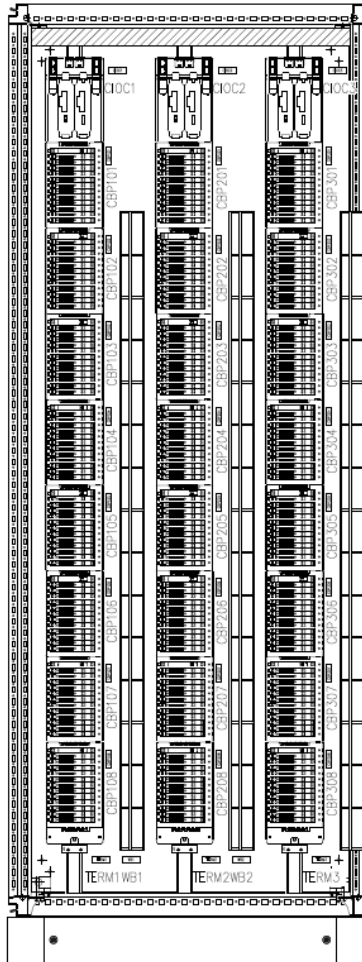


Factory Tested Cabinets



CHARM Marshalling Cabinets

- Standard I/O 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 I/O 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 I/O 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 I/O 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: wire basket solution to optimize available space
- 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.

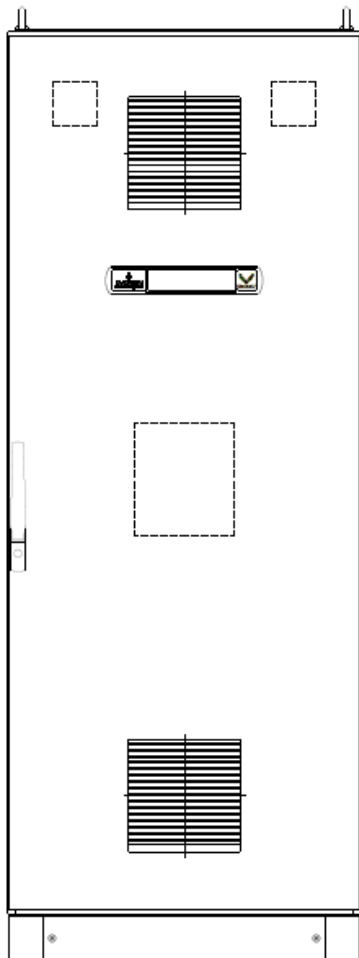
Following tables provide more detailed specifications for both CHARM Marshalling cabinets.

Cabinet specifications

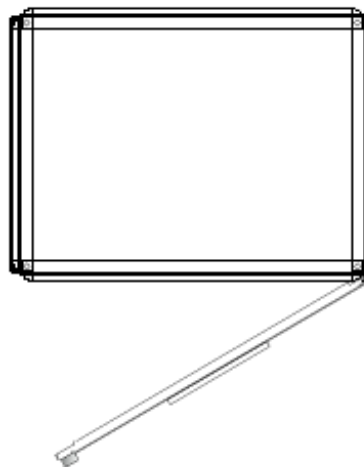
SE7001 (288 CHARM I/O)	
Dimensions	800mm (W) x 600mm (D) x 2000mm (H) + 100mm Plinth
Access	Front access, single door, right hand hinged
Protection category	IP54 – NEMA 12
Certifications	CE Mark, cCSA _{US}
Approximate Weight	200 kg
Color	Cabinet Ral7035, Plinth Ral7022
Other	Louvered doors with filter, mounting plate, grounding bars, wiring plan pocket, lifting eye bolts on top, bottom cable entry, removable gland plate
Environmental Specifications	Indoor installation only, Temperature Limits : -40°C to 50°C
Max. Heat dissipation	150 W
Certifications	CE and CSA, installation in safe area locations
Power Requirements	Primary and secondary 24VDC power to be supplied from outside the cabinet (e.g. from adjacent cabinet or dedicated Power Supply Cabinet).
Control Network	Redundant 100BASE-FX, RJ45 connectors, to be connected to first CIOC carrier. Daisy chained Primary and secondary control network between all 3 CIOC carriers is included (can be changed if required)
Installed Equipment:	<p>Front :</p> <ul style="list-style-type: none"> ■ 3 CHARM IO rails, for total of 288 I/O, each rail containing: <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>Left Side:</p> <p>Fully redundant 24VDC distribution for CHARM I/O cards and bussed field power through switches and fused terminals</p>

Order Channel Identifier Labels for CHARM Baseplates separately: SE4606T02

Specifications for SE7001

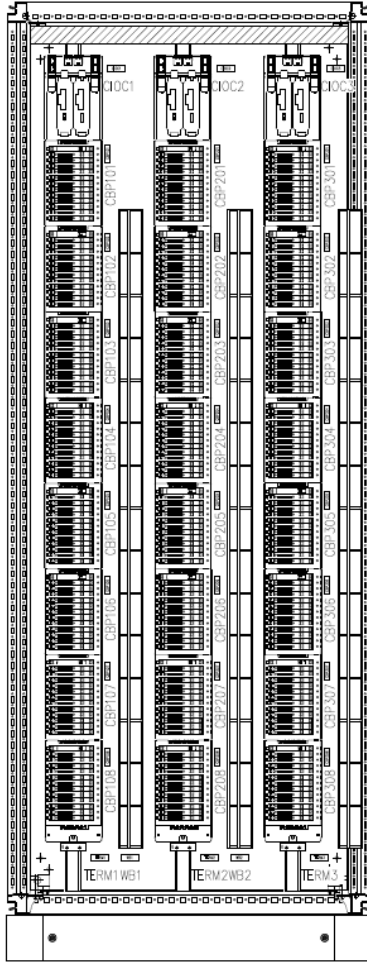


Front View

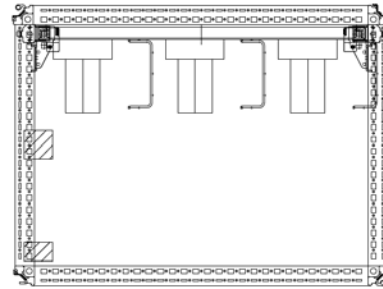


Top View

External layout drawing for SE7001 : Front and Top view



Front View



Top View

Size of Wire Baskets: 150mm H x 54mm D

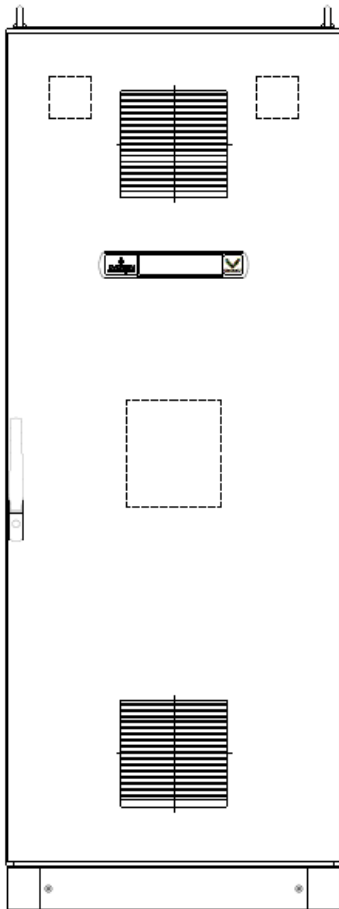
Internal layout drawing for SE7001 : Front and Top view

SE7002 (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 12
Certifications	CE Mark, cCSA _{US}
Approximate Weight	300 kg
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, removable gland plate
Environmental Specifications	Indoor installation only, Temperature Limits : -40°C to 50°C
Max. Heat dissipation	300 W
Certifications	CE and CSA, installation in safe area locations
Power Requirements	Primary and secondary 24VDC power to be supplied from outside the cabinet (e.g. from adjacent cabinet or dedicated Power Supply Cabinet)
Control Network	Redundant 100BASE-FX, RJ45 connectors, to be connected to first CIOC carrier. Daisy chained Primary and secondary control network between all 6 CIOC carriers is included (can be changed if required)
Installed Equipment:	<p>Front :</p> <ul style="list-style-type: none"> ■ 3 CHARM IO rails, for total of 288 I/O, each rail containing: <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>Left Side:</p> <p>Fully redundant 24VDC distribution for Front: CHARM I/O cards and bussed field power through switches and fused terminals.</p> <p>Right Side:</p> <p>Fully redundant 24VDC distribution for Back: CHARM I/O cards and bussed field power through switches and fused terminals.</p>

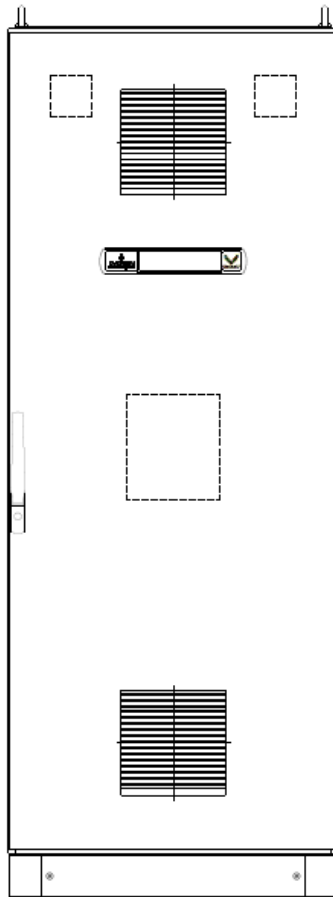
SE7002 (576 CHARM I/O)	
	<p>Back :</p> <ul style="list-style-type: none">3 CHARM IO rails, for total of 288 I/O, each rail containing:<ul style="list-style-type: none">■ 1 x CHARM I/O Carrier with redundant Copper Ethernet connectors■ 8 x CHARM Base Plate■ 8 x CHARM Address Plug■ 96 x CHARM terminal blocks - Screw type■ 1 x CHARM I/O bus termination

Order Channel Identifier Labels for CHARM Baseplates separately: SE4606T02

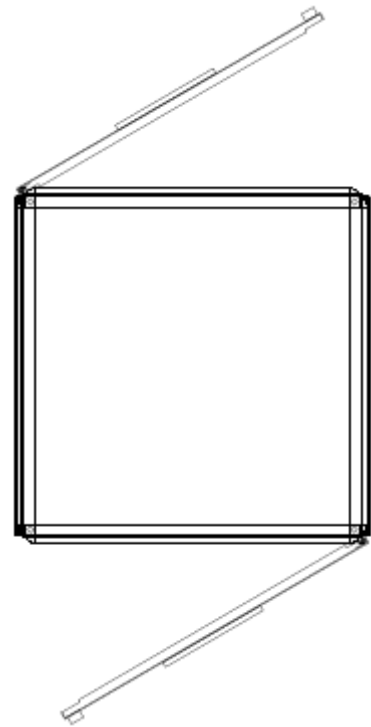
Specifications for SE7002.



Front View

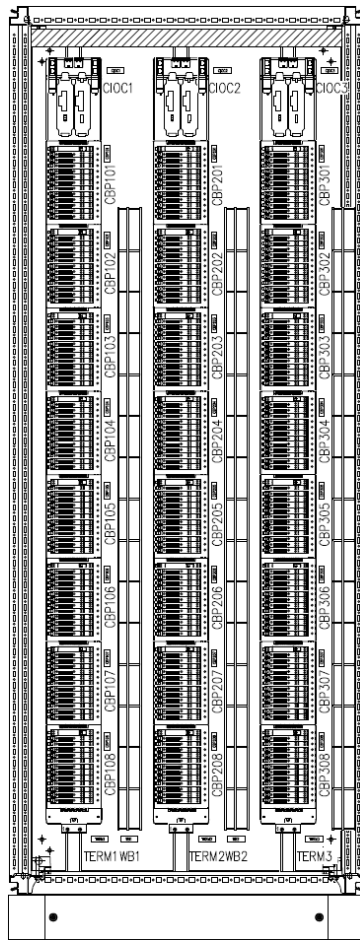


Rear View

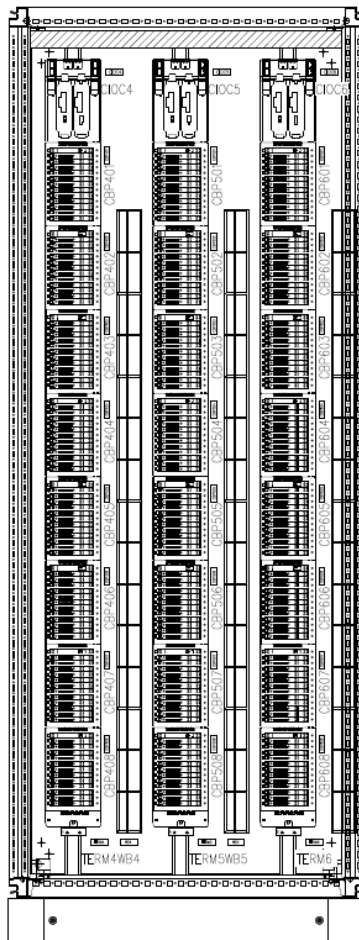


Top view

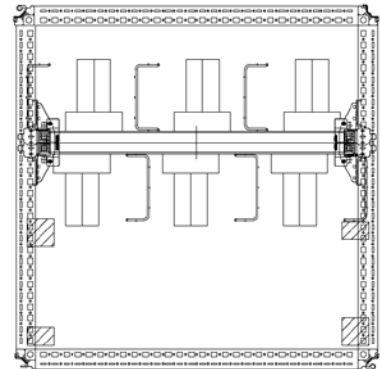
External layout drawing for SE7002 : Front, Rear and Top view



Front View



Rear View



Top view

Size of Wire Baskets: 150mm H x 54mm D

Internal layout drawing for SE7002 : Front, Rear and Top view

Project Customizations

In addition to the standard Factory Tested cabinets above, a number of customizations have been predesigned as a variation or addition to the standard FTE cabinet specifications, such as:

- Cabinet Light: 24 VDC powered LED light
- Name plates engraved with custom supplied cabinet identification information.
- FO to Copper Media Converter
- 24 VDC power distribution for injected power :
12 or 24 fused circuits, optionally prewired to selected channels or base plates
- Cable clamp rail

These options are available as Configure To Order (CTO) enclosures and can 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 available CTO options.

System Compatibility

CHARM I/O cabinets are compatible with DeltaV version 11.3.x and above

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 S-series Electronic Marshalling](#) Product Data Sheet for certification information on the DeltaV system components.

Ordering Information

Description	Model Number
Electronic Marshalling Cabinet for 288 I/O; Front-only Access	SE7001
Electronic Marshalling Cabinet for 576 I/O; Front and Rear Access	SE7002
Description	Model Number
Channel Identifier Labels for CHARM Baseplates; Package of 8	SE4606T02

Related Products

- SE7051 : Left and Right Side Panels for SE7001 Electronic Marshalling Cabinet
- SE7052 : Left and Right Side Panels for SE7002 Electronic Marshalling Cabinet
- SE7053 : Cabinet Baying Clamps; Package of 6; used for SE7001 and SE7002 Cabinets
- CHARM I/O Cards must be ordered separately
- CHARMs must be ordered separately

To locate a sales office near you, visit our website at:
www.EmersonProcess.com/DeltaV
 Or call us at:
 Asia Pacific: 65.777.8211
 Europe, Middle East: 41.41.768.6111
 North America, Latin America: +1 800.833.8314 or +1 512.832.3774

For large power, water, and wastewater applications contact Power and Water Solutions at:
www.EmersonProcess-powerwater.com
 Or call us at:
 Asia Pacific: 65.777.8211
 Europe, Middle East, Africa: 48.22.630.2443
 North America, Latin America: +1 412.963.4000

© Emerson Process Management 2011. All rights reserved. For Emerson Process Management trademarks and service marks, go to: <http://www.emersonprocess.com/home/news/resources/marks.pdf>.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the design or specification of such products at any time without notice.

