

Product Management – Coal Mining Industry Notification | IN00015 Rev1 July 2023


Component substitution affecting status of certification of ISUPSv2

ISSUE

An explosion protected product has been identified as having a component substitution that is not detailed in the certificate of conformity.

ITEMS AFFECTED

Ampcontrol ISUPSv2 300Wh models manufactured since February 2022. These units have serial numbers **2202003069** or higher. Additionally, several repair and/or warranty units completed since February 2022 are also affected, a detailed list of these units is provided at the end of this notice (*see Table 2*).

Part Numbers Affected		
Item Number	Description (Output)	With serial numbers 2202003069 or higher
161823	15.1VDC / 1.50A	
177263	15.1VDC / 0.51A	
177262	15.1VDC / 0.5A	
177260	15.1VDC / 0.47A	
177261	14.5VDC / 1.50A	
177909	12.8V/1.5A	
174622	12.6VDC / 2.5A	
161826	12.6VDC / 2.4A	
161825	12.6VDC / 2.0A	
177259	12.6VDC / 1.5A	

DESCRIPTION

A routine quality audit has identified that the 12V 20Ah battery used in the manufacture of some Ampcontrol 300Wh Uninterruptible Power Supply units is different to the battery described in the [certificate of conformity IECEx TSA 10.0008X](#).

This means that affected ISUPS units are likely not to be compliant with claimed explosion protection certification.

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Industry Notification

Product Alert

The substituted 12V 20Ah battery is 'like for like' having the same voltage, capacity, chemistry and form factor as the originally certified battery. However, this substituted battery has not been assessed by an IECEx test laboratory for the purpose of product certification.

The battery substitution does not affect either the input or output stages of the ISUPS.

Ampcontrol does not believe that the component substitution has affected the safe operation of the ISUPS in its intended applications in underground coal mines.

WHAT AMPCONTROL HAS DONE

1. Ampcontrol has undertaken an immediate safety assessment of the substituted component. This assessment has included the nominated tests from the principal standard IEC 60079-11 Edition 6.0 2011. These test results are summarised in *Table 1* at the end of this document. A more comprehensive test report is available on request.
2. Ampcontrol has notified the regulatory authorities in NSW and Qld of the matter.
3. Ampcontrol is notifying all purchasers of the affected products, and (as far as is reasonably practical) all electrical engineering coal mine managers in NSW and Qld through this notice.
4. Ampcontrol has initiated third party testing through an IECEx Test Laboratory of the substituted component to corroborate its own internal testing.
5. Ampcontrol has applied for revised (supplementary) certification to accommodate the substituted battery as an optional component in the certified product's bill of materials.

Note that the revised certificate of conformity will not (and cannot) be retrospective under the rules of the IECEx product certification scheme. However, Ampcontrol will be able to provide statements of equivalence between the affected products and the updated certificate of conformity for specific serial numbered items.

6. For NSW users: Ampcontrol is making an application to the NSW Resource Regulator under Section 179 of the of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2022 for an '*Exemption from compliance with standards*' that will specifically address affected units by serial number.

WHAT USERS OF THE AFFECTED PRODUCT SHOULD DO – NSW JURISDICTION

Users should undertake their own assessments of the continued safe use of affected products in underground coal mines and determine whether the affected products provide an acceptable level of safety. Ampcontrol's test result summary, and test report, may be used to inform that assessment.

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Industry Notification

Product Alert

The mine's assessment should consider, for example:

- Whether affected units are on site at an underground coal mine.
- Whether affected units are in service at an underground coal mine or whether they are kept as 'spares'.
- Whether affected units in service at an underground coal mine are located in a hazardous zone in the mine.
- Whether affected units in service at an underground coal mine are used to supply IS power to other equipment located in a hazardous zone in the mine.

A mine's assessed level of risk may change once the revised certification (accommodating the substituted component) is obtained.

WHAT USERS OF THE AFFECTED PRODUCT SHOULD DO – QLD JURISDICTION

Amcontrol is acting in accordance with Section 81 of the Coal Mining Safety and Health Regulation 2017 as if it were 'a nationally accredited testing station [that] becomes aware'. Amcontrol has executed in accordance with Sections 81 (2) and 81 (3).

Users of affected units should address the requirements of Section 81 (4).

In taking action to ensure the continued use of the equipment does not create an unacceptable level of risk, mines should consider, for example:

- Whether affected units are on site at an underground coal mine.
- Whether affected units are in service at an underground coal mine or whether they are kept as 'spares'.
- Whether affected units in service at an underground coal mine are located in a hazardous zone in the mine.
- Whether affected units in service at an underground coal mine are used to supply IS power to other equipment located in a hazardous zone in the mine.

A mine's assessed level of risk may change once the revised certification (accommodating the substituted component) is obtained.

WHAT HAPPENS NEXT

As noted above, Amcontrol has initiated third party testing to corroborate its own internal testing and applied for a supplementary certification.

Amcontrol will advise all users if and when the revised (supplementary) certificate of conformity is granted.

Amcontrol will immediately advise all users if any adverse test results are received through either of the phases.

Amcontrol has temporarily paused shipments for all ISUPSv2 300Wh models until a revised certificate of conformity is granted.

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Product Alert

Table 1

Clause from IEC 60079.11	Description	Substitute 12V Battery	Specified 12V Battery
10.5.1	Capacity – Discharge test to verify manufacturer specification	PASS - Meets manufacturers specification.	PASS - Meets manufacturers specification.
10.5.3	Temperature Rise – Single cell short circuit. Temperature does not exceed 150 C°	PASS - 35.4 C° temperature rise, at 20 C° ambient.	PASS - 65.4 C° temperature rise, at 60 C° ambient.
6.3.2.2 Table 5	Creepage and Clearance – 30V category: 2mm of creepage distance between terminals, 0.5mm of solid insulation between terminals	PASS - Terminals of cells have more than 2mm of creepage distance. Distance through solid insulation between cells is more than 0.5 mm.	PASS - Terminals of cells have more than 2mm of creepage distance. Distance through solid insulation between cells is more than 0.5 mm.
10.5.2	Electrolyte leakage – No leakage of electrolyte during testing.	PASS - No leakage during any test.	PASS - No leakage during any test.

Table 2

Affected Warranty / Repair Serial Numbers				
1707000718R	1803002014R	1902000612R	1911001123R	2004002830R
1707001354R	1808002756R	1903000457R	1912001475R	2008003338R
1707001594R	1809000498R	1903003133R	1912001475W	2009000287R
1711001183R	1809000500R	1904001258RR	2001001182R	2203003410R
1711001191RR	1810000138R	1909003127RRR	2002002391R	2206001086W
1711001194RR	1811000885R	1909003128R	2003002077R	2301001611R
1711001932R	1901001961R	1910002789R	2003003222R	-

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Industry Notification

Product Alert

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