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## Amendment History

Date	Issue	Amendments
November 2009	5.0	Complete document revision. All products re-appraised.

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# APPROVED PRODUCTS AND MANUFACTURERS ELECTRICAL

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## 1. INTRODUCTION

This document lists products approved by Hunter Water for use in the water and sewerage networks, together with the names of manufacturers of the approved product. Information on suppliers of the products should be obtained directly from the manufacturers.

The document is intended to be read in conjunction with:

- (i) WSAA Water Supply and Sewage Codes Hunter Water Edition, Hunter Water Corporation Water and Sewer Design Manual, Standard Technical Specifications & Standard Construction Practice (Drawings)
- (ii) The Water Services Association of Australia (WSAA) Product Specifications (refer [www.wsaa.asn.au](http://www.wsaa.asn.au) / National Codes / Purchase Specifications)

Not all products and materials appraised by WSAA are approved for use in the Hunter Water water network.

General background information on products and materials is also available on the WSAA website ([www.wsaa.asn.au](http://www.wsaa.asn.au) / National Codes / Product and Materials Information and Guidance).

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## 2. ELECTRICAL EQUIPMENT

### 2.1. CIRCUIT BREAKERS - ACB

Manufacturer	Description / Comments / Part No
<i>SCHNEIDER</i>	Masterpact NW/NT - Drawout Only
<i>TERASAKI</i>	Tempower 2 - Drawout Only

### 2.2. CIRCUIT BREAKERS - MCB

Manufacturer	Description / Comments / Part No
<i>SCHNEIDER</i>	Multi 9 Series - 6kA Minimum
<i>TERASAKI</i>	DIN-T Series - 6kA Minimum
<i>CLIPSAL</i>	4CB Series - Load Centres Only

### 2.3. CIRCUIT BREAKERS - MCCB

Manufacturer	Description / Comments / Part No
<i>TERASAKI</i>	TemBreak 2
<i>SCHNEIDER</i>	Compact NS

### 2.4. CIRCUIT BREAKERS - RCD/MCB

Manufacturer	Description / Comments / Part No
<i>SCHNEIDER</i>	Multi 9 Series - 6kA Minimum
<i>TERASAKI</i>	DIN-T Series - 6kA Minimum
<i>CLIPSAL</i>	4RCBM Series - 6kA Minimum (for Load Centres only)

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**2.5. CONDUIT (FLEXIBLE METALLIC)**

Manufacturer	Description / Comments / Part No
ADAPTAFLEX	
ANACONDA	

**2.6. CONTACTORS**

Manufacturer	Description / Comments / Part No
SPRECHER & SCHUH	CA 7, CA 6-EI - As per Type 2 Coordination for motor starting
SCHNEIDER	TeSys D, F - As per Type 2 Coordination for motor starting

**2.7. CONTROL RELAYS**

Manufacturer	Description / Comments / Part No
SPRECHER & SCHUH	CS4 or CS8
SCHNEIDER	Tesys D or K

**2.8. DISTRIBUTION BOARDS**

Manufacturer	Description / Comments / Part No
SCHNEIDER	MB, MD Series
NHP	Concept
CLIPSAL	4 Series PVC - Load Centres Only to suit 4CB CB's

**2.9. ETHERNET SWITCHES**

Manufacturer	Description / Comments / Part No
CISCO	IE 3000 - IE-3000-4TC IE-3000-8TC

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**2.10. FLOAT SWITCHES**

Manufacturer	Description / Comments / Part No
FLYGT	ENM10

**2.11. G.P.O.'s**

Manufacturer	Description / Comments / Part No
CLIPSAL	
HPM	

**2.12. HMI SCREENS**

Manufacturer	Description / Comments / Part No
SCHNEIDER	Magelis XBT-GT

**2.13. INDICATING LIGHTS**

Manufacturer	Description / Comments / Part No
SCHNEIDER	ZB4, ZB5 - Superbright LED's only
SPRECHER & SCHUH	D7 - Superbright LED's only

**2.14. INDUSTRIAL SWITCHES, PLUGS & SOCKETS**

Manufacturer	Description / Comments / Part No
CLIPSAL	56 Series

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**2.15. INTERPOSING RELAYS ( 24V DC )**

Manufacturer	Description / Comments / Part No
OMRON	LY*N
FINDER	55.3*
SCHNEIDER	RXM*

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**2.16. LEVEL INDICATORS**

Manufacturer	Description / Comments / Part No
MANN	DIGITAL DISPLAY
CROMPTON INSTRUMENTS	128-10AB

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**2.17. LIMIT SWITCHES**

Manufacturer	Description / Comments / Part No
SCHNEIDER	XCK-S or J - Depending on Application
SCHMERSAL	335 or 336 - Depending on Application

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**2.18. LOAD BREAK SWITCHES**

Manufacturer	Description / Comments / Part No
SOCOMEK	SLB
SCHNEIDER	INS

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**2.19. MOTOR PROTECTION RELAYS**

Manufacturer	Description / Comments / Part No
SCHNEIDER	Tesys T
SPRECHER & SCHUH	CEF

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**2.20. PHASE FAILURE RELAYS**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>CALO GAVAZZI</i>	DPB-02-C-M48
<i>SCHNEIDER</i>	RM17TE00

**2.21. PLC's**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>SCHNEIDER</i>	M340 (BMXP342020) - For pumping stations
<i>SCHNEIDER</i>	QUANTUM - For treatment plants

**2.22. POWER CONVERTER (12V DC - 24V DC)**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>MASCOT</i>	8862 1224 00

**2.23. POWER FACTOR CORRECTION EQUIPMENT (PFC)**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>SCHNEIDER</i>	Varplus - Min 480V rating

**2.24. POWER METERS**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>SCHNEIDER</i>	PM810RDMG - Complete kit with separate meter and display

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**2.25. POWER SUPPLY (240V AC - 15V DC)**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>DENSEI-LAMBDA</i>	JWS50-15/A
<i>DENSEI-LAMBDA</i>	HWS15-150/A
<i>OMNIFLEX</i>	C2196A - Dual Voltage 12/24VDC

**2.26. POWER SUPPLY (240V AC - 24V DC)**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>DENSEI-LAMBDA</i>	HWS50-24A
<i>DENSEI-LAMBDA</i>	HWS150-24/A
<i>OMNIFLEX</i>	C2196A - Dual Voltage 12/24VDC

**2.27. PRESSURE SWITCHES**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>SCHNEIDER</i>	9012-G

**2.28. PROXIMITY SWITCHES**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>TURCK</i>	
<i>IFM</i>	Prewired, Plastic
<i>P &amp; F</i>	

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**2.29. PUSHBUTTONS ( 22.5mm)**

Manufacturer	Description / Comments / Part No
SPRECHER & SCHUH	D7
SCHNEIDER	ZB4, ZB5

**2.30. SCADA**

Manufacturer	Description / Comments / Part No
SERCK CONTROLS	SCX

**2.31. SELECTOR SWITCHES (22.5 mm)**

Manufacturer	Description / Comments / Part No
SCHNEIDER	ZB4, ZB5
SPRECHER & SCHUH	D7

**2.32. SELECTOR SWITCHES (Cam)**

Manufacturer	Description / Comments / Part No
KRAUS & NAIMER	

**2.33. SIGNAL ISOLATORS**

Manufacturer	Description / Comments / Part No
TRANSTECH	TSC
APCS	SI 32

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**2.34. SOFT STARTERS**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
ZENER	AMC-2000
SCHNEIDER	ALTISTART 48 - Soft start and stop
ZENER	SMARTSTART 480 - Soft start only

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**2.35. SURGE ARRESTORS (Coax)**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
NOVARIS	CNFF902-M - Includes mounting bracket

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**2.36. SURGE ARRESTORS (Instrumentation)**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
NOVARIS	SL36G

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**2.37. SURGE ARRESTORS (Power)**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
NOVARIS	DINSAFE SDD3-50-275-A - 3 Phase with alarm option

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**2.38. TELEMETRY**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
SERCK CONTROLS	E-Net - Depending on application
SERCK CONTROLS	PDS Compact 5xx - Depending on application

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**2.39. THERMAL OVERLOADS**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>SCHNEIDER</i>	TeSys D
<i>SPRECHER &amp; SCHUH</i>	CT 7

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**2.40. THERMISTOR RELAYS**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>SCHNEIDER</i>	LT3 - Manual reset
<i>SPRECHER &amp; SCHUH</i>	RT7 - Manual reset

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**2.41. UPS**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>GE</i>	VH
<i>APC</i>	Symetra RT

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**2.42. VARIABLE SPEED DRIVES**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>FUJI</i>	Frenic 5000 P/G
<i>SCHNEIDER</i>	ALTIVAR 61 / 71
<i>ZENER</i>	MSC-3

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### 3. INSTRUMENTATION EQUIPMENT

#### 3.1. CHLORINE CONTROLLERS

Manufacturer	Description / Comments / Part No
WALLACE & TIERNAN	PCU / SCU
WALLACE & TIERNAN	Acutec
WALLACE & TIERNAN	Chlorinators

#### 3.2. CHLORINE RESIDUAL

Manufacturer	Description / Comments / Part No
ENDRESS & HAUSER	Memosens

#### 3.3. DISSOLVED OXYGEN

Manufacturer	Description / Comments / Part No
ROYCE	9100/95A - Galvanic sensor with compressed air auto cleaning (0 - 10 mg/l range)
SIEMENS	Evita series - 0 - 10 mg/l range (for existing sites only)

#### 3.4. FLOW - MAGNETIC

Manufacturer	Description / Comments / Part No
SIEMENS	Sitrans - F M MAGFLO & FUS060 series
ABB	Watermaster

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**3.5. FLOW - MASS**

Manufacturer	Description / Comments / Part No
ROSEMOUNT	Micro Motion

**3.6. FLUORIDE MEASUREMENT**

Manufacturer	Description / Comments / Part No
ProMinent	DULCOMETER® D1C - Fluoride Meter Mounted on Panel

**3.7. LEVEL - HYDROSTATIC PRESSURE**

Manufacturer	Description / Comments / Part No
VEGA	VEGAWELL72

**3.8. LEVEL - PROBES**

Manufacturer	Description / Comments / Part No
ENDRESS & HAUSER	FTW3
MULTITRODE	MTR

**3.9. LEVEL - RADAR**

Manufacturer	Description / Comments / Part No
VEGA	VEGAPULS 60 series - Normally use VEGAPULS 61 or 62

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**3.10. LEVEL - ULTRASONIC**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>SIEMENS</i>	Milltronics - MultiRanger 100 or HydroRanger 200
<i>VEGA</i>	VEGASON 60 series - Normally use VEGASON 61 or 62

**3.11. pH MEASUREMENT**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>Rosemount</i>	
<i>ENDRESS &amp; HAUSER</i>	Memosens

**3.12. PRESSURE TRANSMITTERS**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>ROSEMOUNT</i>	3051 - 0 - 100kpa

**3.13. TURBIDITY MEASUREMENT**

<b>Manufacturer</b>	<b>Description / Comments / Part No</b>
<i>ENDRESS &amp; HAUSER</i>	Memosens
<i>Hach</i>	

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