

Mark* Vle and Mark VleS Control Systems Equipment in Hazardous Locations (HazLoc) Instruction Guide

Sept 2020



3.3 PAOC Analog Output Module

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

- Analog output pack **IS220PAOCH1B** with terminal boards (accessories) **IS200STAOH1A**, **IS200STAOH2A**, or **IS200TBAOH1C**

3.3.1 Electrical Ratings

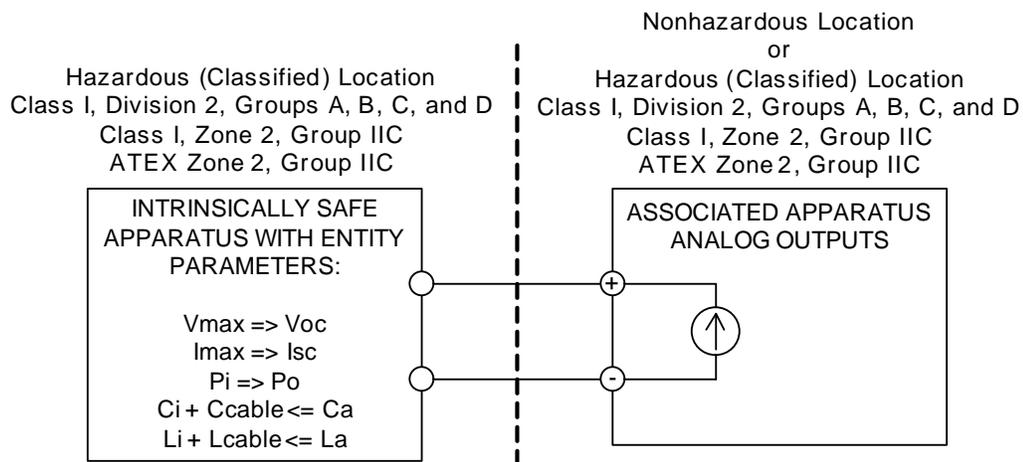
Item	Min	Nominal	Max	Units
<i>Power Supply</i>				
Voltage	27.4	28	28.6	V dc
Current	—	—	0.45	A dc
<i>Analog Outputs</i>				
Voltage	0	—	18	V dc
Current	0	—	20	mA dc

3.3.2 Field Wire Connections

Terminal Board	Terminal Block Type
IS200STAOH1A, IS200STAOH2A	Refer to the table Euro Style Box-type Terminal Blocks for wire size and screw torques.
IS200TBAOH1C	Refer to the table Barrier-type Terminal Blocks for wire size and screw torques.

3.3.3 Intrinsic Safety “ic”

Wiring Diagram



Entity Parameters

Analog Outputs	Value	Unit
V_{oc} or U_o	28.6	V
I_{sc} or I_o	22.5	mA
P_o	0.64	W
C_a or C_o	0.26	uF
L_a or L_o	100	mH

Appendix A Classified Location Certifications

Note In the following tables, **x** = 2 or 4 and **y** = 0 or 1 for I/O module part numbers.

Mark VIe I/O Modules

Mark VIe 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
IS210BAPAH1A Accessories: IS210SAMBH1A	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X
IS41yBAPBH1A Accessories: IS210SAMBH1A	UL E207685	UL E207685	UL E207685	UL DEMKO 18 ATEX 2032X
IS220PAICH1A Accessories: IS200STAIH1A IS200STAIH2A IS200TBAIH1C	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X
IS220PAICH1B Accessories: IS200STAIH1A IS200STAIH2A IS200TBAIH1C IS400STAIH1A IS400STAIH2A IS400TBAIH1C	UL E207685	UL E207685	UL E207685	UL DEMKO 13 ATEX 1214780X
IS220PAOCH1B Accessories: IS200STAOH1A IS200STAOH2A IS200TBAOH1C	UL E207685	UL E207685	UL E207685	UL DEMKO 13 ATEX 1214780X

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

Equipment	Non-hazardous	Class I, Division 2, Groups A, B, C, D	Class I, Zone 2, Group IIC	ATEX Zone 2, Group IIC
IS220PAICH1B Accessories: IS200STAIH1A IS200STAIH2A IS200TBAIH1C IS400STAIH1A IS400STAIH2A IS400TBAIH1C	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
IS220PAOCH1B Accessories: IS200STAOH1A IS200STAOH2A IS200TBAOH1C	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
IS220PCLAH1A Accessories: IS210SCLSH1A IS200SCLTH1A	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
IS220PCLAH1B Accessories: IS210SCLSH1A IS200SCLTH1A	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
IS220PCNOH1A Accessories: IS200SPIDG1A	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 60079-15:2010
IS220PCNOH1B Accessories: IS200SPIDG1A	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 60079-15:2010

Appendix C Equipment Markings

Note In the following tables, **x** = 2 or 4 and **y** = 0 or 1 for I/O module part numbers.

Mark VIe I/O Modules

Mark VIe I/O Modules Equipment Markings

Equipment	US & CAN Class I Div 2	US & CAN Class I Zone 2	ATEX Zone 2
IS210BAPAH1A Accessories: IS210SAMBH1A	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
IS410BAPBH1A Accessories: IS210SAMBH1A	Class I, Div 2, Groups A, B, C, D, T4	Class I, Zone 2, AEx ic ec [ic] IIC T4 Gc; Ex ic ec [ic] IIC T4 Gc X	Ex ic ec [ic] IIC T4 Gc
IS220PAICH1A Accessories: IS200STAIH1A IS200STAIH2A IS200TBAIH1C	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
IS220PAICH1B Accessories: IS200STAIH1A IS200STAIH2A IS200TBAIH1C IS400STAIH1A IS400STAIH2A IS400TBAIH1C	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
IS220PAOCH1B Accessories: IS200STAOH1A IS200STAOH2A IS200TBAOH1C	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