

FM Approvals
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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

GME11000ADP. Series 1000 Adapter.

AIS / I, II, III / 1 / ABCDEFG – ISM0063; [I / 0] AEx [ia] IIC – ISM0063

Special Condition of Use:

1. *The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.*

T3010S. Loop Indicator.

IS / I / 1 / ABCD / T5 Ta = 60°C - ISM0064; Entity; NI / I / 2 / ABCD / T5 Ta = 60°C;

I / 0 AEx ia IIC / T5 Ta = 60°C - ISM0064; Entity; I / 2 / AEx nA IIC / T5 Ta = 60°C;

Entity Parameters:

Input: Vmax = 30 V, Imax = 200 mA, Pi = 850 mW, Ci = 0, Li = 0

Output: Voc = 1.2 V, Isc = 81 mA, Po = 25 mW, Ca = 465 μ F, La = 5.4 mH

Special Condition of Use:

1. *The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.*

2. *For Zone 2 applications, the enclosure shall maintain a minimum ingress protection of IP54.*

3. **WARNING – Potential Electrostatic Charging Hazard – The enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned with a damp cloth.**

D1010ab. SIL2-SIL3 Repeater Power Supply Smart-Hart Compatible.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0007; Entity; [I / 0] AEx [ia] IIC - ISM0007; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15 Ch.2 10-11	A, B, IIC	26.3	91	597	0.095	4.3	59.6
	C, E, IIB F, G, IIA CL III				0.738 2.508	17.2 34.5	238.4 476.8
Ch.1 15-16 Ch.2 11-12	A, B, IIC	1.1	38	11	100	11.3	3490
	C, E, IIB F, G, IIA CL III				1000 1000	45.3 90.7	13963 27927

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1012Q. Quad Repeater Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0070; Entity; [I / 0] AEx [ia] IIC - ISM0070; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 15-16 Ch.2 13-14 Ch.3 9-10 Ch.4 11-12	A, B, IIC	21.5	93	496	0.176	4.1	71.7
	C, E, IIB F, G, IIA CL III				1.2 4.5	16.4 32.8	287 574

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1014ab. Repeater Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0052; Entity; [I / 0] AEx [ia] IIC - ISM0052; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15 Ch.2 10-11	A, B, IIC	25.2	93	585	0.106	4.1	60.7
	C, E, IIB F, G, IIA CL III				0.819 2.899	16.4 32.9	242.9 485.8

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1020ab. SIL 2 Powered Isolating Driver Smart-Hart compatible.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0012; Entity; [I / 0] AEx [ia] IIC - ISM0012; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15	A, B, IIC	25.2	87	548	0.106	4.6	64.9
Ch.2 10-11	C, E, IIB				0.819	18.7	259.6
	F, G, IIA				2.899	37.5	519.3
	CL III						

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1021Sa. 1 Channel Powered Isolating Driver with Fault Detection.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0022; Entity; [I / 0] AEx [ia] IIC - ISM0022; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15	A, B, IIC	25.2	87	548	0.106	4.6	64.9
	C, E, IIB				0.819	18.7	259.6
	F, G, IIA				2.899	37.5	519.3
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1022a. Fire/Smoke Detector Interface.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0077; Entity; [I / 0] AEx [ia] IIC - ISM0077; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	25.2	93	585	0.107	4.1	61.2
Ch.2 15-16	C, E, IIB				0.820	16.4	244.9
	F, G, IIA				2.9	32.9	489.8
	CL III						

a = S, D.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of

the ultimate application including access only by the use of a tool.

D1030ab. Switch/Proximity Detector Repeater Relay Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0008; Entity; [I / 0] AEx [ja] IIC - ISM0008; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	10.7	15	39	2.23	172	930
Ch.2 15-16	C, E, IIB				15.6	689	3720
	F, G, IIA				69	1379	7440
	CL III						

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1031ab. Switch/Proximity Detector Repeater Transistor Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0009; Entity; [I / 0] AEx [ja] IIC - ISM0009; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	10.7	15	39	2.23	172	930
Ch.2 15-16	C, E, IIB				15.6	689	3720
Ch.3 9-10	F, G, IIA				69	1379	7440
Ch.4 11-12	CL III						

a = D, Q.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1032ab. SIL 2 Switch/Proximity Detector Repeater Relay Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0041; Entity; [I / 0] AEx [ja] IIC - ISM0041; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	9.6	10	24	3.599	379	1530
Ch.2 15-16	C, E, IIB				25.999	1517	6150
Ch.3 9-10	F, G, IIA				209.999	3035	12310
Ch.4 11-12	CL III						

a = D, Q.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1033ab. SIL 2 Switch/Proximity Detector Repeater Transistor Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0043; Entity; [I / 0] AEx [ia] IIC - ISM0043; Entity;

Entity Parameter

Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	9.6	10	24	3.599	379	1530
Ch.2 15-16							
Ch.3 9-10							
Ch.4 11-12							
	C, E, IIB				25.999	1517	6150
	F, G, IIA				209.999	3035	12310
	CL III						

a = D, Q.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1034ab. Switch/Proximity Detector Interface.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0053; Entity; [I / 0] AEx [ia] IIC - ISM0053; Entity;

Entity Parameter

Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15	A, B, IIC	9.6	11	25	3.6	336	1449
Ch.2 10-11							
	C, E, IIB				26	1345	5790
	F, G, IIA				210	2690	11590
	CL III						

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1035Sa. Frequency-Pulse Isolating Repeater.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0079; Entity; [I / 0] AEx [ia] IIC - ISM0079; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16	A, B, IIC	10.9	1.1	3	2.05	29000	12000
	C, E, IIB				14.4	117000	48100
	F, G, IIA				63	235000	96200
	CL III						
15-16	A, B, IIC	15.5	13	48	0.508	235	585
	C, E, IIB				3.110	941	2342
	F, G, IIA				12.500	1883	4685
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1040aQ. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0020; Entity; [I / 0] AEx [ia] IIC - ISM0020; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel	A, B, IIC	23.6	72	424	0.130	6.8	83.9
	C, E, IIB				0.970	27.4	335.9
	F, G, IIA				3.5	54.8	671.9
	CL III						
2 channels in parallel	A, B, IIC	23.6	144	847	0.130	1.7	41.9
	C, E, IIB				0.970	6.8	167.9
	F, G, IIA				3.5	13.7	335.9
	CL III						
3 channels in parallel	A, B, IIC	23.6	216	1271	NA	NA	NA
	C, E, IIB				0.970	3	111.9
	F, G, IIA				3.5	6	223.9
	CL III						
4 channels in parallel	A, B, IIC	23.6	288	1674	NA	NA	NA
	C, E, IIB				0.970	1.7	83.9
	F, G, IIA				3.5	3.4	167.9
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1041aQ. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0020; Entity; [I / 0] AEx [ja] IIC - ISM0020; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel	A, B, IIC	23.6	49.6	292	0.130	14.2	121.9
	C, E, IIB				0.970	57.0	487.6
	F, G, IIA CL III				3.5	114.0	975.3
2 channels in parallel	A, B, IIC	23.6	99.2	584	0.130	3.6	60.9
	C, E, IIB				0.970	14.4	243.8
	F, G, IIA CL III				3.5	28.9	487.6
3 channels in parallel	A, B, IIC	23.6	148.8	875	0.130	1.6	40.6
	C, E, IIB				0.970	6.4	162.5
	F, G, IIA CL III				3.5	12.8	325
4 channels in parallel	A, B, IIC	23.6	198.4	1167	NA	NA	NA
	C, E, IIB				0.970	3.6	121.9
	F, G, IIA CL III				3.5	7.2	243.8

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1042aQ. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0020; Entity; [I / 0] AEx [ja] IIC - ISM0020; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel	A, B, IIC	23.6	88.2	519	0.130	4.5	68.6
	C, E, IIB				0.970	18.2	274.4
	F, G, IIA				3.5	36.5	548.9
	CL III						
2 channels in parallel	A, B, IIC	23.6	176.4	1038	0.130	1.1	34.3
	C, E, IIB				0.970	4.5	137.2
	F, G, IIA				3.5	9.1	274.4
	CL III						
3 channels in parallel	A, B, IIC	23.6	264.6	1556	NA	NA	NA
	C, E, IIB				0.970	2	91.4
	F, G, IIA				3.5	4	182.9
	CL III						
4 channels in parallel	A, B, IIC	23.6	352.8	1674	NA	NA	NA
	C, E, IIB				0.970	1.1	68.6
	F, G, IIA				3.5	2.2	137.2
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1043aQ. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0020; Entity; [I / 0] AEx [ja] IIC - ISM0020; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel	A, B, IIC	23.6	49.6	292	0.130	14.2	121.9
	C, E, IIB				0.970	57.0	487.6
	F, G, IIA				3.5	114.0	975.3
	CL III						
2 channels in parallel	A, B, IIC	23.6	99.2	584	0.130	3.6	60.9
	C, E, IIB				0.970	14.4	243.8
	F, G, IIA				3.5	28.9	487.6
	CL III						
3 channels in parallel	A, B, IIC	23.6	148.8	875	0.130	1.6	40.6
	C, E, IIB				0.970	6.4	162.5
	F, G, IIA				3.5	12.8	325
	CL III						
4 channels in parallel	A, B, IIC	23.6	198.4	1167	NA	NA	NA
	C, E, IIB				0.970	3.6	121.9
	F, G, IIA				3.5	7.2	243.8
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1044S, D1044D. Digital Relay Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0080; Entity; [I / 0] AEx [ia] IIC - ISM0080; Entity;

Entity Parameters: Uo = 0, Io = 0, Po = 0, Co = 0, Lo = 0

Entity Parameters: Ui = 60 V, Ii = 2 A, Ci = 0, Li = 0

D1045Ya. Digital Output Loop.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0081; Entity; [I / 0] AEx [ia] IIC - ISM0081; Entity;

Entity Parameter		Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Terminals	Group						
Ch.1 13-14	A, B, IIC	18.9	249	1173	0.260	0.58	30.3
Ch.2 9-10	C, E, IIB				1.6	2.31	121.2
	F, G, IIA				6.39	4.62	242.5
	CL III						
Ch.1 15-16	A, B, IIC	18.9	307	1286	0.260	0.38	24.5
Ch.2 11-12	C, E, IIB				1.6	1.52	98.3
	F, G, IIA				6.39	3.03	196.6
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1046Ya. Digital Output Loop.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / CDEFG – ISM0082; Entity; [I / 0] AEx [ia] IIB - ISM0082; Entity;

Entity Parameter		Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Terminals	Group						
Ch.1 13-14	C, E, IIB	23.6	366	1600	970	1.06	66
Ch.2 9-10	F, G, IIA				3.5	2.12	132.1
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1047 Digital Output Driver Loop Powered for ND Loads

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / CDEFG – ISM0095; Entity; [I / 0] AEx [ja] IIB - ISM0095; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16 (Out A)	A, B, IIC	24.9	145	897	0.112	1.7	39.6
	C, E, IIB				0.850	6.8	158.7
	F, G, IIA				3.01	13.6	317.4
	CL III						
14-16 (Out B)	A, B, IIC	24.9	110	681	0.112	2.9	52.2
	C, E, IIB				0.850	11.8	208.9
	F, G, IIA				3.01	23.6	417.8
	CL III						
15-16 (Out C)	A, B, IIC	24.9	91	559	0.112	4.3	63.6
	C, E, IIB				0.850	17.5	254.5
	F, G, IIA				3.01	35	509
	CL III						

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1048 Digital Output Driver Loop Powered for NE Loads

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / CDEFG – ISM0096; Entity; [I / 0] AEx [ja] IIB - ISM0096; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16 (Out A)	A, B, IIC	24.9	145	897	0.112	1.7	39.6
	C, E, IIB				0.850	6.8	158.7
	F, G, IIA				3.01	13.6	317.4
	CL III						
14-16 (Out B)	A, B, IIC	24.9	110	681	0.112	2.9	52.2
	C, E, IIB				0.850	11.8	208.9
	F, G, IIA				3.01	23.6	417.8
	CL III						
15-16 (Out C)	A, B, IIC	24.9	91	559	0.112	4.3	63.6
	C, E, IIB				0.850	17.5	254.5
	F, G, IIA				3.01	35	509
	CL III						

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1049 Digital Output Driver Bus Powered for NE Loads

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / CDEFG – ISM0097; Entity; [I / 0] AEx [ia] IIB - ISM0097; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16 (Out A)	A, B, IIC	24.9	145	897	0.112	1.7	39.6
	C, E, IIB				0.850	6.8	158.7
	F, G, IIA				3.01	13.6	317.4
	CL III						
14-16 (Out B)	A, B, IIC	24.9	110	681	0.112	2.9	52.2
	C, E, IIB				0.850	11.8	208.9
	F, G, IIA				3.01	23.6	417.8
	CL III						
15-16 (Out C)	A, B, IIC	24.9	91	559	0.112	4.3	63.6
	C, E, IIB				0.850	17.5	254.5
	F, G, IIA				3.01	35	509
	CL III						

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1052ab. Analog Signal Converter, Duplicator, Adder, Subtractor.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0015; Entity; [I / 0] AEx [ia] IIC - ISM0015; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15-16 Ch.2 10-11-12	A, B, IIC	10.8	4	11	2.135	2541	3520
	C, E, IIB				14.995	10167	14090
	F, G, IIA				65.995	20335	28180
	CL III						

a = S, D, X, Y.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1053Sa. SIL 2 Analog Signal Converter and Trip Amplifier.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0016; Entity; [I / 0] AEx [ia] IIC - ISM0016; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
14-15-16	A, B, IIC	10.8	4	11	2.135	2541	3520
	C, E, IIB				14.995	10167	14090
	F, G, IIA				65.995	20335	28180
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of

the ultimate application including access only by the use of a tool.

D1054Sa. 1 Channel Repeater Power Supply and Trip Amplifiers.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0067; Entity; [I / 0] AEx [ia] IIC – ISM0067; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15 Ch.2 10-11	A, B, IIC	26.3	91	597	0.095	4.3	59.6
	C, E, IIB				0.738	17.2	238.4
	F, G, IIA CL III				2.508	34.5	476.8
Ch.1 15-16 Ch.2 11-12	A, B, IIC	1.1	56	16	100	11.3	2327
	C, E, IIB				1000	45.3	9309
	F, G, IIA CL III				1000	90.7	18618

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1060Sa. Frequency-Pulse Converter, Repeater and Trip Amplifier.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0054; Entity; [I / 0] AEx [ia] IIC - ISM0054; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16	A, B, IIC	10.9	1.1	3	2.05	29000	12000
	C, E, IIB				14.4	117000	48100
	F, G, IIA				63	235000	96200
	CL III						
14-15	A, B, IIC	15.5	13	48	0.508	235	585
	C, E, IIB				3.110	941	2342
	F, G, IIA				12.500	1883	4685
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1061Sa. Isolating Repeater.

NI / I / 2 / ABCD / T4 Ta = 60°C; I / 2 / AEx nA IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0068; Entity; [I / 0] AEx [ia] IIC – ISM0068; Entity;

Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Ca (µF)	La (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	3.7	225	206	100	0.7	173
Ch.2 15-16	C, E, IIB	3.7	225	206	1000	2.8	693
	F, G, IIA	3.7	225	206	1000	5.6	1386
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.
2. For Zone 2 applications, the enclosure shall maintain a minimum ingress protection of IP54.

D1062Sa. Vibration Transducer Interface.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0094; Entity; [I / 0] AEx [ia] IIC - ISM0094; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
16-14	A, B, IIC	25.9	90	576	0.100	4.4	61.7
	C, E, IIB				0.770	17.9	247.1
	F, G, IIA				2.63	35.8	494.3
	CL III						
14-15	A, B, IIC	27.0	90	576	0.90	4.4	56.8
	C, E, IIB				0.705	17.9	227.3
	F, G, IIA				2.33	35.8	454.7
	CL III						
15-16	A, B, IIC	1.1	0.012	0.004	100	1000	11000000
	C, E, IIB				1000	1000	46000000
	F, G, IIA				1000	1000	93000000
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1063Sa. Isolating Repeater.

NI / I / 2 / ABCD / T4 Ta = 60°C; I / 2 / AEx nA IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0069; Entity; [I / 0] AEx [ia] IIC – ISM0069; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
9-10-11-12-13-14	A, B, IIC	17.3	199.6	864	351	0.85	41.2
	C, E, IIB				2.058	3.4	164.8
	F, G, IIA				8.498	6.8	329.6
	CL III						
13-14	A, B, IIC	17.3	8	35	353	300	1020
	C, E, IIB				2.06	1200	4110
	F, G, IIA				8.5	2400	8220
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.
2. For Zone 2 applications, the enclosure shall maintain a minimum ingress protection of IP54.

D1064Sa. Load Cell/Strain Gauge Bridge Isolating Converter.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0088; Entity; [I / 0] AEx [ia] IIC - ISM0088; Entity;

Entity Parameters: Uo = 5.92 V, Io = 196 mA, Po = 576 mW, Co = 39 µF, Lo = 0.93 mH, L/R = 61.7 µH/Ω

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
9-10-11-12-13-14	A, B, IIC	5.9	196	576	39	0.93	61.7
	C, E, IIB				996	3.71	247
	F, G, IIA CL III				996	7.42	494.1

D1072ab. SIL 2 Temperature Converter, Duplicator, Adder, Subtractor.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0018; Entity; [I / 0] AEx [ia] IIC - ISM0018; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14-15-16 Ch.2 9-10-11-12	A, B, IIC	10.8	9	24	2.134	468	1510
	C, E, IIB				14.994	1874	6050
	F, G, IIA CL III				65.994	3749	12100

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1073Sa. SIL 2 Temperature Converter and Trip Amplifier.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0019; Entity; [I / 0] AEx [ia] IIC - ISM0019; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14-15-16	A, B, IIC	10.8	9	24	2.134	468	1510
	C, E, IIB				14.994	1874	6050
	F, G, IIA				65.994	3749	12100
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1092a. SIL 2 Relay Output Module.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C; ISM0091

a = S, D.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1092a-069. SIL 3 Relay Output Module.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C; ISM0101

a = S, D.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1093S. SIL 3 Relay Output Module with Line and Load Diagnostics.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C; ISM0093

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1130ab. Switch/Proximity Detector Repeater Relay Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0048; Entity; [I / 0] AEx [ia] IIC - ISM0048; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)	
Ch.1 13-14	A, B, IIC	10.7	15	39	2.23	172	930	
Ch.2 15-16								
					C, E, IIB	15.6	689	3720
					F, G, IIA	69	1379	7440
	CL III							

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D2000. Multiplexer System.

*IS / I, II, III / 1 / ABCDEFG – ISM0078; Entity; [I / 0] AEx [ia] IIC - ISM0078; Entity;
 NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0078; Entity; [I / 0] AEx [ia] IIC - ISM0078; Entity;

*Note D2050M may only be mounted only in Zone 2 or Division 2 areas

D2010M Parameters:

Ui = 15 V li = 215 mA Pi = 1755 mW for supply/communication line

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)			
Ch. 1 to 16 1-2-3-4	A, B, IIC	10.7	7	19	2.23	725	1888			
	C, E, IIB							15.6	2902	7552
	F, G, IIA CL III							69	5804	15105

D2011M Parameters:

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)			
Ch. 1 to 16 1-2-3-4	A, B, IIC	10.7	7	19	2.23	725	1888			
	C, E, IIB							15.6	2902	7552
	F, G, IIA CL III							69	5804	15105

D2030M Parameters:

Ui = 15 V li = 215 mA Pi = 1755 mW for supply/communication line

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)			
Ch. 1 to 32 1-2 or 3-4	A, B, IIC	10.7	14	38	2.23	181	946.5			
	C, E, IIB							15.6	725	3786
	F, G, IIA CL III							69	1451	7572

***D2050M Parameters:**

Uo = 15 V Io = 210 mA Po = 1736 mW for supply/communication line

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

2. **WARNING – Potential Electrostatic Charging Hazard –** The enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned with a damp cloth.

PSD1000ab. Universal Switching Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C; ISM0089

a = Blank, F.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

PSD1001a. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0023; Entity; [I / 0] AEx [ia] IIC - ISM0023; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel Ch.1 13-14 Ch.2 15- 16 Ch.3 9-10 Ch.4 11-12	A, B, IIC	23.6	88.2	519	0.130	4.5	68.6
	C, E, IIB F, G, IIA CL III				0.970 3.5	18.2 36.5	274.4 548.9
2 channels in parallel	A, B, IIC	23.6	176.4	1038	0.130	1.1	34.3
	C, E, IIB F, G, IIA CL III				0.970 3.5	4.5 9.1	137.2 274.4
3 channels in parallel	A, B, IIC	23.6	264.6	1556	NA	NA	NA
	C, E, IIB F, G, IIA CL III				0.970 3.5	2.0 4.0	91.4 182.9
4 channels in parallel	A, B, IIC	23.6	352.8	1674	NA	NA	NA
	C, E, IIB F, G, IIA CL III				0.970 3.5	1.1 2.2	68.6 137.2

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

PSD1001Ca. 2 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / CDEFG – ISM0065; Entity; [I / 0] AEx [ja] IIB - ISM0065; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-15 Ch.2 14-16	C, E, IIB	23.6	352.8	1674	0.970	1.1	68.6
	F, G, IIA CL III				3.5	2.2	137.2

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

PSD1206, PSD1210. Power Supply.

NI / I / 2 / ABCD / T3 Ta = 60°C; NI / I / 2 / IIC / T3 Ta = 60°C; ISM0076

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

Equipment Ratings:

Models D1010S, D1010D, D1012Q, D1014S, D1014D, D1020S, D1020D, D1021S, D1022S, D1022D, D1030S, D1030D, D1031D, D1031Q, D1032D, D1032Q, D1033D, D1033Q, D1034S, D1034D, D1035S, D1040Q, D1041Q, D1042Q, D1043Q, D1044S, D1044D, D1045Y, D1046Y, D1047S, D1048S, D1048D, D1049S, D1049D, D1052S, D1052D, D1052X, D1052Y, D1053S, D1054S, D1060S, D1061S, D1062S, D1063S, D1064S, D1072, D1073, D1072S, D1072D, D1073S, D1092S, D1092S-069, D1092D, D1092D-069, D1093S, D1130S, D1130D, PSD1001, PSD1001C, and D2050M are Associated Intrinsically Safe for connection to Class I, II and III, Division 1, Groups A, B, C, D, E, F and G and Class I, Zone 0, Group IIC in accordance with Entity requirements and the applicable Control Drawing; Nonincendive for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2, Group IIC Hazardous (Classified) Locations

Model GMEI1000ADP is an Associated Intrinsically Safe for connection to Class I, II and III, Division 1, Groups A, B, C, D, E, F and G and Class I, Zone 0, Group IIC Hazardous (Classified) Locations in accordance with Entity requirements and the applicable Control Drawing

Models D2010M, D2011M, D2030M, and T3010S are Intrinsically Safe for use in Class I, Division 1, Groups A, B, C and D and Class I, Zone 0, Group IIC in accordance with Entity requirements and Control Drawing ISM0064; Nonincendive for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2, Group IIC Hazardous (Classified) Locations

Models PSD1000, PSD1206, and PSD1210 are Nonincendive for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2, Group IIC Hazardous (Classified) Locations

FM Approved for:

GM International SRL

Via San Fiorano 70, 20058 Villasanta (MI), Italy

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	2011
Class 3610	2010
Class 3611	2004
Class 3810	2005
ANSI/ISA 12.12.02	2003
ANSI/ISA 60079-0	2009
ANSI/ISA 60079-11	2009

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Report Number	Date	Report Number	Date
3024644	February 6, 2006		
3024667	July 7, 2006		
3029921	August 28, 2008		
3036491	March 22, 2010		
3045615	July 17, 2012		

FM Approvals LLC



James E. Marquedant
Group Manager, Electrical

17 July 2012

Date

CERTIFICATE OF COMPLIANCE

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

This certificate is issued for the following equipment:

GMEI1000ADP. Series 1000 Adapter.

AIS / I, II, III / 1 / ABCDEFG – ISM0063; [I / 0] AEx [ia] IIC – ISM0063

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

T3010S. Loop Indicator.

IS / I / 1 / ABCD / T5 Ta = 60°C - ISM0064; Entity; NI / I / 2 / ABCD / T5 Ta = 60°C;
 I / 0 AEx ia IIC / T5 Ta = 60°C - ISM0064; Entity; I / 2 / AEx nA IIC / T5 Ta = 60°C;

Entity Parameters:

Input: Vmax = 30 V, Imax = 200 mA, Pi = 850 mW, Ci = 0, Li = 0

Output: Voc = 1.2 V, Isc = 81 mA, Po = 25 mW, Ca = 465 µF, La = 5.4 mH

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

2. For Zone 2 applications, the enclosure shall maintain a minimum ingress protection of IP54.

D1010ab. SIL2-SIL3 Repeater Power Supply Smart-Hart Compatible.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0007; Entity; [I / 0] AEx [ia] IIC - ISM0007; Entity;

Entity Parameter

Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15	A, B, IIC	26.3	91	597	0.095	4.3	59.6
Ch.2 10-11	C, E, IIB				0.738	17.2	238.4
	F, G, IIA				2.508	34.5	476.8
	CL III						
Ch.1 15-16	A, B, IIC	1.1	38	11	100	11.3	3490
Ch.2 11-12	C, E, IIB				1000	45.3	13963
	F, G, IIA				1000	90.7	27927
	CL III						

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1012Q. Quad Repeater Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0070; Entity; [I / 0] AEx [ia] IIC - ISM0070; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 15-16 Ch.2 13-14 Ch.3 9-10 Ch.4 11-12	A, B, IIC	21.5	93	496	0.176	4.1	71.7
	C, E, IIB				1.2	16.4	287
	F, G, IIA				4.5	32.8	574
	CL III						

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1014ab. Repeater Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0052; Entity; [I / 0] AEx [ia] IIC - ISM0052; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15 Ch.2 10-11	A, B, IIC	25.2	93	585	0.106	4.1	60.7
	C, E, IIB				0.819	16.4	242.9
	F, G, IIA				2.899	32.9	485.8
	CL III						

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1020ab. SIL 2 Powered Isolating Driver Smart-Hart compatible.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0012; Entity; [I / 0] AEx [ia] IIC - ISM0012; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15 Ch.2 10-11	A, B, IIC	25.2	87	548	0.106	4.6	64.9
	C, E, IIB				0.819	18.7	259.6
	F, G, IIA				2.899	37.5	519.3
	CL III						

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1021Sa. 1 Channel Powered Isolating Driver with Fault Detection.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0022; Entity; [I / 0] AEx [ia] IIC - ISM0022; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15	A, B, IIC	25.2	87	548	0.106	4.6	64.9
	C, E, IIB				0.819	18.7	259.6
	F, G, IIA				2.899	37.5	519.3
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1022a. Fire/Smoke Detector Interface.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0077; Entity; [I / 0] AEx [ia] IIC - ISM0077; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	25.2	93	585	0.107	4.1	61.2
Ch.2 15-16	C, E, IIB				0.820	16.4	244.9
	F, G, IIA				2.9	32.9	489.8
	CL III						

a = S, D.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1030ab. Switch/Proximity Detector Repeater Relay Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0008; Entity; [I / 0] AEx [ia] IIC - ISM0008; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	10.7	15	39	2.23	172	930
Ch.2 15-16	C, E, IIB				15.6	689	3720
	F, G, IIA				69	1379	7440
	CL III						

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1031ab. Switch/Proximity Detector Repeater Transistor Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0009; Entity; [I / 0] AEx [ia] IIC - ISM0009; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14 Ch.2 15-16 Ch.3 9-10 Ch.4 11-12	A, B, IIC	10.7	15	39	2.23	172	930
	C, E, IIB				15.6	689	3720
	F, G, IIA				69	1379	7440
	CL III						

a = D, Q.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1032ab. SIL 2 Switch/Proximity Detector Repeater Relay Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0041; Entity; [I / 0] AEx [ia] IIC - ISM0041; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14 Ch.2 15-16 Ch.3 9-10 Ch.4 11-12	A, B, IIC	9.6	10	24	3.599	379	1530
	C, E, IIB				25.999	1517	6150
	F, G, IIA				209.999	3035	12310
	CL III						

a = D, Q.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1033ab. SIL 2 Switch/Proximity Detector Repeater Transistor Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0043; Entity; [I / 0] AEx [ia] IIC - ISM0043; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14 Ch.2 15-16 Ch.3 9-10 Ch.4 11-12	A, B, IIC	9.6	10	24	3.599	379	1530
	C, E, IIB				25.999	1517	6150
	F, G, IIA				209.999	3035	12310
	CL III						

a = D, Q.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1034ab. Switch/Proximity Detector Interface.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0053; Entity; [I / 0] AEx [ia] IIC - ISM0053; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15	A, B, IIC	9.6	11	25	3.6	336	1449
Ch.2 10-11	C, E, IIB				26	1345	5790
	F, G, IIA				210	2690	11590
	CL III						

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1035Sa. Frequency-Pulse Isolating Repeater.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0079; Entity; [I / 0] AEx [ia] IIC - ISM0079; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16	A, B, IIC	10.9	1.1	3	2.05	29000	12000
	C, E, IIB				14.4	117000	48100
	F, G, IIA				63	235000	96200
	CL III						
15-16	A, B, IIC	15.5	13	48	0.508	235	585
	C, E, IIB				3.110	941	2342
	F, G, IIA				12.500	1883	4685
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1040aQ. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0020; Entity; [I / 0] AEx [ia] IIC - ISM0020; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel	A, B, IIC	23.6	72	424	0.130	6.8	83.9
	C, E, IIB				0.970	27.4	335.9
	F, G, IIA				3.5	54.8	671.9
	CL III						
2 channels in parallel	A, B, IIC	23.6	144	847	0.130	1.7	41.9
	C, E, IIB				0.970	6.8	167.9
	F, G, IIA				3.5	13.7	335.9
	CL III						
3 channels in parallel	A, B, IIC	23.6	216	1271	NA	NA	NA
	C, E, IIB				0.970	3	111.9
	F, G, IIA				3.5	6	223.9
	CL III						
4 channels in parallel	A, B, IIC	23.6	288	1674	NA	NA	NA
	C, E, IIB				0.970	1.7	83.9
	F, G, IIA				3.5	3.4	167.9
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1041aQ. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0020; Entity; [I / 0] AEx [ia] IIC - ISM0020; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel	A, B, IIC	23.6	49.6	292	0.130	14.2	121.9
	C, E, IIB				0.970	57.0	487.6
	F, G, IIA				3.5	114.0	975.3
	CL III						
2 channels in parallel	A, B, IIC	23.6	99.2	584	0.130	3.6	60.9
	C, E, IIB				0.970	14.4	243.8
	F, G, IIA				3.5	28.9	487.6
	CL III						
3 channels in parallel	A, B, IIC	23.6	148.8	875	0.130	1.6	40.6
	C, E, IIB				0.970	6.4	162.5
	F, G, IIA				3.5	12.8	325
	CL III						
4 channels in parallel	A, B, IIC	23.6	198.4	1167	NA	NA	NA
	C, E, IIB				0.970	3.6	121.9
	F, G, IIA				3.5	7.2	243.8
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1042aQ. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0020; Entity; [I / 0] AEx [ia] IIC - ISM0020; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel	A, B, IIC	23.6	88.2	519	0.130	4.5	68.6
	C, E, IIB				0.970	18.2	274.4
	F, G, IIA				3.5	36.5	548.9
	CL III						
2 channels in parallel	A, B, IIC	23.6	176.4	1038	0.130	1.1	34.3
	C, E, IIB				0.970	4.5	137.2
	F, G, IIA				3.5	9.1	274.4
	CL III						
3 channels in parallel	A, B, IIC	23.6	264.6	1556	NA	NA	NA
	C, E, IIB				0.970	2	91.4
	F, G, IIA				3.5	4	182.9
	CL III						
4 channels in parallel	A, B, IIC	23.6	352.8	1674	NA	NA	NA
	C, E, IIB				0.970	1.1	68.6
	F, G, IIA				3.5	2.2	137.2
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1043aQ. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0020; Entity; [I / 0] AEx [ia] IIC - ISM0020; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel	A, B, IIC	23.6	49.6	292	0.130	14.2	121.9
	C, E, IIB				0.970	57.0	487.6
	F, G, IIA				3.5	114.0	975.3
	CL III						
2 channels in parallel	A, B, IIC	23.6	99.2	584	0.130	3.6	60.9
	C, E, IIB				0.970	14.4	243.8
	F, G, IIA				3.5	28.9	487.6

3 channels in parallel	CL III	23.6	148.8	875	0.130	1.6	40.6
	A, B, IIC						
	C, E, IIB F, G, IIA CL III						
4 channels in parallel	A, B, IIC	23.6	198.4	1167	NA	NA	NA
	C, E, IIB						
	F, G, IIA CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1044S, D1044D. Digital Relay Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
AIS / I, II, III / 1 / ABCDEFG – ISM0080; Entity; [I / 0] AEx [ja] IIC - ISM0080; Entity;

Entity Parameters: Uo = 0, Io = 0, Po = 0, Co = 0, Lo = 0
Entity Parameters: Ui = 60 V, Ii = 2 A, Ci = 0, Li = 0

D1045Ya. Digital Output Loop.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
AIS / I, II, III / 1 / ABCDEFG – ISM0081; Entity; [I / 0] AEx [ja] IIC - ISM0081; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14 Ch.2 9-10	A, B, IIC	18.9	249	1173	0.260	0.58	30.3
	C, E, IIB F, G, IIA CL III						
Ch.1 15-16 Ch.2 11-12	A, B, IIC	18.9	307	1286	0.260	0.38	24.5
	C, E, IIB F, G, IIA CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1046Ya. Digital Output Loop.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
AIS / I, II, III / 1 / CDEFG – ISM0082; Entity; [I / 0] AEx [ja] IIB - ISM0082; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14 Ch.2 9-10	C, E, IIB	23.6	366	1600	970	1.06	66
	F, G, IIA CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1047 Digital Output Driver Loop Powered for ND Loads

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / CDEFG – ISM0095; Entity; [I / 0] AEx [ia] IIB - ISM0095; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16 (Out A)	A, B, IIC	24.9	145	897	0.112	1.7	39.6
	C, E, IIB				0.850	6.8	158.7
	F, G, IIA				3.01	13.6	317.4
	CL III						
14-16 (Out B)	A, B, IIC	24.9	110	681	0.112	2.9	52.2
	C, E, IIB				0.850	11.8	208.9
	F, G, IIA				3.01	23.6	417.8
	CL III						
15-16 (Out C)	A, B, IIC	24.9	91	559	0.112	4.3	63.6
	C, E, IIB				0.850	17.5	254.5
	F, G, IIA				3.01	35	509
	CL III						

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1048 Digital Output Driver Loop Powered for NE Loads

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / CDEFG – ISM0096; Entity; [I / 0] AEx [ia] IIB - ISM0096; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16 (Out A)	A, B, IIC	24.9	145	897	0.112	1.7	39.6
	C, E, IIB				0.850	6.8	158.7
	F, G, IIA				3.01	13.6	317.4
	CL III						
14-16 (Out B)	A, B, IIC	24.9	110	681	0.112	2.9	52.2
	C, E, IIB				0.850	11.8	208.9
	F, G, IIA				3.01	23.6	417.8
	CL III						
15-16 (Out C)	A, B, IIC	24.9	91	559	0.112	4.3	63.6
	C, E, IIB				0.850	17.5	254.5
	F, G, IIA				3.01	35	509
	CL III						

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1049 Digital Output Driver Bus Powered for NE Loads

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / CDEFG – ISM0097; Entity; [I / 0] AEx [ia] IIB - ISM0097; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16 (Out A)	A, B, IIC	24.9	145	897	0.112	1.7	39.6
	C, E, IIB				0.850	6.8	158.7
	F, G, IIA				3.01	13.6	317.4
	CL III						
14-16 (Out B)	A, B, IIC	24.9	110	681	0.112	2.9	52.2
	C, E, IIB				0.850	11.8	208.9
	F, G, IIA				3.01	23.6	417.8
	CL III						
15-16 (Out C)	A, B, IIC	24.9	91	559	0.112	4.3	63.6
	C, E, IIB				0.850	17.5	254.5
	F, G, IIA				3.01	35	509
	CL III						

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1052ab. Analog Signal Converter, Duplicator, Adder, Subtractor.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0015; Entity; [I / 0] AEx [ia] IIC - ISM0015; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15-16 Ch.2 10-11-12	A, B, IIC	10.8	4	11	2.135	2541	3520
	C, E, IIB				14.995	10167	14090
	F, G, IIA				65.995	20335	28180
	CL III						

a = S, D, X, Y.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1053Sa. SIL 2 Analog Signal Converter and Trip Amplifier.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0016; Entity; [I / 0] AEx [ia] IIC - ISM0016; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
14-15-16	A, B, IIC	10.8	4	11	2.135	2541	3520
	C, E, IIB				14.995	10167	14090
	F, G, IIA				65.995	20335	28180
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1054Sa. 1 Channel Repeater Power Supply and Trip Amplifiers.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
AIS / I, II, III / 1 / ABCDEFG – ISM0067; Entity; [I / 0] AEx [ia] IIC – ISM0067; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 14-15	A, B, IIC	26.3	91	597	0.095	4.3	59.6
Ch.2 10-11	C, E, IIB				0.738	17.2	238.4
	F, G, IIA				2.508	34.5	476.8
	CL III						
Ch.1 15-16	A, B, IIC	1.1	56	16	100	11.3	2327
Ch.2 11-12	C, E, IIB				1000	45.3	9309
	F, G, IIA				1000	90.7	18618
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1060Sa. Frequency-Pulse Converter, Repeater and Trip Amplifier.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
AIS / I, II, III / 1 / ABCDEFG – ISM0054; Entity; [I / 0] AEx [ia] IIC - ISM0054; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
13-16	A, B, IIC	10.9	1.1	3	2.05	29000	12000
	C, E, IIB				14.4	117000	48100
	F, G, IIA				63	235000	96200
	CL III						
14-15	A, B, IIC	15.5	13	48	0.508	235	585
	C, E, IIB				3.110	941	2342
	F, G, IIA				12.500	1883	4685
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1061Sa. Isolating Repeater.

NI / I / 2 / ABCD / T4 Ta = 60°C; I / 2 / AEx nA IIC / T4 Ta = 60°C;
AIS / I, II, III / 1 / ABCDEFG – ISM0068; Entity; [I / 0] AEx [ia] IIC – ISM0068; Entity;

Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Ca (µF)	La (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	3.7	225	206	100	0.7	173
Ch.2 15-16	C, E, IIB	3.7	225	206	1000	2.8	693
	F, G, IIA	3.7	225	206	1000	5.6	1386
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.
2. For Zone 2 applications, the enclosure shall maintain a minimum ingress protection of IP54.

D1062Sa. Vibration Transducer Interface.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0094; Entity; [I / 0] AEx [ia] IIC - ISM0094; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
16-14	A, B, IIC	25.9	90	576	0.100	4.4	61.7
	C, E, IIB				0.770	17.9	247.1
	F, G, IIA				2.63	35.8	494.3
	CL III						
14-15	A, B, IIC	27.0	90	576	0.90	4.4	56.8
	C, E, IIB				0.705	17.9	227.3
	F, G, IIA				2.33	35.8	454.7
	CL III						
15-16	A, B, IIC	1.1	0.012	0.004	100	1000	11000000
	C, E, IIB				1000	1000	46000000
	F, G, IIA				1000	1000	93000000
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1063Sa. Isolating Repeater.

NI / I / 2 / ABCD / T4 Ta = 60°C; I / 2 / AEx nA IIC / T4 Ta = 60°C;
 AIS / I, II, III / 1 / ABCDEFG – ISM0069; Entity; [I / 0] AEx [ia] IIC – ISM0069; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
9-10-11-12-13-14	A, B, IIC	17.3	199.6	864	351	0.85	41.2
	C, E, IIB				2.058	3.4	164.8
	F, G, IIA				8.498	6.8	329.6
	CL III						
13-14	A, B, IIC	17.3	8	35	353	300	1020
	C, E, IIB				2.06	1200	4110
	F, G, IIA				8.5	2400	8220
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.
2. For Zone 2 applications, the enclosure shall maintain a minimum ingress protection of IP54.

D1064Sa. Load Cell/Strain Gauge Bridge Isolating Converter.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0088; Entity; [I / 0] AEx [ia] IIC - ISM0088; Entity;

Entity Parameters: $U_o = 5.92\text{ V}$, $I_o = 196\text{ mA}$, $P_o = 576\text{ mW}$, $C_o = 39\text{ }\mu\text{F}$, $L_o = 0.93\text{ mH}$, $L/R = 61.7\text{ }\mu\text{H}/\Omega$

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

Entity Parameter Terminals	Group	U_o (V)	I_o (mA)	P_o (mW)	C_o (μF)	L_o (mH)	L/R ($\mu\text{H}/\Omega$)
9-10-11-12-13-14	A, B, IIC	5.9	196	576	39	0.93	61.7
	C, E, IIB				996	3.71	247
	F, G, IIA CL III				996	7.42	494.1

D1072ab. SIL 2 Temperature Converter, Duplicator, Adder, Subtractor.

NI / I / 2 / ABCD / T4 $T_a = 60^\circ\text{C}$; NI / I / 2 / IIC / T4 $T_a = 60^\circ\text{C}$;

AIS / I, II, III / 1 / ABCDEFG – ISM0018; Entity; [I / 0] AEx [ia] IIC - ISM0018; Entity;

Entity Parameter Terminals	Group	U_o (V)	I_o (mA)	P_o (mW)	C_o (μF)	L_o (mH)	L/R ($\mu\text{H}/\Omega$)
Ch.1 13-14-15-16 Ch.2 9-10-11-12	A, B, IIC	10.8	9	24	2.134	468	1510
	C, E, IIB				14.994	1874	6050
	F, G, IIA CL III				65.994	3749	12100

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1073Sa. SIL 2 Temperature Converter and Trip Amplifier.

NI / I / 2 / ABCD / T4 $T_a = 60^\circ\text{C}$; NI / I / 2 / IIC / T4 $T_a = 60^\circ\text{C}$;

AIS / I, II, III / 1 / ABCDEFG – ISM0019; Entity; [I / 0] AEx [ia] IIC - ISM0019; Entity;

Entity Parameter Terminals	Group	U_o (V)	I_o (mA)	P_o (mW)	C_o (μF)	L_o (mH)	L/R ($\mu\text{H}/\Omega$)
Ch.1 13-14-15-16	A, B, IIC	10.8	9	24	2.134	468	1510
	C, E, IIB				14.994	1874	6050
	F, G, IIA				65.994	3749	12100
	CL III						

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1092a. SIL 2 Relay Output Module.

NI / I / 2 / ABCD / T4 $T_a = 60^\circ\text{C}$; NI / I / 2 / IIC / T4 $T_a = 60^\circ\text{C}$; ISM0091

a = S, D.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1092a-069. SIL 3 Relay Output Module.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C; ISM0101

a = S, D.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1093S. SIL 3 Relay Output Module with Line and Load Diagnostics.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C; ISM0093

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D1130ab. Switch/Proximity Detector Repeater Relay Output.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
AIS / I, II, III / 1 / ABCDEFG – ISM0048; Entity; [I / 0] AEx [ia] IIC - ISM0048; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-14	A, B, IIC	10.7	15	39	2.23	172	930
Ch.2 15-16	C, E, IIB				15.6	689	3720
	F, G, IIA				69	1379	7440
	CL III						

a = S, D.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

D2000. Multiplexer System.

*IS / I, II, III / 1 / ABCDEFG – ISM0078; Entity; [I / 0] AEx [ia] IIC - ISM0078; Entity;
NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
AIS / I, II, III / 1 / ABCDEFG – ISM0078; Entity; [I / 0] AEx [ia] IIC - ISM0078; Entity;

*Note D2050M may only be mounted only in Zone 2 or Division 2 areas

D2010M Parameters:

Ui = 15 V Ii = 215 mA Pi = 1755 mW for supply/communication line

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch. 1 to 16 1-2-3-4	A, B, IIC	10.7	7	19	2.23	725	1888
	C, E, IIB				15.6	2902	7552
	F, G, IIA				69	5804	15105
	CL III						

D2011M Parameters:

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch. 1 to 16 1-2-3-4	A, B, IIC	10.7	7	19	2.23	725	1888
	C, E, IIB				15.6	2902	7552
	F, G, IIA CL III				69	5804	15105

D2030M Parameters:

Ui = 15 V Ii = 215 mA Pi = 1755 mW for supply/communication line

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch. 1 to 32 1-2 or 3-4	A, B, IIC	10.7	14	38	2.23	181	946.5
	C, E, IIB				15.6	725	3786
	F, G, IIA CL III				69	1451	7572

*D2050M Parameters:

Uo = 15 V Io = 210 mA Po = 1736 mW for supply/communication line

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

PSD1000ab. Universal Switching Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C; ISM0089

a = Blank, F.

b = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

PSD1001a. 4 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;

AIS / I, II, III / 1 / ABCDEFG – ISM0023; Entity; [I / 0] AEx [ia] IIC - ISM0023; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Single Channel Ch.1 13-14 Ch.2 15- 16 Ch.3 9-10 Ch.4 11-12	A, B, IIC	23.6	88.2	519	0.130	4.5	68.6
	C, E, IIB				0.970	18.2	274.4
	F, G, IIA				3.5	36.5	548.9
	CL III						
2 channels in parallel	A, B, IIC	23.6	176.4	1038	0.130	1.1	34.3
	C, E, IIB				0.970	4.5	137.2
	F, G, IIA				3.5	9.1	274.4
	CL III						

3 channels in parallel	A, B, IIC	23.6	264.6	1556	NA	NA	NA
	C, E, IIB				0.970	2.0	91.4
	F, G, IIA CL III				3.5	4.0	182.9
4 channels in parallel	A, B, IIC	23.6	352.8	1674	NA	NA	NA
	C, E, IIB				0.970	1.1	68.6
	F, G, IIA CL III				3.5	2.2	137.2

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

PSD1001Ca. 2 Channel Power Supply.

NI / I / 2 / ABCD / T4 Ta = 60°C; NI / I / 2 / IIC / T4 Ta = 60°C;
AIS / I, II, III / 1 / CDEFG – ISM0065; Entity; [I / 0] AEx [ia] IIB - ISM0065; Entity;

Entity Parameter Terminals	Group	Uo (V)	Io (mA)	Po (mW)	Co (µF)	Lo (mH)	L/R (µH/Ω)
Ch.1 13-15	C, E, IIB	23.6	352.8	1674	0.970	1.1	68.6
Ch.2 14-16	F, G, IIA CL III				3.5	2.2	137.2

a = Power option /B or blank.

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

PSD1206, PSD1210. Power Supply.

NI / I / 2 / ABCD / T3 Ta = 60°C; NI / I / 2 / IIC / T3 Ta = 60°C; ISM0076

Special Condition of Use:

1. The product shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including access only by the use of a tool.

Equipment Ratings:

Models D1010S, D1010D, D1012Q, D1014S, D1014D, D1020S, D1020D, D1021S, D1022S, D1022D, D1030S, D1030D, D1031D, D1031Q, D1032D, D1032Q, D1033D, D1033Q, D1034S, D1034D, D1035S, D1040Q, D1041Q, D1042Q, D1043Q, D1044S, D1044D, D1045Y, D1046Y, D1047S, D1048S, D1048D, D1049S, D1049D, D1052S, D1052D, D1052X, D1052Y, D1053S, D1054S, D1060S, D1061S, D1062S, D1063S, D1064S, D1072, D1073, D1072S, D1072D, D1073S, D1092S, D1092S-069, D1092D, D1092S-069, D1093S, D1130S, D1130D, PSD1001, PSD1001C, and D2050M are Associated Intrinsically Safe for connection to Class I, II and III, Division 1, Groups A, B, C, D, E, F and G and Class I, Zone 0, Group IIC in accordance with Entity requirements and the applicable Control Drawing; Nonincendive for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2, Group IIC Hazardous (Classified) Locations



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Model GMEI1000ADP is an Associated Intrinsically Safe for connection to Class I, II and III, Division 1, Groups A, B, C, D, E, F and G and Class I, Zone 0, Group IIC Hazardous (Classified) Locations in accordance with Entity requirements and the applicable Control Drawing

Models D2010M, D2011M, D2030M, and T3010S are Intrinsically Safe for use in Class I, Division 1,

Groups A, B, C and D and Class I, Zone 0, Group IIC in accordance with Entity requirements and Control Drawing ISM0064; Nonincendive for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2, Group IIC Hazardous (Classified) Locations

Models PSD1000, PSD1206, and PSD1210 are Nonincendive for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2, Group IIC Hazardous (Classified) Locations

FM Approved for:

GM International SRL
Villasanta, Milan, Italy



Member of the FM Global Group

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

C22.2 No. 157	1992
C22.2 No. 213	1987
CAN/CSA-E79-0-95	1995
CAN/CSA-E79-11-95	1995
C22.2 No. 142	1987

Original Project ID: 3024643

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Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3036491	March 22, 2010		

FM Approvals LLC



 J.E. Marquedant
 Group Manager, Electrical

22 March 2010
 Date