

# 3 Distributed I/O Module Instructions

The equipment listed in this chapter is certified for use in certain specified hazardous (classified) locations. Follow all applicable instructions in [Conditions of Safe Use](#) and within the specific section for each piece of equipment for proper use of this equipment in these locations.

## 3.1 PAIC and YAIC Analog I/O Modules

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

- Mark VIe Analog I/O pack **IS220PAICH1A** with terminal boards (accessories) **IS200STAIH1A**, **IS200STAIH2A**, or **IS200TBAIH1C**
- Mark VIe Analog I/O pack **IS220PAICH1B** with terminal boards (accessories) **IS200STAIH1A**, **IS200STAIH2A**, or **IS200TBAIH1C**
- Mark VIeS Safety Analog I/O pack **IS220YAICS1A** with terminal boards (accessories) **IS200STAIS1A**, **IS400STAIS1A**, **IS200STAIS2A**, **IS400STAIS2A**, **IS200TBAIS1C**, or **IS400TBAIS1C**
- Mark VIeS Safety Analog I/O pack **ISx2yYAICS1B** (where x = 2 or 4 and y = 0 or 1) with terminal boards (accessories) **ISx0ySTAIS1A**, **ISx0ySTAIS2A**, or **ISx0yTBAIS1C**

### 3.1.1 Electrical Ratings

Item	Min	Nominal	Max	Units
<i>Power Supply</i>				
Voltage	PAICH1B / YAICS1B: 22.5 PAICH1A / YAICS1A: 27.4	PAICH1B / YAICS1B: 24.0/28.0 PAICH1A / YAICS1A: 28.0	28.6	V dc
Current	—	—	0.49	A dc
<i>Analog Inputs (1-8)</i>				
Voltage	-10	—	10	V dc
Current	0	—	20	mA dc
<i>Analog Inputs (9-10)</i>				
Current	-5	—	5	V dc
Current	-1	—	20	mA dc
<i>Analog Outputs</i>				
Voltage	0	—	16.3	V dc
Current	0	—	20	mA dc
<i>Analog Transmitter Power</i>				
Voltage	22.8	24.0	25.2	V dc
Current	—	—	21	mA dc

### 3.1.2 Field Wire Connections

Terminal Board	Terminal Block Type
ISx00STAI_1A, ISx00STAI_2A	Refer to the table <a href="#">Euro Style Box-type Terminal Blocks</a> for wire size and screw torques.
ISx00TBAI_1C	Refer to the table <a href="#">Barrier-type Terminal Blocks</a> for wire size and screw torques.

# Mark VieS Safety I/O Modules

## Mark VieS Safety I/O Modules Classified Location Certifications

Equipment	Non-hazardous	Class I, Division 2, Groups A, B, C, D	Class I, Zone 2, Group IIC	ATEX Zone 2, Group IIC
IS220YAICS1A Accessories: IS200STAIS1A IS400STAIS1A IS200STAIS2A IS400STAIS2A IS200TBAIS1C IS400TBAIS1C	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X
ISx2yYAICS1B Accessories: ISx0ySTAIS1A ISx0ySTAIS2A ISx0yTBAIS1C	UL E207685	UL E207685	UL E207685	UL DEMKO 13 ATEX 1214780X
IS220YDIAS1A Accessories: IS200STCIS1A IS200STCIS2A IS200TBCIS2C IS400TBCIS2C IS400STCIS1A IS400STCIS2A	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X
ISx2yDIAS1B Accessories: ISx0ySTCIS1A ISx0ySTCIS2A IS40ySTCIS4A ISx0yTBCIS2C IS40yTBCIS3C	UL E207685	UL E207685	UL E207685	UL DEMKO 18 ATEX 2032X
IS220YDOAS1A Accessories: IS200TRLYS1F IS200TRLYS2F IS400TRLYS1F IS400TRLYS2F	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X

# Mark VieS Safety I/O Modules

## Mark VieS Safety I/O Modules Classified Location Standards

Equipment	Non-hazardous	Class I, Division 2, Groups A, B, C, D	Class I, Zone 2, Group IIC	ATEX Zone 2, Group IIC
IS220YAICS1A Accessories: IS200STAIS1A IS400STAIS1A IS200STAIS2A IS400STAIS2A IS200TBAIS1C IS400TBAIS1C	UL 508 Ed. 17 CSA-C22.2 No. 142-M1987	ANSI/ISA-12.12.01-2015 CAN/CSA-C22.2 No. 213-15	UL 60079-0 Ed. 5 UL 60079-15 Ed. 3 CAN/CSA-C22.2 No. 60079-0:11 CAN/CSA-C22.2 No. 60079-15:12	EN 60079-0:2012 EN 60079-11:2012 EN 60079-15:2010
ISx2yYAICS1B Accessories: ISx0ySTAIS1A ISx0ySTAIS2A ISx0yTBAIS1C	UL 508 Ed. 17 CSA-C22.2 No. 142-M1987	ANSI/ISA-12.12.01-2015 CAN/CSA-C22.2 No. 213-15	UL 60079-0 Ed. 5 UL 60079-15 Ed. 3 CAN/CSA-C22.2 No. 60079-0:11 CAN/CSA-C22.2 No. 60079-15:12	EN 60079-0:2012 EN 60079-11:2012 EN 60079-15:2010
IS220YDIAS1A Accessories: IS200STCIS1A IS200STCIS2A IS200TBCIS2C IS400TBCIS2C IS400STCIS1A IS400STCIS2A	UL 508 Ed. 17 CSA-C22.2 No. 142-M1987	ANSI/ISA-12.12.01-2015 CAN/CSA-C22.2 No. 213-15	UL 60079-0 Ed. 5 UL 60079-15 Ed. 3 CAN/CSA-C22.2 No. 60079-0:11 CAN/CSA-C22.2 No. 60079-15:12	EN 60079-0:2012 EN 60079-11:2012 EN 60079-15:2010
ISx2yYDIAS1B Accessories: ISx0ySTCIS1A ISx0ySTCIS2A IS40ySTCIS4A ISx0yTBCIS2C IS40yTBCIS3C	UL 508 Ed. 17 CSA-C22.2 No. 142-M1987	ANSI/ISA-12.12.01-2015 CAN/CSA-C22.2 No. 213-15	UL 60079-0 Ed. 5 UL 60079-7 Ed. 5 (STCIS4A and TBCIS3C only) UL 60079-15 Ed. 3 (STCIS1A, STCIS2A, and TBCIS2C only) CAN/CSA-C22.2 No. 60079-0:11 CAN/CSA-C22.2 No. 60079-7:16 (STCIS4A and TBCIS3C only) CAN/CSA-C22.2 No. 60079-15:12 (STCIS1A, STCIS2A, and TBCIS2C only)	EN 60079-0:2012 EN 60079-11:2012 (does not apply to STCIS4A or TBCIS3C) EN 60079-7:2015

# Mark VleS Safety I/O Modules

## Mark VleS Safety I/O Modules Equipment Markings

Equipment	US & CAN Class I Div 2	US & CAN Class I Zone 2	ATEX Zone 2
IS220YAICS1A Accessories: IS200STAIS1A IS400STAIS1A IS200STAIS2A IS400STAIS2A IS200TBAIS1C IS400TBAIS1C	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
ISx2yAICS1B Accessories: ISx0ySTAIS1A ISx0ySTAIS2A ISx0yTBAIS1C	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
IS220YDIAS1A Accessories: IS200STCIS1A IS200STCIS2A IS200TBCIS2C IS400TBCIS2C IS400STCIS1A IS400STCIS2A	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
ISx2yDIAS1B Accessories: ISx0ySTCIS1A ISx0ySTCIS2A IS40ySTCIS4A ISx0yTBCIS2C IS40yTBCIS3C	Class I, Div 2, Groups A, B, C, D, T4	When used with accessories ISx0ySTCIS1A, ISx0ySTCIS2A, ISx0yTBCIS2C: Class I, Zone 2, AEx nA [nC] IIC T4, Ex nA [nL] IIC T4 Gc X When used with accessories IS40ySTCIS4A, IS40yTBCIS3C: Class I, Zone 2, AEx/Ex ec IIC T4 Gc X	When used with accessories ISx0ySTCIS1A, ISx0ySTCIS2A, ISx0yTBCIS2C: Ex ec [ic] IIC T4 Gc When used with accessories IS40ySTCIS4A, IS40yTBCIS3C: Ex ec IIC T4 Gc
IS220YDOAS1A Accessories: IS200TRLYS1F IS200TRLYS2F IS400TRLYS1F IS400TRLYS2F	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