R-9041

32-ch, isolated digital output

Features

- 32 digital output (sink) channels
- Safety value (Preset/Hold)
- Power-on value
- Input channel LED indication
- Termination board disconnection detection
- Digital output diagnostic function
- Redundant switching time (<1 ms)

Introduction

R-9041 is equipped with 32 NPN digital output channels (sink mode), each capable of driving a 0.1A load. It provides LED indicators for the ON/OFF status of each output channel and supports disconnection detection between the module and terminal board. Additionally, it features 3000VDC isolation between channels and backplane bus, enhancing its ability to resist noise interference in industrial environments without affecting the operation of the RIO-98x0 system.

Specifications

Features	
Redundant	Yes (Switching time < 1ms)
Disconnection Detection	Yes
Safety Value	Yes (Preset/Hold)
Power-on Value	Yes
LED Indicator	1 PWR, 1 MOD, 1 ACT, 1 DX, 1 ERR
I/O Indicator	32 as channel 0~31 status
Digital Output	
Number of Channels	32 (NPN) (P-COM) (Ch00~15 : GNDG1 ; Ch16~31 : GNDG2)
Type	Current Sinking, Open-Collector
Output Load Current	100 mA/Channel @24 VDC
Output Switching	100 us
Output Impedance	< 1 Ω
Channel Protection	Over-current Protection
Isolation	3000 VDC

Certification	
EMC	EN 61000-6-2 (EMS) EN 61000-6-4 (EMI) IEC/EN 61000-4-2 (ESD) IEC/EN 61000-4-4 (EFT)
General	
Termination Board	RDB-S05, RDB-D05
Max. Power Consumption	1.7 W
Operating Temperature	-25 ~ 70 ℃
Storage Temperature	-30 ~ 75 ℃
Humidity	5 ~ 95 % RH, Non-condensing
Weight	200g
Dimensions (WxLxH)	33mm x 129mm x 130mm

I/O Structure
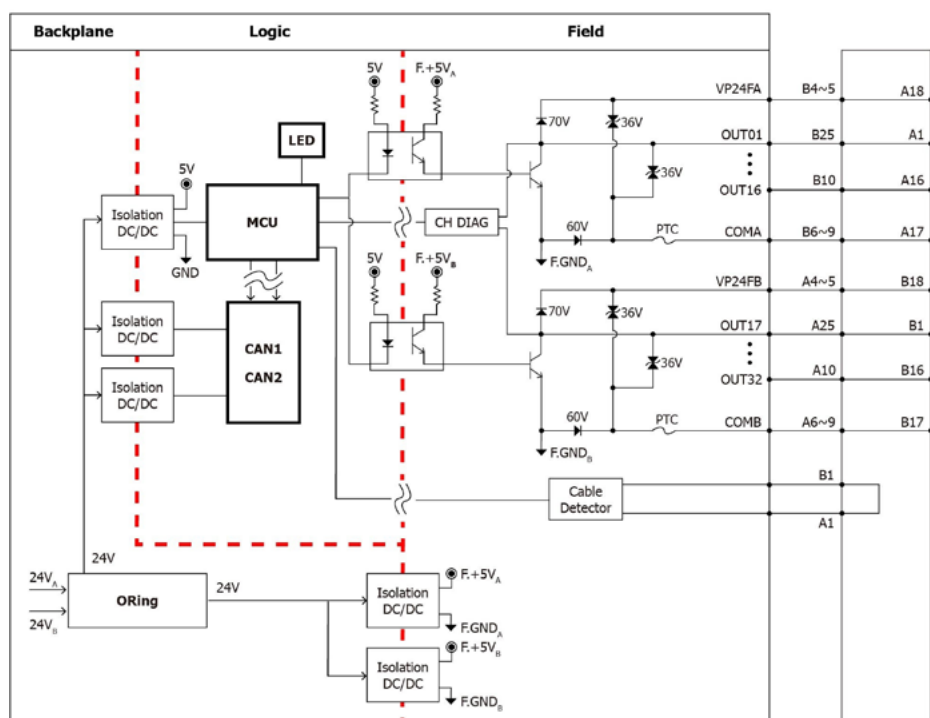
Pin Assignment
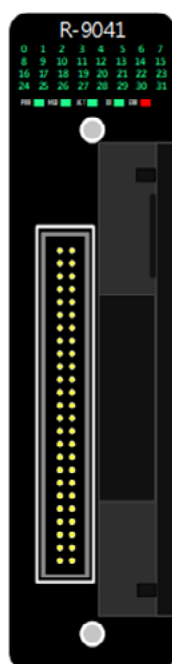
Pin Assigment Name	Terminal No.		Pin Assigment Name
DO_0	A1	B1	DO_16
DO_1	A2	B2	DO_17
DO_2	A3	B3	DO_18
DO_3	A4	B4	DO_19
DO_4	A5	B5	DO_20
DO_5	A6	B6	DO_21
DO_6	A7	B7	DO_22
DO_7	A8	B8	DO_23
DO_8	A9	B9	DO_24
DO_9	A10	B10	DO_25
DO_10	A11	B11	DO_26
DO_11	A12	B12	DO_27
DO_12	A13	B13	DO_28
DO_13	A14	B14	DO_29
DO_14	A15	B15	DO_30
DO_15	A16	B16	DO_31
COM_A	A17	B17	COM_B
COM_A	A18	B18	COM_B
COM_A	A19	B19	COM_B
COM_A	A20	B20	COM_B
Ext. 24V_A	A21	B21	Ext. 24V_B
Ext. 24V_A	A22	B22	Ext. 24V_B
X	A23	B23	X
X	A24	B24	X
BK	A25	B25	BK

Dimensions (Units: mm)

Left View

Front View
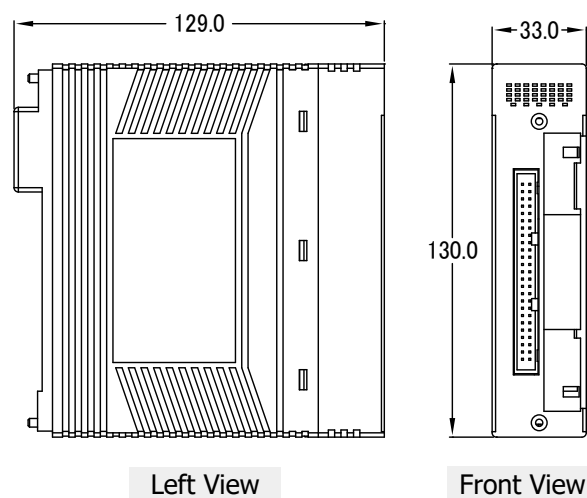
Ordering Information

R-9041 CR	32-ch, isolated digital output (RoHS)

Accessories

RDB-S05 CR	Single I/O termination board (RoHS), for R-9041
RDB-D05 CR	Duplex I/O termination board (RoHS), for R-9041