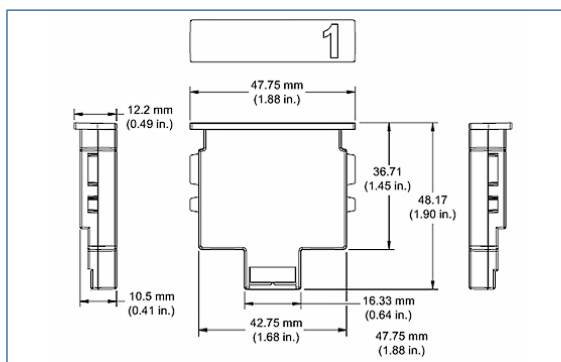
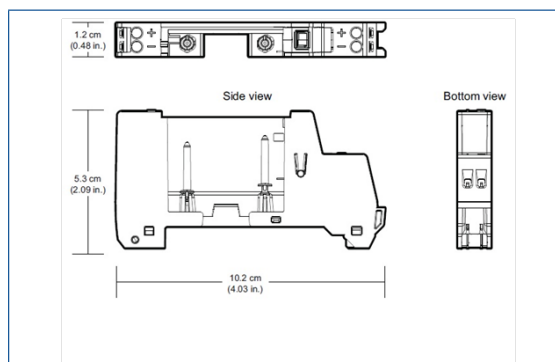


## DeltaV IS Electronic Marshalling

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Address Plug.



Address Plug Terminal Block for IS Baseplate.

## CHARM I/O Card Hardware

| Specifications for CHARM I/O Card Carrier   |                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of I/O Cards per Carrier             | 2 (redundant pair)                                                                                                                                                                                                                                                                                                                                                                                   |
| Input Power (Redundant)                     | 24V DC $\pm 10\%$ at 12 A maximum                                                                                                                                                                                                                                                                                                                                                                    |
| Redundant Ethernet Connections              | Fiber-optic: <ul style="list-style-type: none"> <li>■ 100BASE-FX with MTRJ connectors; cable should have MTRJ Female connector</li> <li>■ Full duplex operation</li> <li>■ Multi-mode – 2 km nominal distance</li> </ul> Copper twisted pair: <ul style="list-style-type: none"> <li>■ 10/100BASE-TX with RJ45 connectors</li> <li>■ Half/Full duplex operation</li> <li>■ 100 m distance</li> </ul> |
| Mounting                                    | DIN rail Latch to T-type rail                                                                                                                                                                                                                                                                                                                                                                        |
| Specifications for CHARM I/O Card 2 (CIOC2) |                                                                                                                                                                                                                                                                                                                                                                                                      |
| Number of I/O Channels                      | 96 Channels, individually defined signal types                                                                                                                                                                                                                                                                                                                                                       |
| Number of I/O Clients                       | 4 (Controllers) – in v15.FP3 and later this has been increased to 8 for the PK Controller                                                                                                                                                                                                                                                                                                            |
| Number of CIOC's per Controller             | 16 – in v15.FP3 and later this has been increased to 32 for the PK Controller                                                                                                                                                                                                                                                                                                                        |
| Number of CIOC's per System                 | 300                                                                                                                                                                                                                                                                                                                                                                                                  |
| I/O Update Rates                            | 50ms, 100ms, 250ms, 500ms                                                                                                                                                                                                                                                                                                                                                                            |
| User Memory                                 | N/A                                                                                                                                                                                                                                                                                                                                                                                                  |
| CIOC Power (24V DC)                         | 0.28A per redundant CIOC node<br>0.32A per redundant CIOC2 node<br>(includes two cards and two communication modules)<br>(individual CHARM power requirements are in addition)                                                                                                                                                                                                                       |

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|                              |                                                                                                                                                                                                                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CIOC Heat Dissipation        | 8 Watts max. per redundant CIOC node<br>9 Watts max. per redundant CIOC2 node <ul style="list-style-type: none"> <li>■ 2.0 Watts per CIOC</li> <li>■ 2.5 Watts per CIOC2</li> <li>■ 1.34 Watts per Copper Ethernet I/O Communication Port</li> <li>■ 2.0 Watts per Fiberoptic I/O Communication Port</li> </ul> |
| CIOC Output to non-IS CHARMS | 6.3V DC redundant power, at 3.25 A maximum*                                                                                                                                                                                                                                                                     |
| Fuse Protection (Internal)   | Internal Non-replaceable Fuse                                                                                                                                                                                                                                                                                   |
| Mounting                     | 2-wide CHARM I/O Carrier                                                                                                                                                                                                                                                                                        |
| Communication                | Redundant Ethernet connections via CHARM I/O Carrier                                                                                                                                                                                                                                                            |
| Network Addressing           | Auto Assigned during commissioning                                                                                                                                                                                                                                                                              |

\*Actual CIOC Output to CHARMS is dependent on number of installed CHARMS.

| LED Indicators                 |                                               |
|--------------------------------|-----------------------------------------------|
| Green – Power                  | Indicates DC power is applied                 |
| Red – Error                    | Indicates an error condition                  |
| Green – Active/Standby         | Indicates operating mode of each CIOC         |
| Yellow Flashing – Pri./Sec. CN | Indicates valid control network communication |

## IS CHARMS Baseplate Hardware

| Specifications for IS CHARM Baseplate                       |                                                                                                                                                         |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of Channels per Baseplate                            | 12                                                                                                                                                      |
| Number of Base Plates per CIOC                              | 8                                                                                                                                                       |
| Addressing                                                  | One address plug (1 through 8)                                                                                                                          |
| Terminal Blocks                                             | <ul style="list-style-type: none"> <li>■ Standard IS Terminal Block (Light Blue)</li> <li>■ IS Thermocouple / mV Terminal Block (Light Blue)</li> </ul> |
| Shield Connections                                          | 1 screw cage terminal per channel, plus 1 for cable shield<br>0.32 – 2.5 mm <sup>2</sup> / 22 – 14 AWG<br>Gold plated connectors for shield continuity  |
| Wire Strip Length                                           | 7 – 9 mm / 0.28 – 0.36 in.                                                                                                                              |
| Mounting                                                    | DIN rail Latch to T-type rail                                                                                                                           |
| Specifications for IS Baseplate Termination, Top and Bottom |                                                                                                                                                         |
| Shield Drain Wire Connections                               | 2 screw cage terminals<br>0.32 – 2.5 mm <sup>2</sup> / 22 – 14 AWG                                                                                      |
| Wire Strip Length                                           | 7 – 9 mm / 0.28 – 0.36 in.                                                                                                                              |

## DeltaV IS Electronic Marshalling

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### Ordering Information

| CHARM I/O CARD                                                                                                                                                                                                        |              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Description                                                                                                                                                                                                           | Model Number |
| <b>Redundant CIOC2 with Copper Ethernet</b> , includes redundant pair of CHARM I/O Card 2, CHARM I/O Carrier with Screw Terminals, Copper I/O Ports, a Baseplate Identifier and a Baseplate Separation Wall           | SE6505T01*   |
| <b>Redundant CIOC2 with fiber optics Ethernet</b> , includes redundant pair of CHARM I/O Card 2, CHARM I/O Carrier with Screw Terminals, Fiberoptic I/O Ports, a Baseplate Identifier and a Baseplate Separation Wall | SE6505T02    |
| <b>Redundant CIOC Carrier Assembly with Copper Ethernet</b> , includes CHARM I/O Carrier with Screw Terminals, Copper I/O Ports, a Baseplate Identifier and a Baseplate Separation Wall                               | SE6501T05*   |
| <b>Redundant CIOC Carrier Assembly with fiber optics Ethernet</b> , includes CHARM I/O Carrier with Screw Terminals, Fiber-Optic I/O Ports, a Baseplate Identifier and a Baseplate Separation Wall                    | SE6501T06    |
| <b>Redundant CIOC2</b> , includes 2 CHARMS I/O Card 2, (Order these with standard cabinets)                                                                                                                           | SE6504       |

| IS CHARM Baseplates                                                                                                                                                                                              |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Description                                                                                                                                                                                                      | Model Number |
| <b>IS CHARMS Baseplate Assembly with Standard IS CHARM Terminal Blocks</b> , includes IS CHARMS Baseplate, IS CHARM Address Terminal Block, 12 IS CHARM Standard Terminal blocks and a Baseplate Separation Wall | SE4608T01    |

| CHARM I/O Baseplate Extender, Terminator & Cables            |              |
|--------------------------------------------------------------|--------------|
| Description                                                  | Model Number |
| <b>Addressing Plugs</b> , includes Address Plugs 1 through 8 | SE4602       |
| <b>Addressing Plugs</b> , includes Address Plugs 1 through 4 | SE4613       |

\*The copper IOPs in this bundle are only supported in v13.3.1 and later, if it is intended to be used for earlier versions, please request KL1601X1-BA1 and order the CIOC Carrier as KL4101X1-BA1.

Each vertical DIN rail requires a DIN Rail stop to lock baseplates in position. Order VE4054DRS, which is a box of 5.



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PRODUCT: KL4101X1-BA1 / DeltaV CHARM I/O Card Carrier

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