11

22

33

44 5Module function:

1. Use HLW8032 chip to collect the voltage, current and active power of alternating current, 2. Choose And can 5V calculate version the and apparent 3V version power, to meet power the factor needs and of different cumulative microcontrollers; power consumption from the collected data; A 3. The AC circuit to be tested and the control circuit are all electromagnetically isolated, safe and reliable, with high precision;

A

Relay control on and off

J1 HOLE RY1

J2 HOLE SRD-05VDC-SL-C

AC voltage output

CN1

Input\_L Input\_N

32 51

2 1 2 Model RY1

U1

C10 C2

C3R1

R2

CN21 Output\_L

Input\_N

3V MCU:

SRD-03

AMS1117-3.3

100NF

10UF NC0 ©1 2 2 Q1

JL635

5V MCU:

SRD-05

NC

NC NC 0 ©NCJL635

4 1MMBT5401 VCC B AC voltage input

Range: 0-300VAC, 0-5A

R3

R4 RY\_Dr

+5V

U1 NC+3.3V

LED1

3

In DNGTAB Out B

GND

Relay drive signal

Input\_L

Current type voltage transformer

Input\_N

Specifications: 1000: 1000, 2mA / 2mA C Voltage coefficient = 150k / (49.9 \* 1000) = 3.006

C

CT2 ZMCT103 Current coefficient = 1000/1000 \* 1 = 1

D D

5 4 2 +5V

RED

1K ©1K ©1

+3.3V

GND

R10 ©VCC R2 C1 C2 C3 NCNCNCNCLED1 is the relay pull-in indicator

Power selection

5V to 3.3V circuit, easy to use 3.3V MCU access

R5

+5V 1K ©R6

C4 33NF 1K ©C5

100NF LED2 GREEN GNDR10

PF 1 ©TXGND

VP CN31 2 3 4 5 GND1 2 3 4 PFCT1

R7 TXZMPT107 49.9 © RY\_Dr R8

5

C6 C7 10UF 10UF 150K ©

XH-5A GND

Connected to the MCU main control circuit, LED2 is the power indicator R9 IP1K ©C833NF Current R11 IN 1K ©HLW8032

Transformer C9 33NF +5V

U2

HLW8032 electrical parameter

IPINC10 VP 100NF 1 2 3 4 Specifications: 1: 1000, 5A / 5mA

VDD RX IP PF IN TX VP GND 8 7 6 5 acquisition chip

TX to MCU RX Note: 5V power supply

GND GND

TITLE: HLW8032 single-phase energy Meter (UART) moduleREV: 1.0

Company:

Date:

Sheet: 1/1

Drawn By: