

## 1 SCOPE

This document lists the categories of equipment shown below, which are approved and accepted for use in ScottishPower's transmission and distribution network.

Substation Batteries.  
Battery Chargers.

## 2 ISSUE RECORD

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<b>DATE</b>	<b>ISSUE NO</b>	<b>AUTHOR</b>	<b>AMENDMENT DETAILS</b>
February 2001	1	Fraser Ainslie	Initial Issue: 7 pages
September 2009	2	David Neilson	Review of specification and equipment manufacturers

## 3 ISSUE AUTHORITY

<b>Author</b>	<b>Owner</b>	<b>Issue Authority</b>
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## 5 REFERENCES

### 5.1 ScottishPower Technical Specifications

BATT-03-001

48V Battery Chargers for 33 kV Substations.

30V and 48/30V Sealed Lead/Acid Batteries and Chargers for 11/6.6 kV Substations.

110V Battery and Charging Equipment.

### 5.2 Transmission Plant Specifications

TPS 9/10.000

Transmission Plant Specification 48V (nominal) D.C. Power Supplies.

### 5.3 National Grid Technical Specifications

NGTS 3.12.4

National Grid Technical Specification 110V D.C. Supplies.

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## **6 STANDARD REQUIREMENTS**

Distribution substations batteries and chargers are required to comply with BATT-03-001

(In addition lead acid batteries to comply with IEC 60896-11 and BS6290 Part 2, SLA/VRLA to comply with BS6290 Part 4)

Transmission substations including Grid Supply Points chargers and batteries are required to comply with TPS 9/10.000 for 48V and NGTS 3.12.4 for 110V.

Installation testing specifications BS 6290 Part 2 and BS EN 60896-1

### 7 APPENDICES

#### 7.1 Batteries and Chargers

##### 7.1.1 110 V Batteries and Chargers

Manufacturer	Type	Description	Remarks	ScottishPower Part Number
PE Systems	1	15A, 100 Ah sealed lead acid		
	1.1	15A, 120 Ah sealed lead acid		
	2	20A, 130 Ah sealed lead acid		
	2.1	20A, 150 Ah sealed lead acid		
	3	25A, 180 Ah sealed lead acid		
	3.1	25A, 200 Ah sealed lead acid		
	3.2	25A, 220 Ah sealed lead acid		
	4	30A, 250 Ah sealed lead acid		
	4	30A, 300 Ah sealed lead acid		

##### 7.1.2 110/48/30 V Chargers

Manufacturer	Type	Description	Remarks	ScottishPower Part Number
Masterpower		Charger Unit 110/48/30		
		Portable Charger		
Eltek	3	110v Charger		C12420367



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## APPROVED EQUIPMENT REGISTER BATTERIES

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### 7.1.3 48 / 30 V Batteries and Chargers

Manufacturer	Type	Description	Remarks	ScottishPower Part Number
PE Systems	2	5 Ah sealed lead acid		C12050523
	3	15 Ah sealed lead acid		C12050525
Eltek	1	48v Wall Mounted Charger		
	2	48v Charger Unit		
	3	48v Charger Unit		
	4	48v Charger Unit		

### 7.1.4 30 V Batteries and Chargers

Manufacturer	Type	Description	Remarks	ScottishPower Part Number
PE Systems		5 Ah sealed lead acid		
	1	15 Ah sealed lead acid		C12050521
		Wall mounted for sealed lead acid		C12420257
		15 Ah sealed lead acid		C12420252
Eltek	1	30v Wall Mounted Charger		C12420361
	1	30v Floor Standing Charger		C12420361
	2	30v Charger		C12420364



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## APPROVED EQUIPMENT REGISTER BATTERIES

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Issue 1

### 7.2 Batteries

#### 7.2.1 Sealed Lead Acid (VRLA)

Manufacturer	Type	Description	Remarks	ScottishPower Part Number
Enersys (Hawker)	Powersafe	Sealed lead acid		
Yuasa	EN 100-6	Sealed lead acid		
HAZE	HZB	Sealed lead acid		
DMS Technologies	CYCLONE	Sealed lead acid		

#### 7.2.2 Planté

Manufacturer	Type	Description	Remarks	ScottishPower Part Number
Enersys (Hawker)	YCP/YHP	Planté		
FIAMM	SGL	Plante		

#### 7.2.3 Nickel Cadmium

Manufacturer	Type	Description	Remarks	ScottishPower Part Number
Saft	LCP	Nickel Cadmium		