CATHODIC ISOLATOR
isolator cathodic

The key to safe and efficient underground corrosion control.

The unique Cathodic Isolator™ meets stringent grounding requirements for safety — with no sacrifice in electrical isolation effectiveness.

RUSTROL®
SYSTEMS

Rustrol®'s solid-state Cathodic Isolator™ offers the safest electrical isolation for efficient cathodic protection.

The uniquely designed Cathodic Isolator™ developed by Rustrol® Systems, effectively confines the current needed for cathodic protection, while providing a safe grounding path during all types of electrical disturbances.

PROVEN CATHODIC PROTECTION.

Cathodic protection, proven by decades of service in a variety of applications, prevents corrosion of buried or submerged metallic structures.

Cathodic protection is most efficiently and uniformly applied when the primary structure is electrically isolated — i.e., all metallic/electrical contacts with foreign metallic structures are eliminated.

Electrical isolation provides three major benefits:

- ☐ Restriction of the required protective current to the surface of the primary structure to produce a uniform polarized level of protection
- ☐ Minimization of stray DC current interference
- ☐ Prevention of galvanic current between metallic structures.

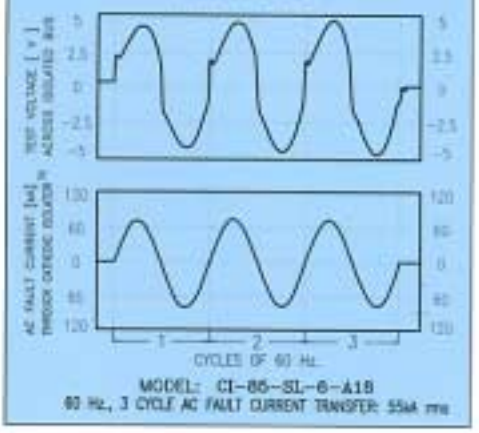
SAFE CATHODIC ISOLATION.

Cathodic isolation is a superior form of electrical isolation. Cathodic Isolation maintains stringent electrical grounding requirements and confines the protective current at the surface of the primary structure. The result is highly effective, uniform protection against corrosion.

The Rustrol® Cathodic Isolator™ meets safety standards for effective grounding within the National Electrical Code, and conforms to the need for safe operating practices accepted worldwide, i.e., not to exceed the 15 volt rms (caution) potential most often stipulated by design.

The Cathodic Isolator™ provides all of the advantages of electrical isolation necessary for Cathodic Protection by blocking the protective current at the electrical isolating device — such as across a pipeline isolating flange. As soon as the potential across the isolating flange exceeds the pre-set voltage threshold, the Rustrol® Cathodic Isolator™ responds instantly.

PERFORMANCE CURVE BY INDEPENDENT TEST LAB
Test No. HC 794

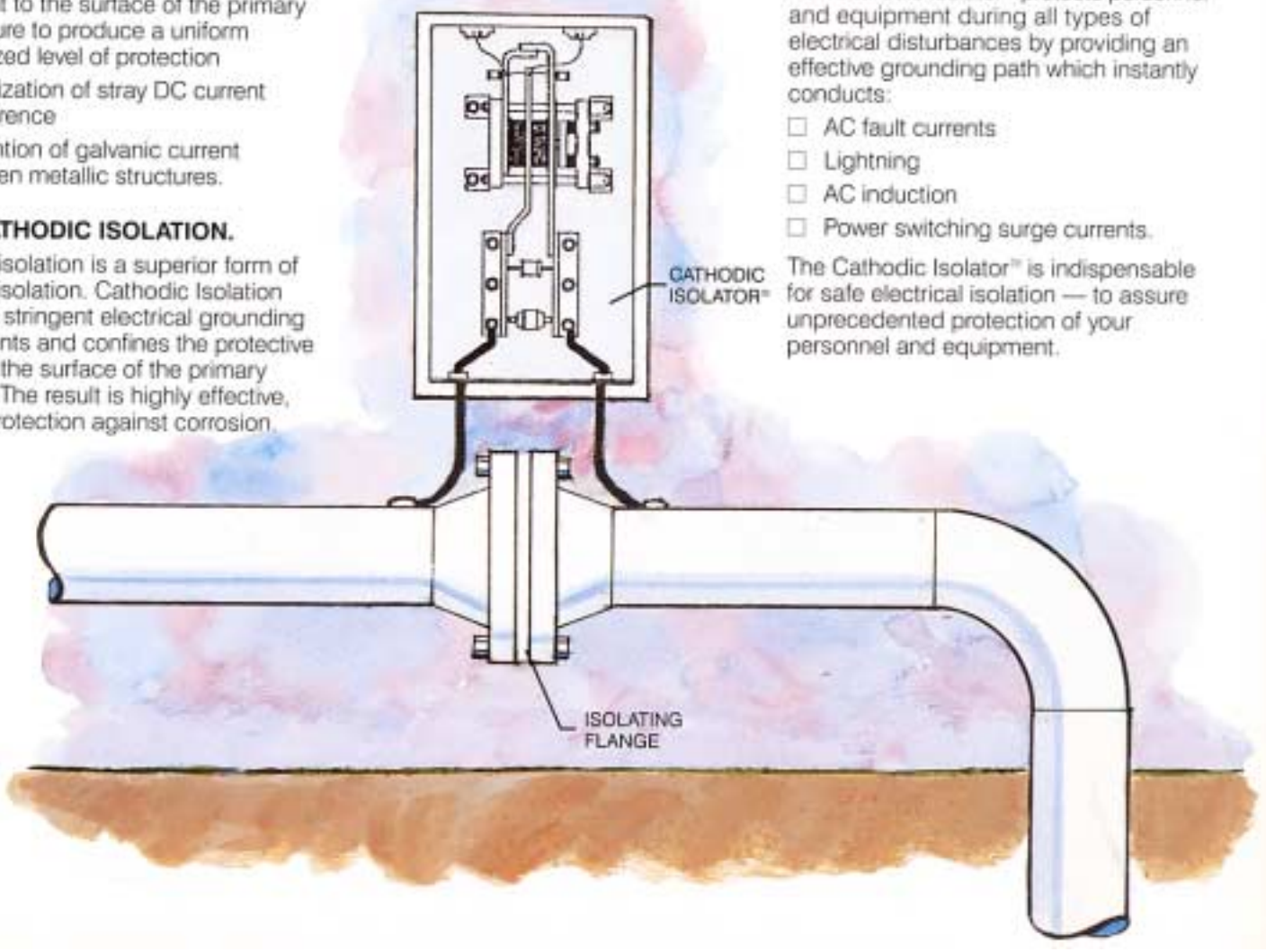


VERSATILE PROTECTION

The Cathodic Isolator™ protects personnel and equipment during all types of electrical disturbances by providing an effective grounding path which instantly conducts:

- ☐ AC fault currents
- ☐ Lightning
- ☐ AC induction
- ☐ Power switching surge currents.

The Cathodic Isolator™ is indispensable for safe electrical isolation — to assure unprecedented protection of your personnel and equipment.



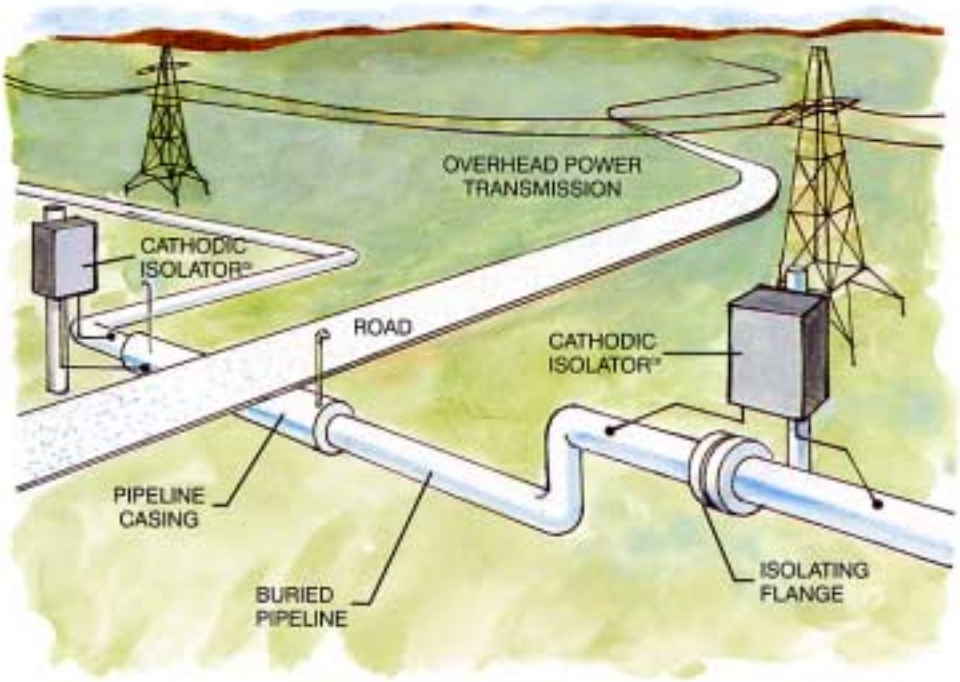
RUSTROL® 'S PROVEN QUALITY ASSURES RELIABLE OPERATION.

Unique developments in electronic circuitry are incorporated in the Rustrol® solid-state Cathodic Isolator™ to assure acute sensitivity; instant response; and fail-safe, maintenance-free operation in a non-electrolytic environment.

The Cathodic Isolator™ and associated hardware feature the most advanced and reliable components now available. Each critical component is precisely machined and carefully assembled to meet Rustrol®'s exceptionally stringent quality assurance standards. The easy-to-mount standard NEMA 4 enclosure simplifies installation.

Research and development models have undergone thorough acceptance-testing by independent high-current test facilities and have been fully approved (test data available upon request).

Rustrol®'s experienced technical staff provides knowledgeable product support. Engineering services to design and commission a system for your special applications are available from our professional consultants upon request.



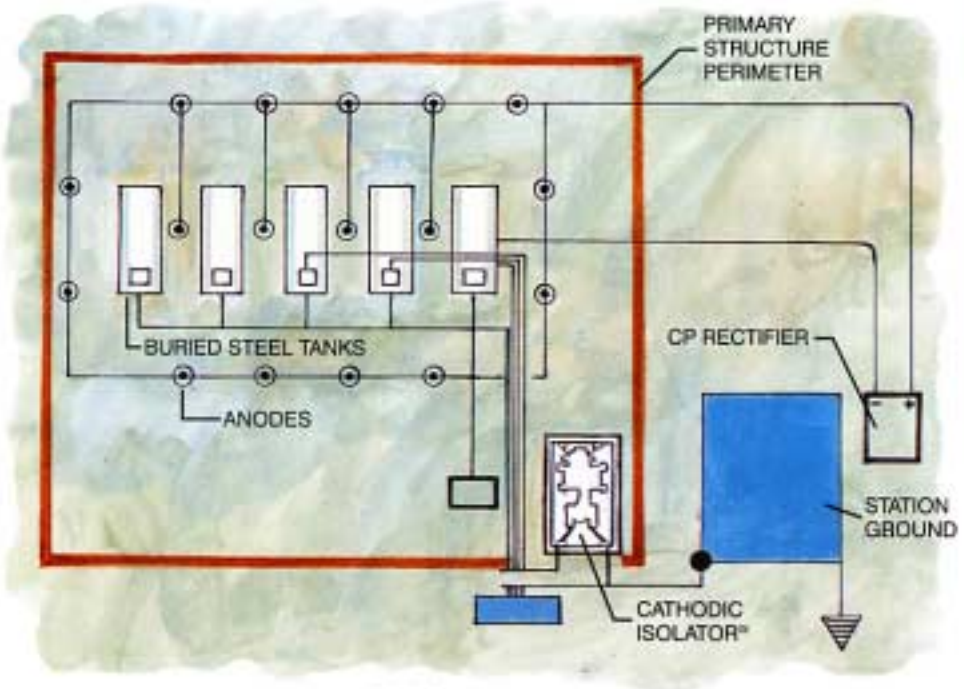
MITIGATION OF INDUCED AC

APPLICATIONS FOR COST-EFFECTIVE OPERATION.

Along with performing a key role in safe and effective corrosion control, the Rustrol® Cathodic Isolator™ also serves to reduce both the capital and maintenance costs of cathodic protection systems.

Cost-effective applications include:
☐ AC fault-current protection across isolating flanges and other devices
☐ mitigation of induced AC on pipelines and other structures ☐ lightning protection for equipment, including cathodic-protection rectifier systems ☐ de-coupling of the primary structure (e.g., fueling facility, pipe-type cable systems, etc.) from contact with the electrical utilities grounding network.

And these are just a few typical applications for the Rustrol® Cathodic Isolator™. Other possibilities are limited only by one's imagination.



TYPICAL TANK FARM

CHECK THIS UNMATCHED COMBINATION OF BENEFITS.

- ☑ ***Solid-state construction***
- ☑ ***Non-electrolytic***
- ☑ ***Maintenance-free***
- ☑ ***Simplified installation***
- ☑ ***Versatile protection***
- ☑ ***Fail-safe operation***
- ☑ ***Test-proven performance***

CATHODIC ISOLATOR™ SELECTION GUIDE

Cathodic Isolator™ (CI):

Standard assembly is installed in a performance test rated, NEMA-4 aluminum enclosure, complete with access cover and locking hasp.

AC Fault Current Exposure:

(as specified by the customer)

- ☐ 5 kA - 1 cycle @ 60 hz rms
- ☐ 10 kA - 1 cycle @ 60 hz rms
- ☐ 20 kA - 1 cycle @ 60 hz rms
- ☑ 30 kA - 1 cycle @ 60 hz rms
- ☐ 40 kA - 1 cycle @ 60 hz rms
- ☐ 50 kA - 1 cycle @ 60 hz rms
- ☐ 60 kA - 1 cycle @ 60 hz rms
- ☐ 75 kA - 1 cycle @ 60 hz rms
- ☐ 85 kA - 1 cycle @ 60 hz rms
- ☐ 100 kA - 1 cycle @ 60 hz rms

(Refer to Drawing No. CI-00 for detailed specifications; applicable ratings @ 50 Hz rms are available).

Surge/Lightning Protection (SL):

Standard assembly, peak surge current @ 8/20 μ sec.

- ☑ Primary @ 100,00 Amperes
- ☐ Secondary @ 70,000 Amperes

Voltage Threshold:

Standard assembly @ 6 volts rms or as specified by the customer within the suggested range of 2.5-20 volts rms.

Mitigation of Induced AC - Steady State @ 60 Hz rms:

Selection range 0-100 Amperes, as specified by the customer.

- ☑ 12 amps
- ☐ 24 amps
- ☐ 36 amps
- ☐ 48 amps
- ☐ 75 amps
- ☐ 100 amps

Optional Accessories:

(as specified by the customer)

- ☐ Potential meter
- ☐ Small arms proof enclosure
- ☐ Submersible enclosure
- ☐ Special finishes (specify)
- ☐ Test Port
- ☐ Quick disconnect wiring harness
- ☐ Any other features (specify)

CI- 30- SL- 6- A12- specify

(Typical ordering code)

Model No.: Cathodic Isolator – CI –100

1 cycle	@ 50 Hz rms	94 kA	@ 60 Hz rms	100 kA
3 cycles	" "	75 kA	" "	80 kA
10 cycles	" "	47 kA	" "	50 kA
30 cycles	" "	34 kA	" "	36 kA

Model No.: Cathodic Isolator – CI –90

1 cycle	@ 50 Hz rms	85 kA	@ 60 Hz rms	90 kA
3 cycles	" "	66 kA	" "	70 kA
10 cycles	" "	42 kA	" "	45 kA
30 cycles	" "	34 kA	" "	36 kA

Model No.: Cathodic Isolator – CI –85

1 cycle	@ 50 Hz rms	80 kA	@ 60 Hz rms	85 kA
3 cycles	" "	56 kA	" "	60 kA
10 cycles	" "	38 kA	" "	40 kA
30 cycles	" "	28 kA	" "	30 kA

Model No.: Cathodic Isolator – CI –60

1 cycle	@ 50 Hz rms	56 kA	@ 60 Hz rms	60 kA
3 cycles	" "	38 kA	" "	40 kA
10 cycles	" "	24 kA	" "	26 kA
30 cycles	" "	19 kA	" "	20 kA

Model No.: Cathodic Isolator – CI –50

1 cycle	@ 50 Hz rms	47 kA	@ 60 Hz rms	50 kA
3 cycles	" "	38 kA	" "	40 kA
10 cycles	" "	23 kA	" "	25 kA
30 cycles	" "	17 kA	" "	18 kA

Model No.: Cathodic Isolator – CI –45

1 cycle	@ 50 Hz rms	42 kA	@ 60 Hz rms	45 kA
3 cycles	" "	33 kA	" "	35 kA
10 cycles	" "	22 kA	" "	23 kA
30 cycles	" "	17 kA	" "	18 kA

Model No.: Cathodic Isolator – CI –40

1 cycle	@ 50 Hz rms	38 kA	@ 60 Hz rms	40 kA
3 cycles	" "	28 kA	" "	30 kA
10 cycles	" "	19 kA	" "	20 kA
30 cycles	" "	14 kA	" "	15 kA

Model No.: Cathodic Isolator – CI –30

1 cycle	@ 50 Hz rms	28 kA	@ 60 Hz rms	30 kA
3 cycles	" "	19 kA	" "	20 kA
10 cycles	" "	12 kA	" "	13 kA
30 cycles	" "	9 kA	" "	10 kA

Model No.: Cathodic Isolator – CI –10

1 cycle	@ 50 Hz rms	9 kA	@ 60 Hz rms	10 kA
3 cycles	" "	7.9 kA	" "	7.4 kA
10 cycles	" "	5.3 kA	" "	5.6 kA
30 cycles	" "	3.9 kA	" "	4.2 kA

Model No.: Cathodic Isolator – CI –5

1 cycle	@ 50 Hz rms	4.7 kA	@ 60 Hz rms	5 kA
3 cycles	" "	3.5 kA	" "	3.7 kA
10 cycles	" "	2.6 kA	" "	2.8 kA
30 cycles	" "	2.0 kA	" "	2.2 kA

REV. 5;
REV. 4;
REV. 3;
REV. 2;
REV. 1;
REV. 0;

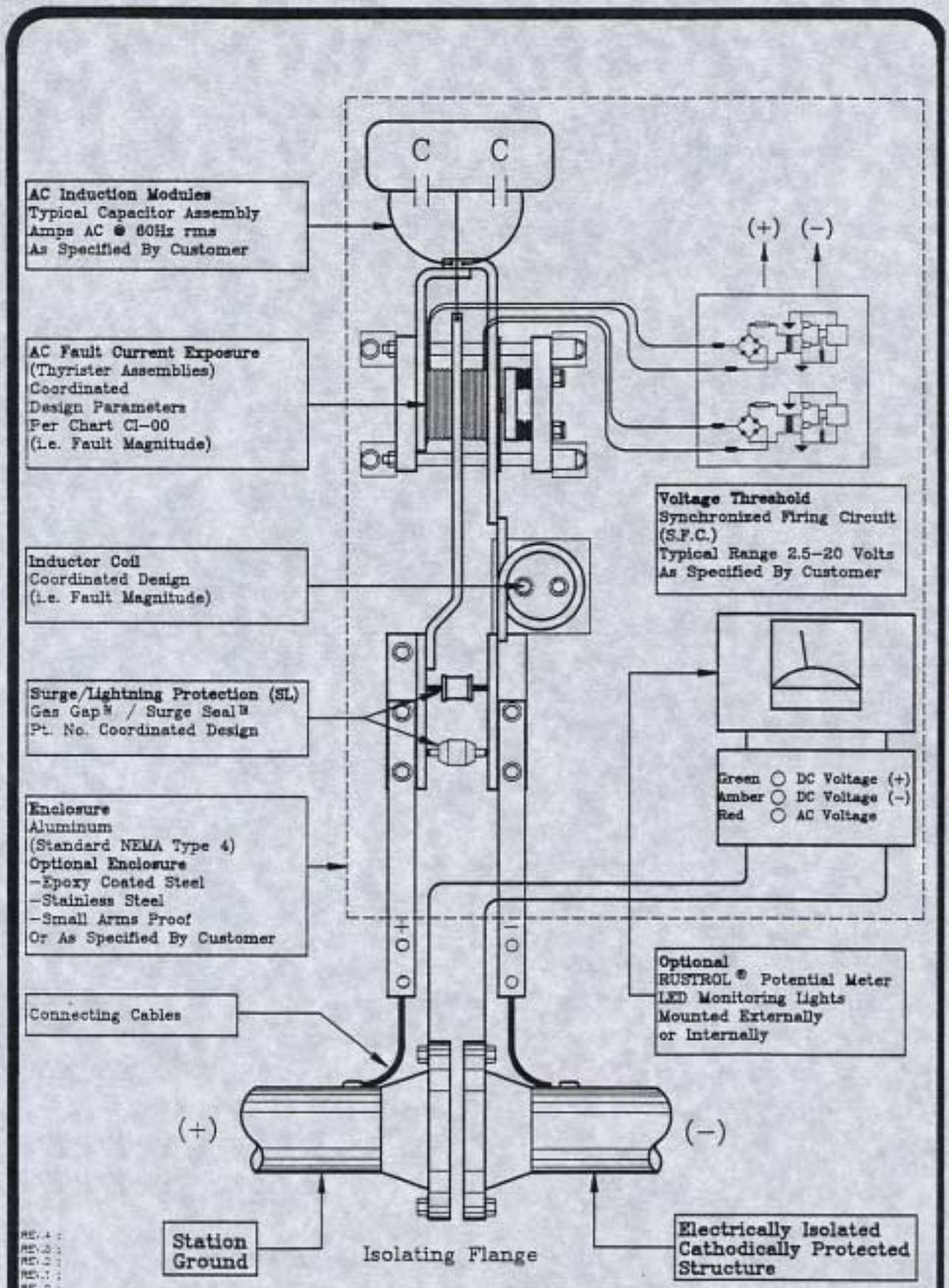
SOLID STATE ELECTRONIC SWITCH

RUSTROL® SYSTEMS

CATHODIC isolator | ISOLATOR™ cathodic

TEL.(905) 634-7751 FAX.(905) 333-4313

dwg. no. Model Numbers CI–00



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dwg. no.
CI-01