



Specification Sheet		
Battery-Powered Electromagnetic Water Meter 40 – 300 mm (with Pulse Output)	Model	SU40-KF, SU50-KF, SU65-KF, SU80-KF, SU100-KF, SU125-KF, SU150-KF, SU200-KF, SU250-KF, SU300-KF
	Aichi Reference No.	SU40-300-KF-M

1. General

This is a battery built-in type electromagnetic water meter that M. Faraday's Electromagnetic Induction Law is applied. This meter demonstrates its wide measuring range and high durability as there is no mechanical moving part in the flow measurement tube of the meter. This meter has the external output corresponding to the remote monitoring / the remote control.

2. Specifications

2-1. Main Materials

- Outer Casing ..... Stainless Steel
- Flow Measurement Tube ..... Stainless Steel (Tube Liner: Epoxy Resin Powder Painting)
- Electrode ..... Stainless Steel
- Register Unit ..... Stainless Steel, Glass
- Electronic Unit ..... Electronic Component, PC Board

2-2. Performance & Function

Flow Performance to ISO 4064, OIML R49/2013			
Meter Size (mm)		40	
Max. Flowrate	Q <sub>4</sub> [±2%] (m <sup>3</sup> /h)	31.3	
Permanent Flowrate	Q <sub>3</sub> [±2%] (m <sup>3</sup> /h)	25	
Transitional Flowrate	Q <sub>2</sub> [±2%] (m <sup>3</sup> /h)	0.16	
Min. Flowrate	Q <sub>1</sub> [±5%] (m <sup>3</sup> /h)	0.1	
Measuring Range Q <sub>3</sub> /Q <sub>1</sub> (R)		250	
Low Flow Cut (m <sup>3</sup> /h)		0.05	
Pressure Loss at Permanent Flowrate (Q <sub>3</sub> ) (MPa)		0.063 or less	
Maximum Permissible Working Pressure (MPa)		1.0	
Measurable Fluid	Applicable Working Fluid Temperature (°C)	+0.1 to +30	
	Fluid Conductivity (μ S/cm)	50 or more	
Ambient Temperature (°C)		-10 to +55	
Waterproof		IP68	
Registration	Integrating Flow	Max. Registration (m <sup>3</sup> )	999999.9999
		Smallest Scale Unit (L)	0.1
	Others	Instantaneous Flowrate (m <sup>3</sup> /h) No-Water Warning Low-Battery Alarm	
Power Supply		Built-in Lithium Battery Estimated Battery Life: 10 years at 30°C ambient temperature (including storage time)	
Weight (Meter with Pulse Output inc. 10m cable) (kg)		Approx. 7.5	
Weight (Meter with Pulse Output inc. 30m cable) (kg)		Approx. 8.5	
Piping Connection		Flange Connection Method	

Remarks: Specifications are subject to change without notice.



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		Aichi Reference No.		SU40-300-KF-M	
Flow Performance to ISO 4064, OIML R49/2013					
Meter Size (mm)		50	65	80	100
Max. Flowrate	Q <sub>4</sub> [±2%] (m <sup>3</sup> /h)	50	78.8	125	200
Permanent Flowrate	Q <sub>3</sub> [±2%] (m <sup>3</sup> /h)	40	63	100	160
Transitional Flowrate	Q <sub>2</sub> [±2%] (m <sup>3</sup> /h)	0.16	0.252	0.4	0.64
Min. Flowrate	Q <sub>1</sub> [±5%] (m <sup>3</sup> /h)	0.1	0.158	0.25	0.4
Measuring Range Q <sub>3</sub> /Q <sub>1</sub> (R)		400			
Low Flow Cut (m <sup>3</sup> /h)		0.08	0.126	0.2	0.32
Pressure Loss at Permanent Flowrate (Q <sub>3</sub> ) (MPa)		0.063 or less			
Maximum Permissible Working Pressure (MPa)		1.0			
Measurable Fluid	Applicable Working Fluid Temperature (°C)	+0.1 to +30			
	Fluid Conductivity (μ S/cm)	50 or more			
Ambient Temperature (°C)		-10 to +55			
Waterproof		IP68			
Registration	Integrating Flow	Max. Registration (m <sup>3</sup> )	999999.9999		999999.999
		Smallest Scale Unit (L)	0.1		1
	Others	Instantaneous Flowrate (m <sup>3</sup> /h) No-Water Warning Low-Battery Alarm			
Power Supply		Built-in Lithium Battery Estimated Battery Life: 10 years at 30°C ambient temperature (including storage time)			
Weight (Meter with Pulse Output inc. 10m cable) (kg)		Approx. 8.5	Approx. 9.5	Approx. 11.5	Approx. 14.5
Weight (Meter with Pulse Output inc. 30m cable) (kg)		Approx. 9.5	Approx. 10.5	Approx. 12.5	Approx. 15.5
Piping Connection		Flange Connection Method			

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		Aichi Reference No.	SU40-300-KF-M
Flow Performance to ISO 4064, OIML R49/2013			
Meter Size (mm)		125	150      200
Max. Flowrate	Q <sub>4</sub> [±2%] (m <sup>3</sup> /h)	313	500      788
Permanent Flowrate	Q <sub>3</sub> [±2%] (m <sup>3</sup> /h)	250	400      630
Transitional Flowrate	Q <sub>2</sub> [±2%] (m <sup>3</sup> /h)	1	1.6      2.52
Min. Flowrate	Q <sub>1</sub> [±5%] (m <sup>3</sup> /h)	0.625	1      1.58
Measuring Range Q <sub>3</sub> /Q <sub>1</sub> (R)		400	
Low Flow Cut (m <sup>3</sup> /h)		0.5	0.8      1.26
Pressure Loss at Permanent Flowrate (Q <sub>3</sub> ) (MPa)		0.063 or less	
Maximum Permissible Working Pressure (MPa)		1.0	
Measurable Fluid	Applicable Working Fluid Temperature (°C)	+0.1 to +30	
	Fluid Conductivity (μ S/cm)	50 or more	
Ambient Temperature (°C)		-10 to +55	
Waterproof		IP68	
Registration	Integrating Flow	Max. Registration (m <sup>3</sup> )	999999.999      9999999.999
		Smallest Scale Unit (L)	1
	Others	Instantaneous Flowrate (m <sup>3</sup> /h) No-Water Warning Low-Battery Alarm	
Power Supply		Built-in Lithium Battery Estimated Battery Life: 10 years at 30°C ambient temperature (including storage time)	
Weight (Meter with Pulse Output inc. 10m cable) (kg)		Approx. 18.5	Approx. 24.5      Approx. 32.5
Weight (Meter with Pulse Output inc. 30m cable) (kg)		Approx. 19.5	Approx. 25.5      Approx. 33.5
Piping Connection		Flange Connection Method	

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	Aichi Reference No.	SU40-300-KF-M	
Flow Performance to ISO 4064, OIML R49/2013			
Meter Size (mm)	250	300	
Max. Flowrate $Q_4 [\pm 2\%]$ (m <sup>3</sup> /h)	1250		
Permanent Flowrate $Q_3 [\pm 2\%]$ (m <sup>3</sup> /h)	1000		
Transitional Flowrate $Q_2 [\pm 2\%]$ (m <sup>3</sup> /h)	4		
Min. Flowrate $Q_1 [\pm 5\%]$ (m <sup>3</sup> /h)	2.5		
Measuring Range $Q_3/Q_1$ (R)	400		
Low Flow Cut (m <sup>3</sup> /h)	2		
Pressure Loss at Permanent Flowrate ( $Q_3$ ) (MPa)	0.063 or less		
Maximum Permissible Working Pressure (MPa)	1.0		
Measurable Fluid	Applicable Working Fluid Temperature (°C)	+0.1 to +30	
	Fluid Conductivity ( $\mu$ S/cm)	50 or more	
Ambient Temperature (°C)	-10 to +55		
Waterproof	IP68		
Registration	Integrating Flow	Max. Registration (m <sup>3</sup> )	9999999.99
		Smallest Scale Unit (L)	10
	Others	Instantaneous Flowrate (m <sup>3</sup> /h) No-Water Warning Low-Battery Alarm	
Power Supply	Built-in Lithium Battery Estimated Battery Life: 10 years at 30°C ambient temperature (including storage time)		
Weight (Meter with Pulse Output inc. 10m cable) (kg)	Approx. 54.5	Approx. 70.5	
Weight (Meter with Pulse Output inc. 30m cable) (kg)	Approx. 55.5	Approx. 71.5	
Piping Connection	Flange Connection Method		

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	Aichi Reference No.	SU40-300-KF-M	
Meter Size (mm)	40		
Pulse Transmitter	MX39-34E		
Cable	Red	CH1	
	White	CH2	
	Black	CH3	
	Green	COM (GND)	
	Length	10m / 30m	
Contact Output	Number of Contact	3	
	Output Form	Normally open / Normally close (Optional)	
	Max. Current (mA)	20	
	Max. Voltage (V)	30	
	Residual Voltage (V)	1 or less	
	Max. Output Frequency (Hz)	CH1	100
		CH2	100
		CH3	0.555
	Pulse Unit (L)	1/10/100/1000/10000	
	Pulse Width (ms)	CH1	5-900 (duty 50%)
		CH2	5-900 (duty 50%) 50-900 (duty 50%) in case that the pulse unit is different between CH1 and CH2 when [Option 0] is chosen Min. 1.8s in case of [Option 2] or [Option 3]
		CH3	Min.1.8s
Details of Contact Output	Choose one from [Option 0], [Option 1], [Option 2] or [Option 3]: [Option 0] CH1: Forward flow pulse with reverse flow compensation CH2: Forward flow pulse with reverse flow compensation CH3: Alarm [Option 1] CH1: Forward flow pulse CH2: Reverse flow pulse CH3: Alarm [Option 2] CH1: Bi-directional absolute value pulse CH2: D. flag (flow direction) CH3: Alarm [Option 3] CH1: Forward flow pulse with reverse flow compensation CH2: C. flag (During reverse flow compensation) CH3: Alarm		
Max. Transmission Distance (m)	200		

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	Aichi Reference No.		SU40-300-KF-M	
Meter Size (mm)	50	65	80	
Pulse Transmitter	MX39-34E			
Cable	Red	CH1		
	White	CH2		
	Black	CH3		
	Green	COM (GND)		
	Length	10m / 30m		
Contact Output	Number of Contact		3	
	Output Form		Normally open / Normally close (Optional)	
	Max. Current (mA)		20	
	Max. Voltage (V)		30	
	Residual Voltage (V)		1 or less	
	Max. Output Frequency (Hz)	CH1	100	
		CH2	100	
		CH3	0.555	
	Pulse Unit (L)		1/10/100/1000/10000	
	Pulse Width (ms)	CH1	5-900 (duty 50%)	
CH2		5-900 (duty 50%) 50-900 (duty 50%) in case that the pulse unit is different between CH1 and CH2 when [Option 0] is chosen Min. 1.8s in case of [Option 2] or [Option 3]		
CH3		Min.1.8s		
Details of Contact Output		Choose one from [Option 0], [Option 1], [Option 2] or [Option 3]: [Option 0] CH1: Forward flow pulse with reverse flow compensation CH2: Forward flow pulse with reverse flow compensation CH3: Alarm [Option 1] CH1: Forward flow pulse CH2: Reverse flow pulse CH3: Alarm [Option 2] CH1: Bi-directional absolute value pulse CH2: D. flag (flow direction) CH3: Alarm [Option 3] CH1: Forward flow pulse with reverse flow compensation CH2: C. flag (During reverse flow compensation) CH3: Alarm		
Max. Transmission Distance (m)		200		

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	Aichi Reference No.	SU40-300-KF-M		
Meter Size (mm)	125	150	200	
Pulse Transmitter	MX39-34E			
Cable	Red	CH1		
	White	CH2		
	Black	CH3		
	Green	COM (GND)		
	Length	10m / 30m		
Contact Output	Number of Contact	3		
	Output Form	Normally open / Normally close (Optional)		
	Max. Current (mA)	20		
	Max. Voltage (V)	30		
	Residual Voltage (V)	1 or less		
	Max. Output Frequency (Hz)	CH1	100	
		CH2	100	
		CH3	0.555	
	Pulse Unit (L)	10/100/1000/10000		
	Pulse Width (ms)	CH1	5-900 (duty 50%)	
		CH2	5-900 (duty 50%) 50-900 (duty 50%) in case that the pulse unit is different between CH1 and CH2 when [Option 0] is chosen Min. 1.8s in case of [Option 2] or [Option 3]	
		CH3	Min.1.8s	
Details of Contact Output	Choose one from [Option 0], [Option 1], [Option 2] or [Option 3]: [Option 0] CH1: Forward flow pulse with reverse flow compensation CH2: Forward flow pulse with reverse flow compensation CH3: Alarm [Option 1] CH1: Forward flow pulse CH2: Reverse flow pulse CH3: Alarm [Option 2] CH1: Bi-directional absolute value pulse CH2: D. flag (flow direction) CH3: Alarm [Option 3] CH1: Forward flow pulse with reverse flow compensation CH2: C. flag (During reverse flow compensation) CH3: Alarm			
Max. Transmission Distance (m)	200			

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		Aichi Reference No.	SU40-300-KF-M	
Meter Size (mm)		250	300	
Pulse Transmitter		MX39-34E		
Cable	Red	CH1		
	White	CH2		
	Black	CH3		
	Green	COM (GND)		
	Length	10m / 30m		
Contact Output	Number of Contact		3	
	Output Form		Normally open / Normally close (Optional)	
	Max. Current (mA)		20	
	Max. Voltage (V)		30	
	Residual Voltage (V)		1 or less	
	Max. Output Frequency (Hz)	CH1	100	
		CH2	100	
		CH3	0.555	
	Pulse Unit (L)		10/100/1000/10000	
	Pulse Width (ms)	CH1	5-900 (duty 50%)	
		CH2	5-900 (duty 50%) 50-900 (duty 50%) in case that the pulse unit is different between CH1 and CH2 when [Option 0] is chosen Min. 1.8s in case of [Option 2] or [Option 3]	
CH3		Min.1.8s		
Details of Contact Output		Choose one from [Option 0], [Option 1], [Option 2] or [Option 3]: [Option 0] CH1: Forward flow pulse with reverse flow compensation CH2: Forward flow pulse with reverse flow compensation CH3: Alarm [Option 1] CH1: Forward flow pulse CH2: Reverse flow pulse CH3: Alarm [Option 2] CH1: Bi-directional absolute value pulse CH2: D. flag (flow direction) CH3: Alarm [Option 3] CH1: Forward flow pulse with reverse flow compensation CH2: C. flag (During reverse flow compensation) CH3: Alarm		
Max. Transmission Distance (m)		200		

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