PROSAFE-RS FIO

Product Data Sheet

SDV144-S53 S4

Sixteen-Channel Digital Input Module

DIGITAL INPUT CHANNELS	ISOLATION ARRANGEMENT	SIGNAL CONTACT	ON RESISTANCE
16	**Module isolation**	**No-voltage contact**	**1 kohm maximum**

Yokogawa SDV144-S53 S4 is a sixteen-channel digital input module for ProSafe-RS FIO safety control and node units. It accepts no-voltage field contacts with module-level isolation, and the SDV144 family supports dual-redundant arrangements. Its contact input distinguishes a closed circuit at up to 1 kohm from an open circuit of at least 100 kohm.

01 TECHNICAL DATA

Digital input channels	16
Isolation arrangement	Module isolation
Signal contact	No-voltage contact
ON resistance	1 kohm maximum
OFF resistance	100 kohm minimum
Input current	6 mA +/-20% at 24 V DC, 0 ohm
External supply	24 V DC +20%/-10%
External supply current capacity	200 mA
Instantaneous maximum input	30.0 V DC
Maximum input response	40 ms

Yokogawa GS 32Q06K40-31E, ninth edition, 2019; SDV144 S4 input table and installation notes.

02 ADDITIONAL PRODUCT DATA

5 V backplane consumption	290 mA maximum
24 V backplane consumption	140 mA maximum
Contact switching requirement	24 V DC +20%/-10%; at least 10 mA
Basic input-system withstand	2 kV AC for 1 minute; floating field supply
Operating temperature selection	-20 to 70 C

03 PRODUCT FUNCTION

For style S4, the documented external supply is 24 V DC with +20/-10 percent tolerance and 200 mA current capacity. Input current is 6 mA plus or minus 20 percent under the stated 24 V, zero-ohm condition, and maximum response time is 40 ms. The S53 selection uses pressure-clamp or MIL connections without explosion protection and includes the G3, -20 to 70 C selection. The input-to-system dielectric rating depends on the field-supply grounding and actual cable insulation.

04 SYSTEM COMPATIBILITY

Use the S4 supply tolerance of +20/-10 percent rather than copying the +/-5 percent figure reserved for styles S1, S2 and S3. Include both the 5 V and 24 V backplane consumption in the host load calculation and respect the 30 V instantaneous input ceiling.

05 REFERENCE

Yokogawa GS 32Q06K40-31E, ninth edition, 2019; SDV144 S4 input table and installation notes.

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