ABB ABB Series Service Manual

DI825

1. Description

The DI825 is an 8 channel 125 V d.c. digital input module for the S800 I/O. The input range is 71 - 150 V and the input current is 3.0 mA at 125 V. The inputs are individually isolated.

3. Product Information

The DI825 is an 8 channel 125 V d.c. digital input module for the S800 I/O. The input range is 71 - 150 V and the input current is 3.0 mA at 125 V. The inputs are individually isolated. Every input channel consists of current limiting components, EMC protection components, input state indication LED, optical isolation barrier. Channel 1 can be used as voltage supervision input for channels 2 - 4, and channel 8 can be used as voltage supervision input for channels 5 - 7.

If the voltage supervision is used and the voltage connected to channel 1 or 8 disappears, the channel error will be set for the channels and the Warning LED turns on. The error signal can be read from the ModuleBus.

Features and benefits

8 channels for 125 V d.c. inputs

Individually isolated channels

Input status indicators

Sequence of event (SOE) functionality

Signal filtering

MTUs that match this product

,

TU811V1

General info

Article number 3BSE036373R1

Type Digital Input

Signal specification 125 V d.c.

Number of channels 8

Signal type Current sinking

HART No

SOE Yes

Redundancy No

High integrity No

Intrinsic safety No

Mechanics S800

Detailed data

Input voltage range, "0" 0 .. 20 V

Input voltage range, "1" 71 .. 156 V

Input impedance 41.5 kΩ

Isolation Individually isolated channels

Filter times (digital, selectable) 0...100 ms

Current limiting Sensor power can be current limited by the MTU

Maximum field cable length 600 meters (656 yards)

Event recording accuracy -0.25 ms...1.0 ms

Event recording resolution 0.4 ms

Rated insulation voltage 250 V

Dielectric test voltage 2300 V a.c. Ch - Ground, 1350 V a.c. Ch - Ch

Power dissipation Max. 4.9 W

Current consumption +5 V Modulebus Max. 90 mA

Current consumption +24 V Modulebus 0

Current consumption +24 V external 0

Diagnostics

Front LED’s F(ault), R(un), W(arning), Channel 1-8 Status

Supervision Process voltage. Channel 1 and 8 can be used per group

Status indication of supervision Module Error, Module Warning, Channel error

Environment and certification

CE mark Yes

Electrical safety EN 61010-1, UL 61010-1, EN 61010-2-201, UL 61010-2-201

Hazardous Location -

Marine certification -

Temperature, Operating 0 to +55 °C (+32 to +131 °F), approvals are issued for +5 to +55 °C

Temperature, Storage -40 to +70 °C (-40 to +158 °F)

Pollution degree Degree 2, IEC 60664-1

Corrosion protection ISA-S71.04: G3

Relative humidity 5 to 95 %, non-condensing

Max ambient temperature 55 °C (131 °F), for vertical mounting in compact MTU 40 °C (104 °F)

Protection class IP20 according to IEC 60529

Mechanical operating conditions IEC/EN 61131-2

EMC EN 61000-6-4 and EN 61000-6-2

Overvoltage categories IEC/EN 60664-1, EN 50178

Equipment class Class I according to IEC 61140; (earth protected)

RoHS compliance DIRECTIVE/2011/65/EU (EN 50581:2012)

WEEE compliance DIRECTIVE/2012/19/EU

Compatibility

Use with MTU TU811, TU813, TU831, TU839, TU851

Keying code AB

Dimensions

Width 45 mm (1.77”)

Depth 102 mm (4.01”), 111 mm (4.37”) including connector

Height 119 mm (4.7”)

Weight 0.14 kg (0.31 lbs.)