

ICS XXXXXXX
CCS X XX

ZJSEE

T/ZJSEE XXXXYYYY

Technical specification for low voltage distributed load monitoring
terminal

| | | | | |
|-----------|-------------|-------|-------|----|
|  | ..... | ..... | ..... | 1 |
| 1 | ..... | ..... | ..... | 2 |
| 2 | ..... | ..... | ..... | 2 |
| 3 | ..... | ..... | ..... | 3 |
| 4 | ..... | ..... | ..... | 3 |
| 4.1 | ..... | ..... | ..... | 3 |
| 4.2 | ..... | ..... | ..... | 4 |
| 4.3 | ..... | ..... | ..... | 5 |
| 4.4 | ..... | ..... | ..... | 7 |
| 4.5 | ..... | ..... | ..... | 9 |
| 4.6 | ..... | ..... | ..... | 9 |
| 4.7 | ..... | ..... | ..... | 12 |
| 4.8 | ..... | ..... | ..... | 12 |
| 4.9 | ..... | ..... | ..... | 13 |
| 4.10 | ..... | ..... | ..... | 15 |
| 4.11 PCBA | ..... | ..... | ..... | 18 |
| 4.12 | ..... | ..... | ..... | 18 |
| 5 | ..... | ..... | ..... | 19 |
| 6 | ..... | ..... | ..... | 19 |
| A | ..... | ..... | ..... | 20 |
| B | DL/T 698.45 | ..... | ..... | 27 |

1

600V 50Hz 60Hz

2

| | | | | | |
|----------------------|---|---|----|-----|----------|
| GB 20840.1-2010 | 1 | | | | |
| GB 20840.2-2014 | 2 | | | | |
| GB/T 2423.1-2008 | | 2 | | A | |
| GB/T 2423.2-2008 | | 2 | | B | |
| GB/T 2423.4-2008 | | 2 | | Db | (12h 12h |
|) | | | | | |
| GB/T 2423.17-2008 | | 2 | | Ka | |
| GB/T 4208-2017 | | | IP | | |
| GB/T 13384-2008 | | | | | |
| GB/T 17215.211-2021 | | | | 21 | |
| GB/T 17215.321-2021 | | | | 21 | (A B C |
| D E) | | | | | |
| GB/T 17215.323-2008 | | | | 23 | 2 3 |
| GB/T 17215.9321-2016 | | | | 321 | - |
| GB/T 17626.2-2018 | | | | | |
| GB/T 17626.3-2016 | | | | | |
| GB/T 17626.4-2018 | | | | | |
| GB/T 17626.5-2019 | | | | | |
| GB/T 17626.6-2017 | | | | | |
| GB/T 17626.8-2016 | | | | | |
| GB/T 17626.9-2011 | | | | | |
| GB/T 17626.10-2017 | | | | | |
| GB/T 17626.11-2008 | | | | | |
| GB/T 17626.12-2013 | | | | | |
| GB/T 17626.18-2016 | | | | | |
| GB/T 17626.14-2014 | | | | | |
| GB/T 17626.20 | | | | | (TEM) |

GB/T 17626.29 2006

| | | | |
|--------------|----|----|-----|
| GB/T 1634.1 | 1 | | |
| GB/T 1634.2 | 2 | | |
| GB/T 2423.10 | 2 | Fc | () |
| GB/T 5169.11 | 11 | / | |

| | | | |
|---------------|-----|---|--|
| DL/T 566 1995 | | | |
| DL/T 698.45 | 4-5 | — | |
| DL/T 645 2007 | | | |

3

Q/GDW 1054 2020 Q/GDW 10362 2020

3.1

CT

3.2

CT

3.3

4

4.1

4.1.1

| | | |
|------|---|------|
| 630A | B | 630A |
|------|---|------|

A

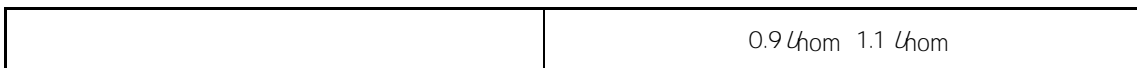
4.1.2 Unom

Unom 3× 220/380V

4.1.3

1

1



| | |
|--|------------------------------|
| | 0.8 U_{nom} 1.15 U_{nom} |
| | 0 U_{nom} 1.2 U_{nom} |

4.1.4

2

2

| | I_{min} | I_{tr} | I_{max} | imp/kWh |
|--|-----------|----------|-----------|---------|
| | A | A | A | |
| | 0.03 | 0.15 | 6 | 6400 |
| | 2 | 5 | 630 | 100 |
| | 16 | 40 | 1600 | 30 |

4.1.5

f_{nom}

f_{nom} 50Hz(60Hz) $\pm 2\%$

4.2

4.2.1

3

3

| | | |
|--------------|----------------|----------------------|
| | | |
| | 23 | ± 2 |
| ¹ | 45% 75% | - |
| | 86 kPa 106 kPa | - |
| | | $\pm 1.0\%$ |
| | | $\pm 0.3\%$ |
| | L1- L2- L3 | - |
| | | - |
| | | d 2% |
| | =0 | - |
| | =0 | $\pm 0.1\%$ |
| | | 0.05 mT ² |
| 30 kHz 6GHz | =0 | <1 V/m |

| | | |
|----------------|-------|-----------------|
| | | - |
| | | $\pm 0.5^\circ$ |
| 150 kHz 80 MHz | =0 | 1 V |
| 2kHz 150 kHz | =0 | 0.1 A |
| | =0 | $\pm 1.0\%$ |
| 1 | | |
| 2 | /tr 1 | |
| | 120° | |

4.2.2

4

4

| | |
|--|---------|
| | |
| | - 25 55 |
| | - 40 70 |
| | - 40 70 |

4.2.3

63.0kPa 106.0kPa 4000m

4.3

4.3.1

a)

b)

c)

d)

e)

f)

4.3.2

98 mm × 60 mm × 66mm

A

4.3.3

IP40

4.3.4

Q/GDW 10822020 5.5.1

4.3.5

Q/GDW 10822020 5.5.2

4.3.6

a)

40N 60N

15N 70N

15N 80N

30N 50N

b)

GB/T 2423.17 2008

48

c)

90

650 ± 10

d)

4.3.7 PCBA

a

b

c

d

e

f

g

4.3.8

a) PC+(10-20)%GF

b)

90

c) 90

650 ± 10

d)

e)

PANTONE Cool Gray 1 U

4.3.9

1.5mm

4.3.10

GB/T 1725.352-2009

A

a)

b)

c)

d)

e)

f)

g)

h)

i)

4.4

Q/GDW 10822020 4.5

4.5

4.5.1

| | | |
|-----|-----|-----|
| /V | /mm | /mm |
| 300 | 5.5 | 6.3 |

4.5.2

15

15

| | | |
|-----|-------|-----------------------|
| | 1 min | (V _{r.m.s}) |
| () | | 3000 |
| | | 1500 |
| CT | CT | 3000 |

4.5.3

1.9U_{nom}

4h

4.5.4

4000A 1

2.5

4.5.5

4V 8V

4.5.6

25K

4.6

4.6.1

a

b

c

2

4.6.2

a

1s/d

l 10

4.6.7

a DL/T 698.45 DL/T 645-2007
b 3s RS-485
c 9600bps
d

4.6.8

a
± 1%
b 0.6Unom 1.2Unom
c Imin 1.2Imax
d PQ 1.15Unom 1.2Imax
e 47.5Hz 52.5Hz
f -1.0 1.0

4.6.9

a ESAM
b ESAM SM1

4.6.10

RS-485

4.6.11

a
b
c
d
e
f
g DL/T 698.45 DL/T 645-2007

4.7

4.7.1

16

GB/T

17215.323 2008 8.1

16

| | | % |
|--------------------|-------------|--------------------------------|
| I_{tr} / I_{max} | 1 | ± 1.0 |
| | 0.5L 1 0.8C | ± 1.0 |
| I_{min} / I_{tr} | 1 | ± 1.5 |
| | 0.5L 1 0.8C | ± 1.5 |
| I_{st} / I_{min} | 1 | $\pm 1.5 \cdot \sqrt{I_{min}}$ |

4.7.2

17

| | | |
|--|---|---------------------|
| | 1 | 0.04I _{tr} |
| | 1 | 0.04I _{tr} |

4.7.3

1.1U_{nom}

4.7.4

4.7.5

Q/GDW 10827-2020 4.5.5.2

4.7.6

0.5 s/24h

-25 +55

0.1 s/

/24h

± 1 s / 24 h

4.7.7

!

18

%

| | | % |
|-------------------|------|-------|
| 10I _{tr} | 1 | ..0.3 |
| | 0.5L | ..0.3 |
| I _{tr} | 1 | ..0.4 |

4.7.8

$10\sigma_{tr}$ 1 0.5L
!

19 %

| | | |
|-----------------|---|-----|
| | | % |
| $10\sigma_{tr}$ | 1 | 0.2 |

4.7.9

1 $I_{min} \sim I_{max}$
!

20 %

| | | |
|------------------------|---|------|
| | | % |
| $0.1/I_{tr} / I_{max}$ | 1 | 0.25 |

4.7.10

3

!

21

| | | |
|-----------|--------------------|------|
| | | % |
| 1 | I_{tr} / I_{max} | 0.1 |
| 1 | I_{min} / I_{tr} | 0.15 |
| 0.5L 0.8C | I_{tr} / I_{max} | 0.1 |

4.7.11

! 2 !

2 kHz 150 kHz

!

22

| | | | | |
|--|-----------------|-----------------|---|-----------|
| | | | | % |
| | $10\sigma_{tr}$ | $10\sigma_{tr}$ | 1 | ± 0.3 |

| | | | | | |
|--|-------------------------------|----------------------|----------------------|-----------|------------------------|
| | | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 0.3 |
| | | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 0.3 |
| | | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 0.3 |
| | | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 0.1 |
| | () | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 2.0 |
| | | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 4.0 |
| | | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 2.0 |
| | | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 4.0 |
| | | $10I_{tr} / I_{max}$ | $10I_{tr} / I_{max}$ | 1 | ± 1.3 |
| | - 5 | $0.5 / I_{max}$ | $0.5 / I_{max}$ | 1 | ± 0.8 |
| | - | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 0.6 |
| | - | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 0.6 |
| | - | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 1.5 |
| | - 90 | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 0.8 |
| | | I_{tr} / I_{max} | I_{tr} / I_{max} | 1 | ± 1.0 |
| | | I_{tr} / I_{max} | I_{tr} / I_{max} | 0.5L | ± 1.5 |
| | $U_{hon} \pm 10\%$ | I_{min} / I_{max} | I_{min} / I_{max} | 1 | ± 0.5 |
| | | I_{tr} / I_{max} | I_{tr} / I_{max} | 0.5L | ± 1.0 |
| | $0.8U_{nom} \sim 0.9U_{nom}$ | I_{tr} / I_{max} | I_{tr} / I_{max} | 1 | ± 1.0 |
| | $1.1U_{nom} \sim 1.15U_{nom}$ | I_{tr} / I_{max} | I_{tr} / I_{max} | 1 | ± 1.0 |
| | $U \sim 0.8U_{nom}$ | $10I_{tr}$ | $10I_{tr}$ | 1 | +10~-100 |
| | | I_{min} / I_{max} | I_{min} / I_{max} | 1 | $\pm 0.0\% \sim 0.7\%$ |
| | | I_{tr} / I_{max} | I_{tr} / I_{max} | 0.5L | $\pm 0.0\% \sim 0.7\%$ |
| | | I_{min} / I_{max} | I_{min} / I_{max} | 1 | ± 0.5 |
| | | I_{tr} / I_{max} | I_{tr} / I_{max} | 0.5L | ± 0.7 |
| | | $I_{tr} 10I_{tr}$ | $I_{tr} 10I_{tr}$ | 1 | ± 0.5 |
| | | $10I_{tr}$ | - | 1 | ± 1.5 |
| | | - | $10I_{tr}$ | 1 | ± 0.5 |
| | | $10I_{tr}$ | $10I_{tr}$ | 1 | ± 2.0 |
| | | I_{max} | I_{max} | 1 0.5L | ± 0.5 |
| | | I_{tr} | I_{tr} | 1 | ± 1.0 |

4.8

- a)
- b)
- c)
- d)

4.8.1

5
5

| | | | | |
|---------------|--------|-------|----|------|
| | | mm | mm | |
| 0.03-0.15(6)A | 4000:1 | 16± 1 | 54 | 0.5S |
| 2-5(630)A | 8000:1 | 36± 1 | 73 | 0.5S |

6

6

| | | | |
|------------|--|---------------------|---------------------|
| | | 0.03-0.15(6)A | 2-5(630)A |
| /tr l /max | | ± 0.3% | ± 0.3% |
| | | 55 | 25 |
| /min l /tr | | ± 0.5% | ± 0.5% |
| | | 60 | 30 |
| /st l /min | | ± 1.5% /min/l | ± 1.5% /min/l |
| | | 50+(15 · /min/l) | 15+(15 · /min/l) |

7

7

| | | |
|--|--------------------------------------|------------|
| | | /% |
| | 10 <tr< td=""> <td>± 0.2</td> </tr<> | ± 0.2 |
| | 10 <tr< td=""> <td>± 0.2</td> </tr<> | ± 0.2 |
| | /min l /max | ± 0.02 %/K |
| | 10 <tr< td=""> <td>± 0.2</td> </tr<> | ± 0.2 |

0 3 6 9 10ltr

7

8

8

| | | |
|---------------|-----|------|
| | m | mm |
| 0.03-0.15 6 A | 2.5 | 5 |
| 2-5 630 A | 35 | 11.5 |

9

9

| | |
|--|--|
| | |
|--|--|

| | |
|--|----------------|
| | 0.3 /tr /max |
| | 15 /tr /max |
| | 3kVAC@50Hz1min |
| | -40 +70 |
| | 80% |
| | 4000m |
| | UL94 V0 |
| | 4V 8V |

4.8.2

10 11
10

| | | |
|--------------|---------|----------|
| | /mm | |
| 16-40(1600)A | 100± 20 | 100mV/kA |

11

| | |
|--|----------------|
| | 0.5 |
| | 1% |
| | 0.05mV |
| | 0.5° 45Hz 55Hz |
| | ± 0.1% 1% 100% |
| | -40 +70 |
| | 8mm |

4.9

4.9.1

a) 10ltr

1.5W 6VA

b) 8W

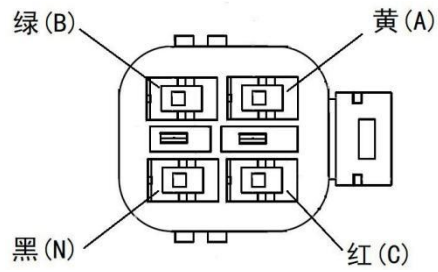
4.9.2

0.2VA 10ltr 10A 10ltr 10A 0.4VA

4.10

4.101

1



1

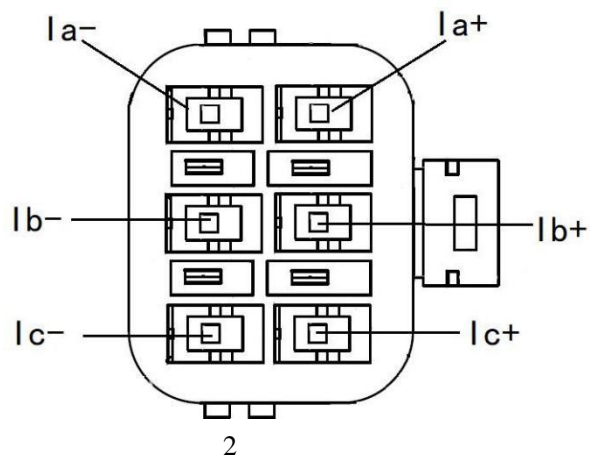
12

12

| | | |
|---|---|--------------|
| | | |
| A | A | UL1015AWG20 |
| B | B | UL1015 AWG20 |
| C | C | UL1015 AWG20 |
| N | | UL1015 AWG20 |

4.102

2



2

13

13

| | |
|--|--|
| | |
|--|--|

| | |
|------|---|
| I a+ | A |
| I a- | A |
| I b+ | B |
| I b- | B |
| I c+ | C |
| I c- | C |

4.103

a LED 1Hz
 2.5Hz 1 2 3 2 A B C 2.5Hz 4 2

b LED
 c LED 5Hz 3s

d LED 2.5Hz 2 2
 2.5Hz 3 2

4.104

a 60ms /
 30ms 5mA 0.8V
 100k

b
 c B.4

4.105 DC 12V

a 1 DC12V
 b DC12V 1V 120mA
 c DC12V
 DC12V

4.106 RS-485

a 1 RS-485
 b RS-485
 c DL/T 6452007 4.3 RS-485 380V 2
 d 1200bps 2400bps 4800bps 9600bps 9600bps

4.10.7

a HPLC Q/GDW10355

—2020 C

b Q/GDW 103552020 D

c 1200bps 2400bps 4800bps 9600bps

4.108

a 1 250V/5A 110V/0.4A 30V/2A

b 10⁵

c 300ms 100ms B.2

d DC 12V AC 456V AC 220V

100 A

4.109

DC 12 2V

10ms

4.11

8

23

23

| | | | | | | | | |
|----|-----|------|-----|------|-----|------|-----|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| /% | 0.2 | 0.25 | 0.3 | 0.35 | 0.4 | 0.45 | 0.5 | 0.55 |

5

GB/T 17215.21-2021 11

6

GB/T

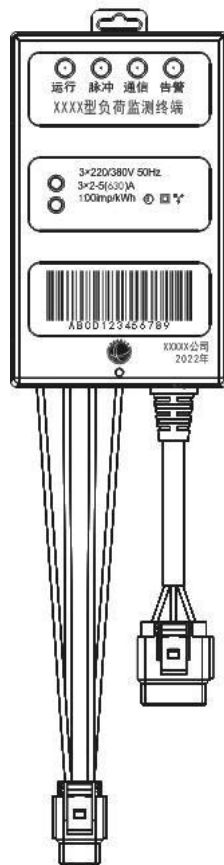
13384-2008

A

A.1

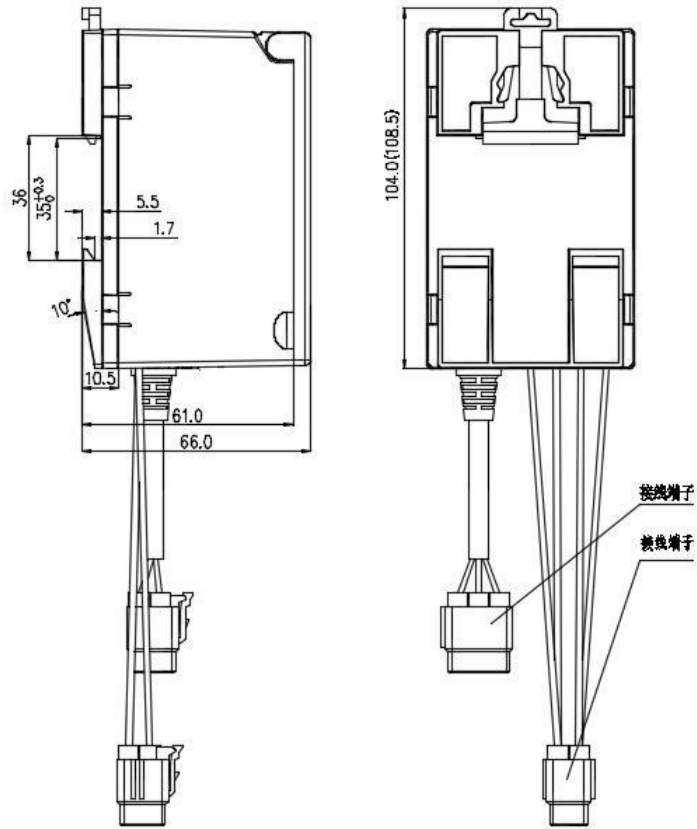
A.1.1

98 mm *60 mm *66 mm



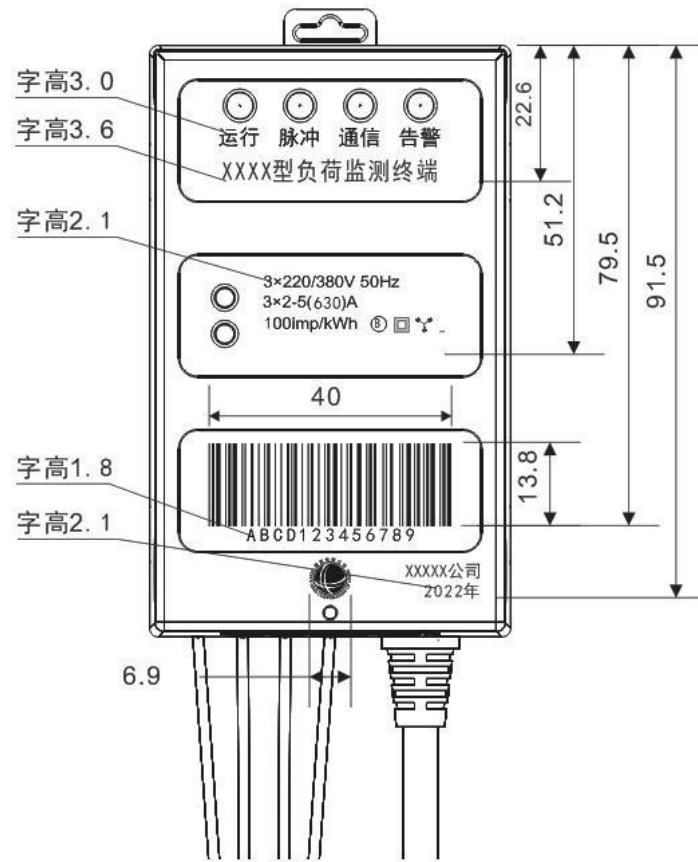
A.1

A.1.2 /



A.2 /

A.1.3

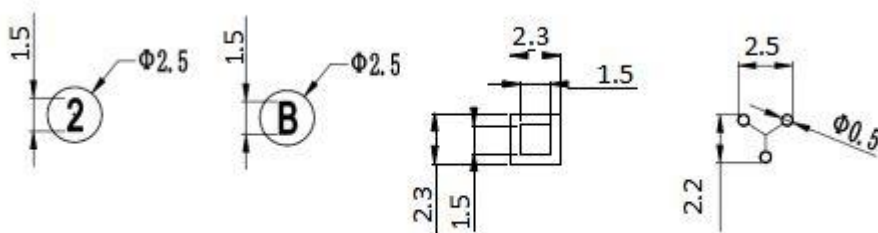


1.

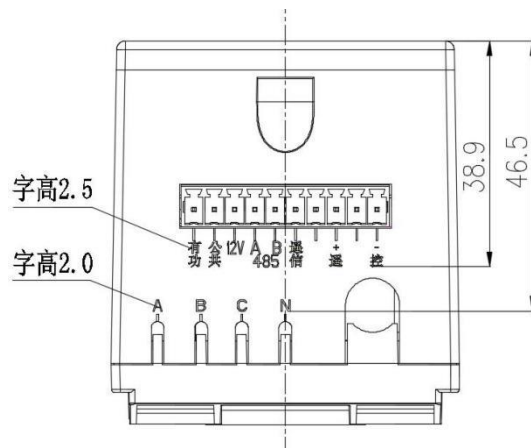
Arial

2.

3.



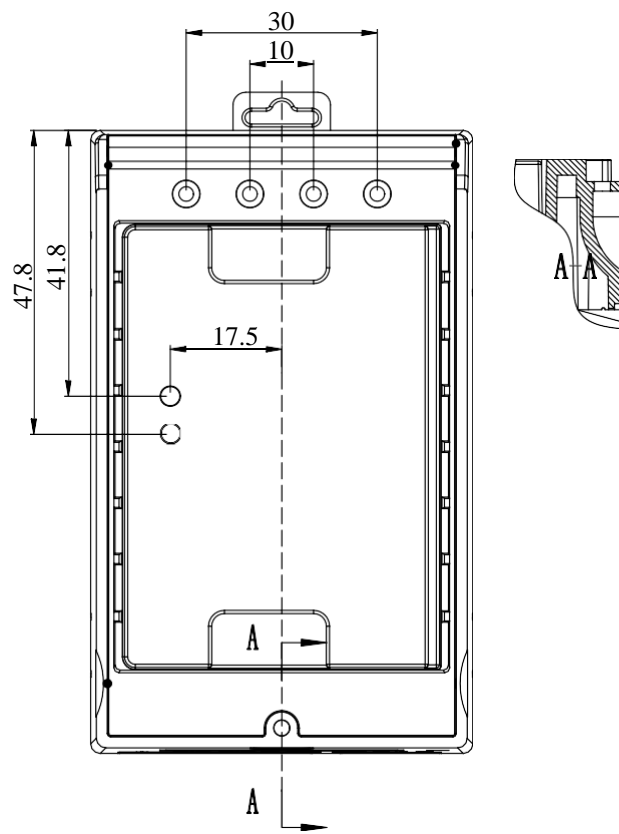
A.3



1. Arial

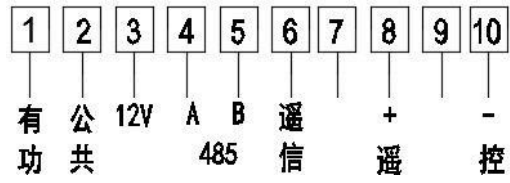
A.4

A.2



A.5

A.3.3

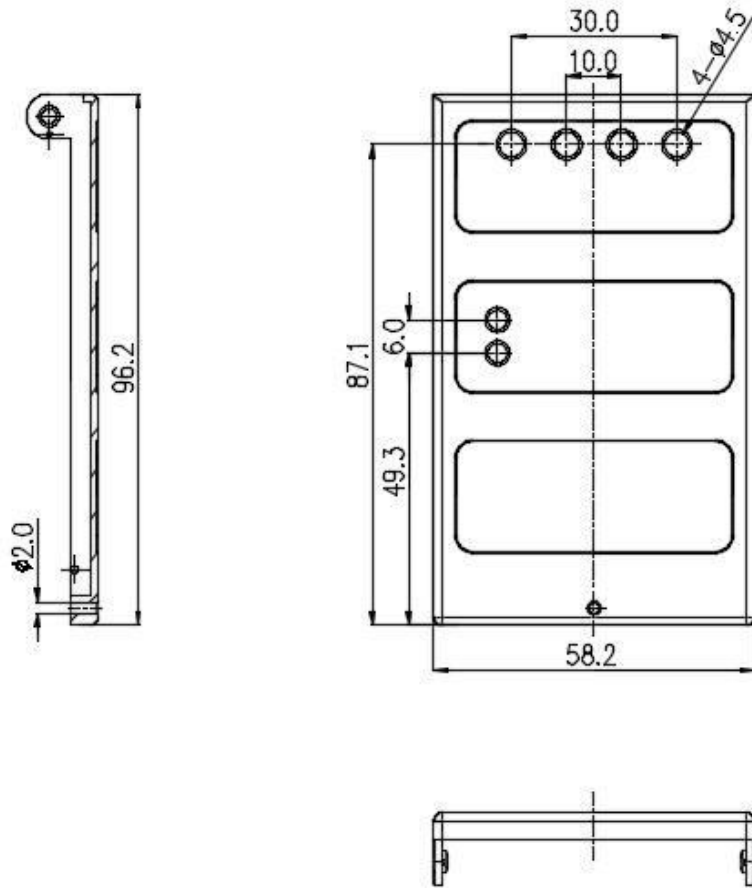


A.8

A.1

| | | | |
|---|----------|----|---|
| 1 | | 6 | |
| 2 | | 7 | |
| 3 | +12V | 8 | + |
| 4 | RS-485 A | 9 | |
| 5 | RS-485 B | 10 | - |

A.4



A.8

B

DL/T 698.45

B.1 OIA1=3H

OIA1=3H

B.1

B.1 OIA1=3H

| OI | IC | | |
|------|----|--|--|
| 3104 | 7 | | 2 =array 6 =structure { } =NULL OAD F2030200 |
| 3115 | 7 | | 2 =array 6 =structure { } =OAD |
| 3117 | 7 | | 2 =array 6 =structure { } OAD F2050200 |
| 330A | 8 | | =structure { double-long-unsigned date_time_s date_time_s OAD array enum{ 0 1 }, 1 Data ... |

| | | | |
|------|---|--|---|
| | | | n Data } |
| 3333 | 8 | | =structure { |
| | | | double-long-unsigned date_time_s date_time_s OAD array enum{ 0 1 } 1 Data ... n Data } |
| 350B | 7 | | 2 =array 6 =structure { } =OAD OAD |

B.2 OIA1=4H

OIA1=4H

B.2

B.2 OIA1=4H

| OI | IC | | |
|------|----|--|--|
| 4909 | 8 | | <pre> 2 =structure { double-long-unsigned -2 0.3 double-long-unsigned -2 0.3 } 3 =structure { long-unsigned 0 0 long-unsigned 0 0 } </pre> |

B.3 OIA1=8H

OIA1=8H

B.3

B.3 OIA1=8H

| OI | IC | | |
|------|----|--|--|
| 8000 | 8 | | <pre> 5) =bit-string(SIZE(8)) bit0...bit7 1...8 " 1" " 0" 129 =array structure { OAD unsigned 0 long-unsigned 0 0 bool True False } 130 =array structure { OAD enum{ 0 1 } } </pre> |

B.4 OIA1=FH

OIA1=FH

B.4

B.4 OIA1=FH

| OI | IC | | |
|------|----|--|--|
| F203 | 22 | | <pre> 2 =array =structure { ST unsigned CD unsigned } ST—0 " " 1 " " CD—0 " " 1 " " 4 =structure { bit-string(SIZE 8) bit-string(SIZE 8) } bit0...bit7 1...8 " 1" " 0" bit0...bit7 1...8 " 1" " 0" </pre> |

