

EFCO Technology

Application Note

Document Name	AN6_Eagle Eyes_Isolated DIO
Applicable Products	All Eagle Eyes series
Application Note Subject	Isolated DIO
Usage Designation	<input type="checkbox"/> Internal <input checked="" type="checkbox"/> External

Preface

Revision History

Revision	Date	Author	Description
1.0	2019/011/20	J Yen	Preliminary release

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Warnings, Cautions and Notes

Warning! Warnings indicate conditions, which if not observed, can cause personal injury!



Caution! Cautions are included to help you avoid damaging hardware or losing data.



Note! Notes provide optional additional information.



Title

What is the max voltage and current of the isolated DIO? And connection method?

Answer

1. Function Description

DI/DO Support NPN(Sink) and PNP(Source) mode.



2.54mm 2x10 Terminal Block Including (DI: 8bit, DO: 8bit, DI COM, VCC and GND pins).

DI mode selection by external H/W connection. DO mode selection by BIOS setting or AP.

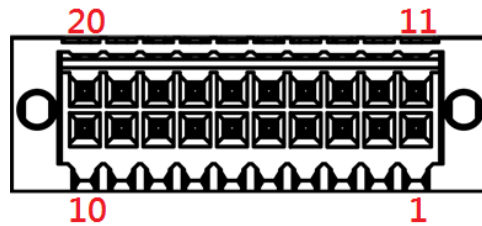
DI/DO Safety-Related Certifications:

DI	DO
Recognized by UL1577 (Double protection isolation), file No. E64380 (as model No. PC3H4)	2500-VRMS Isolation for 1 minute per UL 1577
Approved by VDE, DIN EN60747-5-2(*) (as an option), file No. 40009162 (as model No. PC3H4)	4242-VPK Isolation per DIN V VDE V 0884-10 (VDE V 0884-10):2006-12, 566 VPK Working Voltage
Package resin: UL flammability grade (94V-0)	CSA Component Acceptance Notice 5A, IEC ISO7141CC 60950-1 and IEC 61010-1 End Equipment ISO7141FCC Standards
	CQC Certification per GB 4943.1-2011

DI/DO Operation Characteristics:

Parameter	DI	DO
Operation Voltage	5 ~ 48V DC	Source Mode:5 ~ 48V DC Sink Mode: 5~40V DC
Input/Output Current Limit	100mA	100mA
Turn On Delay Time (Max.)	25 uS	Source Mode: 15 uS Sink Mode: 60uS
Turn Off Delay Time (Max.)	25 uS	Source Mode: 15 uS Sink Mode: 60uS

2. Pin Define

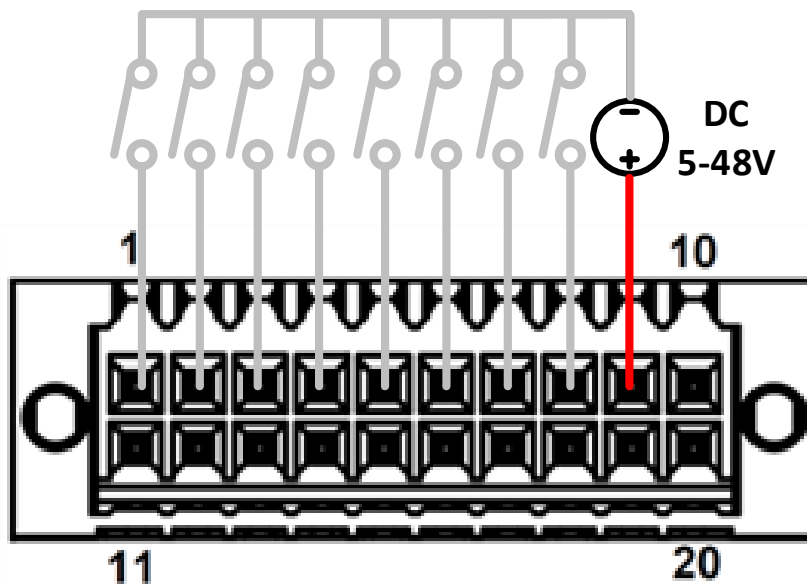


Pin No	Description	Pin No.	Description
1	Digital Input bit 1	11	Digital Output bit 1
2	Digital Input bit 2	12	Digital Output bit 2
3	Digital Input bit 3	13	Digital Output bit 3
4	Digital Input bit 4	14	Digital Output bit 4
5	Digital Input bit 5	15	Digital Output bit 5
6	Digital Input bit 6	16	Digital Output bit 6
7	Digital Input bit 7	17	Digital Output bit 7
8	Digital Input bit 8	18	Digital Output bit 8
9	Digital Input COM	19	Isolation GND
10	Isolation GND	20	Isolation VCC

3. Isolation Digital Input Connection Method

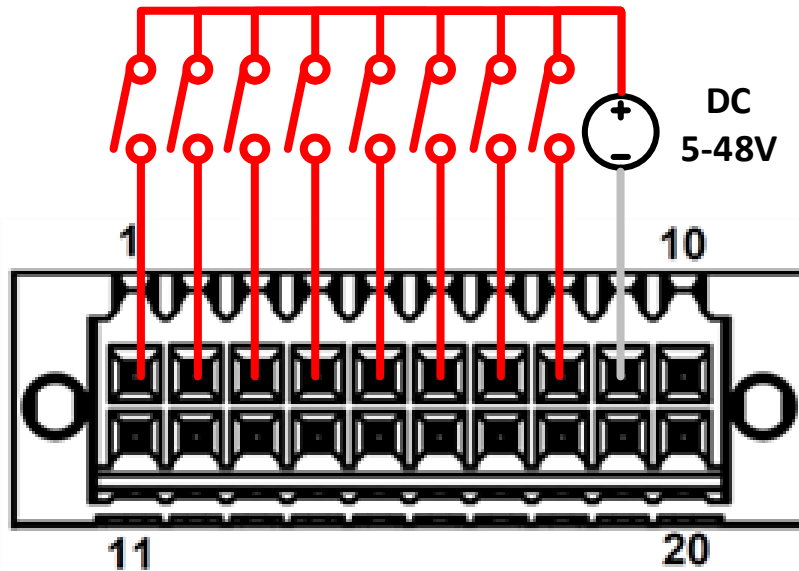
3.1 Digital Input Sink Mode Connection Method

Pin 9 Digital Input COM pin connection to V+, Input pin (Pin No 1-8) Control by V-



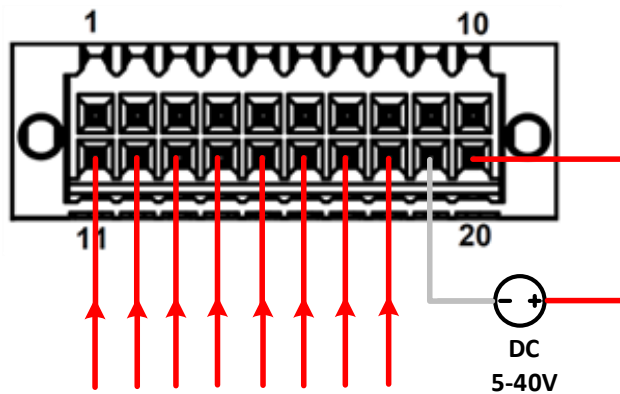
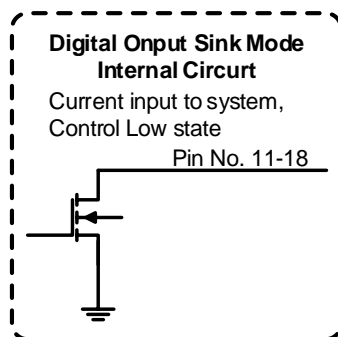
3.2 Digital Input Source Mode Connection Method

Pin 9 Digital Input COM pin connection to V-, Input pin (Pin No 1-8) Control by V+



4. Isolation Digital Output Connection Method

4.1 Digital Output Sink Mode Connection Method



4.2 Digital Output Source Mode Connection Method

