MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

GE MARK VIE

IS200TDBTH2ABC

DISCRETE I/O TERMINAL BOARD

Used with the applicable Mark VIe discrete I/O system configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: GE official manufacturer documentation

GEH-6725R

Mark* VIe and Mark VIeS Control Systems Equipment in Hazardous Locations (HazLoc) Instruction Guide

Sept 2020

Public Information

3.8 PDIO Discrete Input/Output Module

The following I/O pack and terminal board combinations are approved for use in hazardous locations:

- Discrete I/O pack **IS220PDIOH1A**
  with terminal boards (accessories) **IS200TDBSH2A** or **IS200TDBTH2A**
- Discrete I/O pack **IS220PDIOH1B**
  with terminal boards (accessories) **ISx0yTDBSH2A**, **ISx0yTDBSH8A**, **ISx0yTDBTH2A**, or **ISx0yTDBTH8A**

3.8.1 Electrical Ratings

PDIOH1A

Item	Min	Nominal	Max	Units
Power Supply				
Voltage	27.4	28.0	28.6	V dc
Current	—	—	0.81	A dc
Contact Inputs				
Voltage	0	—	32	V dc
Contact Outputs				
Voltage	—	—	32.0	V dc
Current	—	—	3.15	A dc
Contact Wetting Outputs				
Voltage	—	—	32	V dc
Current	—	—	110	mA dc

PDIOH1B

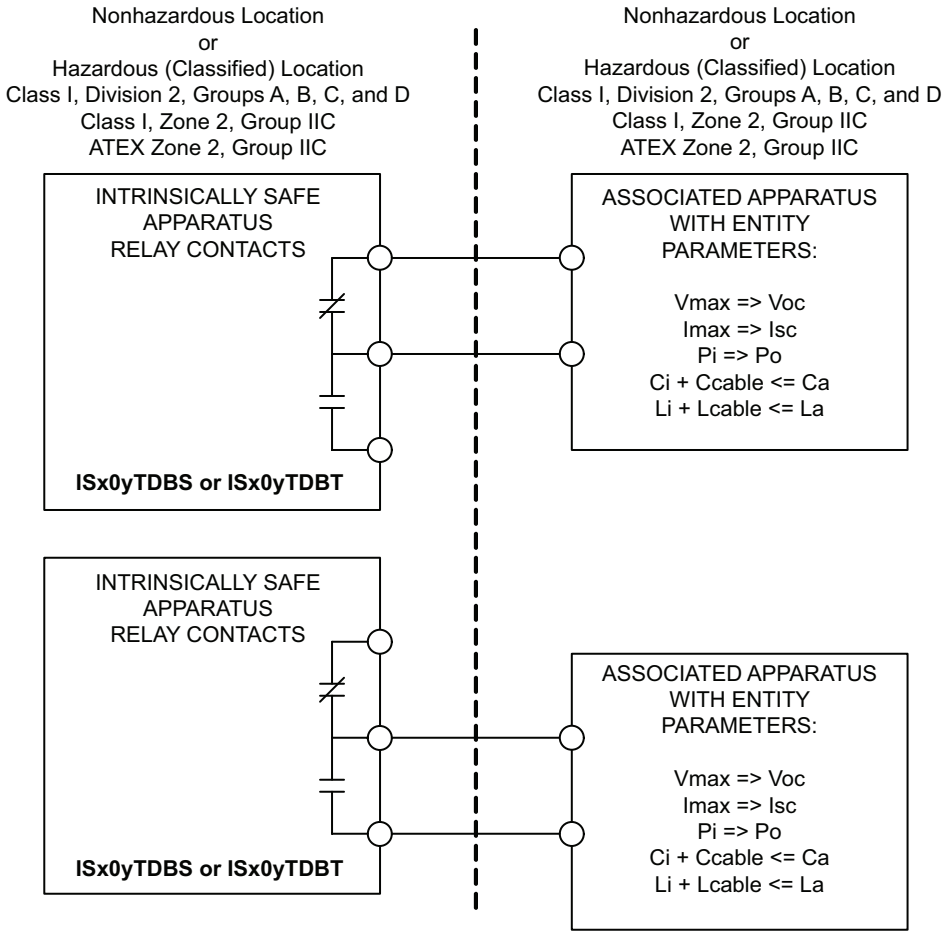
Item	Min	Nominal	Max	Units
Power Supply				
Voltage	27.4	28.0	28.6	V dc
Current	—	—	0.81	A dc
Contact Inputs				
Voltage	0	—	32	V dc
TDBSH2A, TDBTH2A Contact Wetting Outputs				
Voltage	16	—	32	V dc
Current	—	—	110	mA dc
TDBSH8A, TDBTH8A Contact Wetting Outputs (1-21)				
Voltage	—	—	31	V dc
Current	—	—	10	mA dc
TDBSH8A, TDBTH8A Contact Wetting Outputs (22-24)				
Voltage	—	—	31	V dc
Current	—	—	41	mA dc
Contact Outputs				
Voltage	—	—	32.0	V dc
Current	—	—	3.15	A dc

3.8.2 Field Wire Connections

For discrete input/output terminal boards (accessories) certified for HazLoc, refer to the table *Euro Style Box-type Terminal Blocks* for wire size and screw torques.

3.8.3 Intrinsic Safety "ic" for Relay Contacts — Accessory Terminal Boards ISx0yTDBS and ISx0yTDBT

Wiring Diagram



Entity Parameters

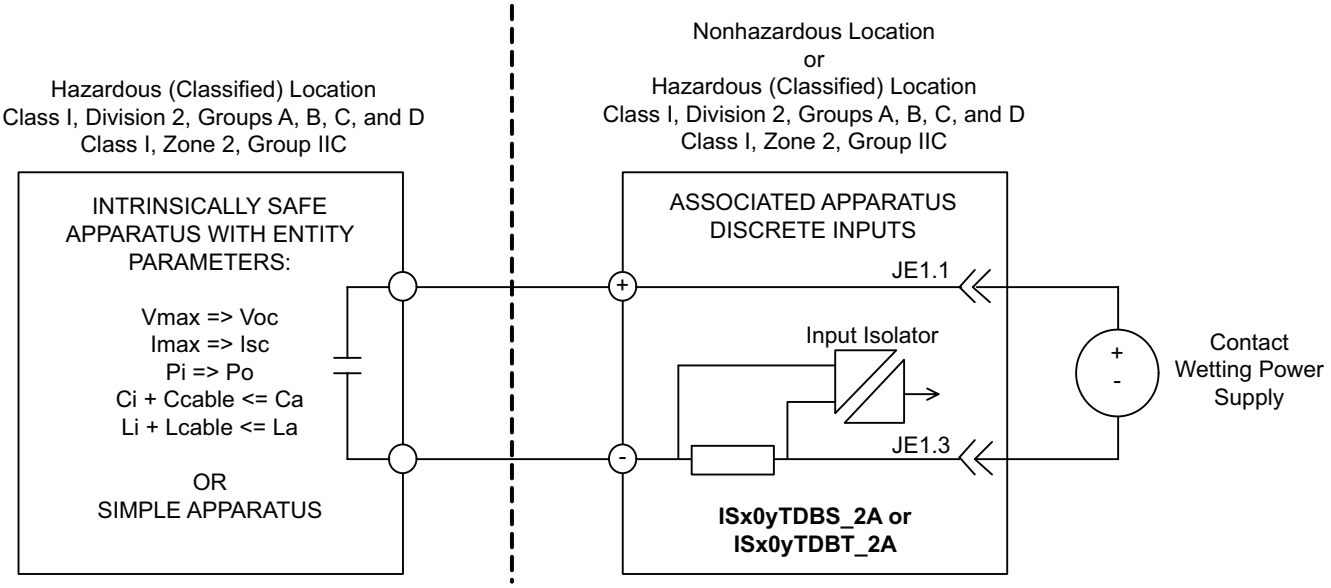
Relay Contacts	Value	Unit
Vmax or Ui	32	V
Imax or Ii	132	mA
Pi	4.22	W
Ci	0	uF
Li	0	mH

Field Terminals for Relay Contacts

Accessory TB	Name	Terminal	Output	Terminal
TDBS or TDBT	NC1	TB1.1	COM1	TB1.2
	NO1	TB1.3	Not used	TB1.4
	NC2	TB1.5	COM2	TB1.6
	NO2	TB1.7	Not used	TB1.8
	NC3	TB1.9	COM3	TB1.10
	NO3	TB1.11	Not used	TB1.12
	NC4	TB1.13	COM4	TB1.14
	NO4	TB1.15	Not used	TB1.16
	NC5	TB1.17	COM5	TB1.18
	NO5	TB1.19	Not used	TB1.20
	NC6	TB1.21	COM6	TB1.22
	NO6	TB1.23	Not used	TB1.24
	NC7	TB1.25	COM7	TB1.26
	NO7	TB1.27	Not used	TB1.28
	NC8	TB1.29	COM8	TB1.30
	NO8	TB1.31	Not used	TB1.32
	NC9	TB1.33	COM8	TB1.34
	NO9	TB1.35	Not used	TB1.36
	NC10	TB1.37	COM10	TB1.38
	NO10	TB1.39	Not used	TB1.40
	NC11	TB1.41	COM11	TB1.42
	NO11	TB1.43	Not used	TB1.44
	NC12	TB1.45	COM12	TB1.46
	NO12	TB1.47	Not used	TB1.48

3.8.4 Intrinsic Safety “ic” for Discrete Inputs — Accessory Terminal Boards ISx0yTDBS_2A, ISx0yTDBT_2A

Wiring Diagram



Entity Parameters

Inputs 1 – 21			Inputs 22 - 24		
Discrete Inputs	**Value**	**Unit**	**Discrete Inputs**	**Value**	**Unit**
Voc or Uo	32	V	Voc or Uo	32	V
Isc or Io	3.3	mA	Isc or Io	13.4	mA
Po	0.11	W	Po	0.43	W
Ca or Co	0.18	uF	Ca or Co	0.18	uF
La or Lo	100	mH	La or Lo	100	mH

***Note** 1.* The contact wetting power supply used with ISx0yTDBS_2A or ISx0yTDBT_ 2A shall be isolated from ground.

***Note** 2.* For North American locations, if contact wetting power is supplied to the accessory terminal board through connector JE1, the wire harness specified on drawing 336A4937FJ shall be used, and the wetting power source shall be current limited by either a UL recognized fuse rated at not more than 3 A, or one of the following power supplies:

• UL R/C, Phoenix Contact GmbH & Co Kg, model QUINT-PS-100-240AC/24DC/5 GE

• UL R/C, Convertec Ltd., model TIS 150-124

***Note** 3.* The output current of this associated apparatus is limited by a resistor such that the output voltage-current plot is a straight line drawn between open-circuit voltage and short-circuit current.

***Note** 6.* Each cable used to connect the simple apparatus must have suitable insulation as required by the applicable local electrical codes.

Field Terminals for Discrete Inputs

Accessory TB	Name	(+) Terminal	Name	(-)Terminal
TDBS or TDBT	Contact Wetting 1	TB2.1	Input 1	TB2.2
	Contact Wetting 2	TB2.3	Input 2	TB2.4
	Contact Wetting 3	TB2.5	Input 3	TB2.6
	Contact Wetting 4	TB2.7	Input 4	TB2.8
	Contact Wetting 5	TB2.9	Input 5	TB2.10
	Contact Wetting 6	TB2.11	Input 6	TB2.12
	Contact Wetting 7	TB2.13	Input 7	TB2.14
	Contact Wetting 8	TB2.15	Input 8	TB2.16
	Contact Wetting 9	TB2.17	Input 9	TB2.18
	Contact Wetting 10	TB2.19	Input 10	TB2.20
	Contact Wetting 11	TB2.21	Input 11	TB2.22
	Contact Wetting 12	TB2.23	Input 12	TB2.24
	Contact Wetting 13	TB2.25	Input 13	TB2.26
	Contact Wetting 14	TB2.27	Input 14	TB2.28
	Contact Wetting 15	TB2.29	Input 15	TB2.30
	Contact Wetting 16	TB2.31	Input 16	TB2.32
	Contact Wetting 17	TB2.33	Input 17	TB2.34
	Contact Wetting 18	TB2.35	Input 18	TB2.36
	Contact Wetting 19	TB2.37	Input 19	TB2.38
	Contact Wetting 20	TB2.39	Input 20	TB2.40
	Contact Wetting 21	TB2.41	Input 21	TB2.42
	Contact Wetting 22	TB2.43	Input 22	TB2.44
	Contact Wetting 23	TB2.45	Input 23	TB2.46
	Contact Wetting 24	TB2.47	Input 24	TB2.48

Mark VIe I/O Modules Classified Location Certifications (continued)

Equipment	Non-hazardous	Class I, Division 2, Groups A, B, C, D	Class I, Zone 2, Group IIC	ATEX Zone 2, Group IIC
IS221PDIAH1B Accessories: IS201STCIH1A IS201STCIH2A IS201STCIH8A IS201TBCIH2C IS201TBCIH4C	UL E207685	UL E207685	UL E207685	UL DEMKO 13 ATEX 1214780X
IS220PDIIH1B Accessories: IS200SDIIH1A	UL E207685	UL E207685	UL E207685	UL DEMKO 13 ATEX 1214780X
IS220PDIOH1A Accessories: IS200TDBSH2A IS200TDBTH2A	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X
IS220PDIOH1B Accessories: ISx0yTDBSH2A ISx0yTDBSH8A ISx0yTDBTH2A ISx0yTDBTH8A	UL E207685	UL E207685	UL E207685	UL DEMKO 13 ATEX 1214780X
IS220PDOAH1A Accessories: IS200TRLYH2E IS200TRLYH3E IS200TRLYH1F IS200TRLYH2F	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X

Mark VIe I/O Modules Equipment Markings (continued)

Equipment	US & CAN Class I Div 2	US & CAN Class I Zone 2	ATEX Zone 2
IS221PDIAH1B Accessories: IS201STCIH1A IS201STCIH2A IS201STCIH8A IS201TBCIH2C IS201TBCIH4C	Class I, Div 2, Groups A, B, C, D, T4	Class I, Zone 2, AEx nA [nC] IIC T4, Ex nA [nL] IIC T4 Gc X	Ex nA [ic] IIC T4 Gc
IS220PDIIH1B Accessories: IS200SDIIH1A	Class I, Div 2, Groups A, B, C, D, T4	Class I, Zone 2, AEx nA IIC T4, Ex nA IIC T4 Gc X	Ex nA IIC T4 Gc
IS220PDIOH1A Accessories: IS200TDBSH2A IS200TDBTH2A	Class I, Div 2, Groups A, B, C, D, T4	Class I, Zone 2, AEx nA nC [nC] IIC T4, Ex nA nL [nL] IIC T4 Gc X	Ex ic nA [ic] IIC T4 Gc
IS220PDIOH1B Accessories: ISx0yTDBSH2A ISx0yTDBTH2A ISx0yTDBSH8A ISx0yTDBTH8A	Class I, Div 2, Groups A, B, C, D, T4	Class I, Zone 2, AEx nA nC [nC] IIC T4, Ex nA nL [nL] IIC T4 Gc X	Ex ic nA [ic] IIC T4 Gc
IS220PDOAH1A Accessories: IS200TRLYH2E IS200TRLYH3E IS200TRLYH1F IS200TRLYH2F	Class I, Div 2, Groups A, B, C, D, T4	Class I, Zone 2, AEx nA nC IIC T4, Ex nA nL IIC T4 Gc X	Ex ic nA IIC T4 Gc