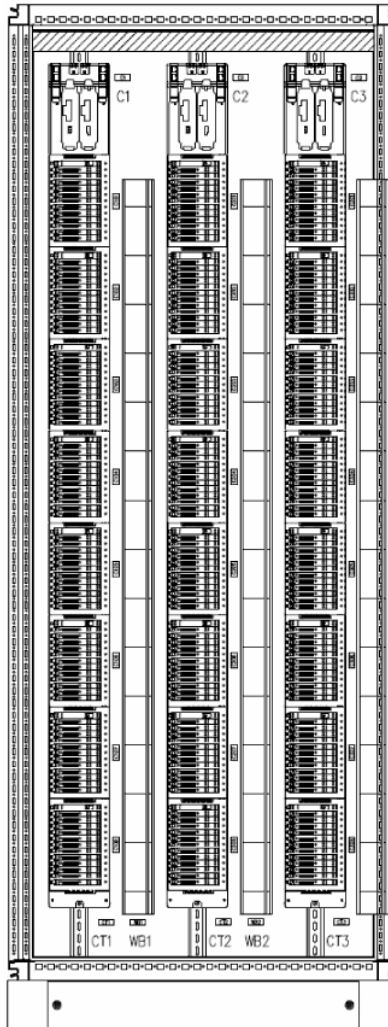


Factory Tested Cabinets



CHARM Marshalling Cabinets

- Standard IO cabinet designs
- Fast delivery
- Reduced system footprint
- Eliminates cabinet design engineering
- Fully Documented Package

Introduction

The DeltaV Factory Tested I/O cabinets provide an off-the-shelf solution for DeltaV v11 CHARM I/O, assembled in industry standard cabinets, ready to be installed on-site and connected to the field I/O.

These Cabinets are designed to meet CSA and CE personal safety requirements to help facilitate site installation and inspection. They seamlessly integrate into the overall hardware solution of your DeltaV project..



Benefits

Standard IO Cabinet Designs. The Factory Tested DeltaV cabinets deliver the full benefits of electronic marshalling. These cabinets meet recommended installation practices of the DeltaV system and each is tested before shipping. The flexibility of DeltaV CHARM IO allows for 100 % utilization of channels, regardless of the I/O signal mix. Late changes are easily accommodated with minimal re-engineering and not rewiring.

Fast Delivery. Standard cabinets are available with short lead times when ordered for direct shipment to site.

Reduced System Footprint. Equipment room footprint is reduced by eliminating the traditional marshalling cabinets with cross wiring to traditional I/O cards.

Eliminates cabinet design engineering. The Factory Tested IO cabinets use DeltaV Electronic Marshalling, which allows any channel to be assigned to any one of four controllers. This eliminates the task of rationalizing I/O to specific controllers and preserves I/O flexibility to handle late changes to the system.

Fully documented package. Each cabinet is supplied with full documentation showing internal lay-out, bill of materials and internal wiring. Drawings can be incorporated into the project drawing package.

Product Description

The DeltaV Factory Tested Cabinets use industry accepted cabinet enclosures, preinstalled with CHARM I/O and related equipment, ready to be installed on-site and connected to field I/O.

The cabinets are typical, free standing enclosures intended for floor mounting in equipment room areas, where temperature and humidity are controlled within the requirements for computer/electronic equipment. They come ready to receive incoming 24 VDC power. All internal wiring to power distribution components and grounding conductors has been tested at the factory.

Before delivery, each cabinet undergoes a full in-house inspection, to assure that it is fully operational before shipping directly to site. Electronic Marshalling eliminates the need for any internal cross wiring and I/O rationalization there is no need for typical FAT at a staging facility.

The Factory Tested cabinets support all available low voltage CHARM I/O types with 24 VDC bussed field power. The standard cabinets are designed for easy bottom cable entry.

All cabinets come with following equipment installed:

- DeltaV CHARM I/O equipment : including CHARM I/O carriers, base plates, terminal block, address plugs and terminals.

The CHARM I/O cards and CHARMS are not included and are to be ordered separately.

The required number of (redundant) CHARM I/O cards and CHARM modules depends on the actual number and types of I/O that will be wired into the cabinet.

- Primary and secondary 24VDC power distribution for CHARM I/O Cards and field instrumentation.
- Field wire ducts
- Grounding bars
- Wiring plan pocket
- Emerson Name Plate Holder and blank name plate insert.

You can choose from two types of Factory Tested cabinets:

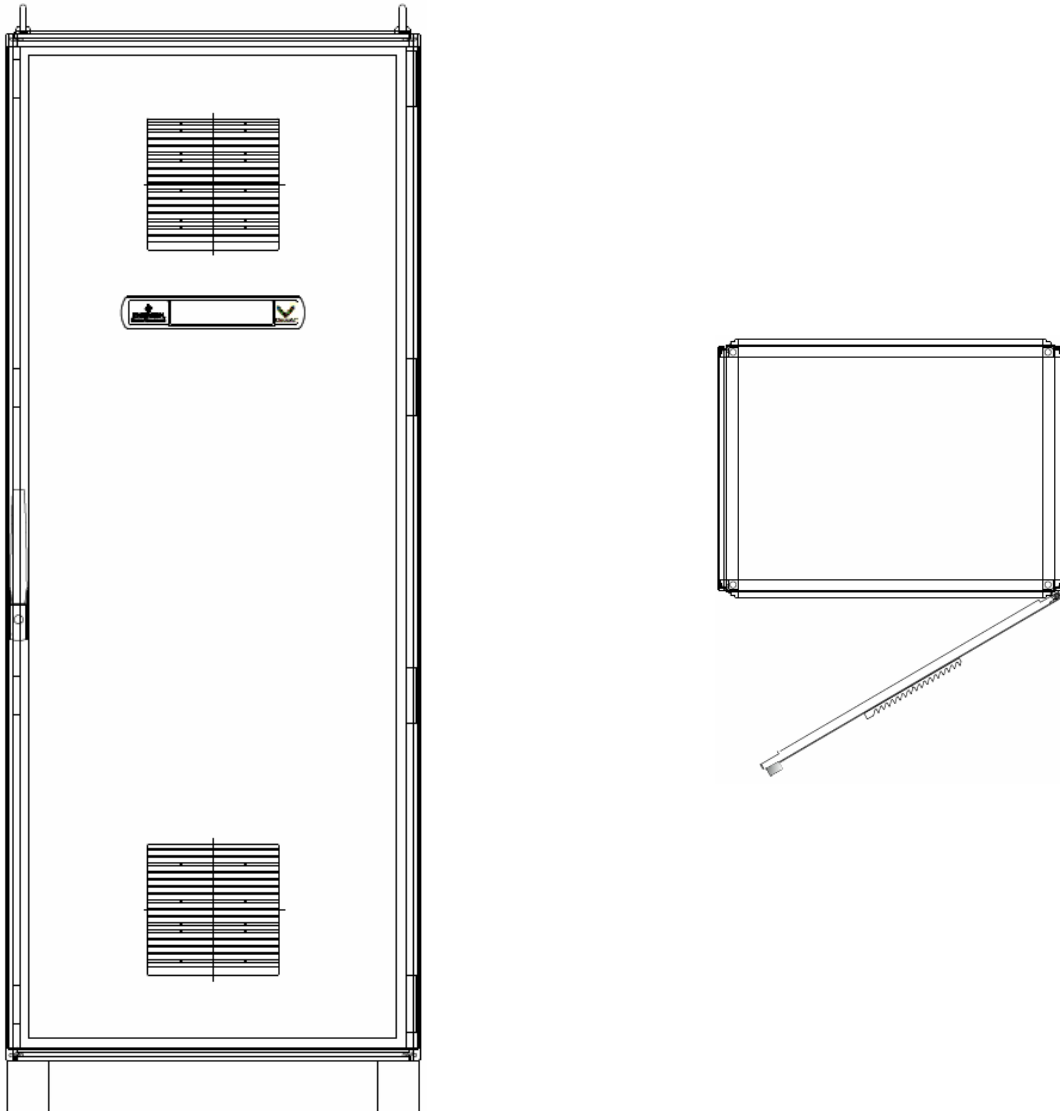
1. “SE7001” providing 288 CHARM I/O channels in an 800 mm wide x 600 mm deep x 2000 mm High cabinet with front only access.
2. “SE7002” providing 576 CHARM I/O channels in an 800 mm wide x 800 mm deep x 2000 mm High cabinet with front and rear access.

Following tables provide more detailed specifications for both CHARM Marshalling cabinets.

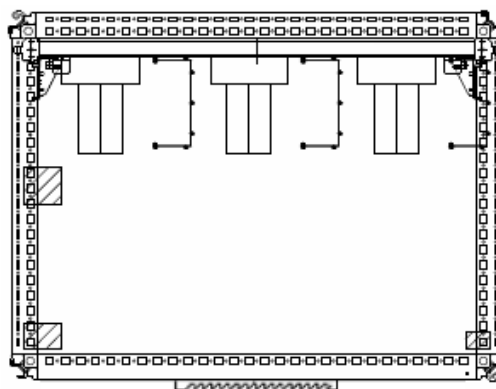
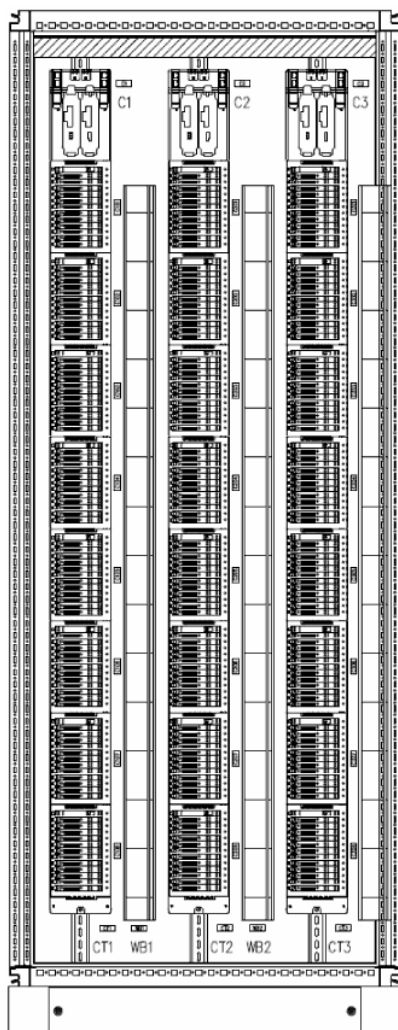
Cabinet specifications

SE7001 (288 CHARM I/O)	
Dimensions	800mm (W) x 600mm (D) x 2000mm (H) + 100mm Plinth
Access	Front access, single door, right hand hinged
Protection category	IP54 – NEMA 13
Approximate Weight	
Color	Cabinet Ral7035, Plinth Ral7022
Other	Louvered doors with filter, mounting plate, grounding bars, wiring plan pocket, lifting eye bolts on top, bottom cable entry, cable clamp rail, removable gland plate
Power Requirements	Primary and secondary 24VDC power to be supplied from outside the cabinet (e.g. from adjacent cabinet or dedicated Power Supply Cabinet).
Installed Equipment:	<p>Front :</p> <p>3 CHARM IO rails, for total of 288 I/O, each rail containing:</p> <ul style="list-style-type: none"> • 1 x CHARM I/O Carrier with redundant Copper Ethernet connectors • 8 x CHARM Base Plate • 8 x CHARM Address Plug • 96 x CHARM terminal blocks - Screw type • 1 x CHARM I/O bus termination <p>Sides:</p> <p>(Left) :24VDC distribution for CHARM I/O cards and bussed field power through switches and fused terminals (fully redundant with separate distribution for Primary and Secondary power).</p> <p>(Right) : PT100 RTD for temperature monitoring</p>

Specifications for SE7001



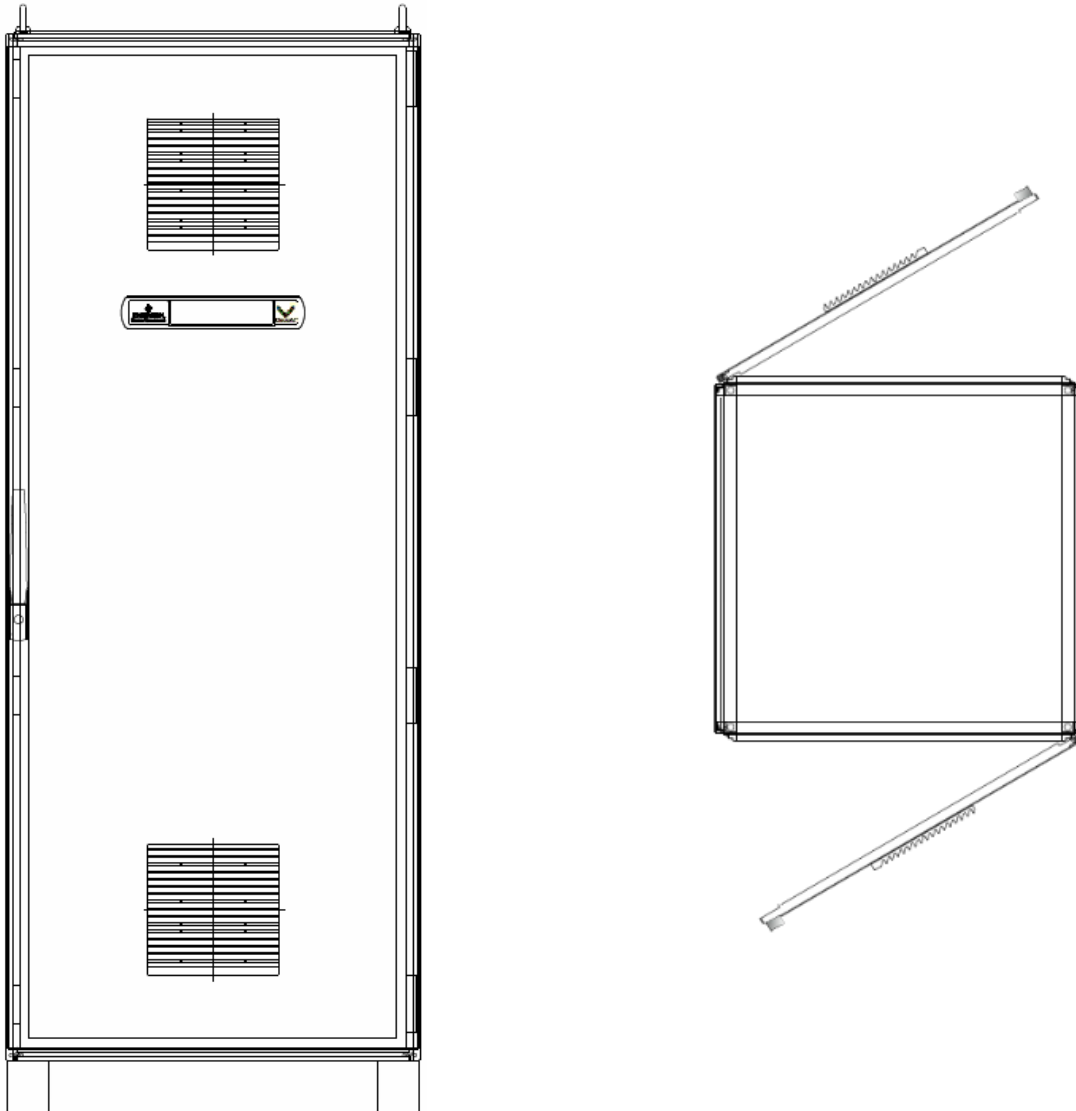
External layout drawing for SE7001, front and top view



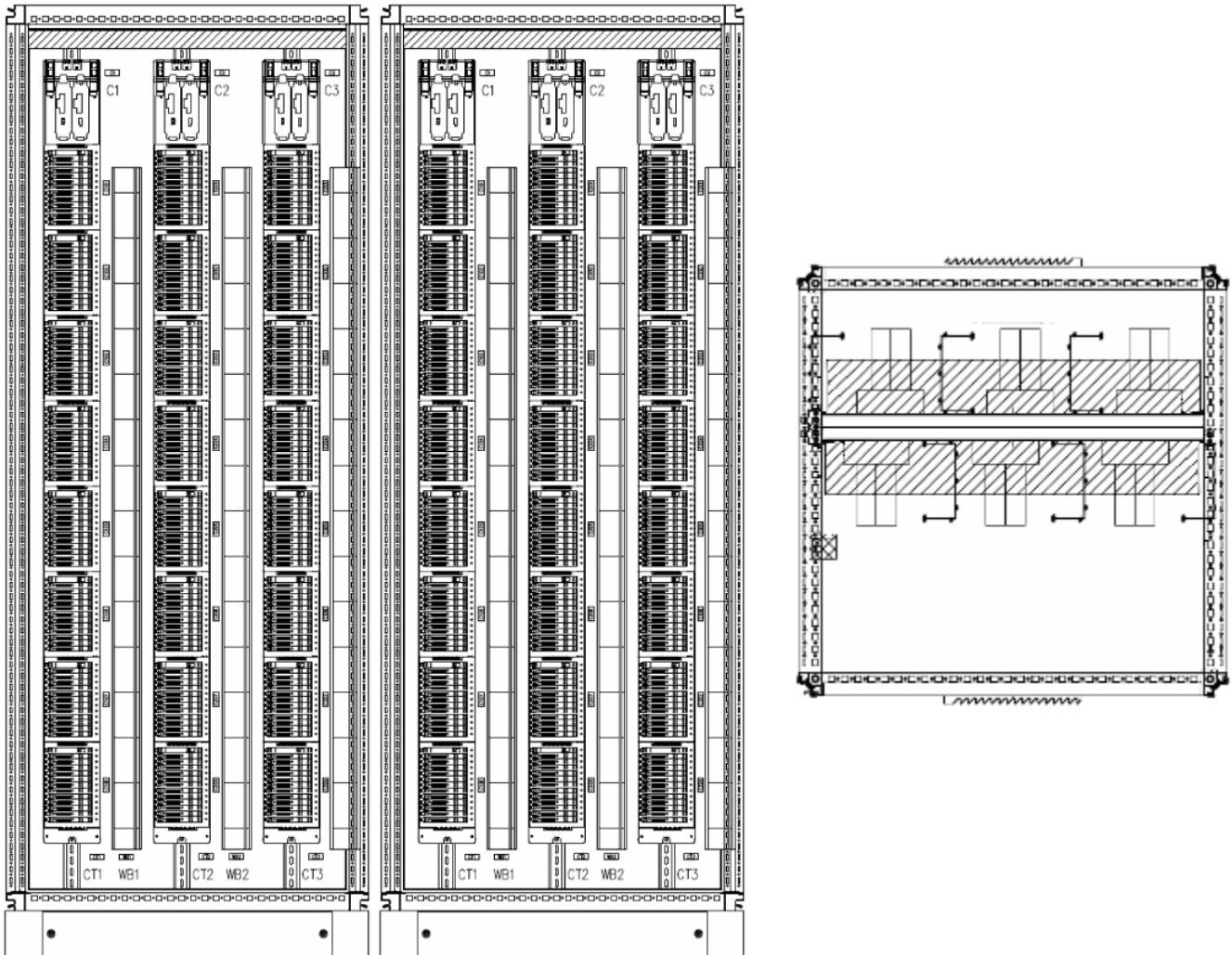
Internal layout drawing for SE7001, Front and top view

SE70002 (576 CHARM I/O)	
Dimensions	800mm (W) x 800mm (D) x 2000mm (H) + 100mm Plinth
Access	Front and Rear Access, single doors, right hand hinged
Protection category	IP54 – NEMA 13
Approximate Weight	
Color	Cabinet Ral7035, Plinth Ral7022
Other	Louvered doors with filter, mounting plate, grounding bars, wiring plan pocket, lifting eye bolts on top, bottom cable entry, cable clamp rail, removable gland plate
Power Requirements	Primary and secondary 24VDC power to be supplied from outside the cabinet (e.g. from adjacent cabinet or dedicated Power Supply Cabinet)
DeltaV Equipment mounted:	<p>Front :</p> <p>3 CHARM IO rails, for total of 288 I/O, each rail containing:</p> <ul style="list-style-type: none"> • 1 x CHARM I/O Carrier with redundant Copper Ethernet connectors • 8 x CHARM Base Plate • 8 x CHARM Address Plug • 96 x CHARM terminal blocks - Screw type • 1 x CHARM I/O bus termination <p>Sides:</p> <p>(Left) :24VDC distribution for Front: CHARM I/O cards and bussed field power through switches and fused terminals (fully redundant with separate distribution for Primary and Secondary power).</p> <p>(Right) : 24VDC distribution for Back: CHARM I/O cards and bussed field power through switches and fused terminals (fully redundant with separate distribution for Primary and Secondary power).</p> <p>PT100 RTD for temperature monitoring</p> <hr/> <p>Back :</p> <p>3 CHARM IO rails, for total of 288 I/O, each rail containing:</p> <ul style="list-style-type: none"> • 1 x CHARM I/O Carrier with redundant Copper Ethernet connectors • 8 x CHARM Base Plate • 8 x CHARM Address Plug • 96 x CHARM terminal blocks - Screw type • 1 x CHARM I/O bus termination

Specifications for SE7002.



External layout drawing for SE7002, rear and top view



Internal layout drawing for SE7002, Front , rear and top view

Project Customizations

In addition to the Factory Tested cabinets above, Configured to Order cabinets can be ordered to complete the project hardware requirements. The standard I/O cabinets can also be modified to accommodate specific project requirements. A number of predefined customizations have been predesigned on top of the standard Factory Tested Cabinets:

- Cabinet Light: 24 VDC powered LED light
- Name plates engraved with custom supplied cabinet identification information.
- FO to Copper Media Converter
- Injected Power:
 - 24 VDC power distribution terminals with fused terminals, not wired to base plates.
 - Pre-wiring to select number of installed baseplates.
 - Pre-wiring to all 12 or 24 Baseplates
- Interposing Relays: Provide up to 48 high current discrete output circuits
-

These additions are not part of the standard Factory Tested Cabinet, but can easily be implemented, tested and shipped to site as one package, without requiring any upfront design engineering or factory acceptance test.

Please contact your local Emerson Sales office for further information regarding these customizations

System Compatibility

CHARM I/O cabinets are compatible with DeltaV version 11.

CHARM I/O cards require S-series Controllers.

Certifications

The Factory Tested Cabinet designs are designed to meet CE and CSA personal safety and EMC requirements. The designs have been submitted for the following certifications:

- Conformity to the relevant European directives, including EMC (CE Marking)
- CSA Mark for US and Canada

Refer to the DeltaV Electronic Marshalling Product Data Sheet for certification information on the DeltaV system components.

Ordering Information

Description	Model Number
Front Access cabinet with 288 CHARM I/O channels	SE7001
Front/Rear Access cabinet with 576 CHARM I/O channels	SE7002

Related Products

- Cabinet Side Panels (Price book option)
- CHARM I/O Cards must be ordered separately
- CHARMs must be ordered separately
- Custom labels with individual cabinet identification

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