

## 1. I/O Point Map

### 1.1 Analog Output

Analog output object is command from Master to Drive. AO does not support COS, Override, Minimum On-time, Minimum Off-time and Maximum cycles per hour functions.

| NPT | NPA | Unit | Name              | Range   | Description  |
|-----|-----|------|-------------------|---|--|
| AO  | 1   | Hz   | Command Frequency | 0.00 – Max Freq(FU1-20)                                     | Maximum value should be less than maximum frequency (FU1-20). Maximum frequency can be modified by Keypad. Only when “Opt mode (COM-02)” is “Cmd + Freq” or “Freq”, this object can be set through N2. Drive does not keep this value after power off. |
| AO  | 2   | Sec  | Accel Time        | 0.0 – 600.0   | Drive does not keep this value after power off.  |
| AO  | 3   | Sec  | Decel Time        | 0.0 – 600.0   | Drive does not keep this value after power off.  |
| AO  | 4   | -    | Drive mode        | 0 – KeyPad<br>1 – Fx/Rx-1<br>2 – Fx/Rx-2                    | This object is meaningless if “Opt mode (COM-02)” is set to “Cmd + Freq” or “Command”.   |
| AO  | 5   | -    | Freq mode         | 0 – KeyPad-1<br>1 – KeyPad-2<br>2 – V1<br>3 – I<br>4 – V1+I | This object is meaningless if “Opt mode (COM-02)” is set to “Cmd + Freq” or “Freq”.  |

## 1.2 Binary Output

Binary Output object is command from Master to Drive. BO does not support COS, Override, Minimum On-time, Minimum Off-time and Maximum cycles per hour functions.

| NPT | NPA | Name        | Range           | Description  |
|-----|-----|-------------|-----------------|--|
| BO  | 1   | Stop        | 1 – Stop        | Drive will stop when BO1 value is set to “1” regardless of the setting value of BO2 ~ 3. |
| BO  | 2   | Run Forward | 1 – Forward Run | Drive will stop when BO1 value is set to “1” or BO2 value is set to “0”.                 |
| BO  | 3   | Run Reverse | 1 – Reverse Run | Drive will stop when BO1 value is set to “1” or BO3 value is set to “0”.                 |
| BO  | 4   | Reset Fault | 1 – Reset       |  |

## 1.3 Analog Input

Analog Input object is data from Drive to master to monitor drive data. The analog input objects support below feature. Low alarm limit, low warning limit, high alarm limit, high warning limit and values. COS, warning and alarm are programmable.

| NPT | NPA | Unit | Name             | Range |
|-----|-----|------|------------------|-------|
| AI  | 1   | Amps | Output Current   |       |
| AI  | 2   | Hz   | Output Frequency |       |
| AI  | 3   | RPM  | Output Speed     |       |

| NPT | NPA | Unit | Name       | Range  |
|-----|-----|------|------------|--|
| AI  | 4   | -    | Fault Code | 0x0000 – No fault<br>0x0001 – OC<br>0x0002 – OV<br>0x0004 – EXT<br>0x0008 – BX<br>0x0010 – LV<br>0x0020 – FUSE<br>0x0040 – GF<br>0x0080 – OH<br>0x0100 – ETH<br>0x0200 – OLT |

#### 1.4 Binary Input

The Binary Input object is data from Drive to master to monitor drive data. The analog input objects support COS.

| NPT | NPA | Name               | Description |
|-----|-----|--------------------|-------------|
| BI  | 1   | Stopped            |             |
| BI  | 2   | Running Forward    |             |
| BI  | 3   | Running Reverse    |             |
| BI  | 4   | Faulted            |             |
| BI  | 5   | Accelerating       |             |
| BI  | 6   | Decelerating       |             |
| BI  | 7   | Reached Full Speed |             |
| BI  | 8   | DC Braking         |             |

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## N2 Metasys® Point Map Specification

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| NPT | NPA | Name            | Description |
|-----|-----|-----------------|-------------|
| BI  | 9   | FX Input        |             |
| BI  | 10  | RX Input        |             |
| BI  | 11  | BX Input        |             |
| BI  | 12  | RST Input       |             |
| BI  | 13  | P1 Input        |             |
| BI  | 14  | P2 Input        |             |
| BI  | 15  | P3 Input        |             |
| BI  | 16  | P4 Input        |             |
| BI  | 17  | P5 Input        |             |
| BI  | 18  | P6 Input        |             |
| BI  | 19  | Q1 (OC1) Output |             |
| BI  | 20  | Q2 (OC2) Output |             |
| BI  | 21  | Q3 (OC3) Output |             |
| BI  | 22  | Aux 1 Output    |             |

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## 2. Parameter Configuration

| Parameter                | Description   |
|--------------------------|---|
| Opt B/D<br>(COM-01)      | After power on, “RS485” should be displayed when N2 option card is inserted properly.   |
| Opt mode<br>(COM-01)     | (1). “None” : Run/Stop command(BO-1,2,3), Frequency command(AO-1) through N2 are not available.<br>(2). “Command” : Run/Stop command(BO-1,2,3) through N2 is available, but Frequency command(AO-1) through N2 is not available.<br>(3). “Freq” : Frequency command(AO-1) through N2 is available, but Run/Stop command(BO-1,2,3) through N2 is not available.<br>(4). “Cmd+ Freq” : Both of them, Run/Stop command(BO-1,2,3), Frequency command(AO-1), through N2 are available. |
| Inv. No.<br>(I/O-46)     | Enter the N2 node address. (1-32)   |
| Baud Rate<br>(I/O-47)    | This parameter has no effect. The baud rate will be fixed at 9600 regardless of this parameter setting.   |
| Lost command<br>(I/O-48) | (1). “None” : The drive keeps going after “Time out(I/O-49)” for network connection lost is expired.<br>(2). “Freerun” : The drive blocks IGBT gate after “Time out(I/O-49)” for network connection lost is expired.<br>(3). “Stop” : The drive will stop after “Time out(I/O-49)” for network connection lost is expired.  |
| Time out<br>(I/O-49)     | Selectable from 0.0 to 120.0 seconds. If communications is lost for longer than the time-out time, the drive will   |

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|  | operate according to “Lost command(I/O-48). If the time-out is set to 0.0 seconds, the feature is disabled and the drive won’t stop when communications is lost. |
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