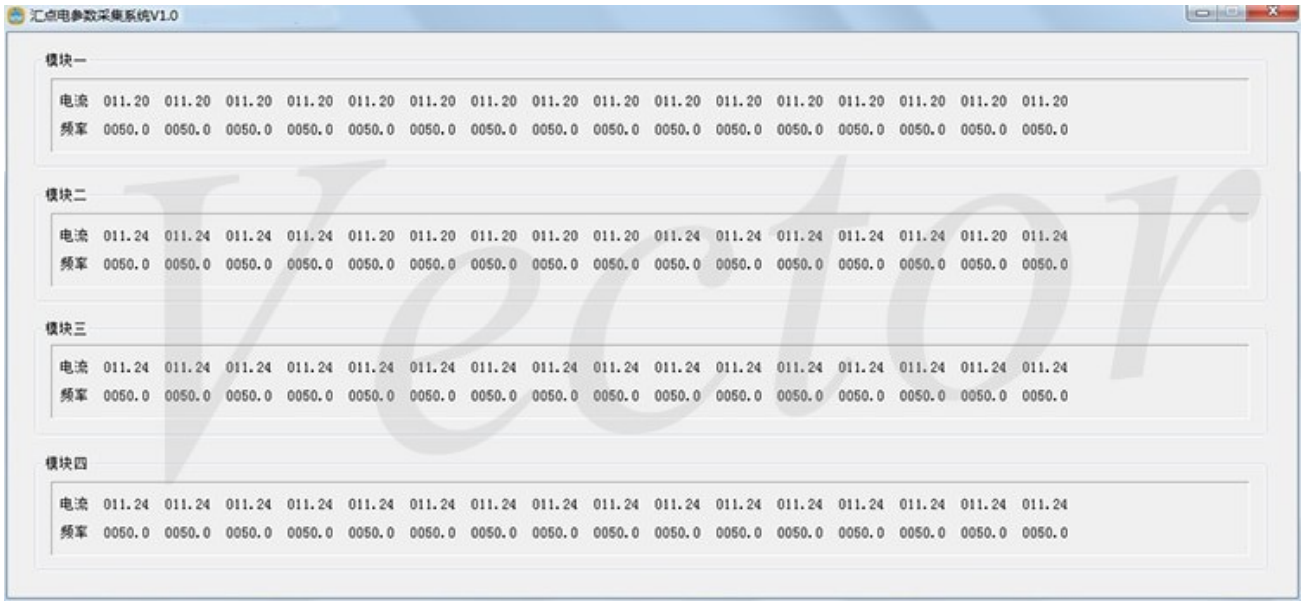
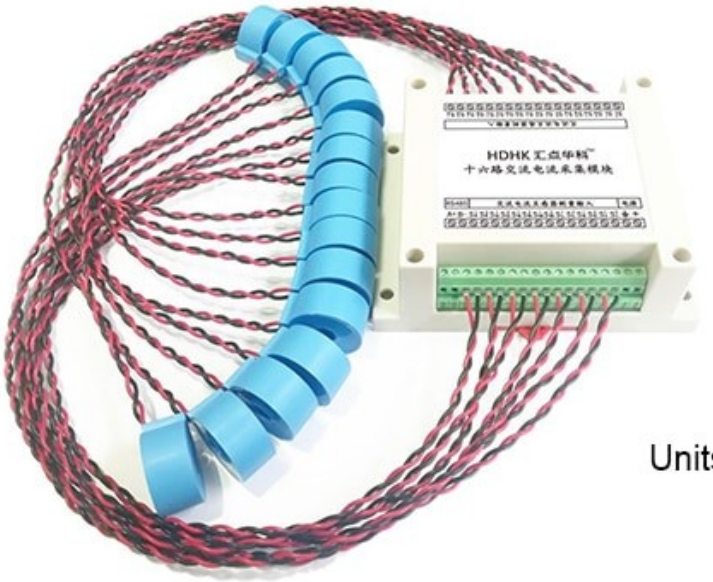
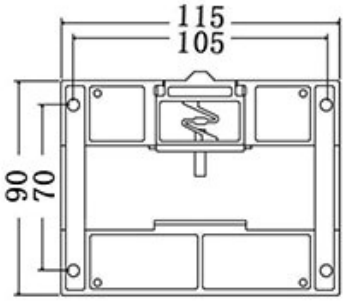
Type 1:40A line transformer

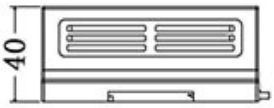
Type 2:80A line transformer







Units: mm



List of parameters

The power supply voltage	DC8~28V (with self-recovery insurance)
The rated power	3W
Measurement error of ac current	Typical value ±2%50Hz, ±5%@ non-50hz
Frequency measurement error	Typical value ± 2.5hz/frequency division coefficient
Ac current resolution	0.04a (40A range)
Data refresh frequency	>5Hz/ frequency division coefficient
Communication interface	RS485 isolation zone TVS protection
Working temperature	20 ℃ to 50 ℃
Working humidity	5% ~ 90% no condensation
Working frequency	[10Hz*5/ frequency division coefficient]~400Hz
Communication baud rate	Default is 9600, N, 8, 1
Number of nodes in the same network	The biggest 32

Modbus-rtu communication protocol

Function code: 0x03, read multiple registers

Example: 01 03 00 00 00 38 44 18

Read 56 word data from device 01 address 00

Function code: 0x06, write single register

Example: 01 06 00 03 00 02 F8 OB

Write data 0002H to device 01 address 03

Function code: 0x10, write multiple registers

Example: 01 10 00 03 00 01 02 00 02 27 A2

Write data 0002H to device 01 address 03

Note: the above parameters are only applicable to sine wave with frequency no less than 50Hz. Other waveforms and frequencies may need to be derated. Please contact customer service

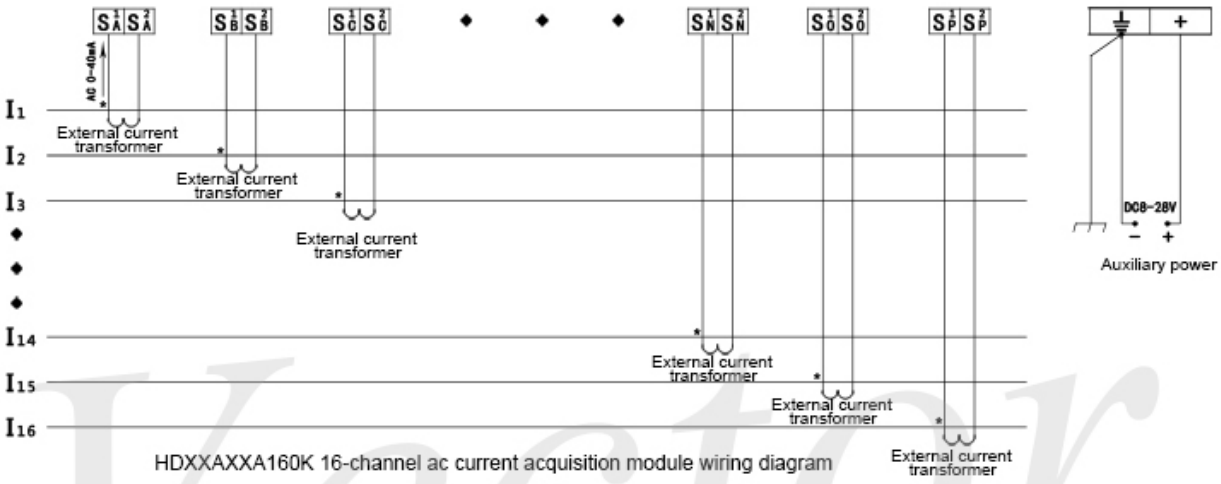
MODBUS register	decimal system	instructions
0000H (read only)	0	Version model (628, representing V6.2.8)
0001H (read only)	1	Current a-h1 (01-08) channel range, unsigned number (value 40, representing 40A)
0002H (read only)	2	Current 1-p (09-16) channel range, unsigned number (value 40, for 40A)
0003H (read only)	3	Default 0001H, high byte low four bit baud rate (0-8), high byte high four bit test bit (0-3).The low byte is the device address (01h-ffh) and 00 is the broadcast address.
		Baud rate 0-8:9600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200
		Check bits 0-3:N,8, 1;E,8, 1. 0,8, 1: N,8,2.
0004H (read only)	4	Factory date (high byte year, low byte month)
0005H (read only)	5	keep
0006H (Read and write)	6	Default is 0005H, frequency division coefficient (value is 1-5).Operating frequency range =[10Hz*5/ frequency division coefficient]~400Hz
0007H (Read and write)	7	High byte measurement result threshold (set 0 directly when the original measurement result is less than this value).Low byte is frequency selection coefficient, the default is 30, the actual frequency selection coefficient = (1+ frequency selection coefficient /10), do not modify except in special cases.
0008H (read only)	8	Channel A current, unsigned number, unit 0.01A
0009H (read only)	9	Channel B current, unsigned number, unit 0.01A
000AH (read only)	10	Channel C current, unsigned number, unit 0.01A
000BH (read only)	11	Channel D current, unsigned number, unit 0.01A
000CH (read only)	12	Channel E current, unsigned number, unit 0.01A
000DH (read only)	13	Channel F current, unsigned number, unit 0.01A
000EH (read only)	14	Channel G current, unsigned number, unit 0.01A
000FH (read only)	15	Channel H current, unsigned number, unit 0.01A
0010H (read only)	16	Channel I current, unsigned number, unit 0.01A
0011H (read only)	17	Channel J current, unsigned number, unit 0.01A
0012H (read only)	18	Channel K current, unsigned number, unit 0.01A
0013H (read only)	19	Channel l current, unsigned number, unit 0.01A
0014H (read only)	20	Channel M current, unsigned number, unit 0.01A
0015H (read only)	21	Channel N current, unsigned number, unit 0.01A
0016H (read only)	22	Channel 0 current, unsigned number, unit 0.01A
0017H (read only)	23	Channel P current, unsigned number, unit 0.01A
0018H (read only)	24	Channel A frequency, unsigned number, unit 0.1Hz
0019H (read only)	25	Channel B frequency, unsigned number, unit 0.1Hz
001AH (read only)	26	Channel C frequency, unsigned number, unit 0.1Hz
001BH (read only)	27	Channel D frequency, unsigned number, unit 0.1Hz
001CH (read only)	28	Channel E frequency, unsigned number, unit 0.1Hz
001DH (read only)	29	Channel F frequency, unsigned number, unit 0.1Hz
001EH (read only)	30	Channel G frequency, unsigned number, unit 0.1Hz
001FH (read only)	31	Channel H frequency, unsigned number, unit 0.1Hz
0020H (read only)	32	Channel 1 frequency, unsigned number, unit 0.1Hz
0021H (read only)	33	Channel J frequency, unsigned number, unit 0.1Hz
0022H (read only)	34	Channel K frequency, unsigned number, unit 0.1Hz

0023H (read only)	35	Channel L frequency, unsigned number, unit 0.1Hz
0024H (read only)	36	Channel M frequency, unsigned number, unit 0.1Hz
0025H (read only)	37	Channel N frequency, unsigned number, unit 0.1Hz
0026H (read only)	38	Channel O frequency, unsigned number, unit 0.1Hz
0027H (read only)	39	Channel P frequency, unsigned number, unit 0.1Hz
0028H (Read and write)	40	Channel A current transformer ratio, unsigned number
0029H (Read and write)	41	Channel B current transformer ratio, unsigned number
002AH (Read and write)	42	Channel C current transformer ratio, unsigned number
002BH (Read and write)	43	Channel D current transformer ratio, unsigned number
002CH (Read and write)	44	Channel E current transformer ratio, unsigned number
002DH (Read and write)	45	Channel F current transformer ratio, unsigned number
002EH (Read and write)	46	Channel G current transformer ratio, unsigned number
003FH (Read and write)	47	Channel H current transformer ratio, unsigned number
0030H (Read and write)	48	Channel I current transformer ratio, unsigned number
0031H (Read and write)	49	Channel J current transformer ratio, unsigned number
0032H (Read and write)	50	Channel K current transformer ratio, unsigned number
0033H (Read and write)	51	Channel L current transformer ratio, unsigned number
0034H (Read and write)	52	Channel M current transformer ratio, unsigned number
0035H (Read and write)	53	Channel N current transformer ratio, unsigned number
0036H (Read and write)	54	Channel O current transformer ratio, no symbol number
0037H (Read and write)	55	Channel P current transformer ratio, unsigned number

Description of reduction:

1. When the frequency division coefficient is set to 5, the measuring frequency range can reach 10hz-400hz, but the frequency is small, and excessive signal will cause the transformer to enter saturation.

2. For signals with variable conduction Angle or duty ratio, such as ac signal of SCR chopper output, the current at the maximum conduction Angle or duty ratio shall not exceed the minimum.And when the conduction Angle or duty ratio is too small, the reliability of the measurement results decreases. In order to obtain better frequency measurement results, it is generally recommended to keep the frequency coefficient (register address 0007H) as the default value.



HDXXAXXA160K 16-channel ac current acquisition module wiring diagram

Safety notes:

1. The power must be cut off before wiring, and make sure it is not electrified.
2. The module grounding end must be reliably grounded.
3. Wiring and installation shall be conducted by qualified personnel.
4. The debt number should not exceed the range of the equipment.
5. Open circuit is not allowed in GT circuit under any circumstances.

Isolation of pressure

Current measurement input to ground: determined by external ac current transformer

RS485 interface to ground: >D0500V

Auxiliary power input to ground: auxiliary power negative grounding

Note: different current ranges current mutual inductance measurement input current signal rating may be different

Warning: this module is only suitable for ac systems with phase voltage (L to N voltage, L to ground voltage) less than 280V