

2 Controller and Switch 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.

2.1 UCSA and UCSB Controller

The following table lists the controllers that are certified for hazardous location usage.

Processor	Part Number	Name
600 MHz EP80579 Intel®	IS420UCSBS1A	Mark VIeS Safety controller
	IS421UCSBS1A (conformal coated)	
	IS420UCSBH1A	Mark VIe, EX2100e, or LS2100e controller
IS421UCSBH1A (conformal coated)		
1066 MHz EP80579 Intel	IS420UCSBH4A	Mark VIe, EX2100e, or LS2100e controller
	IS421UCSBH4A (conformal coated)	
	IS420PPNGH1A	PROFINET gateway module
1200 MHz EP80579 Intel	IS420UCSBH3A	Mark VIe or Mark Stat controller
667 MHz PowerQUICC® Pro Freescale	IS220UCSAH1A	Mark VIe controller PAMC Acoustic Monitor (processor) PMVE Migration from Mark V Control (processor)

2.1.1 Electrical Ratings

Power Supply UCSB

Item	Min	Nominal	Max	Units
Voltage	27.4	28.0	28.6	V dc
Current	-	-	1.1	A dc

Power Supply UCSA

Item	Min	Nominal	Max	Units
Voltage	27.4	28.0	28.6	V dc
Current	-	-	0.62	A dc

Switches and Controllers

Equipment	Non-hazardous	Class I, Division 2, Groups A, B, C, D	Class I, Zone 2, Group IIC	ATEX Zone 2, Group IIC
IS420ESWAH1A IS421ESWAH1A IS420ESWAH2A IS421ESWAH2A IS420ESWAH3A IS421ESWAH3A IS420ESWAH4A IS420ESWAH5A IS420ESWBH1A IS421ESWBH1A IS420ESWBH2A IS421ESWBH2A IS420ESWBH3A IS421ESWBH3A IS420ESWBH4A IS420ESWBH5A	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X
IS220UCSAH1A IS420UCSBH1A IS421UCSBH1A IS420UCSBH3A IS420UCSBH4A IS4210UCSBH4A IS420UCSBS1A IS421UCSBS1A	UL E207685	UL E207685	UL E207685	UL DEMKO 12 ATEX 1114875X

Switches and Controllers

Equipment	Non-hazardous	Class I, Division 2, Groups A, B, C, D	Class I, Zone 2, Group IIC	ATEX Zone 2, Group IIC
IS420ESWAH1A IS421ESWAH1A IS420ESWAH2A IS421ESWAH2A IS420ESWAH3A IS421ESWAH3A IS420ESWAH4A IS420ESWAH5A IS420ESWBH1A IS421ESWBH1A IS420ESWBH2A IS421ESWBH2A IS420ESWBH3A IS421ESWBH3A IS420ESWBH4A IS420ESWBH5A	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
IS220UCSAH1A IS420UCSBH1A IS421UCSBH1A IS420UCSBH3A IS420UCSBH4A IS421UCSBH4A IS420UCSBS1A IS421UCSBS1A	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

Switches and Controllers

Equipment	US & CAN Class I Div 2	US & CAN Class I Zone 2	ATEX Zone 2
IS420ESWAH1A IS421ESWAH1A IS420ESWAH2A IS421ESWAH2A IS420ESWAH3A IS421ESWAH3A IS420ESWAH4A IS420ESWAH5A IS420ESWBH1A IS421ESWBH1A IS420ESWBH2A IS421ESWBH2A IS420ESWBH3A IS421ESWBH3A IS420ESWBH4A IS420ESWBH5A	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
IS220UCSAH1A IS420UCSBH1A IS421UCSBH1A IS420UCSBH3A IS420UCSBH4A IS421UCSBH4A IS420UCSBS1A IS421UCSBS1A	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

Ambient Temperature Ratings

GE Part Number	Ambient Temperature Rating
IS220YDOAS1A	-30 to + 65°C (-22 to +149 °F)
IS220YDOAS1B	
IS220YHRAS1A	
IS220YPROS1A	
IS220YSILS1A	
IS220YTCCS1A	
IS220YTURS1A	
IS220YVIBS1A	
IS221PDIAH1B	
IS221PDOAH1B	
IS221PHRAH1B	
IS221PPDAH1B	
IS221PRTDH1B	
IS221PSCAH1B	
IS221YAICS1B	
IS221YDOAS1B	
IS400JPDHG1A	
IS410JPDHG1A	
IS411JPDHG1A	
IS420ESWAH1A	
IS420ESWAH2A	
IS420ESWAH3A	
IS420ESWAH4A	
IS420ESWAH5A	
IS420ESWBH1A	
IS420ESWBH2A	
IS420ESWBH3A	
IS420ESWBH4A	
IS420ESWBH5A	
IS420PPNGH1A	
IS420PVIBH1B	
IS420UCSBH1A	
IS420UCSBH4A	
IS420UCSBS1A	
IS420YVIBS1B	
IS421ESWAH1A	
IS421ESWAH2A	
IS421ESWAH3A	
IS421ESWBH1A	
IS421ESWBH2A	
IS421ESWBH3A	
IS421UCSBH1A	
IS421UCSBH4A	
IS421UCSBS1A	