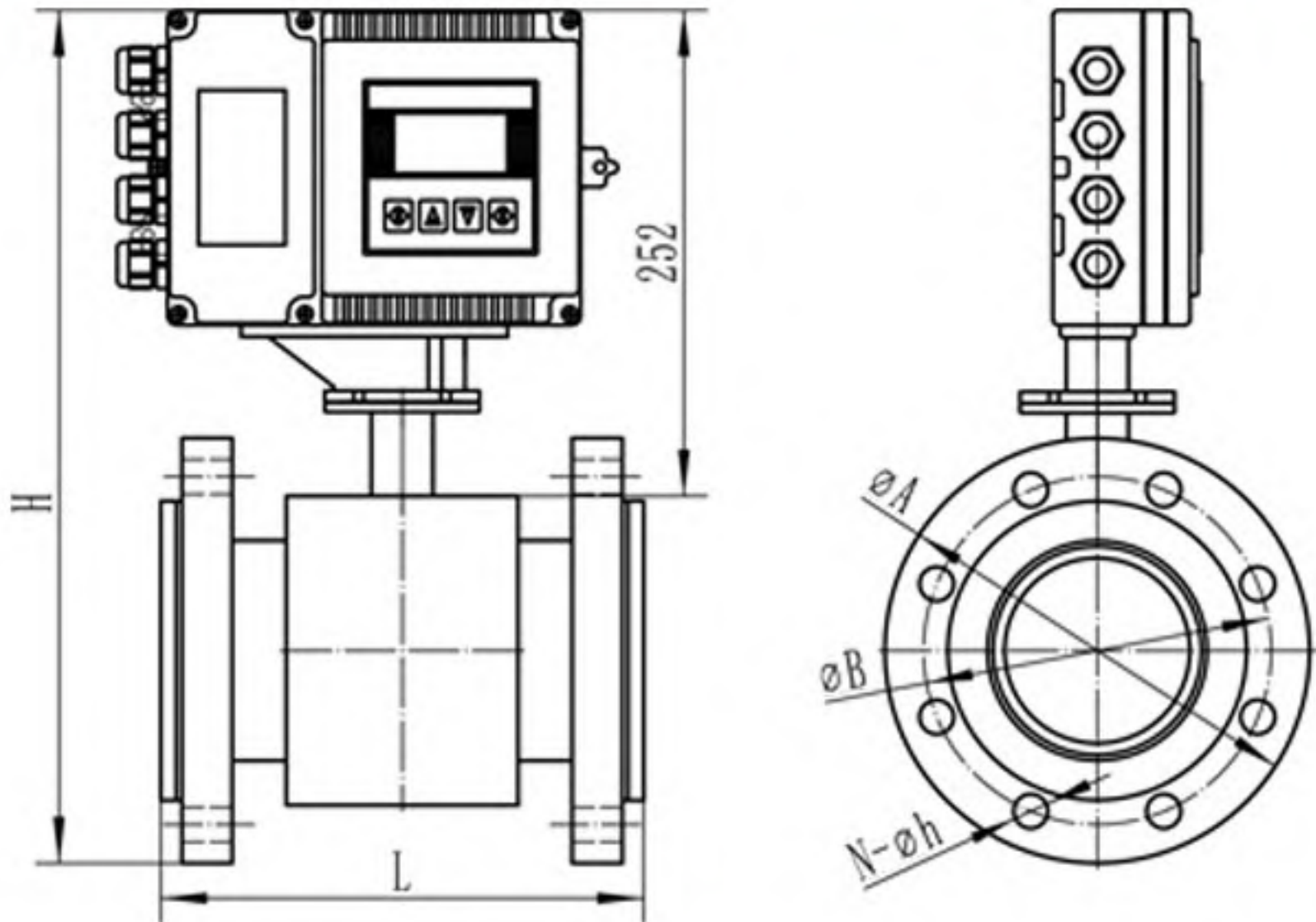
MODEL SELECT

QTGD		XXX	X	X	X	X	X	X	X	X	X	X	X	X
Caliber (mm)	DN3-DN3000													
Connection	Flange(3-3000)		F											
	Wafer(25-200)		W											
	Sanitary(15-200)		S											
	Thread(15-200)		T											
	Insertion(more than 100)		I											
	Others		O											
Process Connection	DIN			D										
	JIS			J										
	ANSI			A										
	None			N										
	Others			O										
Liner	PTFE				1									
	PFA				2									
	Neoprene				3									
	Polyurethane				4									
	Ceramic				5									
	Hard Rubber				6									
	F46				7									
	Others				0									
Electrode	316L					L								
	Hastelloy B					B								
	Hastelloy C					C								
	Titanium					I								
	Platinum-iridium					P								
	Tantalum					A								
	Stainless steel covered with tungsten carbide					S								
	Others					O								
Structure	Integral						I							
	Remote						R							
	Integral ex-proof						1							
	Remote ex-proof						2							
	Others						0							
Power	220V AC 50Hz							A						
	220V AC 60Hz							B						
	24V DC							C						
	3.6V battery							D						
	Dual Power							E						
	Others							O						
Output (for example, 1+2+4)	4-20mA								1					
	Pulse								2					
	Relay								3					
	RS485(communication)								4					
	HART(communication)								5					
	GPRS(communication)								6					
	Others								7					
Protection	IP65									A				
	IP67									B				
	IP68									C				
Accuracy	0.50%										1			
	0.30%										2			
	0.20%										3			
	1.50%										4			
	others										5			
Body Material	Carbon Steel												C	
	SS304												4	
	SS316												6	
Flange Material	Carbon Steel													C
	SS304													4
	SS316													6

If any other requirements, please check with us again

Optional selection				
X	1	2	3	4
	Grounding electrode	Coupled flange	Entrance protection flange	Scraper type electrode
				Others

DRAWING

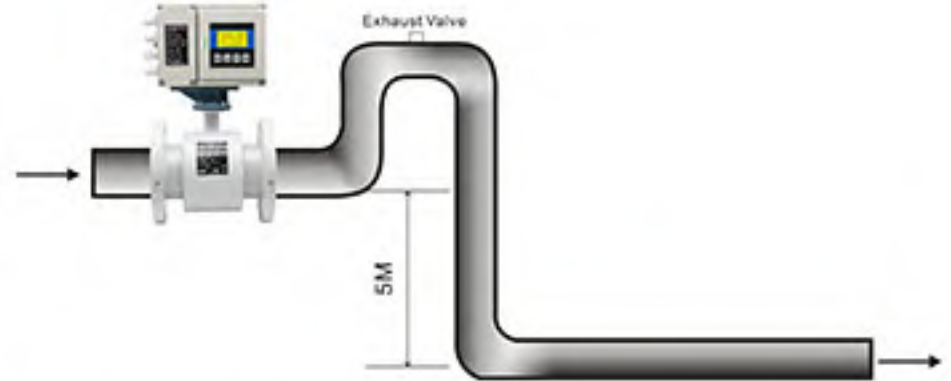


Diameter	Flange	Pressure	H	L	ϕA	ϕB	ϕh	N
DN25	DIN	1.6MPa	357	200	115	85	14	4
DN32	DIN	1.6MPa	367	200	135	100	18	4
DN40	DIN	1.6MPa	377	200	145	110	18	4
DN50	DIN	1.6MPa	392	200	160	125	18	4
DN65	DIN	1.6MPa	410	200	180	145	18	4
DN80	DIN	1.6MPa	426	200	195	160	18	8
DN100	DIN	1.6MPa	445	250	215	180	18	8
DN125	DIN	1.6MPa	470	250	245	210	18	8
DN150	DIN	1.6MPa	502	300	280	240	23	8
DN200	DIN	1.6MPa	560	350	335	295	23	12

INSTALLATION



Install at the lowest point and vertical upward direction
Don't install at the highest point or vertical downward direction



When drop is more than 5m, install exhaust valve at the downstream



Install at the lowest point when used in open drain pipe



Need 10D of upstream and 5D of downstream



Don't install it at the entrance of pump, install it at the exit of pump



Install at the rising direction

CALIBRATION



All instruments will be calibrated before leaving our factory.
We use 0.1% accuracy Coriolis mass flow meter as master meter
for high accuracy

CERTIFICATE

IEP ENERGY PETROLEUM INSTITUTE **IEP ATEX**

(1) EU-Type Examination Certificate

(2) Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres

Directive 2014/34/EU

(3) EU - Type Examination Certificate Number IEP 19 ATEX 0608

(4) Product: QTLD-X type, Electromagnetic Flowmeter Mark: Q&T

(5) Firm Name: KAIFENG QINGTIANWEIYE FLOW INSTRUMENT CO., LTD.

(6) Firm Address: No.1 Wangbai Road, HuangLong Industry Park, Kaifeng, Henan, CHINA

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents there in referred to.

(8) The IEP Uluslararası Enerji Petrol Gazları, Sertifikasyon ve Teknik Hizmetleri Organizasyonu Tic. Ltd. Sti., notified body number 2284 in accordance with Article 17 of the Directive 2014/34/EU of European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in confidential Report No: IEP.Rp.Ex.19-1300 date 02.07.2018.

(9) Compliance with Essential Health and safety requirements has been assured by compliance with:

EN 60079-0 : 2013 , EN 60079-1 : 2014

(10) If the sign " X " is placed after the certificate number, it indicates that the product is subject to Specified Conditions for Safe Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the directive 2014/34/EU. Further requirements of the directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include the following:

Ex II 2G Ex db IIB T6 Gb

Responsible Person:
Nurgün Terzioğlu
Head of Certification Body

Date of Issue: 01.08.2018

IEP Uluslararası Enerji Petrol Gazları, Sertifikasyon ve Teknik Hizmetleri Org. Tic. Ltd. Sti.
7545 Sok. No:1 A, Otilimova - ÜSKÜDİR - TÜRKİYE
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Page 1 / 2

ATEX

Safenet Limited
Denford Garage, Denford, Kettering, Northants, NN14 4EQ, U.K.
Tel: +44 (0)20 732 174 Email: info@safenet.co.uk Website: www.safenet.co.uk

Certificate of Conformity

This is to certify that

Kaifeng Qingtianweiye Flow Instrument Co., Ltd.

No. 1 Wangbai Road, HuangLong Industry Park, Kaifeng, Henan, China

Has had a range of Electromagnetic Flowmeters examined with regards to the Low Voltage Directive 2014/35/EU.

With reference to model **QTLD**

Manufactured by:

Kaifeng Qingtianweiye Flow Instrument Co., Ltd.

No. 1 Wangbai Road, HuangLong Industry Park, Kaifeng, Henan, China

- The technical documentation supplied contains all the relevant information.
- Having verified that the appropriate tests have been conducted, with regard to the QTLD representing the range.
 - The example has been manufactured in accordance with the technical documentation and may be used under the intended conditions.
 - The standards and transposed standards as the case may be, have been applied correctly.
 - The example has conformity with the Principle Elements of Safety Objectives of the Low Voltage Directive, 2014/35/EU.
 - The report, LCS1002000035, shows compliance to EN 61010-1:2010 which is harmonised under the Low Voltage Directive, 2014/35/EU.
 - The technical documentation supplied contains all the information required to include the following models QTLD, QTLD-C, QTLD-D, QTLD-G, QTLD-S, MGG14C and MGR14C.
 - The review date for this certificate is 03/03/2020.

Certificate Number: 6023120716

Date: 18/07/2016

Signed for Safenet Limited

Peter McNicol

Peter McNicol
Technical Manager

CE

Number 1474

This Document remains the property of Safenet Ltd and will be returned to them if so requested. Safenet will ensure the continued compliance of the machinery on a 3 yearly cycle to check for changes in the state of the art.

CE



More than 100 patents