

Mark* V1e and Mark V1eS Control Systems Equipment in Hazardous Locations (HazLoc) Instruction Guide

Sept 2020



3.17 PTCC and YTCC Thermocouple Input Modules

The following hardware combinations are approved for use in hazardous locations:

- Mark VIe Thermocouple input pack **IS220PTCCH1A** or **IS220PTCCH1B** with terminal boards (accessories) **IS200STTCH1A**, **IS200STTCH2A**, **IS200TBTCH1B**, or **IS200TBTCH1C**
- Mark VIeS Safety Thermocouple input pack **IS220YTCCS1A** with terminal boards **IS200STTCS1A**, **IS400STTCS1A**, **IS200STTCS2A**, **IS400STTCS2A**, **IS200TBTCS1B**, **IS200TBTCS1C**, or **IS400TBTCS1C**

3.17.1 Electrical Ratings

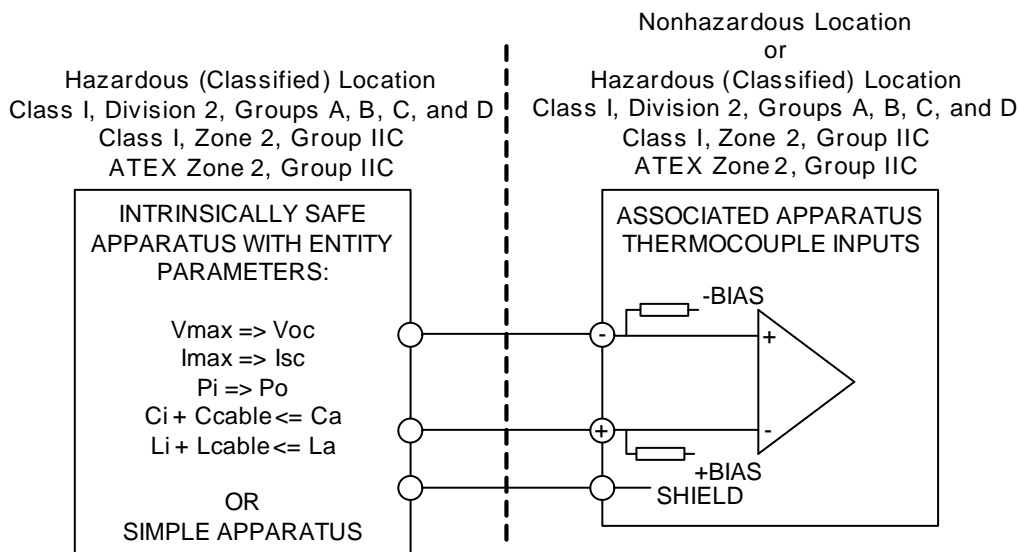
Item	Min	Nominal	Max	Units
<i>Power Supply</i>				
Voltage	27.4	28.0	28.6	V dc
Current	—	—	0.16	A dc
<i>Thermocouple Inputs</i>				
Voltage	-8	—	45	mV dc

3.17.2 Field Wire Connections

Terminal Board	Terminal Block Type
STTC	Refer to the table Euro Style Box-type Terminal Blocks for wire size and screw torques.
TBTC	Refer to the table Barrier-type Terminal Blocks for wire size and screw torques.

3.17.3 Intrinsic Safety “ic”

Wiring Diagram



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
IS220PTCCH1A Accessories: IS200STTCH1A IS200STTCH2A IS200TBTCH1B IS200TBTCH1C	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X
IS220PTCCH1B Accessories: IS200STTCH1A IS200STTCH2A IS200TBTCH1B IS200TBTCH1C	UL E207685	UL E207685	UL E207685	UL DEMKO 13 ATEX 1214780X
IS220PTURH1A Accessories: IS200TRPAH1A	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X
IS220PTURH1B Accessories: IS200TRPAH1A	UL E207685	UL E207685	UL E207685	UL DEMKO 13 ATEX 1214780X
IS42yPUAAH1A Accessories: IS410SUAAH1A	UL E207685	UL E207685	UL E207685	UL DEMKO 16 ATEX 1738X
IS220PVIBH1A Accessories: IS200TVBAH2A IS200WNPSH1A	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X
IS420PVIBH1B Accessories: IS200TVBAH2A IS40yTVBAH2B IS200WNPSH1A IS400WNPSH1A	UL E207685	UL E207685	UL E207685	UL DEMKO 13 ATEX 1214780X
IS42yPDASH1A Accessories: IS40yTCDMS1A	UL E207685	UL E207685	UL E207685	UL DEMKO 18 ATEX 2032X

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
IS220PTCCH1A Accessories: IS200STTCH1A IS200STTCH2A IS200BTCH1B IS200BTCH1C	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
IS220PTCCH1B Accessories: IS200STTCH1A IS200STTCH2A IS200BTCH1B IS200BTCH1C	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
IS220PTURH1A Accessories: IS200TRPAH1A	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
IS220PTURH1B Accessories: IS200TRPAH1A	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
IS42yPUAAH1A Accessories: IS41ySUAH1A	UL 61010-1 Ed. 3 UL 61010-2-201 Ed. 1 CAN/CSA-C22.2 No. 61010-1-12 CAN/CSA-IEC 61010-2-201:14	ANSI/ISA-12.12.01-2015 CAN/CSA-C22.2 No. 213-15	UL 60079-0 Ed. 6 UL 60079-11 Ed. 6 UL 60079-15 Ed. 3 CAN/CSA-C22.2 No. 60079-0:15 CAN/CSA-C22.2 No. 60079-11:14 CAN/CSA-C22.2 No. 60079-15:12	EN 60079-0:2012+A11:2013 EN 60079-11:2012 EN 60079-15:2010
IS42yPDASH1A Accessories: IS40yTCDMS1A	UL 61010-1 Ed. 3 UL 61010-2-201 Ed. 2 CAN/CSA-C22.2 No. 61010-1-19 CAN/CSA-C22.2 No. 61010-2-201:18	ANSI/ISA-12.12.01-2017 CAN/CSA-C22.2 No. 213-17	UL 60079-0 Ed. 6 UL 60079-7 Ed. 5 UL 60079-11 Ed. 6 CAN/CSA-C22.2 No. 60079-0:15 CAN/CSA-C22.2 No. 60079-7:16 CAN/CSA-C22.2 No. 60079-11:14	EN 60079-0:2018 EN 60079-7:2015+A1:2018 EN 60079-11:2012

Mark VIe I/O Modules Equipment Markings (continued)

Equipment	US & CAN Class I Div 2	US & CAN Class I Zone 2	ATEX Zone 2
IS220PSVOH1B Accessories: IS200TSVCH2A IS210WSVOH1A IS410WSVOH1A	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
IS220PTCCH1A Accessories: IS200STTCH1A IS200STTCH2A IS200TBCH1B IS200TBCH1C	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
IS220PTCCH1B Accessories: IS200STTCH1A IS200STTCH2A IS200TBCH1B IS200TBCH1C	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
IS220PTURH1A Accessories: IS200TRPAH1A	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
IS220PTURH1B Accessories: IS200TRPAH1A	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
IS42yPUAAH1A Accessories: IS41ySUAH1A	Class I, Div 2, Groups A, B, C, D, T4	Class I, Zone 2, AEx ic nA [ic] IIC T4, Ex ic nA [ic] IIC T4 Gc X	Ex ic nA [ic] IIC T4 Gc
IS220PVIBH1A Accessories: IS200TVBAH2A IS200WNPSH1A	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

Appendix D Ambient Temperature Ratings

Note In the following tables, **y** = 0 or 1 for module part numbers.

Ambient Temperature Ratings

GE Part Number	Ambient Temperature Rating
IS200JPDLG1A	-30 to + 65 °C (-22 to +149 °F)
IS210BAPAH1A	
IS220PAICH1A	
IS220PAOCH1B	
IS220PCLAH1A	
IS220PCLAH1B	
IS220PDIAH1A	
IS220PDIIH1B	
IS220PDIOH1A	
IS220PDIOH1B	
IS220PDOAH1A	
IS220PHRAH1A	
IS220PHRAH1B	
IS220PPDAH1A	
IS220PPRAH1A	
IS220PPRAS1A	
IS220PPRAS1B	
IS220PPROH1A	
IS220PPROS1B	
IS220PRTDH1A	
IS220PRTDH1B	
IS220PSCAH1A	
IS220PSCAH1B	
IS220PSCHH1A	
IS220PSVOH1A	
IS220PSVOH1B	
IS220PTCCH1A	
IS220PTCCH1B	
IS220PTURH1A	
IS220PTURH1B	
IS220PVIBH1A	
IS220YAICS1A	
IS220YDIAS1A	
IS220YDOAS1A	
IS220YHRAS1A	
IS220YPROS1A	
IS220YSILS1A	
IS220YSILS1B	
IS220YTCCS1A	
IS220YTURS1A	
IS220YVIBS1A	
IS221PHRAH1B	