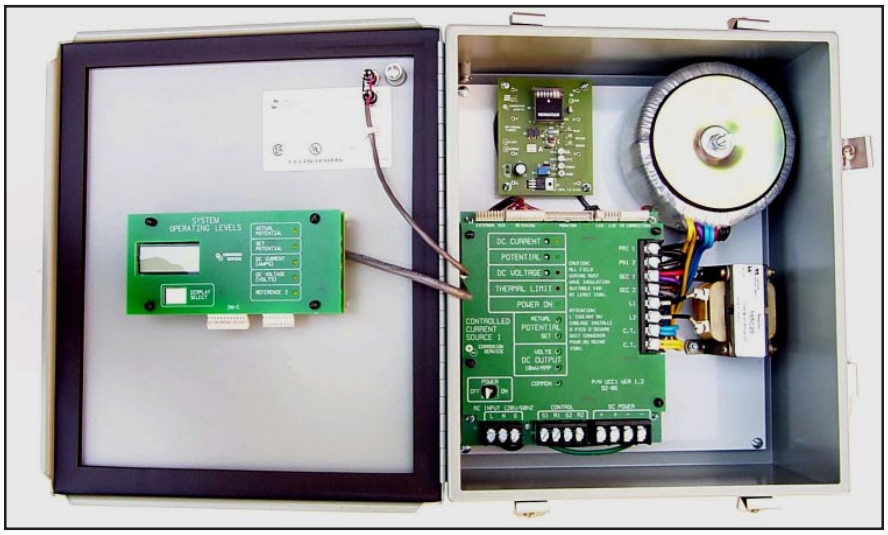
# UCC1

## UNIVERSAL CURRENT CONTROLLER
## Controlled Current for Corrosion Prevention Systems

*Universal Current Controllers (UCC's) are controlled, direct current sources designed for use in electrochemical corrosion control systems. They operate as single loop controllers in one of potential, current, or voltage control modes, increasing current levels until the lowest variable SET level is satisified.*

*The UCC1 incorporates advanced operational and control features, combined with early fault detection:*

- *Single ribbon cable for remote monitoring control*
- *High current ratings*
- *Accurate metering*
- *Wide common mode range of reference inputs*
- *Fast control loop*
- *Easily interfaced*



UCC1-24-12 shown equipped with UCCLCDM Digital Meter and Up Timer.

### Control Flexibility

Voltage, current, and potential control levels may be independently set. As the UCC1 automatically switches between these modes, LED's indicate which mode is controlling rectifier operation. An open collector alarm relay drive, terminals for external current and potential set, and an external IR free controller widen the UCC application range.

### Ease of Monitoring

On-board jacks allow measurement of DC levels, SET, and ACTUAL potential.

External alarm LED's plug into a board jack and are user selected to alarm on failure to maintain the target potential or current. The addition of an optional alarm relay (Part No. RB1), provides remote alarming on these failures.

UCC's are also supplied with a connector for the addition of an optional status module (Part No. STM4), which allows automated monitoring of current source voltage, current, SET potential, and both ACTUAL and IR free reference electrode potentials.

### Digital Metering

An optional plug-in digital meter (Part No. UCCLCDM) enables measurement of current, voltage, SET and ACTUAL reference electrode potential and a second reference electrode potential.

The optional Up Timer (Part No. UCC2412U) can also be added to display the elapsed operating time in increments of 1/100 hr.

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CORROSION SERVICE

*For additional information please contact the office nearest you.*


**Atlantic Time Zone:**

Halifax ..... Tel: (902) 468-7878
Fax: (902) 468-2187

**Eastern Time Zone:**

Montreal ..... Tel: (450) 449-2600
Fax: (450) 449-6353

TORONTO .... Tel: (416) 630-2600
Fax: (416) 630-2393

Sarnia ..... Tel: (519) 336-0740
Fax: (519) 336-5934

**Mountain Time Zone:**

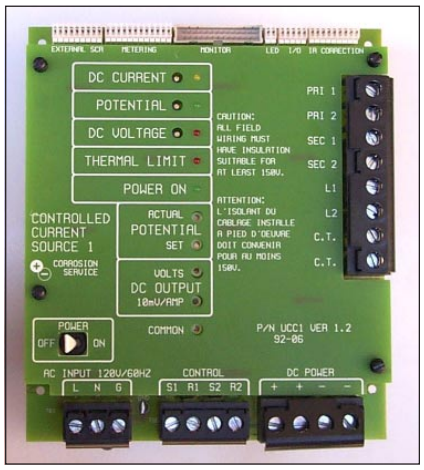
Calgary ..... Tel: (403) 233-2601
Fax: (403) 233-2658

**Pacific Time Zone:**

Vancouver ..... Tel: (604) 521-0572
Fax: (604) 521-0910

**Overseas:**

Dubai, ..... Tel: (971-4) 347-7660
U.A.E. Fax: (971-4) 347-0969


UCC1 Control Board • Front Panel

## Safety

The UCC1 soft starts, limiting line inrush current and protecting power electronics.

Units rated at and above 25 Amps are equipped with a thermal sensor on the SCR heatsink. When the non-adjustable factory set thermal limit is exceeded, typically due to blocked case convection, the UCC electronically shuts down. As the SCR heatsink cools, the unit will automatically recover.

## Modular Construction

The UCC1 allows a range of transformers; enabling rectifiers to be sized for specific applications. At currents greater than 25 Amps, connections are available to drive external SCR's and sense an external current shunt.

A 12 Amp UCC1 consists solely of a power/control circuit board, an inductor, and a transformer. Units rated at 3 Amps and less do not require an inductor.

UCC's rated at and above 25 Amps, include a 120/240 VAC powered circulation fan.

Oil & dust tight enclosures (NEMA 12) ensure operational integrity in industrial environments. NEMA 4 and 4X outdoor enclosures are optionally available.

## Ordering Information

The following information will be required when ordering:

UCC1-**DV-DA-ACV-FF**-CB

where: **DV** = DC Volts
**DA** = DC Amps
**ACV** = AC Volts
**FF** = Frequency

Optional Accessories: In addition to the optional components discussed overleaf, other accessories are also available for use with this product. Please refer to data sheet No. 3616 or contact us for details. Remote monitoring options include; the STM4 Status Module, the ACB2 Analog Capture Board Product Series, and the RMU2 Remote Monitoring Unit.


UCC1 • Functional Blocks




CORROSION SERVICE

**TORONTO**
369 RIMROCK ROAD
DOWNSVIEW, ONTARIO M3J 3G2
(416) 630-2600 FAX (416) 630-2393/8161/9570

**HALIFAX • MONTREAL • SARNIA • CALGARY**
**EDMONTON • VANCOUVER • DUBAI, U.A.E.**
Email: techsupport@corrosionservice.com
WEB: www.corrosionservice.com