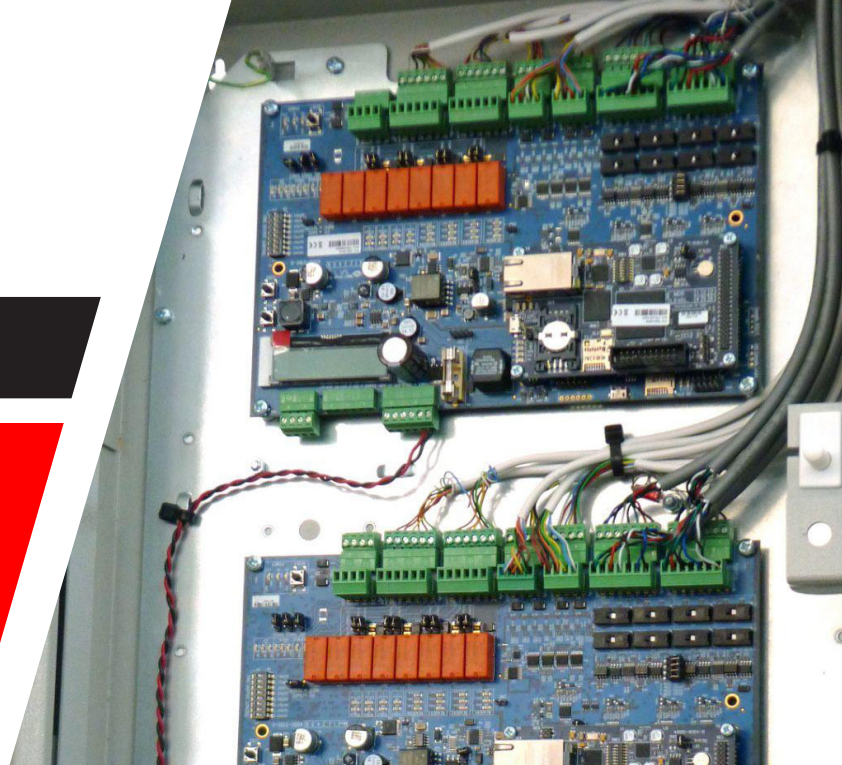# DATASHEET

# Symmetry™ M4000

## Intelligent Controller

## Key Features

**Future-proof controller with Linux Operating System**

**Support for OSDP, SMCLP and Wiegand readers**

**Onboard 1Gb network interface with AES encryption capability**

**Manages up to 1,000,000 cardholders and 65,000 offline transactions**

**Up to 4 readers per DEC**

**Up to 20 readers per M4000 chain**

**20 Inputs/16 Outputs per IOC**

**80 Inputs/64 Outputs per M4000 chain**

**Integrated Intrusion Management is available (Symmetry HSE edition only)**

**Wall mount enclosures available**

## Product Overview

The M4000 Intelligent Door Controller is AMAG Technology's Intelligent controller, compatible with the Symmetry Access Control software (V9.1+). The M4000 supports OSDP readers as well as an onboard Linux operating system.

### M4000 System Architecture:

Each M4000 Door-Entry Controller (DEC) provides 4 reader ports, 8 inputs and 8 outputs. Up to 5 DEC controllers can be part of the same chain, for a maximum of 20 doors per chain (or "node").
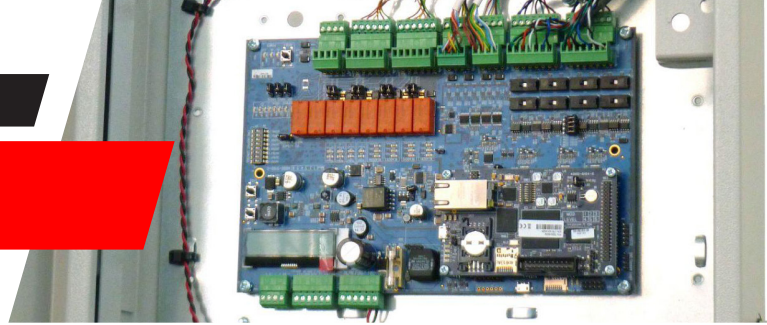
The first DEC in the chain must include an M4000 Database Board (DBB), which provides the network interface and manages all of the DEC controllers.

M4000 Input/Output Controllers (IOC) can be added to any chain to provide additional supervised monitor points and auxiliary outputs. Each M4000 IOC supports 20 monitor points and 16 auxiliary outputs, with up to 4 IOC controllers per chain supported.

M4000 EIOC / ELEV-RELAY can be added to support Elevator Access Control, total of 4 card readers and 64 total elevator floors.

Can support the following configurations: (requires proper hardware quantities and configuration)

1 elevator car, up to 64 total floors
2 elevator cars, up to 32 floor each
4 elevator cars, up to 16 floor each

## Specifications

### Dimensions (Excluding Enclosure)

- M4000-DEC4 & IOC20/16: Width: 9 1/8" (233mm) Height: 5 7/8" (150mm)
- M4000-EIOC: Width: 5 7/8" (150mm) Height: 5 7/8" (150mm)
- ELEV_RELAY: Width: 5 3/4" (390mm) Height: 15 9/16" (395mm)

### Operating Environment

- +14°F to +122°F (-10°C to 50°C)

### Ratings

- M4000-DEC4, database board not fitted: 220mA@12Vdc, or 140mA@24Vdc.
- M4000-DEC4 with database board fitted: 400mA@12Vdc, or 230mA@24Vdc.
- M4000-IOC: 130mA@12Vdc, or 65mA@24Vdc.
- M4000-EIOC with ELEV-RELAY: 895mA@12Vdc, or 456mA@24Vdc

### Reader Ports

- 4 readers (OSDP or Wiegand)
- 4 door monitor inputs
- 4 Exit request inputs
- 4 relay outputs
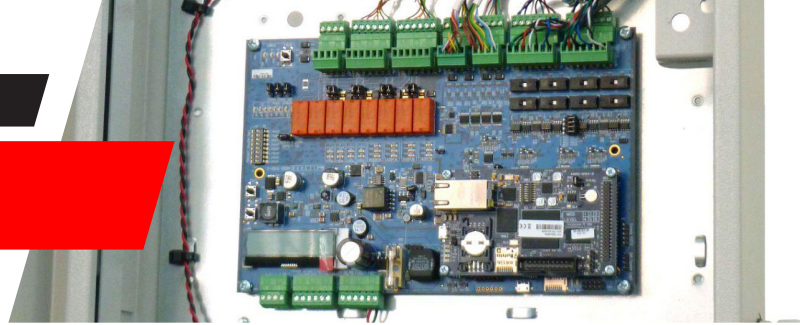- I/O's from unused reader ports can be used as general purpose I/O's

### Wiegand Readers

- 225ft (75m). Use Belden 9539 (one twisted pair unused), or Belden 9537, or equivalent.
- 450ft (150m) by doubling power cores. Use Belden 9539 or equivalent.

The Symmetry multiNODE API server handles all communications between M4000 and the Symmetry software. Up to 250 M4000 nodes can communicate with a single multiNODE API server. Multiple instances of the multiNODE API servers are supported (each on its own server).

Symmetry Sentry is a browser-based software system that allows you to update firmware on M4000 nodes across the network.

**Symmetry™ M4000**



## OSDP Readers
- 225ft (75m). Use Belden 9504 (two twisted pairs unused), or Belden 9502, or equivalent.

## OSDP Readers
- 450ft (150m). Use Belden 9504 or equivalent (one twisted pair unused).
- 900ft (300m) by doubling power cores. Use Belden 9504 or equivalent.

## Storage Capacities
- 1,000,000 cards and 65,000 offline transactions
- Compliance
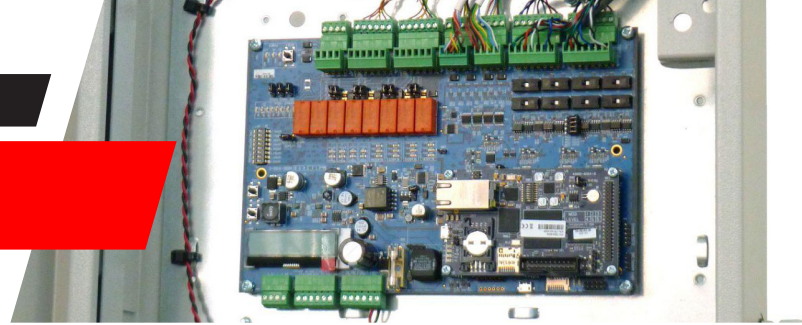- UL 294 access control.
- EMC to EN50130-4:2011
- FCC

## Software Support
- Requires Symmetry Professional or Symmetry Enterprise v9.1 or later

## Wiegand Readers
- 225ft (75m). Use Belden 9539 (one twisted pair unused), or Belden 9537, or equivalent.
- 450ft (150m) by doubling power cores. Use Belden 9539 or equivalent.

## Purchasing Information

**M4000-DBB:** Database controller with onboard NIC

**M4000-DEC4:** M4000 4-door entry controller

**M4000-IOC20/16:** 20 input/16 output controller

**M4000-IPS:** 100-240VAC input, 12\24VDC output (6\3A). Intelligent Power Supply

**M4000-EIOC:** Single Elevator Controller board for up to 16 floors. (Maximum of x4 EIOC per M4000-DDC4 chain).

**ELEV-RELAY:** Single relay board required to interface to each M4000-EIOC controller. Requires x1 M4000-EIOC.

**M4000-CAB2A-ELEV:** CAB2A Enclosure supplied with M4000-EIOC Backplate Earth/Tamper/LED leads & fixings. Can house a combination of x2 M4000-EIOC + x2 ELEV-RELAY boards, together with one M4000-IPS and battery. (NOTE: For use with M4000 elevator board solutions only).

## CAB2 & CAB2A DIAGRAMS
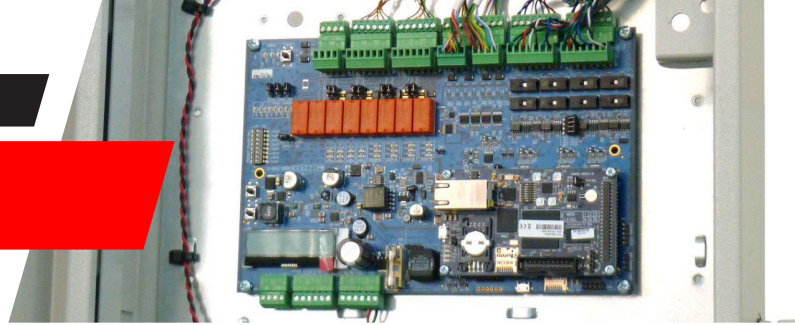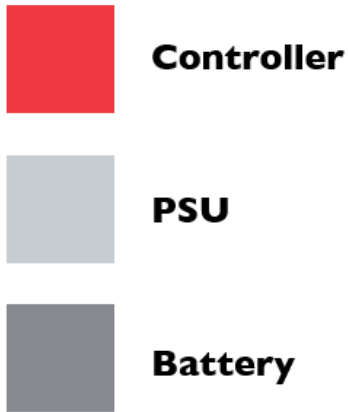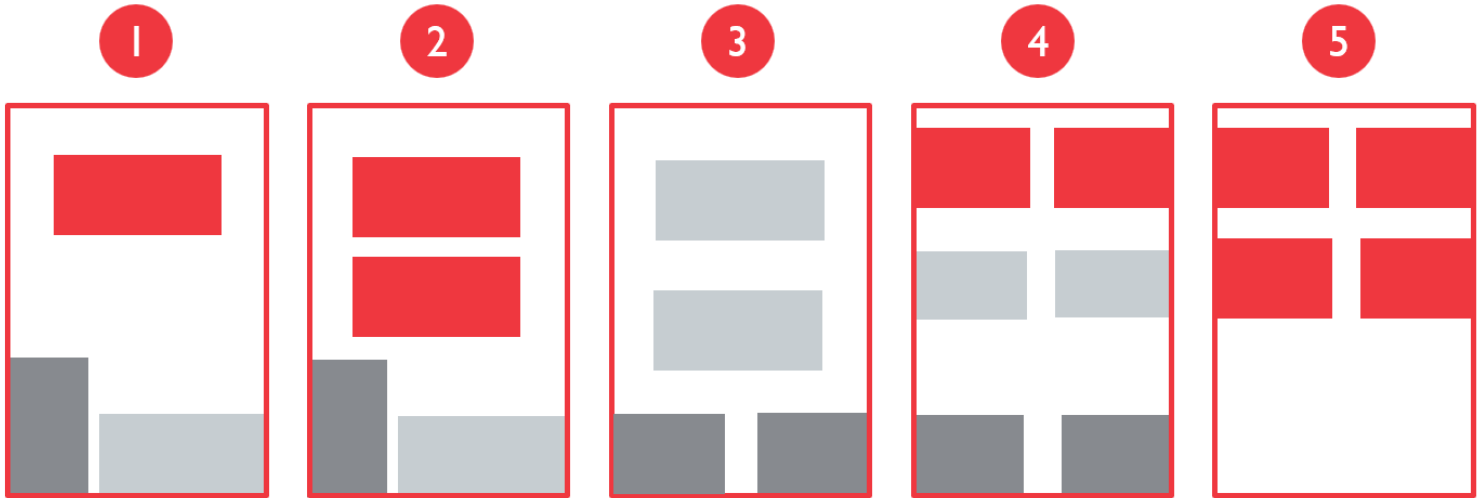


**Legend:**

- 🟥 **Controller**
- ⬜ **PSU**
- ⬛ **Battery**

1. **CAB2 with single M4000 controller and PSU**

2. **CAB2 with two controllers and PSU**

3. **CAB2 with two power supplies**

4. **CAB2A with two controllers and two PSUs**

5. **CAB2A with four controllers**

### Cabinets

CAB 2 dimensions:
- Height: 24 1/16" (611mm)
- Width: 15 3/64" (382mm)
- Depth: 3 15/16" (100mm)

CAB 2A dimensions:
- Height: 24 1/16" (611mm)
- Width: 20 15/16" (532mm)
- Depth: 3 15/16" (100mm)