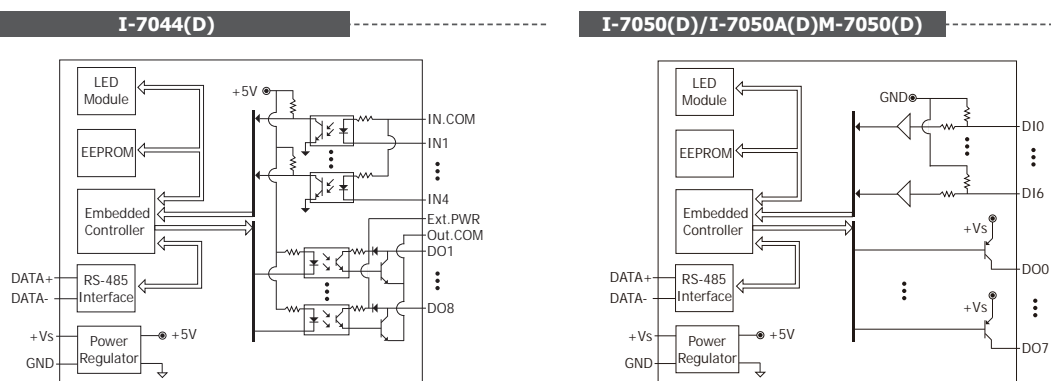


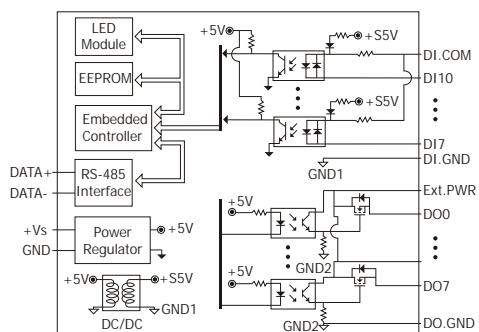


| Digital Input & Output Module          |                                 |                                 |                                 |                                       |                                 |
|----------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------------|---------------------------------|
| Model Name                             | I-7044(D)                       | I-7050(D)                       | I-7050A(D)                      | I-7055(D)                             | I-7055(D)-NPN                   |
| Pictures                               |                                 |                                 |                                 |                                       |                                 |
| <b>Digital Input</b>                   |                                 |                                 |                                 |                                       |                                 |
| Channel                                | 4                               | 7                               |                                 | 8                                     |                                 |
| Contact                                | Wet                             | Dry                             | Wet                             | Dry + Wet                             |                                 |
| Sink/Source (NPN/PNP)                  | Sink/Source                     | Source                          | Sink                            | Dry: Source<br>Wet: Sink/Source       |                                 |
| Wet Contact                            | On Voltage Level                | +1 V <sub>oc</sub> Max.         | -                               | +4 ~ 30 V <sub>oc</sub>               | +10 ~ 50 V <sub>oc</sub>        |
|                                        | Off Voltage Level               | +4 ~ 30 V <sub>oc</sub>         | -                               | +1 V <sub>oc</sub> Max.               | +4 V <sub>oc</sub> Max.         |
| Dry Contact                            | On Voltage Level                | -                               | Open                            | -                                     | Close to GND                    |
|                                        | Off Voltage Level               | -                               | Close to GND                    | -                                     | Open                            |
| Counter (100 Hz, 16-bit)               | Yes                             |                                 | Yes                             |                                       | Yes                             |
| Input Impedance                        | 3 K $\Omega$                    |                                 | 100 K $\Omega$                  |                                       | 10 K $\Omega$                   |
| Overshoot Protection                   | +/-35 V <sub>oc</sub>           |                                 | -                               |                                       | +/-70 V <sub>oc</sub>           |
| <b>Digital Output</b>                  |                                 |                                 |                                 |                                       |                                 |
| Channel                                | 8                               |                                 |                                 |                                       |                                 |
| Type                                   | Open Collector                  | Open Collector                  | Open Emitter                    | MOSFET                                |                                 |
| Sink/Source (NPN/PNP)                  | Sink                            | Sink                            | Source                          | Source                                | Sink                            |
| Load Voltage                           | +3.5 ~ 30 V <sub>oc</sub>       | +3.5 ~ 30 V <sub>oc</sub>       |                                 | +10 ~ 40 V <sub>oc</sub>              | +3.5 ~ 50 V <sub>oc</sub>       |
| Max. Load Current                      | 375 mA/Channel                  | 30 mA/Channel                   |                                 | 650 mA/Channel                        | 700 mA/Channel                  |
| Overshoot Protection                   | -                               |                                 | -                               | 47 V <sub>oc</sub>                    | 60 V <sub>oc</sub>              |
| Overload Protection                    | -                               |                                 | -                               | 1.4 A (with short-circuit protection) |                                 |
| Power-on Value                         | Yes                             |                                 |                                 |                                       |                                 |
| Safe Value                             | Yes                             |                                 |                                 |                                       |                                 |
| <b>System</b>                          |                                 |                                 |                                 |                                       |                                 |
| Dual Watchdog                          | Yes                             |                                 |                                 |                                       |                                 |
| ESD (IEC 61000-4-2)                    | +/-2 kV                         |                                 | -                               |                                       | +/-4 kV                         |
| EFT (IEC 61000-4-4)                    | +/-2 kV                         |                                 | -                               |                                       | +/-4 kV                         |
| Surge (IEC 61000-4-5)                  |                                 |                                 | -                               |                                       | +/-3 kV                         |
| Intra-Module Isolation, Field-to-Logic | 3750 V <sub>rms</sub>           |                                 | -                               |                                       | 3750 V <sub>rms</sub>           |
| Power Input                            | 10 ~ 30 V <sub>oc</sub>         |                                 |                                 |                                       |                                 |
| Power Consumption                      | 1.0 W;<br>1.7 W for (D) version | 0.4 W;<br>1.1 W for (D) version | 0.5 W;<br>1.2 W for (D) version | 0.8 W;<br>1.6 W for (D) version       | 1.2 W;<br>2.2 W for (D) version |

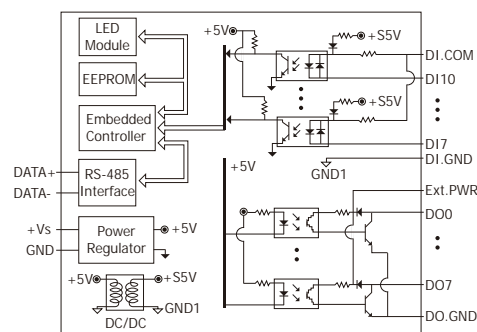
### Internal I/O Structure



**I-7055(D)/M-7055(D)**

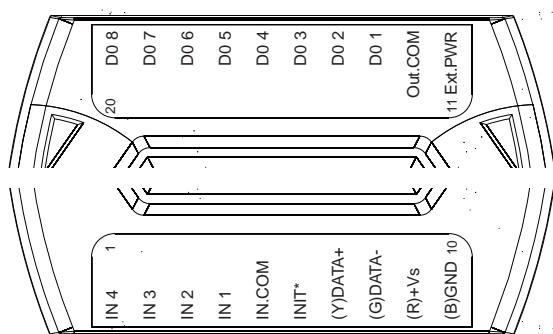


**I-7055(D)-NPN/M-7055(D)-NPN**

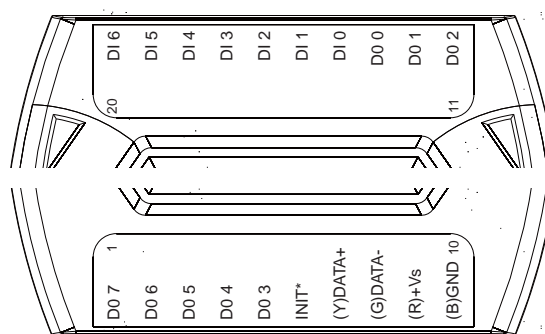


## Pin Assignments

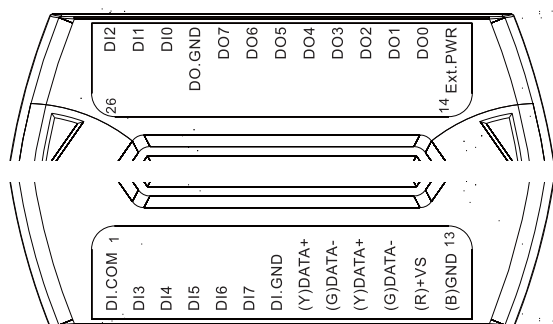
**I-7044(D)**



**I-7050(D)/I-7050A(D)M-7050(D)**



**I-7055(D)/M-7055(D)**



**I-7055(D)-NPN/M-7055(D)-NPN**

