

**I-87041W**

32-channel Sink-type Open
Collector Isolated Digital
Output Module

I-87041PW

32-channel Sink-type Open
Collector Isolated Self Protected
Digital Output Module

Introduction

The I-87041W/I-87041PW module offers 32 Digital Output channels, each of which features Photocouple isolation and supports sink-type output using an open collector. The I-87041W/I-87041PW includes 32 LED indicators that can be used to monitor the status of the Digital Output channels, and options are available for configuring both power-on and safe values. 4 kV ESD protection and 3750 Vrms intra-module isolation is provided as standard. The I-87041W/I-87041PW can be paired with a daughterboard, such as the DN-37-381-A for easy wiring, or the DN-8K32R for relay output.

The I-87041PW integrates over-current, over-voltage and short-circuit functionality. ICP DAS recommends selecting either the "PW" version of the digital output module for industrial use.

System Specifications

Model	I-87041W	I-87041PW
Communication		
Interface	RS-485	
Format	N, 8, 1	
Baud Rate	1200 to 115200 bps	
Protocol	DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)	
LED Indicators/Display		
System LED Indictors	Yes, 1 as Power/Communication Indicator	
I/O LED Indicators	32 as Digital Output Indicators	
Isolation		
Intra-module Isolation, Field-to-Logic	3750 Vrms	
EMS Protection		
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal	± 8 kV Contact for each Terminal
	±8 kV Air for Random Point	±16 kV Air for Random Point
Power		
Power Consumption	1.7 W Max.	
Mechanical		
Dimensions (L x W x H)	114 mm x 30 mm x 85 mm	
Environment		
Operating Temperature	-25 to +75°C	
Storage Temperature	-40 to +85°C	
Humidity	10 to 95% RH, Non-condensing	

Features

- 32-channel Open Collector Output
- Sink-type Digital Output
- Short circuit protection, Overvoltage Protection and Overload Protection for I-87041PW
- Optional Daughterboards
- 4 kV ESD Protection
- 3750 Vrms Intra-module Isolation
- Configurable Power-on Value
- Configurable Safe Value
- RoHS Compliant
- Wide Operating Temperature Range: -25 to +75°C

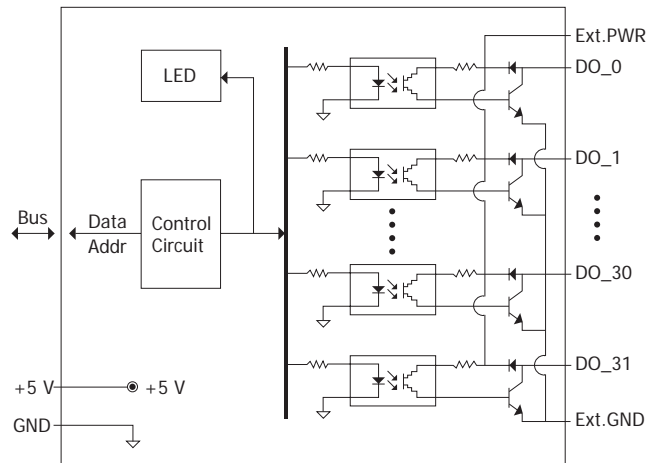
**Applications**

- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

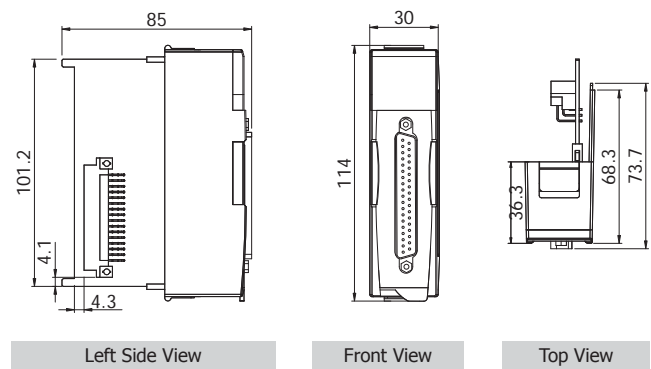
I/O Specifications

Model	I-87041W	I-87041PW
Digital Output		
Channels	32	
Type	Open Collector	
Sink/Source (NPN/PNP)	Sink	
Load Voltage	+5 VDC ~ +30 VDC	+5 VDC ~ +50 VDC
Max. Load Current	100 mA/Channel	200 mA/Channel
Output Type	Open Collector	
Overvoltage Protection	-	60 VDC
Overload Protection	-	1.1 A
Short-circuit Protection	-	Yes
Power-on Value	Yes	
Safe Value	Yes	

Internal I/O Structure



Dimensions (Units: mm)



Wire Connections

Output Type	ON State Readback as 1	OFF State Readback as 0
Digital Output (Resistance Load)		
Digital Output (Inductive Load)		

Pin Assignments

Pin Assignment	Terminal	No.	Pin Assignment
Ext.PWR	19	37	Ext.PWR
Ext.GND	18	36	Ext.GND
Ext.GND	17	35	DO_31
DO_15	16	34	DO_30
DO_14	15	33	DO_29
DO_13	14	32	DO_28
DO_12	13	31	DO_27
DO_11	12	30	DO_26
DO_10	11	29	DO_25
DO_9	10	28	DO_24
DO_8	09	27	DO_23
DO_7	08	26	DO_22
DO_6	07	25	DO_21
DO_5	06	24	DO_20
DO_4	05	23	DO_19
DO_3	04	22	DO_18
DO_2	03	21	DO_17
DO_1	02	20	DO_16
DO_0	01		

37-pin Male D-sub Connector

Ordering Information

I-87041W-G CR	32-channel Sink-type Open Collector Isolated Digital Output Module using the DCON Protocol (Gray Cover) (RoHS)
I-87041PW-G CR	32-channel Sink-type Open Collector Isolated Self Protected Digital Output Module using the DCON Protocol (Gray Cover) (RoHS)

Accessories

	DN-8K32R	32-channel Relay Output Board, including one CA-3705A 37-pin Male-Female D-sub cable, 0.5 m
	DN-37-A	DIN-Rail Mountable I/O Connector Block with 37-pin D-sub Connector (Pitch: 5.08 mm)
	DN-37-381-A	DIN-Rail Mountable I/O Connector Block with 37-pin D-sub Connector (Pitch: 3.81 mm)
	CA-3705A	Male-Female D-sub Cable 0.5 m
	CA-3710A	Male-Female D-Sub Cable 1 m
	CA-3715A	Male-Female D-Sub Cable 1.5 m

	MD-11	Input Type MagicWire for I-8041W/I-87041W
	MD-11	Output Type MagicWire for I-8040W/I-87040W
	SG-770 CR	7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)
	I-87041W and I-87041PW with DN-8K32R	
	I-87040W/41W/42W and I-87040PW/41PW with DN-37-381-A	