

User Manual

FL-9900 Impeller Flow Transfer Controller



The default password is 1000

Shanghai ChiMay Technology Co., Limited

www.chimaytech.com

www.shchimay.com

Preface

Thank you for using the impeller flow transfer controller!

Please read this manual carefully before installation, correct sensor installation and parameter settings are the prerequisite to ensure high performance of the product, and bring you a good experience.

This instrument belongs to the precision measurement and control instrument, should be operated only by professionals trained with reletive skills and konwledge of installation, operation and maintenance.

Please contact the after-sales service department if you encounter any difficulties during installation or use.

Be sure to check the complete list with the actual product you received after you unpack.

Please contact us as soon as possible in case of parts missing or damage.

We solemnly promises:

1. If there is a quality problem within one year from the date of purchase, you will get free product repair or replacement with a brand new product.

2. No matter how you buy this product, the manufacturer promises lifetime technical maintenance of the instrument sold.

This warranty does not include:

* Due to force majeure, natural disasters, social unrest, war (declared or undeclared), terrorism, popular strikes Or damage caused by government regulations, etc.

3. The damage caused by the following reasons is not covered by the warranty:

- A. Damage caused by misconnection of high voltage power supply or flooding;
- B. Damage caused by private modification, repair and wrong use;
- C. Incidental losses caused by improper selection;
- D. Damage caused by exceeding the specified conditions of use of the pro duct;
- E. Physical damage caused by improper force;
- F. Failure caused by storage and transportation in accordance with the stipulated storage or transportation conditions (quoting standard SJ/T10463-93);
- G. Consumable materials need to be purchased separately.
- H. Damage due to misoperation, accident or incorrect use or installation.

Pay attention:

■ Each instrument before leaving the factory are aging test, and by professional technical engineers to test and debug, to ensure product quality,

And according to your selection requirements, to set the factory parameters.

■ This runner flowmeter is only suitable for measuring liquid flow (gas, high viscosity fluids, fluids with impurities, etc., are not suitable).

■ When the flow sensor is connected with other instruments, please read the wiring method of the instructions in detail or contact the technical personnel of the company staff contact.

■ Do not exceed the rated pressure and temperature use.

• When selecting, please ensure the chemical compatibility of the flowmeter and the measured flow body.

■ Power off when wiring.



Content

Preface	2
1. Introduction	5
1.1 Instrument Description	5
1.2 Instrument Characteristics	5
1.3 Technical parameters	6
1.4 Application Areas	6
1.5 Working principle	7
2. Technical Specifications	7
3.Instrument appearance	8
4. wiring instructions	10
Attached: 4-20mA output transmission connection diagram	11
5. Operating instructions	13
5.1 Panel Instructions	13
5.2 Menu Description:	13
5.2.1 Instrument Parameter Setting Description:	13
5.2.2 Description of User Parameter Setting menu	13
6.Mounting seat selection	14
6.1 Large diameter stainless steel pipe installation	14
6.2 Installation of small-caliber stainless steel pipes	16
6.3 Large diameter PVC pipe installation	16
6.4 Welding and bonding of the mounting base	16
6.5 Sensor installation requirements	
7. Communication instructions	19
7.1 Communication format: Default: 9600, N, 8, 1;	
7.2 Appendix table: flowmeter communication address description:	21
8. Fault Self-examination	22
9. Completability	





1. Introduction

1.1 Instrument Description

Impeller flow controller adopts all-digital circuit design, with simple circuit structure, high precision, good reproducibility.

The anti-interference ability is strong, the protection level is high, the installation is simple to use. Widely used in water treatment, cooling water, chemical industry, health Biological pharmaceutical, power plant, cement factory, sewage treatment, colleges and universities, research institutes and other industrial process real-time, on-line monitoring fluid The flow rate and automatic control.

Fully intelligent: The use of high-precision AD conversion and single-chip microprocessor microprocessing technology, can complete instantaneous flow, cumulative flow, range automatic conversion, instrument self-test and other functions.

Strong anti-interference ability: the current output adopts photoelectric coupling isolation technology, strong anti - interference ability, to achieve remote transmission. Have good electromagnetic compatibility.

Waterproof and dustproof design: Protection class IP65, suitable for outdoor use. RS485 communication interface: It can be easily connected to the computer for monitoring and communication, greately improving the distance and on the data transmission

The speed of the processing of the bit machine is convenient to realize the automatic control of the ultra -long distance.

Watchingdog type of controlling: ensure that the meter will not crash. This instrument can be matched with a variety of sensors, suitable for a variety of complex field environment. **1.2 Instrument Characteristics**

- Full digital design, good anti-interference
- A variety of installation methods, disk mounting, wall hanging, integrated installation
- A variety of signal output: pulse output, isolated 4-20mA output, RS485, two groups of switching quantity
- Circulatory menu, easy operation
- Password protection to prevent misoperation
- SMT chip process, high integration, stable measurement, low power consumption, good repeatability of electronic unit

■ The maximum accumulated flow rate is 9999 9999.999, and the bottom function of the table can be preset;

- Instantaneous flow, high/low alarm, relay output control function;
- Dual quantitative control function, can be equipped with low limit alarm and high limit alarm;





1.3 Technical parameters

<u>Display:</u>

Dot matrix LCD with backlight

Instantaneous flow, cumulative flow, alarm prompt, 4-20mA output status

Circular menu, password protected

Measuring range: 0 to 2K Hz

Electronic unit automatic temperature compensation error: $\pm 0.5\%$ FS; Electronic unit repeatability error: $\pm 0.2\%$ FS ± 1 byte;

Electronic unit stability: ±0.2%±1 byte FS/24h;

Input: Rotary flow sensor (pulse/square wave)

<u>Output:</u>

- Current isolation output: $4 \sim 20 \text{ mA} (\text{load} < 750 \Omega);$
- instantaneous value high and low limit alarm output (relay node output)
- RS485 communication output (Free communication protocol)
- Pulse signal output

Environmental requirements:

Temperature: -20 ° C ~+70 ° C (-4~158 ° F)

Humidity: Relative humidity below 90%, no condensation

No strong electric field, strong magnetic field environment (away from large frequency converter,

large motor, etc.)

No obvious vibration place

No corrosive gas site

Installation method: disc mounted, wall mounted, integrated

Instrument dimensions: 98 x 98 x 48mm (3.78 x 3.78 x 3.78 inches)

Hole dimensions: 93.5 x 93.5 mm

<u>Protection grade:</u> meet IP65 requirements, resistant to chemical reagents ; Can be used for a variety of harsh use site

Power requirements: DC 24V

Power consumption: 2W (backlight)

Backlight working mode: the backlight automatically lights up after pressing the button

1.4 Application Areas

Pure water process

 Reverse osmosis/ultrafiltration/water filtration
 Cooling and heating systems
 Water treatment and regeneration
 Pump protection
 Chemical process
 Agricultural irrigation and fertilization system
 Filtration system
 Desalting and recycling
 Ultra-pure water delivery
 Swimming pools and hot springs
 Groundwater filling





1.5 Working principle



When the liquid flows in the pipe, the impact turbine generates rotation, and the magnet on the turbine blade generates a measurement signal in the sensor with the rotation, which is proportional to the flow rate of the fluid, and through a correlation coefficient K corresponding to the diameter and

material of each joint, the meter measures and calculates the current flow rate.

2. Technical Specifications

	Frequency	0~2K Hz
	Velocity of flow	0.5~5 m/s
Measuring range	Instantaneous flow	$0 \sim 2000 \text{ m}^{3}/\text{h}$
	Cumulative flow	$0 \sim 9999 \ 9999.999 \ m^{3}$
Applicable pipe	diameter range	DN15~DN100;DN125~DN300
Resol	ution	0.01 m³/h
Refres	sh rate	1s
Accura	cy class	Level 2.0
Repeatability		±0.5%
Sensor input		Radius:0 \sim 2K Hz
		Supply voltage:DC 24V(instrument internal supply)
The electronic unit automatically		
temperature co	ompensates for	+0.5%FS;
err	ors	
	Technical	Meter/transmitter dual mode (photoelectric
	characteristics	isolation)
4-20mA	Loop resistance	500Q(max), DC24V;
	Transmission	+0.01m 4
	accuracy	
Contact mode		Passive relay control output
Control nort	Load capacity	Load current 5A (max)
	Function	Instantaneous flow upper Jower alarm
	selection	
Maine	oupply.	Working voltage: DC24V 4V Power
IV(dIIIS	Տսիիւչ	consumption :<; 3.OW



Cabla	longth	Factory configuration: 5m, can be agreed: (1~500)
		m
Environmental requirement		Temperature: 0~50°C; Relative humidity: ≤85%RH
Storage environment		Temperature: (-20~60) °C; Humidity: 85%RH
Overall dimension		96×96×72mm (height × width × depth)
Openii	ng size	92×92mm
lnstallati	on mode	Disc mounted, fast fixed
	Pody motorial	Body: Engineering plastic PP; Bearing :Zr02 high
	bouy material	temperature zirconia
	Flow rate range	0.5~5 m/s
	Withstand	<0.6MPa
	pressure	
	Supply voltage	IDC 24V
Sancor	Output pulse	$\lambda/n > 9 \lambda/$
Sensor	amplitude	vµ≥ov
	Normal pipe	
	diameter	
	Medium	Single phase modium (0, 6000)
	characteristic	
	Installation	Direct line incertion
	mode	

3. Instrument appearance

ChiMay



Front view

Back view



Side view





Sensor apperance and internal structure





Matching installation base



Stainless steel



PVC material with tee mounting seat



PVC material





4. wiring instructions

AC220U × DC24U •	PIN(菌) 24V+(红) GND(黑)	Flow sensor pulse input Flow sensor supply output 24 V+ Flow sensor supply output 24 V-
4-20mA output • DC24V supply output (support customization) •	485 A+ 485 B- HI C LO C	RS-485 comm. Port • (Modbus RTU) • Relay high-limit setting • Relay low-limit setting

S/N	ldentification	Function description	Remark
1	MA —/T+	4-20mA output	MA+/- : indicates the meter mode
		1.20mA output	T+/-: indicates the transmission
2	MA+/T-	4-20MA output	mode
3	Power	DC24V+ power input	(n_{1})
4	ruwei	DC24V- Power input	Optional AC220V (please note)
С		Flow sensor pulse	Only the input of square wave
5	PULSE	input	signals can be received
		Flow sensor power	
6	24V+	output +	
		Flow sensor power	Output from inside the instrument
7	24V- (GND)	output -	to the sensor
		RS485	
		communication port	
8	485 A+	+	Modbus PTI protocol
		RS485	
		communication port	
9	485 B-	-	
10	н	High line relay alarm	Contact current: 54/220v Max
10		output node	Contact current. 5/0/2200 Max
		Low line relay alarm	Contact current: 54/220v Max
11	Lo	output node	



Wiring process:

ChiMay

- The sensor has four wires: power cord +5V; Signal line PIN; Ground wire GN; Shielding wire.
- Usually the shielded wire is not used, and the other three wires are connected to the transmitter in turn.



<u>GND</u> black line

Note:

■ Do not lay the sensor cable and the AC power cable in the same guard tube to avoid electronic interference.

Keep cables dry to avoid getting wet

Attached: 4-20mA output transmission connection diagram





ChiMay







5. Operating instructions

5.1 Panel Instructions



On the main screen, the shortcut keys are described as follows: Decrement key: Switch instantaneous flow /4-20mA output display; Right shift key: switch display: instantaneous flow, frequency, velocity; Confirm key: Press once to display CODE, press again to display 0000, enter the user password

5.2 Menu Description:

5.2.1 Instrument Parameter Setting Description:

Measurement interface --> Press the "Confirm key" twice to enter the "0000" user password input interface, the default value is 1000, after entering the correct password, enter the user parameter setting option:

5.2.2 Description of User Parameter Setting menu

dn: Pipe diameter setting: range 20--1000;

cot: flow sensor K value setting; (how many pulses does 1m3 correspond to);

Hl.ON: instantaneous flow upper limit relay, alarm suction value;

Hl.OF: instantaneous flow upper limit relay, alarm off value;

LO.ON: instantaneous flow lower limit relay, alarm suction value



ChiMay

LO.OF: instantaneous flow upper limit relay, alarm disconnect value

A4: instantaneous flow 4-20mA output, 4mA corresponding value;

A20: instantaneous flow 4-20mA output, 20mA corresponding value;

ALA: buzzer alarm sound switch; ON: buzzer, OFF: mute

- dLY: Over-limit alarm delay x second detection;
- CLR: cumulative traffic clearance zero; Need to enter the user login password, after the password is entered correctly, the accumulated traffic will be cleared to zero; At this time, enter the preset table bottom function, after the setting is complete, the cumulative traffic is accumulated from the preset value;

485->ADDR: RS485 communication, the local address set: 1-99

- -- >BPS: RS485 communication, baud rate setting;
- FL-0: excise for low flow rate. When the acquisition frequency of the flow sensor is less than the set value, the instantaneous flow is displayed as zero;
- F0: instantaneous flow unit selection,0:m3,1:gpm; (1 m3 / h = 4.403 GPM);

F1: cumulative flow unit selection,0:m3,1:gAL; (1 m3 = 264.172052 Ga);

F2: accumulated flow clearing mode selection: set 0: Count to the maximum 9999 9999.999 automatic clearing ;

Setting 1: Count to the maximum 9999 9999.999, stop counting;

Lb: Filter depth setting: 1-5 seconds, the measured value lasts * seconds to collect data once;

CODE: User password modification, range: 0000-9999

END: Exit and save all setting parameters;

6. Mounting seat selection

6.1 Large diameter stainless steel pipe installation

1. Applicable material: 316L/304 stainless steel; Pipe diameter range: DN50~300;

2. Pipeline middle hole diameter: F36mm (no raw edge and scar);

3. Installation seat insertion depth: calculate the insertio n depth by the inner diameter of the pipeline 10%;

4. About the scale: the scale pasted on the surface of the mounting seat takes the inner diameter of the pipeline as the corresponding scale, Welding If the front view pipe thickness is different, add the corresponding wall thickness value of the pipe above the scale for the outside of the pipe The plane can be seen in the flush position;





5. Mounting seat shape and installation requirements (figure)

ChiMay



6.Installation common problems (taking pipe diameter DN100 as an example) :



The length of the inner diameter of the pipeline extended into the lower plane of the installation seat is 10% of the inner diameter of the pipeline



Shanghai ChilMay Techology LTD www.chimaytech.com / www.shchimay.com chimay@chimaytech.com WhatsApp/Cellphone:+86 131 1777 5471

ChiMay

6.2 Installation of small-caliber stainless steel pipes

- 1. Applicable pipe diameter: DN25~40; Material: 316L/304;
- 2. Pipe middle opening diameter: 28mm;
- 3. Opening requirements: no burrs and obstacles inside the opening hole;
- 4. Welding smooth shall not have slag inclusion and deformation;
- 5. Construction renderings:



6.3 Large diameter PVC pipe installation

- 1. Applicable pipe diameter: DN50~300; Material: PVC/UPVC;
- 2. Pipe middle opening diameter: with 36mm;

3. Glue inside and on the surface of the installation hole, insert the inner core of the installation seat into the inside of the

pipeline, and complete the arc surface of the skirt

Bonding, skirt to enhance the bonding strength;

4. Construction renderings:



6.4 Welding and bonding of the mounting base

1. When installing, ensure that the notch direction on the sensor mounting seat is parallel to the pipeline to ensure the transmission The direction positioning key of the sensor is consistent with the positioning slot of the mounting seat, and the turbine blade can be vertically tangential to the flow after being locked to feel the full fluid power.



ChiMay

2. Before bonding, welding and fastening, be sure to control the sensor mounting base and the pipeline perpendi cular to ensure insert the depth of the pipeline, and avoid glue or welding slag left inside the installation base to prevent the formation of impeller pieces scratching as you turn.

6.5 Sensor installation requirements

The measurement system composed of impeller sensors can meet the measurement accuracy of all non-trade settlement fluids. To a certain extent, the measurement accuracy depends on the correctness of the sensor's connector installation on the pipeline must meet the requirements of the straight pipe section in the legend, and the installation requirements are as follows: (D indicates the nominal diameter of the pipe)



The connection in the straight pipe

Connections in reduced piping



Elbow downstream connection

Siting downstream of the valve







Double elbow downstream connection

Downstream connections for forward bends



Connection of vertical piping



Installation when there are impurities in the pipeline (add a filter device in the upstream)



A connection when bubbles are present in a horizontal line





7. Communication instructions

7.1 Communication format: Default: 9600, N, 8, 1;

Baud rate 9600; Parity: N (none);

Data bits: 8 bits; Stop bit 1;

The user needs to know:

1: When the user uses the PLC to communicate with the instrument, the address number +1 can be; 2: When communicating with PLC or configuration software, you can use serial debugging assistant or

configuration software to connect USB to 485 data cable and instrument communication test;

Port: COM6 Baud rate: 9600 Apply DTR RTS por for an and the port for an and the port of th	Port: COM6 Baudinate: 9600 Apply DTR RTS port for all feared frames and feared frame			-	
Data bit: 8 Check bits: N Morre Stop bit: - V ModbusRTU suspends the clippet HEX to display ASC Input HEX to display ASC	Data bit: 8 Check bits: N More Stop bit: - ▼ ▼ ModbusRTU suspends the display Input HEX to display ASC Input HEX to display ASC © Ignore space input interface auto-wrap display interval 05 03 00 02 00 02	Baud rate: 9600			Tan all the serial post
Input HEX to display ASC Input HEX to display ASC Input interface auto-wrap display interval Clear display interval Clear display interval	Input HEX to display ASC is ignore space input interface auto-wrap display interval interface auto-wrap display interval interval is ignore space input interface auto-wrap display interval is ignore space input interval is ignore space input interface auto-wrap display interval is ignore space input interface auto-wrap display interval is ignore space input interval is ignore space input interface auto-wrap display interval is ignore space input interval is i	Check bits: None	• Stop bit: -	ModbusRTU su	spends the displa
05 03 00 02 00 02	05 03 00 02 00 02	🕞 lignore space inp	ut interface auto-wrap display	interval	Clear displa
U Cartag	A Construction	_		0	[s) Send
				c >	[[s) S
			Baud rate: 9600 Check bits: N Hone Ignore space ing	Baud rate: 9600 Apply DT Check bits: Mane Stop bit: -	Baud rate: 9600 Apply DTR RTS Check bits: Mone Stop bit: WedbuckTU su Grant Ignore space input interface auto- wrap display interval

Serial assistant, read instantaneous flow (default /100) : hexadecimal: 00 00 06 64 = (base 10) 1636; Final instantaneous flow rate: 1636/100=16.36 m3/h;







Serial assistant, read the cumulative flow (integer part): hexadecimal: 00 BC 61 61 = (base 10) 12345696;

Port: COM6 🗾	Baud rate:	9600	→ Apply	☐ DTR		s	Close the serial port
Data bit: 80 💌	Check bit:	N None	• Stop	bit:	•••••	dbusRTU pr	uses the displa
Type HEX to display HEX Type ASC to display ASC	🕞 Ignore	space in	put field Wrap	Displays in	tervals		Clear display
05 03 00 06 00 02						~ ~	[s) Send
05 03 00 06 00 02						^ V	[[s] Send

Serial assistant, read cumulative traffic (decimal part) : hexadecimal: 00 00 00 DF = (base 10) 223; Final cumulative flow =12345696.223 m3

Use MCGS configuration software to test communication, change the test software can be obtained from the company;

Flow meter	communication (a	dress default =5)		Mailing ac Baud rat	ddress:5 e:9600	
Pipe diameter:	20		Instantaneous flow rate (m3/h)=			
K coefficient:	22000. 000			16.3	36	
Small signal excision:	1		Cumulative flo	w rate (m	า3)=	
Low count threshold =	1.123		1234	567	8.14	13
Upper count threshold =	11. 111		Flow rate	Frequenc	cv 4-2	0mA
High limit suction value =	1100. 010		(m/S)	(HZ)	ou	tput
High threshold disconnection =	1091.123		14.47	100	6.6	M A
Low limit suction value =	0.000					
Lower threshold disconnect =	0.020					Back







7.2 Appendix table: flowmeter communication address description:

Addres	Features	Datatypes	Instructions
0	Meteraddress	Hexadecimal integertype	MODBUSRTU:1-99
1	BaudRate	ltisa hexadecimal integer	Optional2400,4800,9600,19200bps
2	Instantaneous flow high 16 bits	lt is a 32-bit integer	The default is 2 decimal places, resulting in/100
4	Cumulative traffic (integer part)	A32-bitinteger	
6	Cumulative flow (fractional part)	A32-bitinteger	The default is 3 decimal places, resulting in /1000
8	Frequency	ltisa hexadecimal integer	Integer
9	Flowrate	Hexadecimal integer type	The default is 2 decimal paces
10	Smallsignal toggle Settings	Hexadecimal integertype	The integers 0020
11	Pipe diameter setting	Hexadecimal integertype	Integers 20-1000
12	Quantitative Counting mode	ltisa hexadecimal integer	1:On,0 off
13	Cumulative flowmeter full clear zero mode	Hexadecimal integer	o:Clear1:stop
14	K coefficient (integer part)	32-bit integer type	
16	K coefficient(fractional part)	Base 32 integer type	The default is 3 decimal places, resulting in /1000
18	CNT.LLow countvalue (integer part)	32-bitinteger	
20	CNT.LHigh limitcountvalue (fractional part)	A32-bitinteger	The default is 3 decimal places, resulting in /1000
22	CNT.H low countvalue (integer part)	A32-bitinteger	
24	CNT.H high limit countvalue(fractional part)	A32-bitinteger	The default is 3 decimal places, resulting in /1000
26	Instantaneous flow high limit suction valueHII.ON	lt is a 32-bit integer	The default is 2 decimal places, resulting in /100
28	Instantaneous traffic upper cut-off valueHI.OF	lt is a 32-bit integer	The default is 2 decimal places, resulting in /100
30	Instantaneous flow low limit suction valueLO.ON	ltis an integer in base32	The default is 2 decimal places, resulting in /100
32	Instantaneous flow low cut- off value LO.OF	l lt is a 32-bit integer	The default is 2 decimal places, resulting in /100
34	High limitalarm status	Hexadecimal integer type	0: No alarm 1: alarm in progress
35	Lowalarmstatus	Hexadecimal integer type	0: No alarm 1: alarm in progress
36	Current4-20mAoutputvalue	Hexadecimal integer type	Default 2 decimal places, resulting in /100





8. Fault Self-examination

Phenomena	Possible factors	Exclusions
Power-on None is displayed	1.The power supply is faulty 2.The instrument is faulty	1.Check whether there is a 24V power supply in the incoming port of the instrument 2.Return to factory for repair
The instantaneous flow deviation is large	1.The location or installation of the sensor is incorrect2.The caliber of the pipe is set incorrectly3.Flow K coefficient setting problem	1.Check site selection and installation2.Reset the pipe calibers3.Reset the flow K coefficient
Instantaneous flow volume Display 0000	 1.The size of the homemade mounting seat is not appropriate 2.The impeller is not deep into the water body 3.The impeller is stuck by foreign matter and does not turn 4.There is no liquid flow or air in the upper part 5.The impeller is wrapped with fibers 6.The small signal cutting value is too large 	 1.Choose the original installation base 2.Insert the impeller into one tenth of the inner diameter of the pipe 3.Remove and flip the impeller to check the instrument indication 4.Make sure the pipe is filled with liquid 5 Add a filter device upstream 6 Review or modify the small signal excision Settings
Instantaneous Flow Wobbly display	1.The installation location is not correct2.The fluid in the pipe is unstable3.The filter depth is set too small	1.Install the sensor as required2.Select a steady flow section3. Increase the filter depth setting
mAvalues in both places Inconsistent display	End migration error Improper send setting suspicious mAsending does not match	1.Reset the amount of migration received2.Reset the mapping between mAand the indicator value3.Verify the ammeter in series in the mA loop

9. Completability

The runner flowmeter is composed of two parts: transmitter and sensor. When the user unpacks the box, please check the quantity and gauge of the instrument according to the packing list, box and accessories, if the quantity is wrong or the model is inconsistent, please contact the manufacturer or seller.

- 1、One flow controller
- 2、A flow sensor
- 3、One flow sensor mounting piece
- 4、A manual
- 5、One certificate of qualification





Pipe diameter and K coefficient setting reference table					
Nominal diameter DN(mm)	lnstantaneous flow range (m3/h)	K coefficient Set reference value	Nominal pressure (MPa)		
20	0-8.00	114074	0.2-0.6		
25	0~10.00	65550	0.2-0.6		
32	0~15.00	41256	0.2-0.6		
40	0-20.00	34570	0.2-0.6		
50	0~40.00	22345	0.2-0.6		
65	0~60.00	15078	0.2-0.6		
80	90	8320	0.2-0.6		
100	0~150.0	4699	0.2-0.6		
125	0~200.o	2785	0.2-0.6		
150	0~300.o	2112	0.1-0.6		
200	0~400.o	1022	0.1-0.6		
250	0~500.0	623	0.1-0.6		
300	0~800	455	0.1-0.6		





For other question, feel free to contact us.

Thank you for choosing ChiMay!

VCard





