



CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

No.: 2021312315000500

Applicant Topworx Incorporated
Address 3300 Fern Valley Road, Louisville, Kentucky 40213, United States of America
Manufacturer Topworx Incorporated
Address 3300 Fern Valley Road, Louisville, Kentucky 40213, United States of America
Production Factory Topworx Incorporated
Production Address 3300 Fern Valley Road, Louisville, Kentucky 40213, United States of America
Product Proximity Switches
Model/Type 7***5*****, 7*1*5*FN*****, 7*1*56*****, *4355*****, 7*1*56F*****
Ex marking Ex ia IIC T6/T4/T3 Ga, Ex ia IIIC T85°C/T135°C/T200°C Da
Reference Standards GB/T 3836.1-2021, GB/T 3836.4-2021

Certification mode Type Test + Initial Factory Inspection + Post-Certification Surveillance

The product(s) is verified and certified according to CNCA-C23-01: 2019 *China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product* and CNEX-C2301-2019 *Guideline of China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product*.

See Annex for the detailed product information (11 pages).

Initial issue date: 2021-10-25

Issued date: 2023-03-25

Valid to: 2026-10-24

The validity of this certificate is maintained through the regular supervision of the issuing authority during the validity period.

Where any discrepancy arises between the English translation and the original Chinese version, the Chinese version shall prevail.

Director:



Nanyang Explosion Protected Electrical Apparatus Research Institute Co.,Ltd.



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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 1 of 11

Product information:

1. This certificate covers the following models:

- 7***5*****, 7*1*5*FN*****, 7*1*56*****, *4355*****, 7*1*56F*****

Nomenclature of 7***5*****:

7	*	*	*	5	*	*	*	*	*	*****
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)

- 1) Series: 7
- 2) Body Style
 - 1=1.5" lg Ext Thread, 3.9"O/A
 - 3=1.9" lg Ext Thread, 3.75"O/A
 - 5=2.7" lg Ext Thread, 4.3"O/A
 - 7=4.7" Ext Thread, (1.9"blank), 5.8"O/A
 - G=1.75" lg Ext Thread, 4/4.5"O/A
 - l=4.9" Ext Thread, (1.8"blank), 5.6"O/A
 - * Suffix M=Metric Ext Thread
- 3) Contacts
 - 1=Single Pole, Double Throw
 - 2=Double Pole, Double Throw (7G & 7l options only)
- 4) Sensing Distance
 - 3=2.5mm
 - 4=1.8mm
 - 5=1.5mm
 - 6=1.0mm
- 5) Rear Entry: 5
- 6) Material
 - 2=303 S/Steel

Issued date: 2023-03-25

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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 2 of 11

- 3=303 S/Steel
- 4=303 S/Steel
- 6=316 S/Steel
- 7) Certified
 - F, G, H
- 8) Cable Type
 - A=PVC Leads
 - B=PVC Jacket cable
 - F=Teflon Leads
 - H=PEEK Leads
 - S=Silicone Cable
- 9) Cable length
 - 2=36"
 - 3=72"
 - 4=144"
 - 5=25'
 - 6=50'
 - 7=100'
 - 8=250'
- 10) Regional Cert
 - Blank: UL (North America), IECEx, ATEX
 - B: InMetro (Brazil)
 - K: KCs (Korea)
 - N: CCCEX (China)
 - P: PESO (India)
 - R: EAC (Eurasian Economic Union)
 - T: ITRI (China Taiwan)
- 11) Custom Build Indents
 - 6 digits (without relevance for explosion protection)

Issued date: 2023-03-25

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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 3 of 11

The seventh character of the Model Number (F, G or H) indicates the temperature classification / maximum surface temperature and ambient temperature range of the equipment, which are as follows:

Seventh character of Model Number	Certification Marking
F	Ex ia IIC T6 Ga, Ex ia IIIC T85°C Da (-65°C≤Ta≤+50°C)
G	Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da (-65°C≤Ta≤+100°C)
H	Ex ia IIC T3 Ga, Ex ia IIIC T200°C Da (-65°C≤Ta≤+150°C)

The product is powered by Ex ia IIC intrinsically safe power supply that meets the GB/T 3836.4 standard.

Input Parameters: $U_i=30V$, $I_i=0.25A$, $C_i=33nF$, $L_i=200\mu H$

Nomenclature of 7*1*5*FN*****:

7	*	1	*	5	*	F	N	*	*	*****
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)

- 1) Series: 7
- 2) Body Style
4=5/8-18 UNF-2A Ext. Thread
4M=M18x1 Metric Ext Thread
- 3) Contacts
1=Single Pole, Double Throw
- 4) Sensing distance
3=2.5mm
4=1.8mm

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Apparatus Research Institute Co.,Ltd.





CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 4 of 11

- 5=1.5mm
- 5) Rear Entry: 5
- 6) Material
 - 2=303 S/Steel
 - 3=303 S/Steel
 - 4=303 S/Steel
 - 6=316 S/Steel
- 7) Certified: F
- 8) Cable Type: N
- 9) Cable length
 - 2=36"
 - 3=72"
 - 4=144"
 - 5=25'
 - 6=50'
 - 7=100'
 - 8=250'
- 10) Regional Cert
 - Blank: UL (North America), IECEx, ATEX
 - B: InMetro (Brazil)
 - K: KCs (Korea)
 - N: CCCEX (China)
 - P: PESO (India)
 - R: EAC (Eurasian Economic Union)
 - T: ITRI (China Taiwan)
- 11) Custom Build Indents
 - 6 digits (without relevance for explosion protection)

Ex marking: Ex ia IIC T6 Ga, Ex ia IIIC T85°C Da (-65°C≤Ta≤+50°C)

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Apparatus Research Institute Co.,Ltd.





CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 5 of 11

The product is powered by Ex ia IIC intrinsically safe power supply that meets the GB/T 3836.4 standard.

Input Parameters: $U_i=30V$, $I_i=0.25A$, $C_i=33nF$, $L_i=200\mu H$

Nomenclature of 7*1*56*****:

7	*	1	*	5	6	*	*	*	*	*****
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)

- 1) Series: 7
- 2) Body Style
4=5/8-18 UNF-2A Ext. Thread
4M=M18x1 Metric Ext Thread
- 3) Contacts
1=Single Pole, Double Throw
- 4) Sensing distance
3=2.5mm
4=1.8mm
5=1.5mm
- 5) Rear Entry: 5
- 6) Material
6=316 S/Steel
- 7) Certified: F, G or H
- 8) Cable Type:
A=PVC Insulated Leads
B=PVC Jacketd Cable
F=Teflon Insulated Leads
H=PEEK Insulated Leads
S=Silicone Cable
- 9) Cable length

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Apparatus Research Institute Co.,Ltd.





CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 6 of 11

- 2=36"
- 3=72"
- 4=144"
- 5=25'
- 6=50'
- 7=100'
- 8=250'

10) Regional Cert

- Blank: UL (North America), IECEX, ATEX
- B: InMetro (Brazil)
- K: KCs (Korea)
- N: CCCEX (China)
- P: PESO (India)
- R: EAC (Eurasian Economic Union)
- T: ITRI (China Taiwan)

11) Custom Build Indents

- 6 digits (without relevance for explosion protection)

The seventh character of the Model Number (F, G or H) indicates the temperature classification / maximum surface temperature and ambient temperature range of the equipment, which are as follows:

Seventh character of Model Number	Certification Marking
F	Ex ia IIC T6 Ga, Ex ia IIIC T85°C Da (-65°C ≤ Ta ≤ +50°C)
G	Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da (-65°C ≤ Ta ≤ +100°C)
H	Ex ia IIC T3 Ga, Ex ia IIIC T200°C Da (-65°C ≤ Ta ≤ +150°C)

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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 7 of 11

The product is powered by Ex ia IIC intrinsically safe power supply that meets the GB/T 3836.4 standard.

Input Parameters: $U_i=30V$, $I_i=0.25A$, $C_i=33nF$, $L_i=200\mu H$

Nomenclature of *4355*****:

*	4	3	5	5	*	*	*	*	*****
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)

- 1) Model
7CX=1.025" Probe length
7DX=1.250" Probe length
- 2) Contacts: 4
- 3) Sensing distance: 3
- 4) Rear Entry: 5
- 5) Material: 5
- 6) Certified: F, G or H
- 7) Cable Type:
A=PVC Insulated Leads (F certified models only)
B=PVC Jacketd Cable (F certified models only)
F=Teflon Insulated Leads
H=PEEK Insulated Leads
S=Silicone Cable
- 8) Cable length
2=36"
3=72"
4=144"
5=25'
6=50'
7=100'

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Apparatus Research Institute Co.,Ltd.**





CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 8 of 11

- 8=250'
- 9) Regional Cert
 Blank: UL (North America), IECEx, ATEX
 B: InMetro (Brazil)
 K: KCs (Korea)
 N: CCCEX (China)
 P: PESO (India)
 R: EAC (Eurasian Economic Union)
 T: ITRI (China Taiwan)
- 10) Custom Build Indents
 6 digits (without relevance for explosion protection)

The sixth character of the Model Number (F, G or H) indicates the temperature classification / maximum surface temperature and ambient temperature range of the equipment, which are as follows:

Sixth character of Model Number	Certification Marking
F	Ex ia IIC T6 Ga, Ex ia IIIC T85°C Da (-65°C ≤ Ta ≤ +50°C)
G	Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da (-65°C ≤ Ta ≤ +100°C)
H	Ex ia IIC T3 Ga, Ex ia IIIC T200°C Da (-65°C ≤ Ta ≤ +150°C)

The product is powered by Ex ia IIC intrinsically safe power supply that meets the GB/T 3836.4 standard.

Input Parameters: $U_i=30V$, $I_i=0.25A$, $C_i=33nF$, $L_i=200\mu H$

Nomenclature of 7*1*56F*****.

7	*	1	*	5	6	F	*	*	*	*****
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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 9 of 11

1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)
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- 1) Series: 7
- 2) Body Style
 - 2=3/8"-24 UNF Ext. Thread
 - 2M=M12×1 Metric Ext Thread
 - 6=5/8"-18 UNF Ext. Thread
 - 6M=M18x1 Metric Ext Thread
- 3) Contacts
 - 1=Single Pole, Double Throw
- 4) Sensing distance
 - 3=2.5mm
 - 4=1.8mm
 - 5=1.5mm
- 5) Rear Entry: 5
- 6) Material
 - 6=316 S/Steel
- 7) Certified: F, G or H
- 8) Cable Type:
 - A=PVC Insulated Leads
 - B=PVC Jacketd Cable
 - F=Teflon Insulated Leads
 - H=PEEK Insulated Leads
 - S=Silicone Cable
- 9) Cable length
 - 2=36"
 - 3=72"
 - 4=144"
 - 5=25'

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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 10 of 11

6=50'
7=100'
8=250'

- 10) Regional Cert
Blank: UL (North America), IECEx, ATEX
B: InMetro (Brazil)
K: KCs (Korea)
N: CCCEX (China)
P: PESO (India)
R: EAC (Eurasian Economic Union)
T: ITRI (China Taiwan)

- 11) Custom Build Indents
6 digits (without relevance for explosion protection)

The seventh character of the Model Number (F, G or H) indicates the temperature classification / maximum surface temperature and ambient temperature range of the equipment, which are as follows:

Seventh character of Model Number	Certification Marking
F	Ex ia IIC T6 Ga, Ex ia IIIC T85°C Da (-65°C ≤ Ta ≤ +50°C)
G	Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da (-65°C ≤ Ta ≤ +100°C)
H	Ex ia IIC T3 Ga, Ex ia IIIC T200°C Da (-65°C ≤ Ta ≤ +150°C)

The product is powered by Ex ia IIC intrinsically safe power supply that meets the GB/T 3836.4 standard.

Input Parameters: $U_i=30V$, $I_i=0.25A$, $C_i=33nF$, $L_i=200\mu H$

Ex marking: Ex ia IIC T6/T4/T3 Ga, Ex ia IIIC T85°C/T135°C/T200°C Da

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CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION (Annex)

No.: 2021312315000500

Page 11 of 11

- Producers should organize production in accordance with the technical documents approved by the certification body.
- 2. Specific conditions of safety use:
 - Both contacts of the Double Throw and the separate poles of the Double Pole switch, within one proximity switch must form part of the same intrinsically safe circuit.
 - The proximity switches do not require a connection to earth for safety purposes, but an earth connection is provided which is directly connected to the metallic enclosure. Normally an intrinsically safe circuit may be earthed at one point only. If the earth connection is used, the implications of this must be fully considered in any installation, i.e. by the use of a galvanically isolated interface.
 - When using this product, it must be powered by an Ex ia IIC intrinsically safe power supply that meets the GB/T 3836.4 standard and has obtained CCC certification.
 - The flying leads must be terminated in a manner suitable for the zone of installation.
 - See instruction for other information.
- 3. Certificate related report(s):
 - Type test report: CQST2106C170, CQST2106C170/01
 - Factory inspection report: CN2021Q010370
- 4. Certificate change information:
 - 1st change on March 25, 2023: Updated the standards for certification.

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