

Schneider Service Manual

STBDDI3420K

1. Description

STBDDI3420K

3. Product Information

STBDDI3420K | Schneider Electric | Digital input kit, Modicon STB

Manufacturer : Schneider Electric

Product No. : STBDDI3420K

Product Type : Digital input kit, Modicon STB

Range of Product : Modicon STB distributed I/O solution

Product or Component Type : Standard digital input kit

Kit composition :

STBXTS2100, 6-terminal spring clamp connector

STBDDI3420 module

STBXTS1100, 6-terminal screw type connector

STBXBA1000 base

Discrete input number : 4

Discrete input voltage : 24 V

Discrete input voltage type : DC

Input voltage limits :

11...30 V at state 1

-3...5 V at state 0

Acceptable Input Voltage : 30 V

Absolute maximum voltage : 56 V 1.3 ms

Discrete input current : 8 mA

Current state 0 guaranteed : ≤ 1.2 mA

Current state 1 guaranteed : ≥ 2.5 mA

Discrete input logic : Positive or negative

Response time :

0.925 ms off-to-on 0.5 ms

1.35 ms on-to-off 0.5 ms

Protection type : Power protection integrated fuse on PDM time lag 10 A

Input protection resistor-limited

Reverse polarity protection

Insulation between channels and logic bus : 1500 V for 1 minute

Cold swapping : Yes

Hot swapping : Yes for standard NIMs

Input filtering :

1 ms

2 ms

4 ms

8 ms

0.5 ms

16 ms +/- 0.25 ms

Current supplied by sensor : 100 mA per channel

Product Compatibility :

I/O base STBXBA1000

Power distribution module STBPDT3100/3105

[Us] rated supply voltage : 24 V DC

Supply : Power distribution module

Current consumption : 45 mA 5 V DC logic bus

Marking : CE

Overvoltage category : II

Status LED :

1 LED (Green) module status (RDY)

1 LED per channel (Green) channel status (IN1 to IN4)

1 LED (Red) module error (ERR)

Main

Range of product Modicon STB distributed I/O solution

Product or component type Standard digital input kit

Kit composition STBXTS2100, 6-terminal spring clamp connector

STBDDI3420 module

STBXTS1100, 6-terminal screw type connector

STBXBA1000 base

Discrete input number 4

Discrete input voltage 24 V

Discrete input voltage type DC

Complementary

Input voltage limits 11...30 V at state 1

-3...5 V at state 0

Permissible voltage 30 V

Absolute maximum voltage 56 V 1.3 ms

Discrete input current 8 mA

Current state 0 guaranteed ≤ 1.2 mA

Current state 1 guaranteed ≥ 2.5 mA

Discrete input logic Positive or negative

Response time 0.925 ms off-to-on 0.5 ms

1.35 ms on-to-off 0.5 ms

Protection type Power protection integrated fuse on PDM time lag 10 A

Input protection resistor-limited

Reverse polarity protection

Insulation between channels and logic bus

1500 V for 1 minute

Cold swapping Yes

hot swapping Yes for standard NIMs

Input filtering 1 ms

2 ms

4 ms

8 ms

0.5 ms

16 ms +/- 0.25 ms

Current supplied by sensor 100 mA per channel

Product compatibility I/O base STBXBA1000

Power distribution module STBPDT3100/3105

[Us] rated supply voltage 24 V DC

Supply Power distribution module

Current consumption 45 mA at 5 V DC for logic bus

Marking CE

Overvoltage category II

Status LED 1 LED (green) module status (RDY)

1 LED per channel (green) channel status (IN1 to IN4)

1 LED (red) module error (ERR)

Depth 65.1 mm

Height 18.4 mm

Width 125 mm

Net weight 0.111 kg

Environment

Standards IEC 61131-2 Type 1

Product certifications CSA

FM Class 1 Division 2

UL

Pollution degree 2 conforming to IEC 60664-1

Operating altitude ≤ 2000 m

IP degree of protection IP20 conforming to IEC 61131-2 class 1

Ambient air temperature for operation

-25...70 °C (without derating)

Ambient air temperature for operation

32...140 °F without derating

Ambient air temperature for storage

-40...85 °C without derating

Ambient air temperature for
storage

-40...185 °F without derating

Relative humidity 95 % at 60 °C without condensation

Vibration resistance 3 gn at 58...150 Hz on 35 x 7.5 mm symmetrical DIN rail

5 gn at 58...150 Hz on 35 x 15 mm symmetrical DIN rail

+/-0.35 mm at 10...58 Hz

Shock resistance 30 gn for 11 ms conforming to IEC 88 reference 2-27