

The following document is organized by model number. Using the bookmarks function of Adobe Acrobat locate your model number or model number series to find the approval information.



Pentair Pump Group Inc, Hydromatic Pumps 1840 Baney Rd Ashland OH 44805

Submersible Pump Motor. Model abcde

XP / I / 1 / CD / T4

- a = Frequency blank (60 Hz) or Y (50 Hz).
- b = Series type S3HX, S4HX, S3HVX, S4NX or S4NVX.
- c = Motor horsepower 75, 100, 150, 200, 300, 500 (not S3HX) or 600 (not S3HX or S3HVX).
- d = Voltage rating B, C, D G or J.
- e = Speed B, C or D (D only for S3HVX).

Submersible Grinder Pump Motor. Model abcde

XP / I / 1 / CD / T4

- a = Frequency blank (60 Hz) or Y (50 Hz).
- b = Series type G1X, G1LX, HPGHX or HPGFX.
- c = Motor horsepower 150 or 200 (G1X, G1LX); 300 or 500 (HPGHX, HPGFX); 300, 500 or 750 (HPGFX).
- d = Voltage rating 2, 3, 4, 5, 6 or 7.
- e = Speed 2 or 4.

Submersible Pump Motor. Model abcde

XP / I / 1 / CD / T3C

- a = Frequency blank (60 Hz) or Y (50 Hz).
- b = Series type S8LX or S12LX.
- c = Motor horsepower 1500, 2000, 2500, 3000, 4000, 5000, 6000, 7500 (S8LX, S12LX); 10,000 or 12,500 (S8LX only).
- d = Voltage rating E, F, G or J.
- e = Speed A, B or C.

Submersible Pump Motor. Model abcde

XP / I / 1 / CD / T4

- a = Frequency blank (60 Hz) or Y (50 Hz).
- b = Series type S4HVX, S4LX, S4LVX, S4MX, S4MVX, S6LX or S8FX.
- c = Motor horsepower 150 or 200 (S4LX, S4LVX), 300 or 500 (excluding S4HVX), 750 or 1000 (all models), 1200 (S4MX, S4MVX), 1500 (excluding S4MX, S4MVX), 2000, 2500, 3000 (excluding S4MX, S4MVX, S4HVX), 4000 or 4600 (S6LX).
- d = Voltage rating E, F, G or J.
- e = Speed A, B, C or D.

Pepperl+Fuchs GmbH Konigsberger Alle 87 D-68307 Mannheim 31 Germany

Pepperl+Fuchs Inc 1600 Enterprise Pkwy Twinsburg OH 44087

Pepperl+Fuchs Mfg (GB) Ltd 77 Ripponden Rd Oldham OL1 4EL England

Pepperl+Fuchs Pte Ltd 18 Ayer Rajah Crescent P&F Bldg 139942 Singapore

Pepperl+Fuchs Via Delle Industrie 4 Box 14, 20050 Mezzago (MI) Italy

6abcd Keyboard. Daisy Data Inc.

IS / I,II,III / 1 / BCDEFG / T4— 116-0071

- a = Number of keys (60 or 101 keys) 0 or 1.
- b = Keyboard type (membrane or full travel) 0 or 5.
- c = Keyboard mounting (desktop, rack or panel) 3, 4 or 5.
- d = Any designation AA through ZZ.

50FY41-6, 50FY41-12, 50FY41-50, Proximity Switch

IS / I / 1 / ABCD / T4 Ta = 85°C — 116-0258

221-961-099-a, 221-961-100-a. 1000 I/P Transducer. Bellofram.

IS / I,II,III / 1 / ABCDEFG — ID-43 / 0

- a = External mechanical option 000 to 999.

546S Electropneumatic Transducer. Fisher Controls International.

IS / I / 1 / ABCD — ID-42 / 0

571 or 318. Pressure Transmitter. Viatran Corp.

IS / I,II,III / 1 / ABCDEFG —116-0026 / 0

977abcdef-gS. Proximity Sensor

NI / I / 2 / ABCD / T6

- a = Replacement body and head blank or Z.
- b = Sensing types S or T.
- c = Sensing distance 01 or 02.
- d = Output A, B, C, or E.
- e = Option D, F, N, P or blank.
- f = Time range X, 1 or blank.
- g = Input 1 or 2.

1151abcde15. Pressure Transmitter. Rosemount Inc.

IS / I,II,III / 1 / ABCDEFG — 116-0098 / 0

- a = Type instrument AP, DP, DR, GP, HP.
- b = Range 2, 3, 4, 5, 6, 7, 8, 9 or 0.
- c = Output A, B, C, D, E, F, J, L, M or S.
- d = Construction material 12, 13, 14, 15, 16, 22, 23, 24, 25, 26, 33, 34, 35, 36, 43, 44, 45, 46, 52, 53, 54, 55, 56, 63, 64, 66, 73, 83, 1A, 1B, 1D, 2A, 2B, 2D, 3B, 3D, 4B, 4C, 4D, 5A, 5B, 5C, 5D, 6B, 7B or 8B.
- e = Option B1, B2, B3, B4, B5, B6, B7, B8, B9, C9, D1, D2, D3, F1, F2, K1, K2, L1, L2, L3, L4, L5, M1, M2, M3, M4, M6, M7, M8, M9, P1, P2, P3, P4, P5, P6, P7, P8, S1, S2, V1, V2, V3, W2, W3, W4, W5, Z1, Z2, Z3, T0537 and/or T0554.

3311abcd1e15. Current-to-Pressure Transducer. Rosemount Inc.

IS / I,II,III / 1 / ABCDEFG — 116-0099 / 0

- a = Action D or R.
- b = Performance S or M.
- c = Input 1, 2 or 3.
- d = Output J, K, L, M or H.
- e = Option B1, F1, G1, G2, G3, G4, G7, G8, P1 or R1.

7079-17-a-300-024-b. Two-Wire Conductivity or Resistivity Transmitter. Honeywell IAC.

IS / I / 1 / ABCD — 116-0059 / A

a = Housing 01 or 03.

b = Tagging 000, 205, 206, 207, 208 or 209. Isolated Current Repeater. Type EGT-001-a.

7079-abc024d Two-Wire pH or Redox Transmitter. Honeywell IAC.

IS / I / 1 / ABCD — 116-0059 / A

a = Type of measurement 11, 22, 33, 44.

b = Case type 01 or 03.

c = Range 000, 001, 200 or 247.

d = Tagging 000, 205, 206, 207, 208 or 209.

9303001 through 9303011. Pressure Transmitter. Data Instruments Inc.

IS / I,II,III / 1 / ABCDEFG — 116-0042 / 0

Aab-cdef-g-h. Analog Inductive Proximity Sensor.

NI / I / 2 / ABCD / T5 Ta = 50°C — 116-0155 / 0; S / II / 1 / EFG / T5 Ta = 50°C; S / III / T5 Ta = 50°C; Type 4X

a = two digit code.

b = Sensing range in mm (0.6-100).

c = Diameter in mm or housing style.

d = G or blank.

e = Body material M, K, KK or T.

f = Blank or length in mm for cylindrical housing.

g = Electrical outputs.

h = Additional information.

Special Condition of use:

1. Must be installed in a tool secured enclosure meeting the requirements of ISA S82.02.01 or other applicable standard.

ADU 282 / AS-BADU-282-a. A/D Converter.

AIS / I,II,III / 1 / ABCDEFG — 16-260FM-27 / 0; Entity

a = Software issue, not important to intrinsic safety.

Entity Parameters:

| Type | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|---------------|-----------------|------------------|----------------------|---------------|
| Terminals 3-5 | 28.0 | 91 | 0.12 | 4.0 |
| Terminals 6-8 | 28.0 | 91 | 0.12 | 4.0 |

ADU 284 / AS-BADU-284. Temperature Transmitter.

AIS / I,II,III / 1 / ABCDEFG — 16-261FM-22 / 0; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|----------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Terminals 3-6 | 10.0 | 30.0 | — | — | 3.0 | 35.0 |
| Terminals 7-10 | 10.0 | 30.0 | — | — | 3.0 | 35.0 |

Cab-cdef-g-h. Capacitive Proximity Sensor.

NI / I / 2 / ABCD / T5 Ta = 50°C — 116-0155 / 0; S / II / 1 / EFG / T5 Ta = 50°C; S / III / T5 Ta = 50°C; Type 4X

a = two digit code.

b = Sensing range in mm (0.6-100).

c = Diameter in mm or housing style.

d = G or blank.

e = Body material M, K, KK or T.

f = Blank or length in mm for cylindrical housing.

g = Electrical outputs.

h = Additional information.

Special Condition of use:

1. Must be installed in a tool secured enclosure meeting the requirements of ISA S82.02.01 or other applicable standard.

ControlNet Ex Tap.

IS / I / 1 / ABCD / T4 Ta = 70°C — 116-0179; I / 1 / AEx ib IIC T4 Ta = 70°C — 116-0179

CNet Ex Tap Trm Dummy Load.

IS / I / 1 / ABCD / T4 Ta = 70°C — 116-0179; I / 1 / AEx ib IIC T4 Ta = 70°C — 116-0179

ControlNet Ex System.

IS / I / 1 / ABCD — 116-0179; I / 1 / AEx ib IIC — 116-0179

DAP 284/AS-BDAP-284. Transformer Isolated Barrier.

AIS / I,II,III / 1 / ABCDEFG — 116-0125 / 0; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|-----------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Terminals 3-4 | 26.11 | 70 | — | — | 0.17 | 7.45 |
| Terminals 5-6 | 26.11 | 70 | — | — | 0.17 | 7.45 |
| Terminals 7-8 | 26.11 | 70 | — | — | 0.17 | 7.45 |
| Terminals 9-10 | 26.11 | 70 | — | — | 0.17 | 7.45 |
| Terminals 3, 4, 5, 6 | — | — | 27.31 | 140 | 0.15 | 1.97 |
| Terminals 7, 8, 9, 10 | — | — | 27.31 | 140 | 0.15 | 1.97 |

DAP 284/AS-BDAP-284. Transformer Isolated Barrier.

AIS / I,II,III / 1 / CDEFG — 116-0125 / 0; Entity

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|-----------------------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Terminals 3, 4, 5, 6, 7, 8 | — | — | 27.31 | 210 | 0.45 | 3.67 |
| Terminals 3, 4, 5, 6, 7, 8, 9, 10 | — | — | 27.31 | 280 | 0.45 | 2.12 |

DAU 282 / AS-BADU-282. Output Module.

AIS / I,II,III / 1 / ABCDEFG — 16-254BV-16 / 0; Entity

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Terminals 3-4 | 28.0 | 90.7 | — | — | 0.07 | 4.0 |
| Terminals 5-6 | 28.0 | 90.7 | — | — | 0.07 | 4.0 |

DEP 284/AS-BDEP-284. Transformer Isolated Barrier.

AIS / I,II,III / 1 / CDEFG — 116-0131 / 0; Entity

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|----------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Terminals 3-4 | 13.0 | 21 | — | — | 1.24 | 79.4 |
| Terminals 5-6 | 13.0 | 21 | — | — | 1.24 | 79.4 |
| Terminals 7-8 | 13.0 | 21 | — | — | 1.24 | 79.4 |
| Terminals 9-10 | 13.0 | 21 | — | — | 1.24 | 79.4 |

EG1-M4-FSU. Frequency to Current Converter.

AIS / I,II,III / 1 / ABCDEFG — 116-0032 / 0

EG2-M2-DW. Speed Monitor.

AIS / I,II,III / 1 / ABCDEFG — 116-0033 / 0

EG4-a Isolation Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 116-0031 / 0

a = Output type R, T or OT.

EGA-041. Transformer Isolated Solenoid Driver.

AIS / I,II,III / 1 / CDEFG — 116-0034 / 0; Entity

Entity Parameters:

$V_{OC} = 27.9$ V, $I_{SC} = 186$ mA, $C_a = 0.36$ μF , $L_a = 4.2$ mH.

EGA-041a. Transformer Isolated Solenoid Driver.

AIS / I,II,III / 1 / ABCDEFG — 116-0034 / 0; Entity

Entity Parameters:

$V_{OC} = 27.9$ V, $I_{SC} = 93.0$ mA, $C_a = 0.12$ μF , $L_a = 4.0$ mH.

a = Number of channels, blank or /3.

EGC-002. Transformer Isolated RTD Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 116-0029 / 0

EGT-001-a. Transformer Isolated Current Repeater.

AIS / I,II,III / 1 / ABCDEFG — 116-0028 / A; Entity

a = Number of channels, blank or 1.

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|--------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Terminals d2-d4-d6 | — | — | 29.1 | 99.5 | 0.11 | 3.6 |
| Terminals z2-z4-z6 | — | — | 29.1 | 99.5 | 0.11 | 3.6 |
| Terminals d6-d2, | 29.1 | 97.0 | — | — | 0.11 | 3.8 |
| Terminals z6-z2 | 29.1 | 97.0 | — | — | 0.11 | 3.8 |
| Terminals d6-d4 | 5.4 | 2.5 | — | — | 31.0 | 1000 |
| Terminals z6-z4 | 5.4 | 2.5 | — | — | 31.0 | 1000 |

EGT-105-a. Transformer Isolated Current Driver.

AIS / I,II,III / 1 / ABCDEFG — 116-0027 / 0; Entity

a = Input/output options 1-25 or blank.

Entity Parameters:

$V_{OC} = 26.4$ V, $I_{SC} = 90.6$ mA, $C_a = 0.14$ μF , $L_a = 4.5$ mH.

Fyabcde-f. Proximity Sensor.

NI / 2 / ABCD / T6

a = Size A, B, C or D.

b = Description A, B, C or D.

c = Sensing distance 3, 5, 8, 12, 16 or 32.

d = Output A, B, E or F.

e = Input 1 or 2.

f = Termination X, 33 or 34.

HR-2111a0. Purge Control Unit.

AIS / I,II,III / 1 / ABCDEFG — 116-0162 / 0 — Entity

Entity Parameters:

 $V_{OC} = 14.5 \text{ V}$, $I_{SC} = 62 \text{ mA}$, $C_a = 730 \text{ nF}$, $L_a = 9.5 \text{ mH}$.
a = Residual purging time display 0 (none) or 2 (display in sec).**HR-2151ab. Purge Pressure Regulator.**

IS / I,II,III / 1 / ABCDEFG / T6 — 116-0162 / 0

a = Operating mode 1 (compensation mode, orifice 10 mm), 2 (permanent purging, orifice 10 mm), 3 (compensation mode, orifice 17.2 mm) or 4 (permanent purging, orifice 17.2 mm).

b = Unit type 0 (standard unit) or 9 (series connection unit).

H-UT-Ex1. Temperature Transmitter.

IS / I / 1 / ABCD/T4 Ta = 80°C — 4-8331/0; Entity

Entity Parameters (Terminals 5 and 6):

 $V_{Max} = 30 \text{ V}$, $I_{Max} = 100 \text{ mA}$, $P_{Max} = 900 \text{ mW}$, $C_i = 0$, $L_i = 2.5 \text{ mH}$.**IaC-b-c. Code and Data Carriers.**

S / I,II,III / 1 / ABCDEFG / T6 — 116-0153 / b

a = Code carrier C or data carrier D.

b = Size in mm, 8, 10, 12, 16, 30 or 50.

c = T1, T3, F or GK.

IaH-bc-d-e. Inductive Read, Read/Write Heads.

S / I / 2 / ABCD / T6, S / II,III / 1 / EFG / T6 — 116-0153 / b

a = Read Head R, Read/Write Head V.

b = Diameter of cylindrical heads, 12GM, 18GM, 30GM or Flat Pack style FP3 or FP4.

c = Connector type V1 or blank.

d = Customization or blank.

IS-RPI System:

RSD-aO-Ex8. Output Module.

IS / I / 1 / ABCD T4 Ta = 70°C — 116-0183/0 Entity

AIS / I,II,III / 1 / ABCDEFG — 116-0183/0 Entity

IS / I / 1 / AEx ib [ia] IIC T4 Ta = 70°C — 116-0183/0 Entity

 $V_{Max} = 9.5 \text{ V}$ $I_{Max} = 1 \text{ A}$ $C_i = \text{negligible}$ $L_i = \text{negligible}$

Entity Parameters:

| | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|--|-----------------|------------------|--------------|---------------|----------------------------|---------------|
| Any One Channel i.e. Ch 0 Terminals 0(+)/1(-) | 21.0 | 100 | — | — | 0.20 | 3.5 |

a = B (discrete), C (analog) or U (universal).

Special Condition of Use:

1. When connected to FM Approved Power Supplies type numbers RSD2-PSD-Ex4.34.CON and RSA6-PSD-Ex4.34.CON.
2. When installed within an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standards.
3. When used with FM Approved Terminal bases type RS-TB-Ex.SC or RS-TB-Ex.SP.
4. When connected to Gateway Module RSD-GW-Ex2.CN in accordance with Pepperl + Fuchs control Drawing 116-0178.
5. When used with Pepperl + Fuchs interconnecting cable types RS-CE3S, RS-CE1S, RS-CE3 or RS-CE1 or Allen Bradley types 1794-CE3S, 1794-CE1S, 1794-CE3 or 1794-CE1.

RS-ISO.Master. Backplane Bus Isolator.

NI / I / 2 / ABCD / T4A Ta = 70°C — 116-0211

Special Conditions of Use:

1. The unit shall be installed in an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standards.

RSD2-ISO-Ex.Slave. Backplane Bus Isolator.

NI / I / 2 / ABCD / T4A Ta = 70°C; AIS / I / 1 / ABCD — 116-0211

Special Conditions of Use:

1. The unit shall be installed in an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standards.

RSD2-PSD-Ex.4.34.CON. RPI Power Supply.

XP / I / 1 / BCD / T5 Ta = 70°C; AIS / I,II,III / 1 / ABCDEFG — 116-0179 / 0; [I/0] AEx [ib] IIC Ta = 70°C — 116-0179/0; Type 4X

| | V_{oc} (V) | I_{sc} (mA) | P_o (W) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---|-----------------|------------------|--------------|--------------|---------------|----------------------------|---------------|
| Terminals +10,-11, +12, -13, +14, -15, or +16, -17 | 9.5 | 1 | 9.5 | — | — | 0.8 | 10 |

RSD2-PSD2-Ex.4.34.CON. RPI Power Supply.

XP / I / 1 / BCD / T5 Ta = 70°C; AIS / I,II,III / 1 / ABCDEFG — 116-0179 / 0; [I/0] AEx [ib] IIC Ta = 70°C — 116-0179 / 0; Type 4X

| | V_{oc} (V) | I_{sc} (mA) | P_o (W) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|--|-----------------|------------------|--------------|--------------|---------------|---------------------|---------------|
| Terminals +10, -11, +12, -13, +14, -15, or +16, -17 | 9.5 | 1 | 9.5 | - | - | 0.5 | 8 |

RSD-BI-Ex16. Discrete Input Module.

IS / I / 1 / ABCD / T4 Ta = 70°C — 116-0177 / 0; Entity
 AIS / I,II,III / 1 / ABCDEFG — 116-0177 / 0; Entity
 IS / I / 1 / AEx ib [ia] IIC T4 Ta = 70°C — 116-0177 / 0 Entity

$V_{Max} = 9.5$ V $I_{Max} = 1$ A $C_i = 0$ $L_j = 0$

Entity Parameters:

| | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|---|-----------------|------------------|--------------|---------------|---------------------|---------------|
| Any One Channel, i.e., Ch 0 Terminals 0, 1 | 14.5 | 15 | - | - | 0.3 | 80.0 |

Conditions of Use:

1. When connected to FM Approved Power Supplies type numbers RSD2-PSD-Ex4.34.CON and RSA6-PSD-Ex4.34.CON.
2. When installed within an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standard.
3. When used with FM Approved Terminal bases type RS-TB-Ex.SC or RS-TB-Ex.SP
4. When connected to Gateway Module RSD-GW-Ex2.CN in accordance with Pepperl+Fuchs Control Drawing 116-0178.
5. When used with Pepperl+Fuchs interconnecting cable types RS-CE3S, RS-CE1S, RS-CE3 or RS-CE1, or Allen Bradley types 1794-CE3S, 1794-CE1S, 1794-CE3 or 1794-CE1.

RSD-CIa-Ex8. Analog Input Module.

IS / I / 1 / ABCD / T4 Ta = 70°C — 116-0181 / 0 Entity
 AIS / I,II,III / 1 / ABCDEFG — 116-0181/0 Entity
 IS / I / 1 / AEx ib [ia] IIC T4 Ta = 70°C — 116-0181 / 0 Entity

$V_{Max} = 9.5$ V $I_{Max} = 1$ A $C_i = 0$ $L_j = 0$

Entity Parameters:

| | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|------------------------------|-----------------|------------------|--------------|---------------|---------------------|---------------|
| Any One Channel, i.e., Ch 0 | | | | | | |
| Terminals 0(+), 1(sig) | 23.7 | 92.5 | - | - | 0.06 | 2.0 |
| Terminals 1(sig), 2(-) | 5 | 1.0 | - | - | 100 | 1000 |
| Terminals 0(+), 1(sig), 2(-) | - | - | 23.7 | 93.5 | 0.06 | 2.0 |

a = 2 or blank.

Conditions of Use:

1. When connected to FM Approved Power Supplies type numbers RSD2-PSD-Ex4.34.CON and RSA6-PSD-Ex4.34.CON.
2. When installed within an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standard.
3. When used with FM Approved Terminal bases type RS-TB-Ex.SC or RS-TB-Ex.SP
4. When connected to Gateway Module RSD-GW-Ex2.CN in accordance with Pepperl+Fuchs Control Drawing 116-0178.
5. When used with Pepperl+Fuchs interconnecting cable types RS-CE3S, RS-CE1S, RS-CE3 or RS-CE1, or Allen Bradley types 1794-CE3S, 1794-CE1S, 1794-CE3 or 1794-CE1.

RSD-CFA-Ex.CN. ControlNet Adapter.

IS / I / 1 / ABCD / T4 Ta = 70°C — 116-0179 / AIS / I / 1 / AEx ib IIC T4 Ta = 70°C — 116-0179 / A

Conditions of Use:

1. Modules shall be supplied from FM Approved Power Supplies type numbers RSD2-PSD-Ex4.34.CON or RSD2-PSD2-Ex4.34.CON..
2. Modules shall be installed within an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standards.

RSD-FC-Ex2.CN.3km

IS / I / 1 / ABCD / T4 Ta = 70°C — 116-0179 / AIS / I / 1 / AEx ib IIC T4 Ta = 70°C — 116-0179 / A

Conditions of Use:

1. Modules shall be installed within an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standards.
2. Modules shall be supplied from FM Approved type numbers RSD2-PSD-Ex4.34.CON or RSD2-PSD2-Ex4.34.CON Power Supplies or RSD-CFA-ExCN Copper Fiber Adapters.

RSD-GW-Ex2.CN ControlNet Gateway Medium Redundant

IS / I / 1 / ABCD / T4 Ta = 70°C — 116-0179 Entity

AIS / I, II, III / 1 / ABCDEFG — 116-0179 Entity

IS / I / 1 / AEx ib IIC T4 Ta = 70°C — 116-0179 Entity

 $V_{Max} = 9.5 \text{ V}$ $I_{Max} = 1.0 \text{ A}$ $C_i = 120 \text{ nF}$ $L_i = 0$

Entity Parameters

| | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|----------------|-----------------|------------------|--------------|---------------|----------------------------|---------------|
| Flexbus | — | — | 5.8 | 400 | 3.0 | 3.0 |
| CH. A or CH. B | 5.4 | 160 | — | — | — | — |

Special Conditions of Use:

- The Gateways shall be connected to FM Approved Power Supplies type numbers RSD2-PSD-Ex4.34.CON or RSD2-PSD2-Ex4.34.CON.
- The Gateways shall be installed within an enclosure meeting the requirements of ANSI / ISA-82.02.01 or other applicable ordinary location standards.

RSD-TB-Ex.Sa Terminal Base.

IS / I / 1 / ABCD / T4 Ta = 70°C — 110-0179; I / 0 / AEx ia IIC T4 Ta = 70°C — 110-0179

a = C or P.

RSD-TIa-Ex8 Temperature Input Module

IS / I / 1 / ABCD / T4 Ta = 70°C — 116-0185 / 0 Entity

AIS / I,II,III / 1 / ABCDEFG — 116-0185 / 0 Entity

IS / I / 1 / AEx ib [ia] IIC T4 Ta = 70°C — 116-0185 / 0 Entity

 $V_{Max} = 9.5 \text{ V}$ $I_{Max} = 1 \text{ A}$ $C_i = 0$ $L_i = 0$

Entity Parameters

| | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|--|-----------------|------------------|--------------|---------------|----------------------------|---------------|
| Any One Channel i.e. Ch 0 | | | | | | |
| Terminals 0(+), 1(H), 2(L) 3(-); | 9 | 37 | — | — | 3 | 20 |
| Terminals 37, 38, 39 (CJC1); or 46, 47, 48 (CJC2) | 9 | 1 | — | — | 3 | 1000 |
| Terminals 0(+), 1(H), 2(L), 3(-), 37, 38, 39 (CJC1) or 46, 47, 48 (CJC2) | — | — | 9 | 37 | 3 | 20 |

a = blank or 2

Special Conditions of Use

- When connected to FM Approved Power Supplies type numbers RSD2-PSD-Ex4.34.CON and RSA6-PSD-Ex4.34.CON.
- When installed within an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standard.
- When used with FM Approved Terminal bases type RS-TB-Ex.SC or RS-TB-Ex.SP.
- When connected to Gateway Module RSD-GW-Ex2.CN in accordance with Pepperl + Fuchs Control Drawing 116- 0178.
- When used with Pepperl +Fuchs interconnecting cable types RS-CE3S, RS-CE1S, RS-CE3 or RS-CE1, or Allen Bradley types 1794-CE3S, 1794-CE1S, 1794-CE3 or 1794-CE1.

IVI-KHD2-4HRX, KHD2-IVI-AB1 and KHD2-IVI-4R4 ID. Interface Types.

NI / I / 2 / ABCD / T5

KaD0-CS-Exb.5cd Transformer Isolated Loop Powered Current Separator

AIS / I,II,III / 1 / ABCDEFG — 116-0129; Entity; NI / I / 2 / ABCD / T4 Ta = 60°C

| | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|------------------------|-----------------|------------------|--------------|---------------|----------------------------|---------------|
| KaD0-CS-Ex1.50d | 25.2 | 93 | — | — | 0.107 | 4.2 |
| KaD0-CS-Ex1.51d | 25.2 | 93 | — | — | 0.107 | 4.2 |
| KaD0-CS-Ex1.53d | 10.5 | 95 | — | — | 2.41 | 4.0 |
| KaD0-CS-Ex2.50d | | | | | | |
| Terminals 1-2, 4-5 | 25.2 | 93 | — | — | 0.107 | 4.2 |
| KaD0-CS-Ex2.51d | | | | | | |
| Terminals 1-2, 4-5 | 25.2 | 93 | — | — | 0.107 | 4.2 |
| KaD0-CS-Ex2.53d | | | | | | |
| Terminals 1-2, 4-5 | 10.5 | 95 | — | — | 2.41 | 4.0 |

a = Connection option plug and socket F or terminals H.

b = No of channels 1 or 2.

c = Nonhazardous area circuit options 0, 1, or 3.

d = P or blank.

KFD0-SCS-Ex1.55. SMART Current Repeater.

[I/1] AEx [ib] IIC — 116-0163 / 0 Entity; ANI / I,II,III / 2 / ABCDFG — 116-0163 / 0
 Entity Parameters:

| Type | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-----------------|-----------------|------------------|----------------------|---------------|
| KFD0-SCS-Ex1.55 | 23.1 | 38.2 | 0.042 | 0.5 |

KFD2-BR-Ex1.2-ab. Segment Coupler.

AIS / I,II,III / 1 / ABCDEFG — 16-263FM-42/e, FISCO; [I / 0] AEx [ia] IIC — 116-0191 FISCO
 FISCO Parameters:

$V_{Max} = 15 V$, $I_{Max} = 208 mA$, $P_{Max} = 1.93 W$.
 a = MOD or PA.
 b = Baud rate.

KFD2-BRa-Ex1.bc.d. Segment Coupler.

AIS / I,II,III / 1 / ABCDEFG — 116-0191, FISCO; [I / 0] AEx [ia] IIC — 116-0191, FISCO; NI / I / 2 / ABCD; T4 Tamb = 60°C

Special Condition of Use:

- The segment coupler shall be installed within an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standards.

Note: The output of this device is non-linear.

FISCO Parameters:

$V_{Max} = 15 V$, $I_{Max} = 208 mA$, $P_{Max} = 1.93 W$.
 a = Blank or 2.
 b = 2 or 3.
 c = MOD or PA.
 d = Baud rate.

KFD2-EBa.bcd.e. Power Feed Modules.

NI / 1 / 2 / ABCD / T4 Ta = 65°C — 116-0160

a = 2 (No power redundancy—4 amp fuse) or blank.

b = B (Bus connection—no power redundancy), D (Redundant power connection), R (For use with redundant module) or blank.

c = 2, 4 (# of Amps) or blank.

d = A (Amperes) or blank.

e = B (Bus connection) RPI (no fault connection) or blank.

Special conditions for safe use:

- The power feed modules shall be installed within an enclosure meeting the requirements of ANSI/ISA-82.02.01 or other applicable ordinary location standards.

KFD2-PLa-Ex1PA. Power Link.

AIS / I,II,III / 1 / ABCDEFG — 116-0191, FISCO; [I / 0] AEx [ia] IIC — 116-0191, FISCO; NI / I / 2 / ABCD; T4 Tamb = 60°C

Special Condition of Use:

- The power link shall be installed within an enclosure meeting the requirements of ANSI/ISA S82.02.01 or other applicable ordinary location standards.

Note: The output of this device is non-linear.

FISCO Parameters:

$V_{Max} = 15 V$, $I_{Max} = 208 mA$, $P_{Max} = 1.93 W$.
 a = Blank or 2.

KFD2-PRa-Ex1-IEC. Power Repeater.

AIS / I,II,III / 1 / ABCDEFG — 116-0190, FISCO; [I/0] AEx [ia] IIC — 116-0190, FISCO; NI / I / 2 / ABCD; T4 Tamb = 60°C

AIS / I,II,III / 1 / ABCDEFG — 116-0190, Entity; [I/0] AEx [ia] IIC — 116-0190, Entity;

Entity Parameters

| Terminals | U_o (V) | I_o (mA) | P_o (W) | Groups | C_a (μF) | L_a (mH) |
|---------------------|--------------|---------------|--------------|---------------|----------------------|---------------|
| 1, 2, 3; 16, 17, 18 | 12.8 | 141 | 1.2 | ABCDGEF (IIC) | 0.2 | 0.5 |
| | | | | CDEFG (IIB) | 0.2 | 5 |
| | | | | DGF (IIA) | 0.2 | 5 |

FISCO Parameters:

$V_{Max} = 12.8 V$, $I_{Max} = 141 mA$, $P_{Max} = 1.2 W$.
 a = Blank or 2.

Special Condition of Use:

- The power repeater shall be installed within an enclosure meeting the requirements of ANSI/ISA 82.02.01 or other applicable ordinary location standards.

Note: The output of this device is non-linear.

KFD2-PRa-Ex1-IEC1. Power Repeater

AIS / I,II,III / 1 / ABCDEFG — 116-0190, FISCO; [I/O] AEx [ia] IIC — 116-0190, FISCO; NI / I / 2 / ABCD; T4 Tamb = 60°C
AIS / I,II,III / 1 / ABCDEFG — 116-0190, Entity; [I/O] AEx [ia] IIC — 116-0190, Entity;

Entity Parameters

| Terminals | U_o (V) | I_o (mA) | P_o (W) | Groups | C_a (μ F) | L_a (mH) |
|---------------------|--------------|---------------|--------------|---------------|---------------------|---------------|
| 1, 2, 3; 16, 17, 18 | 15 | 208 | 1.93 | ABCDGEF (IIC) | 0.3 | 0.15 |
| | | | | CDEFG (IIB) | 0.7 | 1 |
| | | | | DGF (IIA) | 0.7 | 1 |

FISCO Parameters:

$V_{Max} = 15$ V, $I_{Max} = 208$ mA, $P_{Max} = 1.93$ W.

a = Blank or 2.

Special Condition of Use:

- The power repeater shall be installed within an enclosure meeting the requirements of ANSI/ISA 82.02.01 or other applicable ordinary location standards.

Note: The output of this device is non-linear.

KFa-DWB-Ex1.D Rotation Speed Limit Alarm

AIS / I,II,III / 1 / ABCDEFG — 116-0200; Entity; [I/O] AEx [ia] IIC — 116-0200; Entity
NI / I / 2 / ABCD / T4 Tamb = 60°C; NI / I / 2 / IIC / T4 Tamb = 60°C
a = Input Voltage D2, A5 or A6.

Entity Parameters

| Terminals | V_o (V) | I_o (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|-------------------|--------------|---------------|--------------|---------------|---------------------|---------------|
| Terminals 1 and 3 | 10.15 | 13.6 | — | — | 2.75 | 180 |

Special Conditions of Use:

- The Rotation Speed Limit Alarm Module shall be installed within an enclosure meeting the requirements of ANSI/ISA-82.02.01 or other applicable ordinary location standards.

KFa-UFC-Ex1.b Rotation Speed Converter (Digital or Analog converter)

AIS / I,II,III / 1 / ABCDEFG — 116-0200; Entity; [I/O] AEx [ia] IIC — 116-0200; Entity
NI / I / 2 / ABCD / T4 Tamb = 60°C; NI / I / 2 / IIC / T4 Tamb = 60°C
a = Input Voltage D2 or U8.
b = Display Option D or blank.

Entity Parameters

| Terminals | V_o (V) | I_o (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|-------------------|--------------|---------------|--------------|---------------|---------------------|---------------|
| Terminals 1 and 3 | 9.61 | 12.9 | — | — | 3.5 | 195 |

Special Conditions of Use:

- The Rotation Speed Converter Module shall be installed within an enclosure meeting the requirements of ANSI/ISA-82.02.01 or other applicable ordinary location standards.

KFa-UFT-Ex2.b Universal Logic Controls

AIS / I,II,III / 1 / ABCDEFG — 116-0200; Entity; [I/O] AEx [ia] IIC — 116-0200; Entity
NI / I / 2 / ABCD / T4 Tamb = 60°C; NI / I / 2 / IIC / T4 Tamb = 60°C
a = Input Voltage D2 or U8.
b = Display Option D or blank.

Entity Parameters

| Terminals | V_o (V) | I_o (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|-------------------------------|--------------|---------------|--------------|---------------|---------------------|---------------|
| Terminals: 1 and 3; 4 and 6 | 9.61 | 12.9 | — | — | 3.5 | 195 |
| Terminals: 1 and 4 to 3 and 6 | — | — | 10.61 | 25.8 | 2.23 | 90 |

Special Conditions of Use:

- The Universal Logic Controls Module shall be installed within an enclosure meeting the requirements of ANSI/ISA-82.02.01 or other applicable ordinary location standards.

KFa-DU-Ex1.D Timer

AIS / I,II,III / 1 / ABCDEFG — 116-0200; Entity; [I/0] AEx [ia] IIC — 116-0200; Entity
NI / I / 2 / ABCD / T4 Tamb = 60°C; NI / I / 2 / IIC / T4 Tamb = 60°C
a = Input Voltage D2, A5 or A6.

Entity Parameters

| | V_o (V) | I_o (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|-------------------|--------------|---------------|--------------|---------------|---------------------|---------------|
| Terminals 1 and 3 | 10.15 | 13.6 | – | – | 2.75 | 180 |

Special Conditions of Use:

1. The Timer Module shall be installed within an enclosure meeting the requirements of ANSI/ISA-82.02.01 or other applicable ordinary location standards.

KG Series Solenoid Driver.

AIS / I,II,III / 1 / ABCDEFG — 116-0052 / A; Entity

| Type | Entity Parameters | | | | | |
|---------------|-------------------|------------------|--------------|---------------|---------------------|---------------|
| | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
| KG24-V11/Ex-S | 12.8 | 64.2 | – | – | 1.1 | 8.2 |
| KG30-V11/Ex-S | 12.8 | 64.2 | – | – | 1.1 | 8.2 |
| KG24-V12/Ex-S | 16.0 | 88.9 | – | – | 0.58 | 4.4 |
| KG30-V12/Ex-S | 16.0 | 88.9 | – | – | 0.58 | 4.4 |
| KG24-V13/Ex-S | 25.8 | 84.3 | – | – | 0.15 | 5.0 |
| KG30-V13/Ex-S | 25.8 | 84.3 | – | – | 0.15 | 5.0 |
| KG24-V14/Ex-S | 8.0 | 148 | – | – | 6.8 | 1.4 |
| KG30-V14/Ex-S | 8.0 | 148 | – | – | 6.8 | 1.4 |
| KG24-V15/Ex-S | 25.8 | 69.5 | – | – | 0.15 | 7.1 |
| KG30-V15/Ex-S | 25.8 | 69.5 | – | – | 0.15 | 7.1 |
| KG24-V16/Ex-S | 15.0 | 83.3 | – | – | 0.75 | 5.1 |
| KG30-V16/Ex-S | 15.0 | 83.3 | – | – | 0.75 | 5.1 |
| KG30-V33/Ex | 25.8 | 84.3 | – | – | 0.15 | 5.0 |

KG30-R/Exa. Isolation Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 16-95-6 / F
a = Indicator blank or – Y = 00000 to 99999.

KG30-T 30/Exa. Isolation Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 16-95-6 / F
a = Indicator blank or – Y = 00000 to 99999.

KHD2-FF-Ex2.P-RS232. RS232 Communication Repeater.

AIS / I,II,III / 1 / ABCDEFG — 116 / 0137 / 0; Entity/System; NI / I / 2 / ABCD / T4

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|---------------|-----------------|------------------|--------------|---------------|---------------------|---------------|
| Terminals 1,2 | 15.31 | 51 | – | – | 0.707 | 13.63 |
| Terminals 3,2 | 6.04 | 1.3 | – | – | 34 | 1000 |
| Terminals 1,3 | 20.73 | 52.2 | – | – | 0.29 | 13.05 |

KLD2-PR-NI1-IEC Power Repeater

NI / I / 2 / ABCD / T5 Ta = 60°C; ANI / I,II,III / 2 / ABCDFG — 116-0256

NI / I / 2 / IIC / T5 Ta = 60°C; ANI / I / 2 / IIC — 1 16-0256

Noncendive Field Wiring Parameters:

$$V_{oc} = 13.8 \text{ V}, I_{sc} = 242 \text{ mA}, C_a = 0.54 \mu\text{F}, L_a = 0.15 \text{ mH}.$$

Special Conditions of Use:

1. The KLD2-PR-NI1-IEC Power Repeater shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

KMD0-FT-Ex. Terminator.

IS / I / 1 / ABCD / T4 Ta = 60°C 116-0189 — FISCO; IS / I / 0 / AEx ia IIC T4 Ta = 60°C 116-0189 — FISCO

KSD2-BO-Exa Solenoid driver

AIS / I, III, III / 1 / ABCDEFG; Entity 116-0150

NI / I / 2 / ABCD / T4 Tamb = 60°C

Entity Parameters:

$$V_{Max} = 26 \text{ V}, I_{Max} = 110 \text{ mA}, C_a = 99 \text{ nF}, L_a = 3 \text{ mH}.$$

a = 2.2 (2 channel) or 1(1 channel)

Special Conditions of Use:

1. The solenoid drivers shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

KSD2-GW-CN.a. Control Net Gateway.

NI / 1 / 2 / ABCD / T4 — 116-0150 / 0

a = 485 (RS 232 socket) or blank.

Special Conditions of Use:

1. Circuits shall not be connected to or disconnected from the RS-232 jack socket located on the top of the unit whilst the circuit is live unless the area is known to be non-hazardous.
2. The Control Net Gateways shall be installed in a tool secured enclosure.

KSD2-GW-MPL-a. ModBus Plus Gateway.

NI / 1 / 2 / ABCD / T4 — 116-0150 / 0

a = 485 (RS 232 socket) or blank.

Special Conditions of Use:

1. Circuits shall not be connected to or disconnected from the RS-232 jack socket located on the top of the unit whilst the circuit is live unless the area is known to be non-hazardous.
2. The Control Net Gateways shall be installed in a tool secured enclosure.

KW130-T 250/Exa. Isolation Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 16-95-6 / F

a = Indicator blank or - Y = 00000 to 99999.

KW130-T250/EX A1a. Isolation Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 16-95-6 / F

a = Indicator blank or - Y = 00000 to 99999.

KW130-Th 250/Exa. Isolation Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 16-95-6 / F

a = Indicator blank or - Y = 00000 to 99999.

KW250-T250/Exa. Isolation Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 16-95-6 / F

a = Indicator blank or - Y = 00000 to 99999.

KW250-Th 250/Exa. Isolation Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 16-95-6 / F

a = Indicator blank or - Y = 00000 to 99999.

LPI4-20. Loop Powered Indicator.

IS / I,II,III / 1 / ABCDEFG / T — 116-0004 / 0; Entity

Entity Parameters:

 V_{OC} must be greater than 7.8 V and less than 60 V, $I_{Max} = 150$ mA, $C_i = 0$, $L_i = 0$ mH.**Mab-cdef-g-h. Magnetic Proximity Sensor.**

NI / 1 / 2 / ABCD / T5 Ta = 50°C — 116-0155 / 0; S / II / 1 / EFG / T5 Ta = 50°C; S / III / T5 Ta = 50°C; Type 4X

a = two digit code.

b = Sensing range in mm (0.6-100).

c = Diameter in mm or housing style.

d = G or blank.

e = Body material M, K, KK or T.

f = Blank or length in mm for cylindrical housing.

g = Electrical outputs.

h = Additional information.

Special Condition of use:

1. Must be installed in a tool secured enclosure meeting the requirements of ISA S82.02.01 or other applicable standard.

Nab-cdef-g-h. Inductive Proximity Sensor.

NI / 1 / 2 / ABCD / T5 Ta = 50°C — 116-0155 / 0; S / II / 1 / EFG / T5 Ta = 50°C; S / III / T5 Ta = 50°C; Type 4X

a = one or two digit code BB, BC, J, EB, MB, BN, CB, CN, EN, or MN.

b = Sensing range in mm (0.6-100).

c = Diameter in mm or F, F1, F17, F23, F29, F41, F46, F9, F10, F11, V3, F7, F33, FP, U1, U2, U3, U4, or M.

d = G or blank.

e = Body material M, K, KK or T.

f = Blank or length in mm for cylindrical housing.

g = Electrical outputs.

h = Additional information, V1, V12, V3, BHM, H76, or H77.

Special Condition of use:

1. Must be installed in a tool secured enclosure meeting the requirements of ISA S82.02.01 or other applicable standard.

NBN3-F25-E8 Inductive Proximity Sensor.

NI / 1 / 2 / ABCD / T5 Ta = 50°C — 116-0155 / 0; S / II / 1 / FG / T5 Ta = 50°C; S / III / T5 Ta = 50°C

Nonincendive Field Wiring Parameters:

 $V_{Max} = 60$ V, $I_{Max} = 200$ mA, $C_i = 0$ mF, $L_i = 0$ mH.**NBN3-F25-E8-a. Inductive Sensor.**

NI / I,II,III / 2 / ABCDFG / T5

a = Alphanumeric code not relevant for safety.

NJa-bGMc0-E2. Inductive Proximity Sensors.

NI / 1 / 2 / ABCD / T5 Ta = 50°C — 116-0155 / 0; S / II / 1 / EFG / T5 Ta = 50°C; S / III / T5 Ta = 50°C; Type 4X

Nonincendive Field Wiring Parameters:

 $V_{Max} = 60$ V, $I_{Max} = 200$ mA, $C_i = 0$ mF, $L_i = 0$ mH.

a = 2 or 5.

b = 12 or 18.

c = 4 or 5.

PTX Potentiometer Transmitter, PIX, PIT Reverse/Current Transmitter RBX Resistance Bulb Transmitter. Moore Industries Inc.
 IS / I / 1 / ABCD — 116-0002 / 0

Proximity Sensors:

aJb-c-d-Ye, aJb-c-d-Ye. Proximity Sensor, End Sensor Models.

NI / I / 2 / ABCD / T5; S / II / 1 / EFG / T5

a = C or N.

b = Sensing range (mm).

c = Mechanical form (dia. or shape and mounting style).

d = Output designator (relay mode, input voltage and wiring) E, E1, E2, E3, Z, WO, VWS, VWO, N, SN, A, A2, WS, WSK or WOK.

e = Cable length and option not affecting safety.

Capacitive Sensors NAMUR Output

IS / I,II,III / ABCDEFG / T6 Ta = 60°C, 116-0165 / a Entity

| Model | V _{Max} (V) | I _{Max} (mA) | C _i (nF) | L _i (μH) |
|--------------------|-------------------------|--------------------------|------------------------|------------------------|
| CCB10-30GK80-N1 | 16 | 20 | 190 | 10 |
| CCB10-30GK80-N1-V1 | 16 | 20 | 190 | 10 |
| CCB10-30GM80-N1 | 16 | 20 | 190 | 10 |
| CCB10-30GM80-N1-V1 | 16 | 20 | 190 | 10 |
| CJ 1-12GK-N-a-a | 15.5 | 52 | 60 | 0 |
| CJ 2-18GK-N-a-a | 15.5 | 52 | 60 | 0 |
| CJ 4-12GK-N-a-a | 15.5 | 52 | 60 | 0 |
| CJ 6-18GK-N-a-a | 15.5 | 52 | 40 | 0 |
| CJ 10-30GM-N | 15.5 | 52 | 180 | 0 |
| CJ 15-40-N-a-a | 15.5 | 52 | 205 | 0 |

a = alphanumeric code which does not affect safety.

Magnetic Sensors NAMUR Output

IS / I,II,III / ABCDEFG / T6 Ta = 60°C, 116-0165 / a Entity

| Model | V _{Max} (V) | I _{Max} (mA) | C _i (nF) | L _i (μH) |
|-------|-------------------------|--------------------------|------------------------|------------------------|
| MJa | 15.5 | 52 | 42 | 30 |

a = alphanumeric code which does not affect safety.

Inductive Sensors NAMUR Output

IS / I,II,III / ABCDEFG / T5 Ta = 60°C, 116-0165 / a Entity

| Model | V _{Max} (V) | I _{Max} (mA) | C _i (nF) | L _i (μH) |
|-------------------|-------------------------|--------------------------|------------------------|------------------------|
| FJ6-110-Na | 16 | 20 | 150 | 110 |
| FJ7-Na | 16 | 20 | 65 | 220 |
| NCB1.5-6.5M-a-N0a | 16 | 20 | 90 | 100 |
| NCB1.5-8GMa-N0a | 16 | 20 | 90 | 100 |
| NCB2-12GMa-N0a | 16 | 20 | 90 | 100 |
| NCB2-F1-N0a | 16 | 20 | 100 | 100 |
| NCB5-18GMa-N0a | 16 | 20 | 95 | 100 |
| NCB10-30GMa-N0a | 16 | 20 | 105 | 100 |
| NCB15+Ua+Na | 16 | 20 | 110 | 160 |
| NCB15-30GMa-N0a | 16 | 20 | 110 | 100 |
| NCB20+Ua+Na | 16 | 20 | 110 | 160 |
| NCB40-FP-Na | 16 | 20 | 220 | 360 |
| NCN2-6.5M-a-N0a | 16 | 20 | 90 | 100 |
| NCN2-8GMa-N0a | 16 | 20 | 90 | 100 |
| NCN3-F24a-N4a | 15 | 20 | 100 | 100 |
| NCN3-F25a-N4a | 15 | 20 | 100 | 100 |
| NCN4-12GMa-N0a | 16 | 20 | 95 | 100 |
| NCN4-M3K-N4a | 15 | 20 | 100 | 100 |
| NCN8-18GMa-N0a | 16 | 20 | 95 | 100 |
| NCN15-30GMa-N0a | 16 | 20 | 110 | 100 |
| NCN15-Ma-N0a | 16 | 20 | 100 | 100 |
| NCN20+Ua+Na | 16 | 20 | 110 | 160 |
| NCN30+Ua+Na | 16 | 20 | 110 | 160 |
| NCN40+Ua+Na | 16 | 20 | 140 | 130 |
| NCN50-FP-Na | 16 | 20 | 220 | 360 |
| NJ0.2-10GM-Na | 16 | 20 | 20 | 50 |
| NJ0.6-a-a | 15.5 | 52 | 15 | 10 |
| NJ0.8-4.5-Na | 16 | 20 | 30 | 50 |
| NJ0.8-5GM-Na | 16 | 20 | 30 | 50 |
| NJ0.8-F-Na | 16 | 20 | 30 | 50 |
| NJ1-10-a-a | 15.5 | 52 | 30 | 21 |
| NJ1-N-1a | 16 | 20 | 30 | 50 |
| NJ1-N2a | 16 | 20 | 40 | 50 |
| NJ1.5-10GM-N-Ya | 16 | 20 | 20 | 50 |
| NJ1.5-18GM-a-a | 15.5 | 52 | 40 | 40 |
| NJ1.5-18GM-N-Da | 16 | 20 | 25 | 60 |

| <i>Model</i> | <i>V_{Max}</i> (V) | <i>I_{Max}</i> (mA) | <i>C_j</i> (nF) | <i>L_j</i> (μH) |
|--------------------|-------------------------------|--------------------------------|------------------------------|------------------------------|
| NJ1.5-18GM-N-D-Ya | 16 | 20 | 50 | 60 |
| NJ1.5-6.5-Na | 16 | 20 | 30 | 50 |
| NJ1.5-8GM-Na | 16 | 20 | 30 | 50 |
| NJ1.5-8-Na | 16 | 20 | 20 | 50 |
| NJ1.5-F-Na | 16 | 20 | 25 | 50 |
| NJ1.5-F-N-Ya | 16 | 20 | 25 | 50 |
| NJ2.5-F-Na | 16 | 20 | 40 | 50 |
| NJ2-11-Na | 16 | 20 | 45 | 50 |
| NJ2-11-N-Ga | 16 | 20 | 30 | 50 |
| NJ2-11-SNa | 16 | 20 | 50 | 150 |
| NJ2-11-SN-Ga | 16 | 20 | 50 | 150 |
| NJ2-12GK-Na | 16 | 20 | 45 | 50 |
| NJ2-12GK-SNa | 16 | 20 | 50 | 150 |
| NJ2-12GM-Na | 16 | 20 | 45 | 50 |
| NJ2-12GM-N-V1-Ya | 16 | 20 | 30 | 50 |
| NJ2-14GM-Na | 16 | 20 | 45 | 50 |
| NJ2-18-N-G/Ex-ZO-a | 15.5 | 100 | 45 | 0 |
| NJ2-F-a-a | 15.5 | 52 | 45 | 15 |
| NJ2-F1-Na | 16 | 20 | 25 | 50 |
| NJ2-V3-Na | 16 | 20 | 35 | 50 |
| NJ3-18GK-S1Na | 16 | 20 | 70 | 200 |
| NJ4-12GK-Na | 16 | 20 | 60 | 50 |
| NJ4-12GK-N-Ya | 16 | 20 | 45 | 50 |
| NJ4-12GK-SNa | 16 | 20 | 70 | 150 |
| NJ4-12GM-Na | 16 | 20 | 45 | 50 |
| NJ4-14GK-Na | 16 | 20 | 45 | 50 |
| NJ4-30GM-N-200a | 16 | 20 | 70 | 80 |
| NJ4-F-Na | 16 | 20 | 160 | 100 |
| NJ5-10-11-Na | 16 | 20 | 15 | 50 |
| NJ5-11-N | 16 | 20 | 45 | 50 |
| NJ5-18GK-Na | 16 | 20 | 65 | 50 |
| NJ5-18GK-SNa | 16 | 20 | 115 | 155 |
| NJ5-18GM-Na | 16 | 20 | 85 | 50 |
| NJ5-30GK-S1Na | 16 | 20 | 105 | 205 |
| NJ6+B+VNBi-a-a | 15.5 | 52 | 260 | 150 |
| NJ6-22-Na | 16 | 20 | 130 | 100 |
| NJ6-22-SNa | 16 | 20 | 115 | 155 |
| NJ6-22-SN-Ga | 16 | 20 | 115 | 155 |
| NJ6-25-N-G/Ex-ZO-a | 15.5 | 100 | 85 | 0 |
| NJ6-F-Na | 16 | 20 | 85 | 100 |
| NJ6S1+Ua+Na | 16 | 20 | 150 | 150 |
| NJ7-F-a-a | 15.5 | 52 | 100 | 165 |
| NJ8-18GK-Na | 16 | 20 | 65 | 50 |
| NJ8-18GK-SNa | 16 | 20 | 125 | 155 |
| NJ8-18GM-Na | 16 | 20 | 65 | 50 |
| NJ10-22-Na | 16 | 20 | 130 | 110 |
| NJ10-23Bi-a-a | 15.5 | 52 | 260 | 150 |
| NJ10-30GKK-Na | 16 | 20 | 140 | 100 |
| NJ10-30GK-Na | 16 | 20 | 140 | 100 |
| NJ10-30GK-SNa | 16 | 20 | 115 | 175 |
| NJ10-30GM-Na | 16 | 20 | 140 | 100 |
| NJ10-32-a-a | 15.5 | 52 | 170 | 110 |
| NJ10-F-Na | 16 | 20 | 85 | 100 |
| NJ15+B+V-a-a | 15.5 | 52 | 290 | 110 |
| NJ15+Ua+Na | 16 | 20 | 140 | 130 |
| NJ15-30GKK-Na | 16 | 20 | 140 | 100 |
| NJ15-30GK-Na | 16 | 20 | 140 | 100 |
| NJ15-30GK-SNa | 16 | 20 | 120 | 180 |
| NJ15-30GM-Na | 16 | 20 | 40 | 100 |
| NJ15-32-a-a | 15.5 | 52 | 230 | 100 |
| NJ15-40-a-a | 15.5 | 52 | 290 | 107 |
| NJ15-50-a-a | 15.5 | 52 | 170 | 123 |
| NJ15-M1K-Na | 16 | 20 | 140 | 100 |
| NJ15-M1-Na | 16 | 20 | 140 | 100 |
| NJ15S+Ua+Na | 16 | 20 | 120 | 180 |
| NJ20+B+V-a-a | 15.5 | 52 | 290 | 110 |
| NJ20+Ua+Na | 16 | 20 | 140 | 130 |
| NJ20-40-Na | 16 | 20 | 140 | 140 |
| NJ20S+Ua+Na | 16 | 20 | 200 | 150 |
| NJ25-50-Na | 16 | 20 | 150 | 140 |
| NJ30+B+V-a-a | 15.5 | 52 | 210 | 125 |
| NJ30+Ua+Na | 16 | 20 | 160 | 130 |
| NJ30P+Ua+Na | 16 | 20 | 150 | 170 |
| NJ40+Ua+Na | 16 | 20 | 180 | 130 |
| NJ40-80-a-a | 15.5 | 52 | 300 | 160 |
| NJ40-F-a-a | 15.5 | 52 | 300 | 160 |

| Model | V _{Max} (V) | I _{Max} (mA) | C _i (nF) | L _i (μH) |
|--------------------|-------------------------|--------------------------|------------------------|------------------------|
| NJ40-FP-Na | 16 | 20 | 320 | 360 |
| NJ40-FP-SNa | 16 | 20 | 375 | 300 |
| NJ50-FP-Na | 16 | 20 | 320 | 360 |

a = alphanumeric code which does not affect safety.

Inductive Ring Sensors NAMUR Output

IS / I,II,III / ABCDEFG / T5 Ta = 60°C, 116-0165 / a Entity

| Model | V _{Max} (V) | I _{Max} (mA) | C _i (nF) | L _i (μH) |
|--------------------|-------------------------|--------------------------|------------------------|------------------------|
| RC10-14-N0a | 16 | 20 | 150 | 100 |
| RC10-a-N3a | 16 | 20 | 90 | 120 |
| RC15-14-N0a | 16 | 20 | 150 | 100 |
| RC15-a-N3a | 16 | 20 | 90 | 70 |
| RJ10-a-a | 16 | 52 | 90 | 20 |
| RJ15-a-a | 16 | 52 | 130 | 50 |
| RJ21-a-a | 16 | 52 | 70 | 50 |
| RJ43-a-a | 16 | 52 | 40 | 50 |

a = alphanumeric code which does not affect safety.

Inductive Slot Sensors NAMUR Output

IS / I,II,III / ABCDEFG / T6 Ta = 60°C, 116-0165 / a Entity

| Model | V _{Max} (V) | I _{Max} (mA) | C _i (nF) | L _i (μH) |
|-------------------------|-------------------------|--------------------------|------------------------|------------------------|
| SC2.0-N0a | 16 | 20 | 150 | 150 |
| SC3.5-N0 | 16 | 20 | 100 | 150 |
| SC3.5-N0-Ya | 16 | 20 | 150 | 150 |
| SC3.5-N0aLED | 16 | 20 | 100 | 150 |
| SJ1.0-a-a | 15.5 | 52 | 30 | 29 |
| SJ1.8-N-Ya | 16 | 20 | 30 | 100 |
| SJ2.0-Na | 16 | 20 | 30 | 100 |
| SJ2-SNa | 16 | 20 | 60 | 100 |
| SJ2-S1Na | 16 | 20 | 60 | 100 |
| SJ2.2-Na | 16 | 20 | 50 | 100 |
| SJ3.5-N LED | 16 | 20 | 50 | 70 |
| SJ3.5-N-Ya (LED) | 16 | 20 | 50 | 250 |
| SJ3.5-Na | 16 | 20 | 80 | 500 |
| SJ3.5-N-K37a | 16 | 20 | 50 | 250 |
| SJ3.5-a-a | 16 | 20 | 50 | 250 |
| SJ3.5-H-Ya | 16 | 20 | 50 | 250 |
| SJ3.5-SaNa | 16 | 20 | 60 | 100 |
| SJ5.0-K-Na | 16 | 20 | 50 | 600 |
| SJ5-Na | 16 | 20 | 50 | 250 |
| SJ5-G-Na | 16 | 20 | 50 | 250 |
| SJ10-Na | 16 | 20 | 50 | 1100 |
| SJ15-Na | 16 | 20 | 150 | 1300 |
| SJ30-Na | 16 | 20 | 150 | 1500 |

a = alphanumeric code which does not affect safety.

NCN3-F36-N4. Inductive Sensor.

IS / I,II,III / 1 / ABCDEFG — 116-0141 / 0; Entity

Entity Parameters:

$$V_{Max} = 20 \text{ V}, I_{Max} = 50 \text{ mA}, C_i = 0.04 \text{ } \mu\text{F}, L_i = 0.40 \text{ mH}.$$

OCS1000-F3-NO, OCS1000-F3-N1, OCS2000-M1K-N2, OCT150-F3-N0, OCT150-F3-N1, OCT300-M1K-N2. Photoelectric NAMUR Proximity Switches.

IS / I,II,III / 1 / ABCDEFG / T5 — 116-0110 / B; Entity; NI / I / 2 / ABCD / T6

Entity Parameters:

$$V_{Max} = 13 \text{ V}, I_{Max} = 30 \text{ mA}, C_i = 0.90 \text{ } \mu\text{F}, L_i = 0 \text{ mH (Groups A, B, C, D, E, F, G)}.$$

$$V_{Max} = 20 \text{ V}, I_{Max} = 50 \text{ mA}, C_i = 0.90 \text{ } \mu\text{F}, L_i = 0 \text{ mH (Groups C, D, E, F, G)}.$$

Rja-b-Yc. Proximity Sensor, Ring Sensor Models.

NI / I / 2 / ABCD / T5; S / II / 1 / EFG / T5

a = Ring dia. (mm).

b = Output designator (relay mode, input voltage and wiring) E, E1, E2, E3, Z, WO, VWS, VWO, N, SN, A, A2, WS, WSK or WOK.

c = Cable length and option not affecting safety.

SJa-b-Yc. Proximity Sensor, Slot Sensor Models.

NI / I / 2 / ABCD T5; S / II / 1 / EFG / T5

a = Slot width (mm).

b = Output designator (relay mode, input voltage and wiring) E, E1, E2, E3, Z, WO, VWS, VWO, N, SN, A, A2, WS, WSK or WOK.

c = Cable length and option not affecting safety.

Rab-c-d. Ring Inductive Proximity Sensor.

NI / I / 2 / ABCD / T5 Ta = 50°C — 116-0155 / 0; S / II / 1 / EFG / T5 Ta = 50°C; S / III / T5 Ta = 50°C; Type 4X

a = two digit code RB, RC or RJ.

b = Sensing range (Ring Diameter) in mm (10 -43).

c = K or electrical outputs.

d = Electrical outputs or 4 digit code (maximum) signifying adjustable sensitivity or blank.

Special Condition of use:

1. Must be installed in a tool secured enclosure meeting the requirements of ISA S82.02.01 or other applicable standard.

RPI Gateway Modules Type KFD2-GW.a.b.c.

NI / I / 2 / ABCD T5 Ta = 65°C — 116-0150/c

a = PRO (Profibus connection) or MOD (Modbus Connection).

b = 485 (RS 232 socket) or blank.

c = B or blank.

Special Conditions of Use:

1. Circuits shall not be connected to or disconnected from the RS-232 jack socket located on the top of the unit while the circuit is live unless the area is known to be nonhazardous.

Sab-c-d. Slot Inductive Proximity Sensor.

NI / I / 2 / ABCD / T5 Ta = 50°C — 116-0155 / 0; S / II / 1 / EFG / T5 Ta = 50°C; S / III / T5 Ta = 50°C; Type 4X

a = Two digit code SB, SC or SJ.

b = Sensing range (Slot width) in mm (2-30).

c = K or electrical outputs.

d = Electrical outputs or blank.

Special Condition of use:

1. Must be installed in a tool secured enclosure meeting the requirements of ISA S82.02.01 or other applicable standard.

SLPI/Ex-1V. Loop Powered Indicator.

IS / I / 1 / ABCD / T6 — 650441 / D; Entity; NI / I / 2 / ABCD / T6

Entity Parameters:

$$V_{Max} = 32 V, I_{Max} = 150 mA, C_i = 0, L_i = 0.$$

STR . . . / . Power Supply Unit.

AIS / I,II,III / 1 / ABCDEFG — ID-34 / 0; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| STR15/1 | 9.3 | 74.4 | — | — | 3.6 | 6.6 |
| STR15/2 | 9.3 | 107.8 | — | — | 3.6 | 3.1 |

Switch Isolator, Relay or relay and transistor output Transformer Isolated Interface.

AIS / I,II,III / 1 / ABCDEFG 116-0035 / t; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | Entity Parameters | | C_a (μF) | L_a (mH) |
|--|-----------------|------------------|-------------------|---------------|----------------------|---------------|
| | | | V_t (V) | I_t (mA) | | |
| KFD2-SR2-Ex2.2S Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFD2-SR2-Ex1. W.LB Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFD2-SR2-Ex1. W Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFD2-SR2-Ex2. W Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFD2-SR2-Ex1. W — Y93602 Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFD2-SR2-Ex1. W — Y938198 Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFD2-SR2-Ex1. W — Y93818 Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFD2-SR2-Ex1. W — Y93601 Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFA6-SR2-Ex2. W Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFA6-SR2-Ex1. W.LB Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFA6-SR2-Ex1. W Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFA5-SR2-Ex1. W.LB Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFA5-SR2-Ex1. W Terminals 1-3, 2-3 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KFA5-SR2-Ex2. W Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |
| KHab-cExde Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | — | — | 1.27 | 84.9 |

a = Supply voltage type A or D.

b = Supply level 2, 5 or 6.

c = Output type RTA, RW1/, SS1/, SS2/, RS1/, SR-, SRT- or SR2.

d = No. of channels 1 or 2.

e = Special function e.g. power rail designation (.P) or optional connection KHD2-EB-PB or KFD2-EB2 (Safe area mounting only).

KFD2, KFA5 AND KFA6 SERIES SWITCH ISOLATORS

AIS / I,II,III / 1 / ABCDEFG 116-0035; Entity; NI / I / 2 / ABCD / T5 Ta = 60°C

| Type | V _{OC} (V) | I _{sc} (mA) | V _t (V) | I _t (mA) | C _a (μF) | L _a (mH) |
|---|------------------------|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| KFA5-SR2-Ex2.W.IR Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.33 | 84.9 |
| KFA6-SR2-Ex2.W.IR Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.33 | 84.9 |

Conditions of Use:

- The Switch Isolators shall be installed within an enclosure meeting the requirements of ANSI/ISA 82.02.01 or other applicable ordinary location standards.

Switch Isolator. Transistor Output.

AIS / I,II,III / 1 / ABCDEFG — 116-0035 / W; Entity; NI / I / 2 / ABCD / T5

| Type | V _{OC} (V) | I _{sc} (mA) | V _t (V) | I _t (mA) | C _a (μF) | L _a (mH) |
|---|------------------------|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| KFD2-SOT-Ex2-Y93522 Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.27 | 84.9 |
| KFD2-SOT-Ex1.Lk Terminals 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.27 | 84.9 |
| KFD2-SOT-Ex2 Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.27 | 84.9 |
| KFD2-ST-Ex2 Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.27 | 84.9 |
| KFD2-ST-Ex1.Lk Terminals 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.27 | 84.9 |
| KFD2-ST-Ex1 Terminals 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.27 | 84.9 |
| KFD2-ST-Ex2 Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.27 | 84.9 |
| KFD2-ST2-Ex f Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.273 | 84.8 |
| KFD2-SOT-Ex1 Terminals 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.27 | 84.9 |
| KFD2-SOT2-Ex f Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.273 | 84.8 |
| KHab-cExde Terminals 1-3, 2-3, 4-6, 5-6 | 12.9 | 19.8 | – | – | 1.27 | 84.9 |

a = Supply voltage type A or D.

b = Supply level 2, 5 or 6.

c = Output type OT1/, TA2/, TA1/ or ST.

d = No. of channels 1 or 2.

e = Special function e.g. power rail connection (.P) or optional connection KHD2-EB-PB or KFD2-EB2 (Safe area mounting only).

f = Software version, not important to intrinsic safety.

Transformer Isolated Devices.

AIS / I,II,III / 1 / ABCDEFG — 116-0129 / I; Entity; NI / I / 2 / ABCD / T4

| Type | V _{OC} (V) | I _{sc} (mA) | V _t (V) | I _t (mA) | C _a (μF) | L _a (mH) |
|--|------------------------|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| KFD2-RR-Ex1 Single Channel Resistance Repeater. | – | – | 12.4 | 17 | 1.24 | 120 |
| KFD2-UT-Ex1 Single Channel Temperature Converter | 11 | 33 | – | – | 1.97 | 32 |
| KFD2-UT-Ex1-1 Single Channel Temperature Converter. | 11 | 33 | – | – | 1.97 | 32 |
| KFD2-STC1-Ex1 SMART – Transmitter Power Supply | 25.2 | 93 | – | – | 0.082 | 4.3 |
| KFD2-STC1-Ex1-1 SMART Transmitter Power Supply | 25.2 | 93 | – | – | 0.082 | 4.3 |
| KFD2-STV1-Ex1 SMART Transmitter Power Supply | 25.2 | 93 | – | – | 0.082 | 4.3 |
| KFD2-STV1-Ex1-1 SMART Transmitter Power Supply | 25.2 | 93 | – | – | 0.082 | 4.3 |

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|--|-----------------|------------------|--------------|---------------|----------------------|---------------|
| KFD0-CS-Ex1.53 Single Channel Current Repeater. | 10.5 | 95.0 | — | — | 2.40 | 4.0 |
| KFD0-CS-Ex2.53 Dual Channel Current Repeater. | 10.5 | 95.0 | — | — | 2.40 | 4.0 |
| KFD2-PT-Ex1 Single Channel Potentiometer Converter | — | — | 11.0 | 33 | 2.18 | 31.55 |
| KFD0-CS-Ex1.52 Single Channel Current Repeater | 28 | 0.0 | — | — | 0.14 | 1000 |
| KFD0-CS-Ex2.52 Dual Channel Current Repeater | 28 | 0.0 | — | — | 0.14 | 1000 |
| KFD0-CS-Ex1.54 Single Channel Current Repeater | 28.5 | 95 | — | — | 0.13 | 4.09 |
| KFD0-CS-Ex1.54-Y72221 Single Channel Current Repeater | 25.4 | 42 | — | — | 0.17 | 20.5 |
| KFD0-CS-Ex2.54 Dual Channel Current Repeater | 28.5 | 95 | — | — | 0.13 | 4.09 |
| KFD0-CS-Ex2.54-Y72222 Dual Channel Current Repeater | 25.4 | 42 | — | — | 0.17 | 20.5 |
| KFD2-WAC-Ex1 Single Channel Strain Gauge Converter | — | — | 18.2 | 318 | 0.44 | 0.39 |
| KFD2-WAV-Ex1 Single Channel Strain Gauge Converter | — | — | 18.2 | 318 | 0.44 | 0.39 |
| KFD2-VR-Ex1.50m Single Channel Voltage Repeater | 3.9 | 1.7 | — | — | 1000 | 1000 |
| KFD2-VR-Ex1.50m.L Single Channel Voltage Repeater | 3.9 | 1.7 | — | — | 1000 | 1000 |
| KFD2-VR-Ex1.50m.R Single Channel Voltage Repeater | 3.9 | 1.7 | — | — | 1000 | 1000 |
| KFD2-VR-Ex1.500m Single Channel Voltage Repeater | 5.1 | 2.2 | — | — | 1000 | 1000 |
| KFD2-VR-Ex1.500m.L Single Channel Voltage Repeater | 5.1 | 2.2 | — | — | 1000 | 1000 |
| KFD2-VR-Ex1.500m.R Single Channel Voltage Repeater | 5.1 | 2.2 | — | — | 1000 | 1000 |
| KFD2-SL-Ex1.48-90A Single Channel Solenoid Driver | 25.2 | 93 | — | — | 0.107 | 4.3 |
| KFD2-SD-Ex1.48-90A Single Channel Solenoid Driver | 25.2 | 93 | — | — | 0.107 | 4.3 |
| KFD2-SD-Ex1.47 Single Channel Solenoid Driver | 25.2 | 93 | — | — | 0.107 | 4.3 |
| KFD2-SD-Ex1.48 Single Channel Solenoid Driver | 25.2 | 93 | — | — | 0.107 | 4.3 |
| KFD2-SL-Ex1.47 Single Channel Solenoid Driver | 25.2 | 93 | — | — | 0.107 | 4.3 |
| KFD2-SL-Ex1.48 Single Channel Solenoid Driver | 25.2 | 93 | — | — | 0.107 | 4.3 |
| KFD2-SL-Ex1.48-Y93450 Single Channel Solenoid Driver | 28 | 93 | — | — | 0.14 | 4.18 |
| KFD2-STC3-Ex1-a a = 1, 2, 3 or 86C Smart Transmitter Barrier | 28 | 93 | — | — | 0.14 | 4.18 |
| KFD2-STV3-Ex1-a a = 1, 2 or 3 Smart Transmitter Barrier | 28 | 93 | — | — | 0.14 | 4.18 |
| KFD2-CD-Ex1.32-a Single Channel Current/Voltage Driver a = I/O Option 1 through 25 or blank. | 28 | 93 | — | — | 0.14 | 4.18 |

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|--|-----------------|------------------|--------------|---------------|----------------------|---------------|
| KFD2-VR3-Ex1.26 | | | | | | |
| Single Channel Voltage Repeater | | | | | | |
| Terminals 4-5 | 26.0 | 86.0 | — | — | 0.17 | 4.89 |
| Terminals 4-6 | 26.0 | 5.0 | — | — | 0.17 | 14.17 |
| Terminals 4-5-6 | — | — | 27.0 | 91.0 | 0.16 | 4.38 |
| KFD2-CR-Ex1.30-300-90C | | | | | | |
| Transmitter Power Supply | | | | | | |
| Terminals 1-3 | 26.0 | 56.0 | — | — | 0.099 | 2.82 |
| Terminals 2-3 | 4.3 | 22.0 | — | — | 0.099 | 2.82 |
| Terminals 1-2 | 26.0 | 93.0 | — | — | 0.099 | 2.82 |
| Terminals 1-2-3 | — | — | 26 | 115 | 0.099 | 2.82 |
| KFD2-PT2-Ex1-a | | | | | | |
| Single Channel | — | — | 10.4 | 31.4 | 2.53 | 36.07 |
| Potentiometer Amplifier a = 1 to 5 or blank. | | | | | | |
| KFD2-PT2-Ex1-Y98312 | — | — | 10.4 | 46 | 2.53 | 17.23 |
| KFD2-PT2-Ex1-1-Y107265 | — | — | 10.4 | 46 | 2.53 | 17.23 |
| KFD2-PT2-Ex1-2-Y107266 | — | — | 10.4 | 46 | 2.53 | 17.23 |
| KFD2-PT2-Ex1-3-Y107267 | — | — | 10.4 | 46 | 2.53 | 17.23 |
| KFD2-PT2-Ex1-4-Y107268 | — | — | 10.4 | 46 | 2.53 | 17.23 |
| KFD2-PT2-Ex1-5-Y107269 | — | — | 10.4 | 46 | 2.53 | 17.23 |
| KFD0-CS-Ex 2.51a | | | | | | |
| a = blank, .GP, .GM or P | | | | | | |
| Dual Channel Current Repeater | | | | | | |
| Terminals 1-2 | 25.2 | 93.0 | — | — | 0.17 | 4.20 |
| Terminals 4-5 | 25.2 | 93.0 | — | — | 0.17 | 4.20 |
| KFD0-CS-Ex 1.50(P) | | | | | | |
| Single Channel | 25.2 | 93.0 | — | — | 0.17 | 4.20 |
| Current Repeater | | | | | | |
| KFD0-CS-Ex 2.50(P) | | | | | | |
| Dual Channel Current Repeater | | | | | | |
| Terminals 1-2 | 25.2 | 93.0 | — | — | 0.17 | 4.20 |
| Terminals 4-5 | 25.2 | 93.0 | — | — | 0.17 | 4.20 |
| KFD2-CR-Ex1.20-200 | | | | | | |
| Transmitter Power Supply | 20.0 | 93.0 | — | — | 0.22 | 4.3 |
| KFD2-CR-Ex1.20-240 | | | | | | |
| Transmitter Power Supply | 20.0 | 93.0 | — | — | 0.22 | 4.3 |
| KFD2-CR-Ex1.30-200 | | | | | | |
| Transmitter power Supply | 26.0 | 93.0 | — | — | 0.099 | 4.3 |
| KFD2-CR-Ex1.30-240 | | | | | | |
| Transmitter Power Supply | 26.0 | 93.0 | — | — | 0.099 | 4.3 |
| KFD2-CR-Ex1.20-300 | | | | | | |
| Transmitter Power Supply | | | | | | |
| Terminals 1-2-3 | — | — | 20.0 | 115.0 | 0.22 | 2.82 |
| Terminals 1-2 | 20.0 | 93.0 | — | — | 0.22 | 2.82 |
| Terminals 1-3 | 20.0 | 56.0 | — | — | 0.22 | 2.82 |
| Terminals 2-3 | 4.3 | 22.0 | — | — | 0.22 | 2.82 |
| KFD2-CR-Ex1.20-304 | | | | | | |
| Transmitter Power Supply | | | | | | |
| Terminals 1-2-3 | — | — | 20.0 | 115.0 | 0.22 | 2.82 |
| Terminals 1-2 | 20.0 | 93.0 | — | — | 0.22 | 2.82 |
| Terminals 1-3 | 20.0 | 56.0 | — | — | 0.22 | 2.82 |
| Terminals 2-3 | 4.3 | 22.0 | — | — | 0.22 | 2.82 |
| KFD2-CR-Ex 1.20-340 | | | | | | |
| Transmitter Power Supply | | | | | | |
| Terminals 1-2-3 | — | — | 20.0 | 115.0 | 0.22 | 2.82 |
| Terminals 1-2 | 20.0 | 93.0 | — | — | 0.22 | 2.82 |
| Terminals 1-3 | 20.0 | 56.0 | — | — | 0.22 | 2.82 |
| Terminals 2-3 | 4.3 | 22.0 | — | — | 0.22 | 2.82 |
| KFD2-CR-Ex 1.30-300 | | | | | | |
| Transmitter Power Supply | | | | | | |
| Terminals 1-2-3 | — | — | 26.0 | 115.0 | 0.099 | 2.82 |
| Terminals 1-2 | 26.0 | 93.0 | — | — | 0.099 | 2.82 |
| Terminals 1-3 | 26.0 | 56.0 | — | — | 0.099 | 2.82 |
| Terminals 2-3 | 4.3 | 22.0 | — | — | 0.099 | 2.82 |
| KFD2-CR-Ex 1.30-300-79B | | | | | | |
| Transmitter Power Supply | | | | | | |
| Terminals 1-2-3 | — | — | 26.0 | 144.0 | 0.099 | 1.63 |
| Terminals 1-2 | 26.0 | 93.0 | — | — | 0.099 | 1.63 |
| Terminals 1-3 | 26.0 | 74.0 | — | — | 0.099 | 1.63 |
| Terminals 2-3 | 4.3 | 51.0 | — | — | 0.099 | 1.63 |
| KFD2-CR-Ex 1.30-304 | | | | | | |
| Transmitter Power Supply | | | | | | |
| Terminals 1-2-3 | — | — | 26.0 | 115.0 | 0.099 | 2.82 |
| Terminals 1-2 | 26.0 | 93.0 | — | — | 0.099 | 2.82 |
| Terminals 1-3 | 26.0 | 56.0 | — | — | 0.099 | 2.82 |
| Terminals 2-3 | 4.3 | 22.0 | — | — | 0.099 | 2.82 |

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|--|-----------------|------------------|--------------|---------------|----------------------|---------------|
| KFD2-CR-Ex 1.30-340 | | | | | | |
| Transmitter Power Supply | | | | | | |
| Terminals 1-2-3 | — | — | 26.0 | 115.0 | 0.099 | 2.82 |
| Terminals 1-2 | 26.0 | 93.0 | — | — | 0.099 | 2.82 |
| Terminals 1-3 | 26.0 | 56.0 | — | — | 0.099 | 2.82 |
| Terminals 2-3 | 4.3 | 22.0 | — | — | 0.099 | 2.82 |
| KFD0-CS-Ex 1.51 | | | | | | |
| Single Channel Current Repeater | 25.2 | 93.0 | — | — | 0.17 | 4.2 |
| KFD0-CS-Ex 1.51P | | | | | | |
| Single Channel | 25.2 | 93.0 | — | — | 0.17 | 4.2 |
| KFD2-SCD-Ex1.LK | | | | | | |
| Single Channel | 25.2 | 93.0 | — | — | 0.107 | 4.30 |
| KFD2-SD-Ex1.10100 | | | | | | |
| Single Channel Solenoid Driver, Loop Powered | 17.0 | 271 | — | — | 0.375 | 0.28 |
| KFD2-SDO-Ex2 | | | | | | |
| Single Channel | 28.5 | 119.9 | — | — | — | — |
| KFD2-SDO-Ex2.A | | | | | | |
| Single Channel | 28.5 | 115.1 | — | — | 0.14 | 2.80 |
| KFD2-SDO-Ex2.A.GM | | | | | | |
| Single Channel | 28.5 | 115.1 | — | — | 0.14 | 2.80 |
| KFD2-SDO-Ex2.A.GP | | | | | | |
| Single Channel | 28.5 | 115.1 | — | — | 0.14 | 2.80 |
| KFD2-SDO-Ex2.GM | | | | | | |
| Single Channel | 28.5 | 119.9 | — | — | — | — |
| KFD2-SDO-Ex2.GP | | | | | | |
| Single Channel | 28.5 | 119.9 | — | — | — | — |
| KFD2-SD-Ex1.17 | | | | | | |
| Single Channel | 17.22 | 220.0 | — | — | 0.353 | 0.56 |
| KFD2-SL-Ex1.17 | | | | | | |
| Single Channel | 17.22 | 220.0 | — | — | 0.353 | 0.56 |
| KFD2-TR-Ex1 | | | | | | |
| Transformer Isolated | — | — | 8.9 | 19.0 | 5.05 | 91.83 |
| KFD2-TT-Ex1 | | | | | | |
| Transformer Isolated | 6.4 | 6.5 | — | — | 30.59 | 758.1 |
| KFD2-VR-Ex1.18 | | | | | | |
| Transformer Isolated | 18.0 | 4.2 | — | — | 0.309 | 492 |
| KFD2-VR-Ex1.19 | | | | | | |
| Transformer Isolated | 18.0 | 4.2 | — | — | 0.309 | 492 |
| KFD2-VR-Ex1.19-Y109129 | | | | | | |
| Transformer Isolated | 15.5 | 7.2 | — | — | 0.309 | 492 |

Special Condition of Use:

1. The Transformer Isolators shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

Transformer Isolated Devices.

AIS / I,II,III / 1 / CDEFG 116-0129 Entity; NI / I / 2 / ABCD / T4

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---|-----------------|------------------|--------------|---------------|----------------------|---------------|
| KFD2-SD-Ex1.36 (Part #116317) | 25.9 | 184.0 | — | — | 0.77 | 4.78 |
| KFD2-SD-Ex1.36-87B (Part #116319) | 25.9 | 184.0 | — | — | 0.77 | 4.78 |
| KFD2-SL-Ex1.36 (Part #116318) | 25.9 | 184.0 | — | — | 0.77 | 4.78 |

Special Condition of Use:

1. The Transformer Isolators shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

Transformer Isolated Interfaces.

AIS / I,II,III / 1 / ABCDEFG — 116-0150 / C; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---|-----------------|------------------|--------------|---------------|----------------------|---------------|
| KSD2-TI-Ex | | | | | | |
| Transformer Isolated Universal Temperature Converter. | — | — | 11 | 33 | 1.97 | 31 |
| KSD2-CI-S-Ex.a | | | | | | |
| Transformer Isolated Universal Transmitter. | | | | | | |
| Terminals 2-3 | 26.1 | 92.0 | — | — | 0.17 | 4.33 |
| Terminals 1-2 | 3.5 | 0 | — | — | 1000 | 1000 |
| Terminals 1-2-3 | — | — | 26.1 | 96.0 | 0.17 | 3.97 |
| a = H or blank. | | | | | | |
| KSD2-CO-Ex a | | | | | | |
| Transformer Isolated Analogue Output Interface. | 24.8 | 92.0 | — | — | 0.19 | 4.3 |
| a = Not relevant to safety, e.g. software version. Y41170 | | | | | | |
| KSD2-CO-S-Ex | | | | | | |
| Transformer Isolated Analogue Output Interface. | 24.8 | 92.0 | — | — | 0.19 | 4.3 |
| KSD2-BI-Ex2 | | | | | | |
| Transformer Isolated Digital Interface. | — | — | 10.6 | 31.9 | 2.62 | 33.75 |

| | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|----------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| KSD2-BI-Ex4 | | | | | | |
| Transformer Isolated | | | | | | |
| Digital Interface. | | | | | | |
| Terminals 1,2,3 | – | – | 10.6 | 31.9 | 2.62 | 33.75 |
| Terminals 4,5,6 | – | – | 10.6 | 31.9 | 2.62 | 33.75 |

Transformer Isolated Repeater.

AIS / I,II,III / 1 / ABCDEFG — ID-46 / 0; Entity

| Type | Entity Parameters | | | | | |
|----------------------|-------------------|------------------|--------------|---------------|----------------------|---------------|
| | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
| ZG31/Ex | 27.7 | 92 | – | – | 0.13 | 4.2 |
| ZG31/Ex-R | 27.7 | 92 | – | – | 0.13 | 4.2 |
| ZG31/Ex-S | 27.7 | 92 | – | – | 0.13 | 4.2 |
| ZG31/Ex-F | 27.7 | 92 | – | – | 0.13 | 4.2 |
| ZG31/Ex-S-31b | 27.7 | 92 | – | – | 0.13 | 4.2 |

Transformer Isolated Repeater. Type ZG . . EX

AIS / I,II,III / 1 / ABCDEFG — ID-29 / 0; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|-----------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| ZG30/EX | | | | | | |
| Terminals 1,2,4 | – | – | 27.6 | 88 | 0.12 | 4.7 |

Transformer Isolated Safety Barrier.

AIS / I,II,III / 1 / ABCDEFG — 116/0158/0; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|-------------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| KHD2.SH.Ex1.T.OP | 9.78 | 17.2 | – | – | 3.5 | 111.9 |
| KHD2.SH.Ex1 | 9.78 | 15.7 | – | – | 3.5 | 133.3 |

Transformer Isolated Smart Transmitter Barrier.

AIS / I,II,III / 1 / ABCDEFG — 116 / 0088 / b; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|------------------------|-----------------|------------------|----------------------|---------------|
| KFD2-STC3-Ex1.P | 28.2 | 93.4 | 0.14 | 4.15 |
| KFD2-STV3-Ex1.P | 28.2 | 93.4 | 0.14 | 4.15 |

WE77/EX1-a. Control Relay/Amplifier.

AIS / I,II / 1 / ABCDEFG — 16-40-73 / D
a = Amplifier mode 2U, Bi, OT, UL or blank.

WE77/EX2-a. Control Relay/Amplifier.

AIS / I,II / 1 / ABCDEFG — 16-40-73 / D
a = Amplifier mode OT, UL or blank.

WE77/EX-4UG. Control Relay/Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 16-74-4 / B

WE77/EX-DW-a. Control Relay/Amplifier.

AIS / I,II / 1 / ABCDEG — 16-40-73 / D
a = T or blank.

WE77/EX-UT. Control Relay/Amplifier.

AIS / I,II,III / 1 / ABCDEFG — 16-66-9 / B

WE77 / EX-TR. Isolated Barriers.

AIS / I,II,III / 1 / ABCDEFG — ID-19 / 0; ID-20 / 0; ID-21 / 0; ID-22 / 0; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|----------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| WE77/EX-TR01: | | | | | | |
| Terminals 8-9 | 30 | 100 | – | – | 0.11 | 3.5 |
| Terminals 7-9 | 5.8 | 6.1 | – | – | 50 | 800 |
| Terminals 8-7 | 31.2 | 25 | – | – | 0.10 | 52 |
| WE77/EX-TR02 | 30 | 100 | – | – | 0.11 | 3.5 |

WEM/Ex-DW-T. Speed Monitor.

AIS / I,II,III / 1 / ABCDEFG — ID-35 / 0; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | Entity Parameters | | C_a (μ F) | L_a (mH) |
|---------------|-----------------|------------------|-------------------|---------------|---------------------|---------------|
| | | | V_t (V) | I_t (mA) | | |
| Terminals 7-8 | 10.6 | 27 | — | — | 2.2 | 44 |
| Terminals 5-6 | 10.6 | 27 | — | — | 2.2 | 44 |
| Terminals 2-3 | 10.6 | 27 | — | — | 2.2 | 44 |

WEM/Ex-FSU. Frequency/Current Converter.

AIS / I,II,III / 1 / ABCDEFG — ID-36 / 0; Entity

Entity Parameters: $V_{oc} = 13.1$ V, $I_{sc} = 19.9$ mA, $C_a = 1.2$ μ F, $L_a = 80$ mH.**Z Series Zener Barriers**

AIS / I,II,III / 1 / ABCDEFG — 116-0118 / D; Entity; NI / I / 2 / ABCD / T5 Ta = 60°C

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|-----------------------|-----------------|------------------|--------------|---------------|---------------------|---------------|
| Z705 | 4.97 | 507 | — | — | 1000 | 0.10 |
| Z710 | 9.77 | 200 | — | — | 3.51 | 0.48 |
| Z710.CL | 9.77 | 200 | — | — | 3.51 | 0.48 |
| Z713 | 15.75 | 724 | — | — | 0.67 | 0.07 |
| Z715 | 15.2 | 155 | — | — | 0.76 | 1.09 |
| Z715.CL | 15.2 | 155 | — | — | 0.76 | 1.09 |
| Z715.F | 15.2 | 155 | — | — | 0.76 | 1.09 |
| Z715.1k | 15.2 | 15.5 | — | — | 0.76 | 137 |
| Z722 | 22.7 | 155 | — | — | 0.24 | 1.10 |
| Z722.CL | 22.7 | 155 | — | — | 0.24 | 1.10 |
| Z728 | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Z728.CL | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Z728.F | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Z731 | | | | | | |
| Terminals 1-2 | 28 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-2 and 4-2 | 7.14 | 1456 | — | — | 10 | 0.03 |
| Terminals 1, 2, 3, 4 | — | — | 30 | 1549.3 | 0.11 | 0.03 |
| Z755 | | | | | | |
| Terminals 1-2 | 4.97 | 507 | — | — | 1000 | 0.10 |
| Terminals 3-4 | 4.97 | 507 | — | — | 1000 | 0.10 |
| Terminals 1-4 | — | — | 5.97 | 1014 | 128 | 0.02 |
| Z757 | | | | | | |
| Terminals 1-2 | 7.30 | 745 | — | — | 12.3 | 0.03 |
| Terminals 3-4 | 7.30 | 745 | — | — | 12.3 | 0.03 |
| Terminals 1-4 | — | — | 8.30 | 1489 | 6.89 | 0.01 |
| Z764 | | | | | | |
| Terminals 1-2 | 11.9 | 12.1 | — | — | 1.69 | 220 |
| Terminals 3-4 | 11.9 | 12.1 | — | — | 1.69 | 220 |
| Terminals 1-4 | — | — | 12.9 | 24.3 | 1.28 | 57.0 |
| Z765 | | | | | | |
| Terminals 1-2 | 15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 3-4 | 15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 1-4 | — | — | 16.2 | 309 | 0.62 | 0.20 |
| Z765.F | | | | | | |
| Terminals 1-2 | 15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 3-4 | 15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 1-4 | — | — | 16.2 | 309 | 0.62 | 0.20 |
| Z772 | | | | | | |
| Terminals 1-2 | 22.7 | 155 | — | — | 0.24 | 1.10 |
| Terminals 3-4 | 22.7 | 155 | — | — | 0.24 | 1.10 |
| Z778 | | | | | | |
| Terminals 1-2 | 28.0 | 46.0 | — | — | 0.13 | 15.6 |
| Terminals 3-4 | 28.0 | 46.0 | — | — | 0.13 | 15.6 |
| Terminals 1-4 | — | — | 30.0 | 93.0 | 0.11 | 3.91 |
| Z779 | | | | | | |
| Terminals 1-2 | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 1-2 | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Z779.F | | | | | | |
| Terminals 1-2 | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Z786 | | | | | | |
| Terminals 1-2 | 28.0 | 0.0 | — | — | 0.13 | 4.29 |
| Terminals 3-4 | 28.0 | 0.0 | — | — | 0.13 | 4.29 |
| Terminals 1-4 | — | — | 30.0 | 0.0 | 0.11 | 4.29 |
| Z787 | | | | | | |
| Terminals 1-2 | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | 28.0 | 0.0 | — | — | 0.13 | 3.91 |
| Terminals 1-4 | — | — | 30.0 | 93.0 | 0.11 | 3.91 |

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|----------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Z787.F | | | | | | |
| Terminals 1-2 | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | 28.0 | 0.0 | — | — | 0.13 | 3.91 |
| Terminals 1-4 | — | — | 30.0 | 93.0 | 0.11 | 3.91 |
| Z788 | | | | | | |
| Terminals 1-2 | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | 9.77 | 200 | — | — | 3.51 | 0.48 |
| Terminals 1-4 | — | — | 29.9 | 296 | 0.12 | 0.21 |
| Z788.R | | | | | | |
| Terminals 1-2 | 28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | 9.77 | 200 | — | — | 3.51 | 0.48 |
| Terminals 1-4 | — | — | 29.9 | 296 | 0.12 | 0.21 |
| Z796 | | | | | | |
| Terminals 1-2 | 27.5 | 87.7 | — | — | 0.15 | 4.71 |
| Terminals 3-4 | 20.8 | 51.0 | — | — | 0.30 | 13.6 |
| Terminals 1-4 | — | — | 29.5 | 139 | 0.12 | 1.60 |
| Z805 | | | | | | |
| Terminals 1-2 | -4.97 | 507 | — | — | 1000 | 0.10 |
| Terminals 3-4 | -9.77 | 200 | — | — | 3.51 | 0.48 |
| Terminals 1-4 | -9.77 | 200 | — | — | 3.51 | 0.48 |
| Z810.CL | | | | | | |
| Terminals 1-2 | -15.75 | 724 | — | — | 0.67 | 0.07 |
| Terminals 3-4 | -15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 1-4 | -15.2 | 155 | — | — | 0.76 | 1.09 |
| Z815 | | | | | | |
| Terminals 1-2 | -15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 3-4 | -15.2 | 15.5 | — | — | 0.76 | 137 |
| Terminals 1-4 | -22.7 | 155 | — | — | 0.24 | 1.10 |
| Z822 | | | | | | |
| Terminals 1-2 | -22.7 | 155 | — | — | 0.24 | 1.10 |
| Terminals 3-4 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 1-4 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Z828 | | | | | | |
| Terminals 1-2 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 1-4 | -4.97 | 507 | — | — | 1000 | 0.10 |
| Z855 | | | | | | |
| Terminals 1-2 | -4.97 | 507 | — | — | 1000 | 0.10 |
| Terminals 3-4 | -4.97 | 507 | — | — | 1000 | 0.10 |
| Terminals 1-4 | — | — | 5.97 | 1014 | 128 | 0.02 |
| Z857 | | | | | | |
| Terminals 1-2 | -7.30 | 745 | — | — | 12.3 | 0.03 |
| Terminals 3-4 | -7.30 | 745 | — | — | 12.3 | 0.03 |
| Terminals 1-4 | — | — | 8.30 | 1489 | 6.89 | 0.01 |
| Z864 | | | | | | |
| Terminals 1-2 | -11.9 | 12.1 | — | — | 1.69 | 220 |
| Terminals 3-4 | -11.9 | 12.1 | — | — | 1.69 | 220 |
| Terminals 1-4 | — | — | 12.9 | 24.3 | 1.28 | 57.0 |
| Z865 | | | | | | |
| Terminals 1-2 | -15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 3-4 | -15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 1-4 | — | — | 16.2 | 309 | 0.62 | 0.20 |
| Z865.F | | | | | | |
| Terminals 1-2 | -15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 3-4 | -15.2 | 155 | — | — | 0.76 | 1.09 |
| Terminals 1-4 | — | — | 16.2 | 309 | 0.62 | 0.20 |
| Z872 | | | | | | |
| Terminals 1-2 | -22.7 | 155 | — | — | 0.24 | 1.10 |
| Terminals 3-4 | -22.7 | 155 | — | — | 0.24 | 1.10 |
| Z878 | | | | | | |
| Terminals 1-2 | -28.0 | 46.0 | — | — | 0.13 | 15.6 |
| Terminals 3-4 | -28.0 | 46.0 | — | — | 0.13 | 15.6 |
| Terminals 1-4 | — | — | 30.0 | 93.0 | 0.11 | 3.91 |
| Z879 | | | | | | |
| Terminals 1-2 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Z879.F | | | | | | |
| Terminals 1-2 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Z886 | | | | | | |
| Terminals 1-2 | -28.0 | 0.0 | — | — | 0.13 | 4.29 |
| Terminals 3-4 | -28.0 | 0.0 | — | — | 0.13 | 4.29 |
| Terminals 1-4 | — | — | 30.0 | 0.0 | 0.11 | 4.29 |
| Z887 | | | | | | |
| Terminals 1-2 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | -28.0 | 0.0 | — | — | 0.13 | 4.29 |
| Terminals 1-4 | — | — | 30.0 | 93.0 | 0.11 | 3.91 |
| Z887.F | | | | | | |
| Terminals 1-2 | -28.0 | 93.0 | — | — | 0.13 | 3.91 |
| Terminals 3-4 | -28.0 | 0.0 | — | — | 0.13 | 4.29 |
| Terminals 1-4 | — | — | 30.0 | 93.0 | 0.11 | 3.91 |

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|----------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Z888 | | | | | | |
| Terminals 1-2 | -28.0 | 93.0 | | | 0.13 | 3.91 |
| Terminals 3-4 | -9.77 | 200 | | | 3.51 | 0.48 |
| Terminals 1-4 | | | 29.0 | 293 | 0.12 | 0.21 |
| Z888.R | | | | | | |
| Terminals 1-2 | -28.0 | 93.0 | | | 0.13 | 3.91 |
| Terminals 3-4 | -9.77 | 200 | | | 3.51 | 0.48 |
| Terminals 1-4 | | | 29.0 | 293 | 0.12 | 0.21 |
| Z896 | | | | | | |
| Terminals 1-2 | -27.5 | 87.7 | | | 0.15 | 4.71 |
| Terminals 3-4 | -20.8 | 51.0 | | | 0.30 | 13.6 |
| Terminals 1-4 | | | 29.5 | 139 | 0.12 | 1.60 |
| Z905 | | | | | | |
| | 5.10 | 520 | | | 1000 | 0.09 |
| Z910 | | | | | | |
| | 10.3 | 210 | | | 2.89 | 0.42 |
| Z915 | | | | | | |
| | 15.5 | 158 | | | 0.71 | 1.02 |
| Z915.1k | | | | | | |
| | 15.5 | 15.8 | | | 0.71 | 132 |
| Z922 | | | | | | |
| Terminals 1-2 | 11.4 | 225 | | | 2.00 | 0.35 |
| Terminals 3-4 | 11.4 | 225 | | | 2.00 | 0.35 |
| Terminals 1-4 | | | 12.4 | 500 | 1.48 | 0.12 |
| Z928 | | | | | | |
| | 28.0 | 93.0 | | | 0.13 | 3.91 |
| Z954 | | | | | | |
| Terminals 1-2 | 5.10 | 433 | | | 1000 | 0.13 |
| Terminals 3-2 | 5.10 | 433 | | | 1000 | 0.13 |
| Terminals 4-2 | 5.10 | 433 | | | 1000 | 0.13 |
| Terminals 1, 2, 3, 4 | | | 10.2 | 1300 | 2.97 | 0.01 |
| Z955 | | | | | | |
| Terminals 1-2 | 5.10 | 520 | | | 1000 | 0.09 |
| Terminals 3-4 | 5.10 | 520 | | | 1000 | 0.09 |
| Terminals 1-4 | - | - | 10.2 | 1040 | 2.99 | 0.01 |
| Z960 | | | | | | |
| Terminals 1-2 | 10.3 | 210 | - | - | 2.90 | 0.42 |
| Terminals 3-4 | 10.3 | 210 | - | - | 2.90 | 0.42 |
| Terminals 1-4 | | | 10.3 | 419 | 2.90 | 0.14 |
| Z960.F | | | | | | |
| Terminals 1-2 | 10.3 | 210 | - | - | 2.90 | 0.42 |
| Terminals 3-4 | 10.3 | 210 | - | - | 2.90 | 0.42 |
| Terminals 1-4 | - | - | 10.3 | 419 | 2.90 | 0.14 |
| Z961 | | | | | | |
| Terminals 1-2 | 9.0 | 91.8 | - | - | 5.01 | 4.30 |
| Terminals 3-4 | 9.0 | 91.8 | - | - | 5.01 | 4.30 |
| Terminals 1-4 | - | - | 18.0 | 184 | 0.43 | 0.62 |
| Z961.F | | | | | | |
| Terminals 1-2 | 9.0 | 91.8 | - | - | 5.01 | 4.30 |
| Terminals 3-4 | 9.0 | 91.8 | - | - | 5.01 | 4.30 |
| Terminals 1-4 | - | - | 18.0 | 184 | 0.43 | 0.62 |
| Z961.H | | | | | | |
| Terminals 1-2 | 9.63 | 26.3 | - | - | 4.41 | 49 |
| Terminals 3-4 | 9.63 | 26.3 | - | - | 4.41 | 49 |
| Terminals 1-4 | - | - | 18.5 | 52.5 | 0.4 | 12.88 |
| Z964 | | | | | | |
| Terminals 1-2 | 12.4 | 12.6 | - | - | 1.45 | 204 |
| Terminals 3-4 | 12.4 | 12.6 | - | - | 1.45 | 204 |
| Terminals 1-4 | - | - | 24.7 | 25.2 | 0.18 | 53.1 |
| Z965 | | | | | | |
| Terminals 1-2 | 15.5 | 158 | - | - | 0.68 | 1.02 |
| Terminals 3-4 | 15.5 | 158 | - | - | 0.68 | 1.02 |
| Terminals 1-4 | - | - | 15.5 | 316 | 0.68 | 0.19 |
| Z966 | | | | | | |
| Terminals 1-2 | 12.4 | 84.0 | - | - | 1.45 | 5.14 |
| Terminals 3-4 | 12.4 | 84.0 | - | - | 1.45 | 5.14 |
| Terminals 1-4 | - | - | 24.7 | 168 | 0.18 | 0.83 |
| Z966.F | | | | | | |
| Terminals 1-2 | 12.4 | 84.0 | - | - | 1.45 | 5.14 |
| Terminals 3-4 | 12.4 | 84.0 | - | - | 1.45 | 5.14 |
| Terminals 1-4 | - | - | 24.7 | 168 | 0.18 | 0.83 |
| Z966.H | | | | | | |
| Terminals 1-2 | 12.31 | 167.6 | - | - | 1.46 | 0.84 |
| Terminals 3-4 | 12.31 | 167.6 | - | - | 1.46 | 0.84 |
| Z967 | | | | | | |
| Terminals 1-2 | 17.3 | 147 | - | - | 0.49 | 1.31 |
| Terminals 3-4 | 17.3 | 147 | - | - | 0.49 | 1.31 |
| Terminals 1-4 | - | - | 17.3 | 294 | 0.49 | 0.21 |

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Z972 | | | | | | |
| Terminals 1-2 | 22.7 | 75.5 | – | – | 0.23 | 6.36 |
| Terminals 3-4 | 22.7 | 75.5 | – | – | 0.23 | 6.36 |
| Terminals 1-4 | – | – | 22.7 | 151 | 0.23 | 1.19 |
| Z978 | | | | | | |
| Terminals 1-2 | 28.0 | 46.0 | – | – | 0.13 | 15.6 |
| Terminals 3-4 | 28.0 | 46.0 | – | – | 0.13 | 15.6 |
| Terminals 1-4 | – | – | 30.0 | 93.0 | 0.11 | 3.91 |

Z Series Zener Barriers

AIS / I,II,III / 1 / CDEFG — 116-0118 / D; Entity; NI / 1 / 2 / ABCD / T5 Ta = 60°C

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|--------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Z726 | | | | | | |
| Terminals 1-2, 3-4 | 27.0 | 159.0 | – | – | 0.46 | 6.36 |
| Z728.H | | | | | | |
| Terminals 1-2, 3-4 | 28.0 | 119.2 | – | – | 0.40 | 10.2 |
| Z728.H.F | | | | | | |
| Terminals 1-2, 3-4 | 28.0 | 119.2 | – | – | 0.40 | 10.2 |
| Z772 | | | | | | |
| Terminals 1-4 | – | – | 24.7 | 309 | 0.58 | 1.56 |
| Z779 | | | | | | |
| Terminals 1-4 | – | – | 30.0 | 186 | 0.33 | 4.39 |
| Z779.F | | | | | | |
| Terminals 1-4 | – | – | 30.0 | 186 | 0.33 | 4.39 |
| Z779.H | | | | | | |
| Terminals 1-2 | 28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Terminals 3-4 | 28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Terminals 1-4 | – | – | 30.0 | 235.5 | 0.33 | 2.67 |
| Z779.H.F | | | | | | |
| Terminals 1-2, 3-4 | 28.0 | 119.2 | – | – | 0.40 | 10.2 |
| Terminals 1-4 | – | – | 30.0 | 235.5 | 0.33 | 2.67 |
| Z787.H | | | | | | |
| Terminals 1-2 | 28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Terminals 3-4 | 28.0 | 0 | – | – | 0.4 | 78.9 |
| Terminals 1-4 | – | – | 30.0 | 119.2 | 0.33 | 10.2 |
| Z787.H.F | | | | | | |
| Terminals 1-2 | 28.0 | 119.2 | – | – | 0.40 | 10.2 |
| Terminals 3-4 | 28.0 | 0.0 | – | – | 0.40 | 78.9 |
| Terminals 1-4 | – | – | 30.0 | 119.2 | 0.33 | 10.2 |
| Z788.H | | | | | | |
| Terminals 1-2 | 28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Terminals 3-4 | 9.78 | 199.6 | – | – | 10.5 | 4.08 |
| Terminals 1-4 | – | – | 30.0 | 321.8 | 0.33 | 1.40 |
| Z788.R.H | | | | | | |
| Terminals 1-2 | 28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Terminals 3-4 | 9.78 | 199.6 | – | – | 10.5 | 4.08 |
| Terminals 1-4 | – | – | 30.0 | 321.8 | 0.33 | 1.4 |
| Z828.H | | | | | | |
| Terminals 1-2, 3-4 | –28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Z828.H.F | | | | | | |
| Terminals 1-2, 3-4 | –28.0 | 119.2 | – | – | 0.40 | 10.2 |
| Z872 | | | | | | |
| Terminals 1-4 | – | – | 24.7 | 309 | 0.58 | 1.56 |
| Z879 | | | | | | |
| Terminals 1-4 | – | – | 30.0 | 186 | 0.33 | 4.39 |
| Z879.F | | | | | | |
| Terminals 1-4 | – | – | 30.0 | 186 | 0.33 | 4.39 |
| Z879.H | | | | | | |
| Terminals 1-2 | –28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Terminals 3-4 | –28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Terminals 1-4 | – | – | 30.0 | 235.5 | 0.33 | 2.67 |
| Z879.H.F | | | | | | |
| Terminals 1-2, 3-4 | –28.0 | 119.2 | – | – | 0.40 | 10.2 |
| Terminals 1-4 | – | – | 30.0 | 235.5 | 0.33 | 2.67 |
| Z887.H | | | | | | |
| Terminals 1-2 | –28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Terminals 3-4 | –28.0 | 0 | – | – | 0.4 | 78.9 |
| Terminals 1-4 | – | – | 30.0 | 119.2 | 0.33 | 10.2 |
| Z887.H.F | | | | | | |
| Terminals 1-2 | –28.0 | 119.2 | – | – | 0.40 | 10.2 |
| Terminals 3-4 | –28.0 | 0.0 | – | – | 0.40 | 78.9 |
| Terminals 1-4 | – | – | 30.0 | 119.2 | 0.33 | 10.2 |
| Z888.H | | | | | | |
| Terminals 1-2 | –28.0 | 119.2 | – | – | 0.4 | 10.2 |
| Terminals 3-4 | –9.78 | 199.6 | – | – | 10.5 | 4.08 |
| Terminals 1-4 | – | – | 30.0 | 321.8 | 0.33 | 1.4 |

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---|-----------------|------------------|--------------|---------------|----------------------|---------------|
| Z888.R.H | | | | | | |
| Terminals 1-2 | -28.0 | 119.2 | — | — | 0.4 | 10.2 |
| Terminals 3-4 | -9.78 | 199.6 | — | — | 10.51 | 4.08 |
| Terminals 1-4 | — | — | 30.0 | 321.8 | 0.33 | 1.4 |
| Z966.H | | | | | | |
| Terminals 1-4 | — | — | 24.63 | 335.1 | 0.56 | 1.25 |
| Zener Barrier. | | | | | | |
| AIS / I,II,III / 1 / ABCDEFG — 116-0063 / D; Entity; NI / I / 2 / ABCD / T6 | | | | | | |
| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
| KHZ-907/Ex | | | | | | |
| Terminals 1,4 | 27 | 109 | — | — | 0.15 | 3.0 |
| Terminals 3,6 | 27 | 109 | — | — | 0.15 | 3.0 |
| Terminals 14,17 | 27 | 109 | — | — | 0.15 | 3.0 |
| Terminals 2,5 | 27 | 0 | — | — | 0.15 | 2.52 |
| Terminals 13,18 | 27 | 0 | — | — | 0.15 | 2.52 |
| Terminals 15,18 | 27 | 0 | — | — | 0.15 | 2.52 |
| Terminals 1,2 | — | — | 29 | 118 | 0.13 | 2.52 |
| KHZ-354/Ex2 | | | | | | |
| Terminals 1,2 | — | — | 10.6 | 1070 | 2.58 | 0.04 |
| Terminals 3,13 | — | — | 10.6 | 1070 | 2.58 | 0.04 |
| Terminals 14,15 | — | — | 10.6 | 1070 | 2.58 | 0.04 |
| Terminals 1, 2, 3 | — | — | 10.6 | 1600 | 2.58 | 0.017 |
| Terminals 13, 14, 15 | — | — | 10.6 | 1600 | 2.58 | 0.017 |
| Terminals 1,4 | 5.3 | 535 | — | — | 861 | 0.14 |
| Terminals 2,5 | 5.3 | 535 | — | — | 861 | 0.14 |
| Terminals 3,6 | 5.3 | 535 | — | — | 861 | 0.14 |
| Terminals 13,16 | 5.3 | 535 | — | — | 861 | 0.14 |
| Terminals 14,17 | 5.3 | 535 | — | — | 861 | 0.14 |
| Terminals 15,18 | 5.3 | 535 | — | — | 861 | 0.14 |
| KHZ-428/Ex3 | | | | | | |
| Terminals 1,4 | 27.0 | 90 | — | — | 0.16 | 4.66 |
| Terminals 2,5 | 27.0 | 90 | — | — | 0.16 | 4.66 |
| Terminals 3,6 | 27.0 | 90 | — | — | 0.16 | 4.66 |
| KHZ-487/Ex3 | | | | | | |
| Terminals 1,4 | 27.0 | 90 | — | — | 0.16 | 4.66 |
| Terminals 2,5 | 27.0 | 0 | — | — | 0.16 | 1 H |
| Terminals 3,6 | 27.0 | 90 | — | — | 0.16 | 4.66 |
| Terminals 13,16 | 27.0 | 0 | — | — | 0.16 | 1 H |
| Terminals 14,17 | 27.0 | 90 | — | — | 0.16 | 4.66 |
| Terminals 15,18 | 27.0 | 0 | — | — | 0.16 | 1 H |
| Terminals 1,2 | — | — | 29.4 | 90 | 0.13 | 4.67 |
| Terminals 3,13 | — | — | 29.4 | 90 | 0.13 | 4.67 |
| Terminals 14,15 | — | — | 29.4 | 90 | 0.13 | 4.67 |
| KHZ-488/Ex3 | | | | | | |
| Terminals 1,2 | — | — | 28.2 | 287 | 0.14 | 0.49 |
| Terminals 3,13 | — | — | 28.2 | 287 | 0.14 | 0.49 |
| Terminals 14,15 | — | — | 28.2 | 287 | 0.14 | 0.49 |
| Terminals 1,4 | 27.0 | 90 | — | — | 0.16 | 4.66 |
| Terminals 2,5 | 9.8 | 197 | — | — | 3.51 | 1.01 |
| Terminals 3,6 | 27.0 | 90 | — | — | 0.16 | 4.66 |
| Terminals 13,16 | 9.8 | 197 | — | — | 3.51 | 1.01 |
| Terminals 14,17 | 27.0 | 90 | — | — | 0.16 | 4.66 |
| Terminals 15,18 | 9.8 | 197 | — | — | 3.51 | 1.01 |
| KHZ-655/Ex3 | | | | | | |
| Terminals 1,2 | — | — | 10.6 | 892 | 2.58 | 0.05 |
| Terminals 3,13 | — | — | 10.6 | 892 | 2.58 | 0.05 |
| Terminals 14,15 | — | — | 10.6 | 892 | 2.58 | 0.05 |
| Terminals 1,4 | 5.3 | 446 | — | — | 861 | 0.21 |
| Terminals 2,5 | 5.3 | 446 | — | — | 861 | 0.21 |
| Terminals 3,6 | 5.3 | 446 | — | — | 861 | 0.21 |
| Terminals 13,16 | 5.3 | 446 | — | — | 861 | 0.21 |
| Terminals 14,17 | 5.3 | 446 | — | — | 861 | 0.21 |
| Terminals 15,18 | 5.3 | 446 | — | — | 861 | 0.21 |
| KHZ-901/Ex | | | | | | |
| Terminals 3,2 | 1.2 | 97 | — | — | 1000 | 4.02 |
| Terminals 4,5 | 1.2 | 11 | — | — | 1000 | 260 |
| Terminals 6,5 | 15.2 | 41 | — | — | 0.76 | 21.7 |

| Type | V _{OC} (V) | I _{SC} (mA) | V _t (V) | I _t (mA) | C _a (μF) | L _a (mH) |
|-----------------------------------|------------------------|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| KHZ-908/Ex | — | — | 17.0 | 101 | 0.53 | 3.53 |
| Terminals 1,4 | 8.5 | 16.8 | — | — | 6.19 | 116.4 |
| Terminals 2,5 | 8.5 | 16.8 | — | — | 6.19 | 116.4 |
| Terminals 3,6 | 8.5 | 16.8 | — | — | 6.19 | 116.4 |
| Terminals 13,16 | 8.5 | 16.8 | — | — | 6.19 | 116.4 |
| Terminals 14,17 | 8.5 | 16.8 | — | — | 6.19 | 116.4 |
| Terminals 15,18 | 8.5 | 16.8 | — | — | 6.19 | 116.4 |
| KHZ-922/Ex-1 | | | | | | |
| Terminals 1,4 | 27.0 | 109 | — | — | 0.15 | 3.0 |
| KHZ-922/Ex-2 | | | | | | |
| Terminals 1,4 | 27.0 | 109 | — | — | 0.15 | 3.0 |
| Terminals 2,5 | 27.0 | 109 | — | — | 0.15 | 3.0 |
| KHZ-922/Ex-3 | | | | | | |
| Terminals 1-4, 2-5, 3-6 | 27.0 | 109 | — | — | 0.15 | 3.0 |
| KHZ-921/Ex | | | | | | |
| Terminals 1-4, 2-5, 3-6, 13-16 | 9.8 | 197 | — | — | 3.51 | 1.01 |

Zener Barrier.

AIS / I,II,III / 1 / CDEFG — 116-0063 / D; Entity; NI / I / 2 / ABCD / T6

| Type | V _{OC} (V) | I _{SC} (mA) | V _t (V) | I _t (mA) | C _a (μF) | L _a (mH) |
|-------------------|------------------------|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| Z364/Ex | — | — | 34.4 | 593 | 0.27 | 0.51 |
| KHZ-901/Ex | — | — | 34.4 | 593 | 0.27 | 0.51 |
| Terminals 1,2 | 21.5 | 418 | — | — | 0.83 | 0.99 |

Zener Barrier.

AIS / I,II,III / 1 / DFG — 116-0063 / D; Entity; NI / I / 2 / ABCD / T6

| Type | V _{OC} (V) | I _{SC} (mA) | V _t (V) | I _t (mA) | C _a (μF) | L _a (mH) |
|-------------------|------------------------|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| Z361/Ex | — | — | 30.7 | 756 | 0.92 | 0.53 |
| KHZ-901/Ex | — | — | 30.7 | 756 | 0.92 | 0.53 |

Zener Barrier.

AIS / I,II,III / CDEFG — 116-0069 / b; Entity

| Type | V _{OC} (V) | I _{SC} (mA) | V _t (V) | I _t (mA) | C _a (μF) | L _a (mH) |
|------------------------|------------------------|-------------------------|-----------------------|------------------------|------------------------|------------------------|
| KHP-100/Ex-2C | | | | | | |
| Terminals 1-2 | 27.01 | 197 | — | — | 0.467 | 4.15 |
| Terminals 3-2 | 9.78 | 256 | — | — | 10.51 | 2.52 |
| KHP-101/Ex-2C-R | | | | | | |
| Terminals 1-2 | 27.01 | 197 | — | — | 0.467 | 4.15 |
| Terminals 3-2 | 9.78 | 256 | — | — | 10.51 | 2.52 |
| KHP-110/Ex-1C | | | | | | |
| Terminals 1-2 | 27.01 | 197 | — | — | 0.467 | 4.15 |
| KHP-111/Ex-2C | | | | | | |
| Terminals 1-2 | 27.01 | 197 | — | — | 0.467 | 4.15 |
| Terminals 3-2 | 27.01 | 197 | — | — | 0.467 | 4.15 |
| KHP-113/Ex-2C | | | | | | |
| Terminals 1-2 | 27.01 | 273 | — | — | 0.47 | 2.23 |
| Terminals 3-2 | 27.01 | 273 | — | — | 0.47 | 2.23 |
| KHP-CTA/Ex-1C-L | | | | | | |
| Terminals 1-2 | 27.01 | 197 | — | — | 0.467 | 4.15 |
| KHP-CTA/Ex-2C-L | | | | | | |
| Terminals 1-2 | 27.01 | 197 | — | — | 0.467 | 4.15 |
| Terminals 3-2 | 9.78 | 256 | — | — | 10.51 | 2.52 |
| KHP-100/Ex-2C | — | — | 28.21 | 453 | 0.421 | 0.852 |
| KHP-101/Ex-2C-R | — | — | 28.21 | 453 | 0.421 | 0.852 |
| KHP-105/Ex-2A | — | — | 29.41 | 190 | 0.382 | 4.437 |
| KHP-CTA/Ex-2C-L | — | — | 28.21 | 453 | 0.421 | 0.852 |

Zener Barrier.

AIS / I,II,III / DFG — 116-0069 / b; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|----------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| KHP-111/Ex-2C | — | — | 29.41 | 394 | 1.020 | 1.939 |

Zener Barrier.

AIS / I,II,III / ABCDEFG — 116-0069 / b; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---|-----------------|------------------|--------------|---------------|----------------------|---------------|
| KHP-102/Ex-2A | — | — | 28.21 | 351 | 0.140 | 0.327 |
| KHP-104/Ex-2A | — | — | 29.41 | 95 | 0.127 | 4.2 |
| KHP-106/Ex-2A-R | — | — | 28.21 | 351 | 0.140 | 0.327 |
| KHP-112/Ex-2A | — | — | 29.41 | 95 | 0.127 | 4.2 |
| KHP-CTA/Ex-2A-L | — | — | 28.21 | 351 | 0.140 | 0.327 |
| KHP-102/Ex-2A Terminals 1-2 | 27.01 | 95 | — | — | 0.156 | 4.2 |
| Terminals 3-2 | 9.78 | 256 | — | — | 3.504 | 0.607 |
| KHP-103/Ex-1A Terminals 1-2 | 27.01 | 95 | — | — | 0.156 | 4.2 |
| KHP-104/Ex-2A Terminals 1-2 | 27.01 | 95 | — | — | 0.156 | 4.2 |
| Terminals 3-2 | 27.01 | 0 | — | — | 0.156 | 7.17 |
| KHP-105/Ex-2A Terminals 1-2 | 27.01 | 95 | — | — | 0.156 | 4.2 |
| Terminals 3-2 | 27.01 | 95 | — | — | 0.156 | 4.2 |
| KHP-106/Ex-2A-R Terminals 1-2 | 27.01 | 95 | — | — | 0.156 | 4.2 |
| Terminals 3-2 | 9.78 | 256 | — | — | 3.504 | 0.607 |
| KHP-112/Ex-2A Terminals 1-2 | 27.01 | 95 | — | — | 0.156 | 4.2 |
| Terminals 3-2 | 27.01 | 0 | — | — | 0.156 | 7.17 |
| KHP-CTA/Ex-1A-L Terminals 1-2 | 27.01 | 95 | — | — | 0.156 | 4.2 |
| KHP-CTA/Ex-2A-L Terminals 1-2 | 27.01 | 95 | — | — | 0.156 | 4.2 |
| Terminals 3-2 | 9.78 | 256 | — | — | 3.504 | 0.607 |

Zener Barrier, High Current.

AIS / I,II,III / ABCDEFG — 116-0074 / b; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| ZH-102/Ex | 11.65 | 2.35 | — | — | 1.821 | 0.007 |
| ZH-103/Ex | 13.78 | 2.78 | — | — | 3.082 | 0.015 |
| ZH-110/Ex | 11.65 | 2.35 | — | — | 1.821 | 0.007 |
| ZH-112/Ex | 15.90 | 1.07 | — | — | 1.958 | 0.105 |

Zener Barrier, High Current.

AIS / I,II,III / CDEFG — 116-0074 / b; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| ZH-111/Ex | 13.78 | 2.78 | — | — | 3.082 | 0.015 |

Zener Barrier, High Current.

AIS / I,II,III / DFG — 116-0074 / b; Entity

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| ZH-101/Ex | 19.10 | 1.20 | — | — | 3.061 | 0.220 |
| ZH-201/Ex | -19.10 | 1.20 | — | — | 3.061 | 0.220 |

Zener Barrier, High Current.

AIS / I,II,III / ABCDEFG — 116-0122 / 0; Entity; NI / I / 2 / ABCD / T6

| Type | V_{oc} (V) | I_{sc} (mA) | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|--------------------|-----------------|------------------|--------------|---------------|----------------------|---------------|
| WE77-102/Ex | 11.65 | 2.35 | — | — | 1.82 | 0.01 |
| WE77-110/Ex | 11.65 | 2.35 | — | — | 1.82 | 0.01 |
| WE77-103/Ex | 13.78 | 2.78 | — | — | 3.08 | 0.01 |
| WE77-201/Ex | -19.10 | 1.20 | — | — | 3.06 | 0.22 |

Zener Barrier, High Current.

AIS / I,II,III / CDEFG — 116-0122 / 0; Entity; NI / I / 2 / ABCD / T6

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|-------------|-----------------|------------------|--------------|---------------|---------------------|---------------|
| WE77-111/Ex | 13.78 | 2.78 | — | — | 3.08 | 0.01 |
| WE77-112/Ex | 15.90 | 1.07 | — | — | 1.96 | 0.10 |

Zener Barrier, High Current.

AIS / I,II,III / DFG — 116-0122 / 0; Entity; NI / I / 2 / ABCD / T6

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|-------------|-----------------|------------------|--------------|---------------|---------------------|---------------|
| WE77-101/Ex | 19.10 | 1.20 | — | — | 3.06 | 0.22 |

Z130/EX. Current Repeater.

AIS / I,II,III / 1 / ABCDEFG — ID-38 / 0; Entity

Max Entity Parameters:

$$V_{OC} = 23.8 \text{ V}, I_{SC} = 121.4 \text{ mA}, C_a = 0.18 \text{ } \mu\text{F}, L_a = 2.5 \text{ mH.}$$

ZG . . . / EX Transformer Isolated Barriers, Repeaters and Drivers.

AIS / I,II,III / 1 / ABCDEG — ID-10 / a; ID-11 / a; ID-12 / a; Entity

| Type | V_{OC} (V) | I_{SC} (mA) | V_t (V) | I_t (mA) | C_a (μ F) | L_a (mH) |
|---------|-----------------|------------------|--------------|---------------|---------------------|---------------|
| ZG05/EX | 4.7 | 2.0 | — | — | 2600 | 1 H |
| ZG17/EX | 17.9 | 229.0 | — | — | 0.4 | 0.76 |
| ZG18/EX | 19.1 | 16.7 | — | — | 0.34 | 143 |
| ZG27/EX | 30.8 | 90.5 | — | — | 0.1 | 4.3 |
| ZG28/EX | 30.8 | 90.5 | — | — | 0.1 | 4.3 |
| ZG32/EX | 25.8 | 86.0 | — | — | 0.16 | 4.6 |
| ZG33/EX | 17.9 | 229.0 | — | — | 0.4 | 0.76 |
| ZG34/EX | 30.8 | 90.5 | — | — | 0.1 | 4.3 |
| ZG35/EX | 30.8 | 90.5 | — | — | 0.1 | 4.3 |

ZG40/EX. Intrinsically Safe Reed Relay.

AIS / I,II,III / 1 / ABCDEFG — ID-39 / 0; Entity

Entity Parameters:

$$V_{OC} = 0 \text{ V}, I_{SC} = 0 \text{ mA}, C_a = 10000 \text{ } \mu\text{F}, L_a = 1 \text{ H.}$$

ZG44/Ex Optical Isolated Barrier.

AIS / I,II,III / 1 / ABCDEFG — 116-0135 / 0; Entity

Entity Parameters:

$$V_{OC} = 0 \text{ V}, I_{SC} = 0 \text{ mA}, C_a = 10,000 \text{ } \mu\text{F}, L_a = 1000 \text{ mH.}$$

1700 MUX. Multiplexer.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

EAM-ISI. Terminal Connection Board.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
2. Must be installed with HPTB/1132/CON8-H-LTX.

HFM-ISI. Terminal Connection Board.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
2. Must be installed with HPTB / 1132 / CON8-H-LTX.

HPMM. Terminal Board.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

HPSM. Terminal Board.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

HPTB / 1132 / CON8-H-LTX. Terminal Board.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

HPTB/FOX. Terminal Board.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

HTPB / 32 / CONB / TB-01 / HFa. Terminal Board.

NI / I / 2 / ABCD / T5 Ta = 70°C

a = Interface Connections: 16, 32.

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

IA-BA-AO-HFT-01. Terminal Connection Board.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
2. Must be installed with HPTB/1132/CON8-H-LTX.

IA-HO-AI-01-S. Associated Nonincendive Apparatus.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
2. Must be installed with HPTB/CON.

IA-HO-AO-HFT-01. Associated Nonincendive Apparatus.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
2. Must be installed with HPTB/CONB.

SAM-NIS. Terminal Connection Board.

NI / I / 2 / ABCD / T5 Ta = 70°C

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.
2. Must be installed with HPTB/1132/CON8-H-LTX.

Series MB, Shunt Diode Barrier Assembly.

AIS / I,II,III / 1 / ABCDEFG — S-2371 / 1; Entity

Entity Parameters:

| Series | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-----------------------------------|-----------------|------------------|----------------------|---------------|
| Single Channel With Ground Return | | | | |
| MB3/1/ 2ac | ±12.2 | 247 | 1.3 | 0.5 |
| MB3/2/ 2ac 2ac | ±12.2 | 247 | 1.3 | 0.5 |
| MB3/3/ 2ac 2ac 2ac | ±12.2 | 247 | 1.3 | 0.5 |
| MB3/1/ 3ac | ±11.3 | 126 | 1.7 | 2.1 |
| MB3/2/ 3ac 3ac | ±11.3 | 126 | 1.7 | 2.1 |
| MB3/3/ 3ac 3ac 3ac | ±11.3 | 126 | 1.7 | 2.1 |
| MB4/2/ 8ac | ±12.2 | 247 | 1.3 | 0.5 |
| MB4/4/ 8ac 8ac | ±12.2 | 247 | 1.3 | 0.5 |
| MB3/1/ 17ac | ±12.2 | 8.3 | .3 | 450 |
| MB3/2/ 17ac 17ac | ±12.2 | 8.3 | 1.3 | 450 |
| MB3/3/ 17ac 17ac 17ac | ±12.2 | 8.3 | 1.3 | 450 |
| MB3/1/ 19ac | ±23.7 | 159.6 | 0.2 | 1.0 |
| MB3/2/ 19ac 19ac | ±23.7 | 159.6 | 0.2 | 1.0 |
| MB3/3/ 19ac 19ac 19ac | ±23.7 | 159.6 | 0.2 | 1.0 |
| MB4/2/ 20ac | ±23.7 | 159.6 | .2 | 1.0 |
| MB4/4/ 20ac 20ac | ±23.7 | 159.6 | 0.2 | 1.0 |
| MB3/1/ 0+ | +18 | 189.5 | 0.4 | 1.0 |
| MB3/1/ 0- | -18 | 189.5 | 0.4 | 1.0 |
| MB3/1/ 2+ | +11.9 | 241 | 1.4 | 0.6 |
| MB3/1/ 2- | -11.9 | 241 | 1.4 | 0.6 |
| MB3/1/ 3+ | +11 | 122 | 2.0 | 2.1 |
| MB3/1/ 3- | -11 | 122 | 2.0 | 2.1 |
| MB3/1/ 14+ | +31.8 | 103.9 | 0.095 | 3.5 |
| MB3/1/ 14- | -31.8 | 103.9 | 0.095 | 3.5 |
| MB3/1/ 19+ | +23.7 | 159.6 | 0.2 | 1.0 |
| MB3/1/ 19- | -23.7 | 159.6 | 0.2 | 1.0 |
| MB3/1/ 19+ | +23.7 | 159.6 | 0.2 | 1.0 |
| MB3/2/ 0+ 0+ | +18 | 189.5 | 0.4 | 1.0 |
| MB3/2/ 0- 0- | -18 | 189.5 | 0.4 | 1.0 |
| MB3/2/ 0+ 0+ 0+ | +18 | 189.5 | 0.4 | 1.0 |
| MB3/2/ 0- 0- 0- | -18 | 189.5 | 0.4 | 1.0 |
| MB3/2/ 2+ 2+ | +11.9 | 241 | 1.4 | 0.6 |
| MB3/2/ 2- 2- | -11.9 | 241 | 1.4 | 0.6 |

| Series | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-------------------------------------|-----------------|------------------|----------------------|---------------|
| MB3/2/ 2+ 2+ 2+ | +11.9 | 241 | 1.4 | 0.6 |
| MB3/2/ 2- 2- 2- | -11.9 | 241 | 1.4 | 0.6 |
| MB3/2/ 3+ 3+ | +11 | 122 | 2 | 2.1 |
| MB3/2/ 3- 3- | -11 | 122 | 2 | 2.1 |
| MB3/2/ 3+ 3+ 3+ | +11 | 122 | 2 | 2.1 |
| MB3/2/ 3- 3- 3- | -11 | 122 | 2 | 2.1 |
| MB3/2/ 14+ 14+ | +31.8 | 103.9 | 0.095 | 3.5 |
| MB3/2/ 14- 14- | -31.8 | 103.9 | 0.095 | 3.5 |
| Single Channel With Ground Return | | | | |
| MB3/2/ 14+ 14+ 14+ | +31.8 | 103.9 | 0.095 | 3.5 |
| MB3/2/ 14- 14- 14- | -31.8 | 103.9 | 0.095 | 3.5 |
| MB3/2/ 19+ 19+ | +23.7 | 159.6 | 0.2 | 1.0 |
| MB3/2/ 19- 19- | -23.7 | 159.6 | 0.2 | 1.0 |
| MB3/3/ 19+ 19+ 19+ | +23.7 | 159.6 | 0.2 | 1.0 |
| MB3/3/ 19- 19+ 19- | -23.7 | 159.6 | 0.2 | 1.0 |
| MB4/2/ 8+ | +13.1 | 241 | 1.1 | 0.6 |
| MB4/2/ 8- | -13.1 | 241 | 1.1 | 0.6 |
| MB4/4/ 8+ 8+ | +13.1 | 241 | 1.1 | 0.6 |
| MB4/4/ 8- 8- | -13.1 | 241 | 1.1 | 0.6 |
| MB4/2/ 18+ | +31.8 | 103.9 | 0.095 | 3.5 |
| MB4/2/ 18- | -31.8 | 103.9 | 0.095 | 3.5 |
| MB4/4/ 18+ 18+ | +31.8 | 103.9 | 0.095 | 3.5 |
| MB4/4/ 18- 18- | -31.8 | 103.9 | 0.095 | 3.5 |
| Two Channel With Ground Return | | | | |
| MB3/2/ 0+ 0+ | +18 | 379 | 0.4 | 0.3 |
| MB3/2/ 0- 0- | -18 | 379 | 0.4 | 0.3 |
| MB3/2/ 1ac 1ac | ± 2.6 | 326 | 10,000 | 0.3 |
| MB3/2/ 2+ 2+ | +11.9 | 482 | 1.4 | 0.1 |
| MB3/2/ 2- 2- | -11.9 | 482 | 1.4 | 0.1 |
| MB3/2/ 3+ 3+ | +11 | 244 | 2 | 0.6 |
| MB3/2/ 3- 3- | -11 | 244 | 2 | 0.6 |
| MB3/2/ 10ac 10ac | ± 9.3 | 856 | 3.6 | 0.05 |
| MB4/2/ 7ac | ± 2.6 | 326 | 10,000 | 0.3 |
| MB4/2/ 11ac | +9.3 | 856 | 3.6 | 0.05 |
| MB4/2/ 8+ | +13.1 | 482 | 1.1 | 0.1 |
| MB4/2/ 8- | -13.1 | 482 | 1.1 | 0.1 |
| Two Channel Without Ground Return | | | | |
| MB3/2/ 17ac 17ac | ± 24.4 | 16.6 | 0.16 | 120 |
| MB3/2/ 19+ 2+ | +24.9 | 125.8 | 0.16 | 2.1 |
| MB3/2/ 14+ 12+ | +31.8 | 103.9 | 0.095 | 3.5 |
| MB3/2/ 14- 12- | -31.8 | 103.9 | 0.095 | 3.5 |
| MB3/2/ 12+ 12+ | +31.8 | 0 | 0.095 | 1 H |
| MB3/2/ 12- 12- | -31.8 | 0 | 0.095 | 1 H |
| MB4/2/ 13+ | +33 | 0 | 0.085 | 1 H |
| MB4/2/ 13- | -33 | 0 | 0.085 | 1 H |
| Three Channel Without Ground Return | | | | |
| MB3/3/ 1ac 1ac 1ac | ± 2.6 | 489 | 10,000 | 1.2 |
| MB3/3/ 10ac 10ac 10ac | ± 9.3 | 1280 | 3.6 | 0.028 |
| MB3/3/ 14+ 12+ 12+ | +31.8 | 103.9 | 0.095 | 3.5 |
| MB3/3/ 14- 12- 12- | -31.8 | 103.9 | 0.095 | 3.5 |
| MB3/3/ 12+ 12+ 12+ | +31.8 | 0 | 0.095 | 1 H |
| MB3/3/ 12- 12- 12- | -31.8 | 0 | 0.095 | 1 H |
| Four Channel With Ground Return | | | | |
| MB4/4/ 7ac 7ac | ± 2.6 | 326 | 10,000 | 0.3 |
| MB4/4/ 8ac 8ac | ± 24.4 | 482 | 1.3 | 1.1 |
| MB4/4/ 11ac 11ac | ± 9.3 | 856 | 3.6 | 0.05 |
| MB4/4/ 8+ 8+ | +13.1 | 482 | 1.1 | 0.1 |
| MB4/4/ 8- 8- | -13.1 | 482 | 1.1 | 0.1 |
| Four Channel Without Ground Return | | | | |
| MB4/4/ 7ac 7ac | ± 2.6 | 652 | 10,000 | 0.15 |
| MB4/4/ 11ac 11ac | ± 9.3 | 1712 | 3.6 | 0.01 |
| MB4/4/ 13+ 13+ | +33 | 0 | 0.085 | 1 H |
| MB4/4/ 13- 13- | -33 | 0 | 0.085 | 1 H |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series MB-400/IS. Galvanically Isolated Barrier.

AIS / I,II,III / 1 / ABCDEFG — S-3104 / 3; Entity

Entity Parameters:

| Series | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|--------------|-----------------|------------------|----------------------|---------------|
| MB-410/DC/IS | 10.6 | 46.0 | 2.0 | 16.0 |
| MB-412/DC/IS | 10.6 | 46.0 | 2.0 | 16.0 |
| MB-420/DC/IS | 10.6 | 46.0 | 2.0 | 16.0 |
| MB-422/DC/IS | 10.6 | 46.0 | 2.0 | 16.0 |
| MB-431/DC/IS | 10.6 | 46.0 | 2.0 | 16.0 |
| MB-432/DC/IS | 10.6 | 46.0 | 2.0 | 16.0 |
| MB-441/DC/IS | 10.6 | 46.0 | 2.0 | 16.0 |
| MB-442/DC/IS | 10.6 | 46.0 | 2.0 | 16.0 |
| MB-481/IS-O | 25.6 | 123 | 0.15 | 2.3 |
| MB-482/IS-O | 25.6 | 123 | 0.15 | 2.3 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Galvanically Isolated Barriers.

AIS / I,II,III / 1 / ABCDEFG — SD-CD-004-A0 / 9-29-98; Entity

Entity Parameters:

| Model No. | Terminals | Capacitance Inductance | | | |
|---|-----------|------------------------|------------------|----------------------|---------------|
| | | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
| 2025, 2025SK, 2026, 2026SK, 2031, 2032, 2033, 2034, 2037, 2038 | 1-4, 2-5 | 26.25 | 93.0 | 0.15 | 4.2 |

| Model No. | Terminals | Capacitance Inductance | | | |
|-------------------|---------------------------------|------------------------|------------------|----------------------|---------------|
| | | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
| 2061, 2062 | 1-4, 7-8, 1-8, 2-3, 5-6, 2-6 | 13.1 | 22.0 | 1.17 | 70.0 |

| Model No. | Terminals | Capacitance Inductance | | | |
|-------------------|---|------------------------|------------------|----------------------|---------------|
| | | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
| 2071, 2072 | 7-1-4-8, 7-1-4, 3-2-5-6, 3-2-5 1-4-8, 2-5-6 | 13.1 | 22.0 | 1.17 | 70.0 |

| Model No. | Terminals | Capacitance Inductance | | | |
|-------------------------------|-----------------------|------------------------|------------------|----------------------|---------------|
| | | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
| 2822, 2824, 2842, 2844 | 1-4, 2-5, 3-6, 7-8 | 13.1 | 22.0 | 1.17 | 70.0 |

Special Conditions of Use:

1. The HiD 2000 Modules must be mounted in FM Approvals evaluated HiD 2100 Series Termination Boards: HiD2108/HAT/, HiD2108/HAKE/, HiD2116/HAT/, HiD2116/HAKE/, HiD2112/HAT/ or HiD2112/HAKE/.
2. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series HiD 2000. Galvanically Isolated Barriers.

AIS / I,II,III / 1 / ABCDEFG — SD-CD-004-A1 / A1; Entity

Entity Parameters:

| Model No. | Terminals | Capacitance Inductance | | | |
|-----------------------------------|----------------------|------------------------|------------------|----------------------|---------------|
| | | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
| 2029, 2029SK, 2030, 2030SK | 1-4, 2-5 4-7, 5-6 | 26.25 1.2 | 93.0 50.0 | 0.15 1000.0 | 4.2 14.0 |

Special Conditions of Use:

1. The HiD 2000 Modules must be mounted in FM Approvals evaluated HiD 2100 Series Termination Boards: HiD2108/HAT/, HiD2108/HAKE/, HiD2116/HAT/, HiD2116/HAKE/, HiD2112/HAT/ or HiD2112/HAKE/.
2. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series HiD 2000. Galvanically Isolated Barriers.

AIS / I,II,III / 1 / ABCDEFG — SD-CD-004-A0 / 9-29-98; Entity
Entity Parameters:

| Model No. | Terminals | Capacitance Inductance | | | |
|-------------------------------|-----------|------------------------|---------------|----------------------|---------------|
| | | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
| 2035, 2036, 2877, 2878 | 1-4, 2-5 | 26.25 | 93.0 | 0.15 | 4.2 |

| Model No. | Terminals | Capacitance Inductance | | | |
|-------------------|-----------|------------------------|---------------|----------------------|---------------|
| | | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
| 2873, 2874 | 1-4, 2-5 | 26.25 | 110.0 | 0.15 | 3.0 |

Special Conditions of Use:

1. The HiD 2000 Modules must be mounted in FM Approvals evaluated HiD 2100 Series Termination Boards: HiD2108/HAT/, HiD2108/HAKE/, HiD2116/HAT/, HiD2116/HAKE/, HiD2112/HAT/ or HiD2112/HAKE/.
2. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series HiD 2000. Galvanically Isolated Barriers.

AIS / I,II,III / 1 / ABCDEFG — SD-CD-004-A1 / 9-29-98; Entity
Entity Parameters:

| Model No. | Terminals | Capacitance Inductance | | | |
|-------------------|--------------|------------------------|---------------|----------------------|---------------|
| | | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
| 2875, 2876 | 7-1-4, 6-2-5 | 26.25 | 93.0 | 0.15 | 4.2 |

| Model No. | Terminals | Capacitance Inductance | | | |
|-------------------|--------------|------------------------|---------------|----------------------|---------------|
| | | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
| 2871, 2872 | 7-1-4, 6-2-5 | 26.25 | 110.0 | 0.15 | 3.0 |

Special Conditions of Use:

1. The HiD 2000 Modules must be mounted in FM Approvals evaluated HiD 2100 Series Termination Boards: HiD2108/HAT/, HiD2108/HAKE/, HiD2116/HAT/, HiD2116/HAKE/, HiD2112/HAT/ or HiD2112/HAKE/.
2. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series HiD 2000. Galvanically Isolated Barriers.

AIS / I,II,III / 1 / CDEFG — SD-CD-004-A0 / 9-29-98; Entity
Entity Parameters:

| Model No. | Terminals | Capacitance Inductance | | | |
|-------------|-----------|------------------------|------------------|----------------------|---------------|
| | | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
| 2881 | 1-4 | 26.25 | 184.0 | 0.46 | 4.6 |

Special Conditions of Use:

1. The HiD 2000 Modules must be mounted in FM Approvals evaluated HiD 2100 Series Termination Boards: HiD2108/HAT/, HiD2108/HAKE/, HiD2116/HAT/, HiD2116/HAKE/, HiD2112/HAT/ or HiD2112/HAKE/.
2. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series MB. Shunt Diode Barrier Assembly.

AIS / I,II,III / 1 / CDEFG — S-2371 / 1; Entity

Single Channel With Ground Return

Entity Parameters:

| Series | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-----------------|-----------------|------------------|----------------------|---------------|
| MB4/2/ 9ac | ±33.8 | 110.5 | 0.225 | 12 |
| MB4/4/ 9ac 9ac | ±33.8 | 110.5 | 0.225 | 12 |
| MB3/1/ 4+ | +33.2 | 108.5 | 0.24 | 13 |
| MB3/1/ 4- | -33.2 | 108.5 | 0.24 | 13 |
| MB3/2/ 4+ 4+ | +33.2 | 108.5 | 0.24 | 13 |
| MB3/2/ 4- 4- | -33.2 | 108.5 | 0.24 | 13 |
| MB3/3/ 4+ 4+ 4+ | +33.2 | 108.5 | 0.24 | 13 |
| MB3/3/ 4- 4- 4- | -33.2 | 108.5 | 0.24 | 13 |
| MB4/2/ 9+ | +33.2 | 108.5 | 0.22 | 13 |
| MB4/2/ 9- | -33.2 | 108.5 | 0.22 | 13 |

| Series | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-------------------------------------|-----------------|------------------|----------------------|---------------|
| MB4/4/ 9+ 9+ | +33.2 | 108.5 | 0.22 | 13 |
| MB4/4/ 9- 9- | -33.2 | 108.5 | 0.22 | 13 |
| MB4/2/ 20+ | +24.9 | 159.6 | 0.51 | 5.8 |
| Single Channel With Ground Return | | | | |
| MB4/2/ 20- | -24.9 | 159.6 | 0.51 | 5.8 |
| MB4/4/ 18+ | +33 | 103.9 | 0.25 | 14 |
| MB4/4/ 18- | -33 | 103.9 | 0.25 | 14 |
| MB4/4/ 20+ 20+ | +24.9 | 159.6 | 0.51 | 5.8 |
| MB4/4/ 20- 20- | -24.9 | 159.6 | 0.51 | 5.8 |
| MB4/2/ 21+ | +28.7 | 161.1 | 0.36 | 5.8 |
| MB4/4/ 21+ 21+ | +28.7 | 161.1 | 0.36 | 5.8 |
| MB4/4/ 21+ 6+ | | | | |
| Terminals 7-11 | +28.7 | 161.1 | 0.36 | 5.8 |
| MB4/4/ 21+ 16+ | | | | |
| Terminals 7-11 | +28.7 | 161.1 | 0.36 | 5.8 |
| Two Channel With Ground Return | | | | |
| MB3/2/ 0+ 0+ | +19.2 | 379 | 1.02 | 1.1 |
| MB3/2/ 0- 0- | -19.2 | 379 | 1.02 | 1.1 |
| MB3/2/ 3ac 3ac | ± 22.6 | 252 | 0.6 | 2.4 |
| MB3/2/ 14+ 14+ | +31.8 | 207.8 | 0.28 | 3.6 |
| MB3/2/ 14- 14- | -31.8 | 207.8 | 0.28 | 3.6 |
| MB3/2/ 19+ 19+ | +23.7 | 319.2 | 0.6 | 1.6 |
| MB3/2/ 19- 19- | -23.7 | 319.2 | 0.6 | 1.6 |
| MB4/2/ 20+ | +24.9 | 319.2 | 0.51 | 1.6 |
| MB4/2/ 20- | -24.9 | 319.2 | 0.51 | 1.6 |
| MB4/4/ 20+ 20+ | +24.9 | 319.2 | 0.51 | 1.6 |
| MB4/4/ 20- 20- | -24.9 | 319.2 | 0.51 | 1.6 |
| Two Channel Without Ground Return | | | | |
| MB3/2/ 3ac 3ac | ± 22.6 | 252 | 0.6 | 2.4 |
| MB3/2/ 4+ 2+ | +34.4 | 96.8 | 0.22 | 16 |
| MB3/2/ 14+ 2+ | +33 | 92.8 | 0.24 | 17 |
| MB4/2/ 5+ | +34.4 | 96.8 | 0.22 | 16 |
| MB4/2/ 5- | -34.4 | 96.8 | 0.22 | 16 |
| MB4/4/ 5+ 5+ | +34.4 | 96.8 | 0.22 | 16 |
| MB4/4/ 5- 5+ | 34.4 | 96.8 | 0.22 | 16 |
| MB4/2/ 5R+ | +34.4 | 96.8 | 0.22 | 16 |
| MB4/2/ 5R- | -34.4 | 96.8 | 0.22 | 16 |
| MB4/4/ 5R+ 5R+ | +34.4 | 96.8 | 0.22 | 16 |
| MB4/4/ 5R- 5R+ | -34.4 | 96.8 | 0.22 | 16 |
| MB4/2/ 15- | -33 | 91.3 | 0.24 | 18 |
| MB4/2/ 15+ | +33 | 91.3 | 0.24 | 18 |
| MB4/4/ 15- 15- | -33 | 91.3 | 0.24 | 18 |
| MB4/4/ 15+ 15+ | +33 | 91.3 | 0.24 | 18 |
| MB4/2/ 15R+ 15+ | +33 | 91.3 | 0.24 | 18 |
| Single Channel With Ground Return | | | | |
| MB4/2/ 15R- | -33 | 91.3 | 0.24 | 18 |
| MB4/4/ 15R+ 15R+ | +33 | 91.3 | 0.24 | 18 |
| MB4/4/ 15R- 15R- | -33 | 91.3 | 0.24 | 18 |
| MB4/4/ 5+ 6+ | +34.4 | 96.8 | 0.22 | 16 |
| MB4/4/ 5R+ 6+ | +34.4 | 96.8 | 0.22 | 16 |
| MB4/4/ 15+ 16+ | +33 | 91.3 | 0.24 | 18 |
| MB4/4/ 15R+ 16+ | +33 | 91.3 | 0.24 | 18 |
| MB3/2/ 4+ 12+ | +33.2 | 108.5 | 0.24 | 13 |
| MB3/2/ 4- 12- | -33.2 | 108.5 | 0.24 | 13 |
| MB4/4/ 6+ 6+ | +34.4 | 108.5 | 0.22 | 13 |
| MB4/4/ 6- 6- | -34.4 | 108.5 | 0.22 | 13 |
| MB4/4/ 16+ 16+ | +33 | 103.9 | 0.25 | 14 |
| MB4/4/ 16- 16- | -33 | 103.9 | 0.25 | 14 |
| MB4/4/ 21+ 6+ | | | | |
| Terminals 9-10 | +34.4 | 108.5 | 0.22 | 13 |
| MB4/4/ 21+ 16+ | | | | |
| Terminals 9-10 | +33 | 103.9 | 0.25 | 14 |
| Three Channel Without Ground Return | | | | |
| MB3/3/ 3ac 3ac 3ac | ± 22.6 | 378 | 0.6 | 1.0 |
| MB3/3/ 4+ 12+ 12+ | +33.2 | 108.5 | 0.24 | 13 |
| MB3/3/ 4- 12- 12- | -33.2 | 108.5 | 0.24 | 13 |

| Series | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|------------------------------------|-----------------|------------------|----------------------|---------------|
| Four Channel Without Ground Return | | | | |
| MB4/4/ 6+ 13+ | +33.2 | 108.5 | 0.24 | 13 |
| MB4/4/ 6- 13- | -33.2 | 108.5 | 0.24 | 13 |
| MB4/4/ 16+ 13+ | +33 | 103.9 | 0.25 | 14 |
| MB4/4/ 16- 13- | -33 | 103.9 | 0.25 | 14 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series MB. Shunt Diode Barrier Assembly.

AIS / I,II,III / 1 / DEFG — S-2371 / 1; Entity

Entity Parameters:

| Series | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-----------------------------------|-----------------|------------------|----------------------|---------------|
| Two Channel With Ground Return | | | | |
| MB4/2/ 8ac | ± 24.4 | 494 | 1.3 | 1.1 |
| MB4/4/ 8ac 8ac | ± 24.4 | 494 | 1.3 | 1.1 |
| MB3/2/ 2ac 2ac | ± 24.4 | 494 | 1.3 | 11 |
| MB3/2/ 4+ 4+ | +33.2 | 217 | 0.64 | 6 |
| MB3/2/ 4- 4- | -33.2 | 217 | 0.64 | 6 |
| MB4/2/ 9+ | +34.4 | 217 | 0.6 | 6 |
| MB4/2/ 9- | -34.4 | 217 | 0.6 | 6 |
| MB4/2/ 18+ | +33 | 207.8 | 0.68 | 6.8 |
| MB4/2/ 18- | -33 | 207.8 | 0.68 | 6.8 |
| MB4/4/ 18+ 18+ | +33 | 207.8 | 0.68 | 6.8 |
| MB4/4/ 18- 18- | -33 | 207.8 | 0.68 | 6.8 |
| MB4/4/ 9+ 9+ | +34.4 | 217 | 0.6 | 6 |
| MB4/4/ 9- 9- | -34.4 | 217 | 0.6 | 6 |
| Two Channel Without Ground Return | | | | |
| MB3/2/ 2ac 2ac | ± 24.4 | 494 | 1.3 | 1.1 |
| MB4/2/ 8ac | ± 24.4 | 494 | 1.3 | 1.1 |
| MB4/4/ 8ac 8ac | ± 24.4 | 494 | 1.3 | 1.1 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 5000. Intrinsically Safe Barrier System.

AIS / I,II,III / 1 / ABCDEFG — S-2541 / 0; Entity

Entity Parameters:

| Series | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-------------------|-----------------|------------------|----------------------|---------------|
| CS-I-5022/IS | 21 | 111 | 0.27 | 3.0 |
| CS-I-5022/IS-O | 21 | 111 | 0.27 | 3.0 |
| CS-I-5032/IS | 21 | 113 | 0.27 | 2.8 |
| CS-I-5042/IS | | | | |
| Terminals 1-2-3 | 21 | 111 | 0.27 | 3.0 |
| Terminals 10-11 | 21 | 113 | 0.27 | 2.8 |
| CS-I-5006/IS | 7.0 | 7.4 | 12 | 600 |
| CS-I-5606/IS | 7.0 | 7.4 | 12 | 600 |
| CS-I-5706/IS | 7.0 | 7.4 | 12 | 600 |
| CS-I-5900/IS | 21 | 107 | 0.27 | 3.1 |
| CS-I-5900/IS-O | | | | |
| Terminals 1-2-5-6 | 21 | 107 | 0.27 | 3.1 |
| Terminals 11-12 | 21 | 113 | 0.27 | 2.8 |
| CS-I-5910/IS | 21 | 165 | 0.27 | 0.9 |
| CS-I-5910/IS-O | | | | |
| Terminals 1-2-5-6 | 21 | 165 | 0.27 | 0.9 |
| Terminals 11-12 | 21 | 113 | 0.27 | 2.8 |
| SW-I-5816/IS | 8.6 | 56 | 5.0 | 11 |
| SW-I-5826/IS | 8.6 | 56 | 5.0 | 11 |
| SW-I-5836/IS | 8.6 | 56 | 5.0 | 11 |
| SW-I-5846/IS | 8.6 | 56 | 5.0 | 11 |
| SW-I-5896/IS | 14.4 | 42 | 0.8 | 20 |
| SW-I-5856/IS-O | 0 | 0 | 10,000 | 1 H |
| SW-I-5866/IS-O | 0 | 0 | 10,000 | 1 H |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 5000. Intrinsically Safe Barrier System.

AIS / I,II,III / 1 / ABCDEFG — S-2184 / 1; Entity

| Series | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-----------------|-----------------|------------------|----------------------|---------------|
| SW-I-5876A/IS-O | 28.4 | 92.8 | 0.11 | 4.0 |
| SW-I-5886A/IS-O | 28.4 | 92.8 | 0.11 | 4.0 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 7000. Intrinsically Safe Barrier System.

AIS / I,II,III / 1 / ABCDEFG — S-2566 / 0; Entity

Entity Parameters:

| Model | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-----------------|-----------------|------------------|----------------------|---------------|
| CS-I-7000/IS | 6.5 | 21.5 | 20 | 74 |
| CS-I-7011/IS | 15.8 | 166 | 0.6 | 0.8 |
| CS-I-7012/IS | 15.8 | 166 | 0.6 | 0.8 |
| CS-I-7040/IS | | | | |
| Terminals 1-2 | 21 | 145 | 0.27 | 1.5 |
| Terminals 1-2-3 | 21 | 150 | 0.27 | 1.4 |
| CS-I-7022/IS | 21 | 170 | 0.27 | 0.76 |
| CS-I-7030/IS | 15.8 | 144 | 0.6 | 1.5 |
| CS-I-7032/IS | 15.8 | 166 | 0.6 | 0.8 |
| CS-I-7042/IS | | | | |
| Terminals 1-2 | 21 | 170 | 0.2 | 0.76 |
| Terminals 4-5 | 15.8 | 166 | 0.6 | 0.8 |
| CS-I-7600/IS | 7.7 | 7.4 | 8.0 | 600 |
| CS-I-7700/IS | 6.5 | 21.5 | 20 | 74 |
| SA-7600/IS | 7.7 | 7.4 | 8.0 | 600 |
| CSA-I-7000/IS | 6.5 | 21.5 | 20 | 74 |
| CSA-I-7600/IS | 7.7 | 7.4 | 8.0 | 600 |
| CSA-I-7700/IS | 6.5 | 21.5 | 20 | 74 |
| SA-7000/IS | 6.5 | 21.5 | 20 | 74 |
| SA-7700/IS | 6.5 | 21.5 | 20 | 74 |
| SW-I-781a/IS | 10.5 | 9.1 | 2.2 | 400 |
| SW-I-782a/IS | 10.5 | 9.1 | 2.2 | 400 |
| SW-I-783a/IS | 10.5 | 9.1 | 2.2 | 400 |
| SW-I-784a/IS | 10.5 | 9.1 | 2.2 | 400 |
| SW-I-785a/IS-O | 0 | 0 | 10,000 | 1 H |
| SW-I-786a/IS-O | 0 | 0 | 10,000 | 1 H |
| SW-I-787a/IS-O | 28.4 | 92.8 | 0.11 | 4.0 |
| SW-I-788a/IS-O | 28.4 | 92.8 | 0.11 | 4.0 |
| SW-I-789a/IS | 14.4 | 13.3 | 0.8 | 180 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series MB. Shunt Diode Barrier Assembly.

AIS / I,II,III / 1 / ABCDEFG — S-2371 / 1; Entity

Entity Parameters:

| Series | Each Channel to Ground | | V_t (V) | C_a (μF) | *La_1 (mH) | $^{**}La_2$ (mH) |
|-------------------------------------|---------------------------|------------------|--------------|----------------------|------------------|---------------------|
| | V_{oc} (V) | I_{sc} (mA) | | | | |
| Thermocouple Applications | | | | | | |
| MB3/2/22ac 22ac | 4.7 | 95.0 | 9.4 | 3.6 | — | 1.1 |
| MB3/2/35ac 35ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.16 |
| MB4/4/23ac 23ac | 4.7 | 95.0 | 9.4 | 3.6 | — | 1.1 |
| MB4/2/23ac | 4.7 | 95.0 | 9.4 | 3.6 | — | 1.1 |
| MB4/2/36ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.16 |
| MB4/4/36ac 36ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.16 |
| Ungrounded RTD Applications | | | | | | |
| MB4/4/23ac 23ac | 4.7 | 95.0 | 9.4 | 3.6 | — | 0.3 |
| MB4/4/36ac 36ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.026 |
| MB3/2/36ac 38ac | | | 16.8 | 0.5 | — | 0.16 |
| Terminal 7-8 | 8.4 | 257 | | | | |
| Terminal 9-10 | 8.4 | 5.7 | | | | |
| Grounded Potentiometer Applications | | | | | | |
| MB3/2/31ac 31ac | 14.0 | 94.3 | 28.0 | 0.12 | — | 1.1 |
| MB3/2/35ac 35ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.16 |
| MB4/2/32ac | 14.0 | 94.3 | 28.0 | 0.12 | — | 1.1 |

| Series | Each Channel to Ground | | V_t (V) | C_a (μF) | *La_1 (mH) | $^{**}La_2$ (mH) |
|--|---------------------------|------------------|--------------|----------------------|------------------|---------------------|
| | V_{oc} (V) | I_{sc} (mA) | | | | |
| MB4/2/36ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.16 |
| MB4/4/32ac 32ac | 14. | 94.3 | 28.0 | 0.12 | — | 1.1 |
| MB4/4/36ac 36ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.16 |
| Ungrounded Potentiometer Applications | | | | | | |
| MB3/3/31ac 31ac 31ac | 14.0 | 94.3 | 28.0 | 0.12 | — | 0.5 |
| MB3/3/35ac 35ac 35ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.067 |
| AC Sensors And Photocells Applications | | | | | | |
| MB3/2/24ac 24ac | 21.4 | 14.5 | 42.8 | 0.05 | — | 40.0 |
| MB3/2/31ac 31ac | 14.0 | 94.3 | 28.0 | 0.12 | — | 1.1 |
| MB3/2/33ac 33ac | 14.0 | 9.5 | 28.0 | 0.12 | — | 90.0 |
| MB3/2/35ac 35ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.16 |
| MB3/2/37ac 37ac | 8.4 | 5.7 | 16.8 | 0.5 | — | 250 |
| MB4/2/25ac | 21.4 | 14.5 | 42.8 | 0.05 | — | 40.0 |
| MB4/2/32ac | 14.0 | 94.3 | 28.0 | 0.12 | — | 1.1 |
| MB4/2/34ac | 14.0 | 9.5 | 28.0 | 0.12 | — | 90.0 |
| MB4/2/36ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.16 |
| MB4/2/38ac | 8.4 | 5.7 | 16.8 | 0.5 | — | 250 |
| MB4/4/25ac 25ac | 21.4 | 14.5 | 42.8 | 0.05 | — | 40.0 |
| MB4/4/32ac 32ac | 14.0 | 94.3 | 28.0 | 0.12 | — | 1.1 |
| MB4/4/34ac 34ac | 14.0 | 9.5 | 28.0 | 0.12 | — | 90.0 |
| MB4/4/36ac 36ac | 8.4 | 257 | 16.8 | 0.5 | — | 0.16 |
| MB4/4/38ac 38ac | 8.4 | 5.7 | 16.8 | 0.5 | — | 250 |
| Ungrounded I/P; LED; Solenoid Valves and Switches Applications | | | | | | |
| MB4/2/29+ | | | 17.1 | 0.5 | 1.5 | 1.5 |
| Terminal 7 | +15.9 | 167.4 | | | | |
| Terminal 8 | +15.9 | 0 | | | | |
| MB4/2/29- | | | 17.1 | 0.5 | 1.5 | 1.5 |
| Terminal 7 | -15.9 | 167.4 | | | | |
| Terminal 8 | -15.9 | 0 | | | | |
| MB4/2/30+ | | | 20.3 | 0.3 | 9.0 | 9.0 |
| Terminal 7 | +19.1 | 62.4 | | | | |
| Terminal 8 | +19.1 | 0 | | | | |
| MB4/2/30- | | | 20.3 | 0.3 | 9.0 | 9.0 |
| Terminal 7 | -19.1 | 62.4 | | | | |
| Terminal 8 | -19.1 | 0 | | | | |
| MB4/4/29+ 29+ | | | 17.1 | 0.5 | 1.5 | 1.5 |
| Terminal 7 | +15.9 | 167.4 | | | | |
| Terminal 8 | +15.9 | 0 | | | | |
| MB4/4/29- 29- | | | 17.1 | 0.5 | 1.5 | 1.5 |
| Terminal 7 | -15.9 | 167.4 | | | | |
| Terminal 8 | -15.9 | 0 | | | | |
| MB4/4/30+ 30+ | | | 20.3 | 0.3 | 9.0 | 9.0 |
| Terminal 7 | +19.1 | 62.4 | | | | |
| Terminal 8 | +19.1 | 0 | | | | |
| MB4/4/30- 30- | | | 20.3 | 0.3 | 9.0 | 9.0 |
| Terminal 7 | -19.1 | 62.4 | | | | |
| Terminal 8 | -19.1 | 0 | | | | |
| 2 Wire Transmitter and I/P Applications | | | | | | |
| MB4/4/21+ 29+ | | | | | | |
| Terminal 7-11 | +25.5 | 143 | — | 0.17 | 1.6 | — |
| | | | 17.1 | 0.5 | 1.5 | 1.5 |
| Terminal 9 | +15.9 | 167 | | | | |
| Terminal 10 | +15.9 | 0 | | | | |
| MB4/4/21+ 30+ | | | | | | |
| Terminal 7-11 | +25.5 | 143 | — | 0.17 | 1.6 | — |
| | | | 20.3 | 0.3 | 9.0 | 9.0 |
| Terminal 9 | +20.3 | 62.4 | | | | |
| Terminal 10 | +20.3 | 0 | | | | |

| Series | Each Channel to Ground | | V_t (V) | C_a (μF) | *La_1 (mH) | $^{**}La_2$ (mH) |
|----------------|---------------------------|------------------|--------------|----------------------|------------------|---------------------|
| | V_{oc} (V) | I_{sc} (mA) | | | | |
| MB4/4/5+ 29+ | | | | | | |
| Terminal 7 | +29.7 | 97.0 | 30.9 | 0.1 | 0.9 | 0.43 |
| Terminal 8 | +10.6 | 214.6 | | | | |
| Terminal 9 | +15.9 | 167.4 | 17.1 | 0.5 | 1.5 | 1.5 |
| Terminal 10 | +15.9 | 0 | | | | |
| MB4/4/5R+ 29+ | | | | | | |
| Terminal 7 | +29.7 | 97.0 | 30.9 | 0.1 | 0.9 | 0.43 |
| Terminal 8 | +10.6 | 214.6 | | | | |
| Terminal 9 | +15.9 | 167.4 | 17.1 | 0.5 | 1.5 | 1.5 |
| Terminal 10 | +15.9 | 0 | | | | |
| MB4/4/15+ 29+ | | | | | | |
| Terminal 7 | +28.6 | 93.5 | 29.8 | 0.1 | 1.1 | 0.5 |
| Terminal 8 | +10.6 | 191.3 | | | | |
| Terminal 9 | +15.9 | 167.4 | 17.1 | 0.5 | 1.5 | 1.5 |
| Terminal 10 | +15.9 | 0 | | | | |
| MB4/4/15R+ 29+ | | | | | | |
| Terminal 7 | +28.6 | 93.5 | 29.8 | 0.1 | 1.1 | 0.5 |
| Terminal 8 | +10.6 | 191.3 | | | | |
| Terminal 9 | +15.9 | 167.4 | 17.1 | 0.5 | 1.5 | 1.5 |
| Terminal 10 | +15.9 | 0 | | | | |
| MB4/4/5+ 30+ | | | | | | |
| Terminal 7 | +29.7 | 97.0 | 30.9 | 0.1 | 0.9 | 0.43 |
| Terminal 8 | +10.6 | 214.6 | | | | |
| Terminal 9 | +19.1 | 62.4 | 20.3 | 0.3 | 9.0 | — |
| Terminal 10 | +19.1 | 0 | | | | |
| MB4/4/5R+ 30+ | | | | | | |
| Terminal 7 | +29.7 | 97.0 | 30.9 | 0.1 | 0.9 | 0.43 |
| Terminal 8 | +10.6 | 214.6 | | | | |
| Terminal 9 | +19.1 | 62.4 | 20.3 | 0.3 | 9.0 | 9.0 |
| Terminal 10 | +19.1 | 0 | | | | |
| MB4/4/15+ 30+ | | | | | | |
| Terminal 7 | +28.6 | 93.5 | 29.8 | 0.1 | 1.1 | 0.5 |
| Terminal 8 | +10.6 | 191.3 | | | | |
| Terminal 9 | +19.1 | 62.4 | 20.3 | 0.3 | 9.0 | 9.0 |
| Terminal 10 | +19.1 | 0 | | | | |
| MB4/4/15R+ 30+ | | | | | | |
| Terminal 7 | +28.6 | 93.5 | 29.8 | 0.1 | 1.1 | 0.5 |
| Terminal 8 | +10.6 | 191.3 | | | | |
| Terminal 9 | +19.1 | 62.4 | 20.3 | 0.3 | 9.0 | 9.0 |
| Terminal 10 | +19.1 | 0 | | | | |

| Series | Each Channel to Ground | | V_t (V) | C_a (μF) | *La_1 (mH) | $^{**}La_2$ (mH) |
|--|---------------------------|------------------|--------------|----------------------|------------------|---------------------|
| | V_{oc} (V) | I_{sc} (mA) | | | | |
| 6 V dc System Applications | | | | | | |
| MB3/1/17+ | +10.9 | 7.4 | — | 2.0 | 600 | — |
| MB3/1/17- | -10.9 | 7.4 | — | 2.0 | 600 | — |
| MB3/2/17+ 17+ | +10.9 | 7.4 | — | 2.0 | 600 | — |
| MB3/2/17- 17- | -10.9 | 7.4 | — | 2.0 | 600 | — |
| MB3/3/17+ 17+ 17+ | +10.9 | 7.4 | — | 2.0 | 600 | — |
| MB3/3/17- 17- 17- | -10.9 | 7.4 | — | 2.0 | 600 | — |
| 18 V dc System Applications | | | | | | |
| MB3/1/24+ | +21.3 | 14.5 | — | 0.25 | 150 | — |
| MB3/1/24- | -21.3 | 14.5 | — | 0.25 | 150 | — |
| MB3/2/24+ 24+ | +21.3 | 14.5 | — | 0.25 | 150 | — |
| MB3/2/24- 24- | -21.3 | 14.5 | — | 0.25 | 150 | — |
| MB3/3/24+ 24+ 24+ | +21.3 | 14.5 | — | 0.25 | 150 | — |
| MB3/3/24- 24- 24- | -21.3 | 14.5 | — | 0.25 | 150 | — |
| MB4/2/25+ | +21.3 | 14.5 | — | 0.25 | 150 | — |
| MB4/2/25- | -21.3 | 14.5 | — | 0.25 | 150 | — |
| MB4/4/25+ 25+ | +21.3 | 14.5 | — | 0.25 | 150 | — |
| MB4/4/25- 25- | -21.3 | 14.5 | — | 0.25 | 150 | — |
| 3 V ac System Applications | | | | | | |
| MB3/1/35ac | 8.4 | 257 | — | 6.0 | 0.6 | — |
| MB3/2/35ac 35ac | 8.4 | 257 | — | 6.0 | 0.6 | — |
| MB3/3/35ac 35ac 35ac | 8.4 | 257 | — | 6.0 | 0.6 | — |
| MB4/2/36ac | 8.4 | 257 | — | 6.0 | 0.6 | — |
| MB4/4/36ac 36ac | 8.4 | 257 | — | 6.0 | 0.6 | — |
| MB3/1/37ac | 8.4 | 5.7 | — | 6.0 | 1 H | — |
| MB3/2/37ac 37ac | 8.4 | 5.7 | — | 6.0 | 1 H | — |
| MB3/3/37ac 37ac 37ac | 8.4 | 5.7 | — | 6.0 | 1 H | — |
| MB4/2/38ac | 8.4 | 5.7 | — | 6.0 | 1 H | — |
| MB4/4/38ac 38ac | 8.4 | 5.7 | — | 6.0 | 1 H | — |
| 6 V ac System Applications | | | | | | |
| MB3/1/31ac | 14.0 | 94.3 | — | 0.9 | 4.0 | — |
| MB3/2/31ac 31ac | 14.0 | 94.3 | — | 0.9 | 4.0 | — |
| MB3/3/31ac 31ac 31ac | 14.0 | 94.3 | — | 0.9 | 4.0 | — |
| MB4/2/32ac | 14.0 | 94.3 | — | 0.9 | 4.0 | — |
| MB4/4/32ac 32ac | 14.0 | 94.3 | — | 0.9 | 4.0 | — |
| MB3/1/33ac | 14.0 | 9.5 | — | 0.9 | 350 | — |
| MB3/2/33ac 33ac | 14.0 | 9.5 | — | 0.9 | 350 | — |
| MB3/3/33ac 33ac 33ac | 14.0 | 9.5 | — | 0.9 | 350 | — |
| MB4/2/34ac | 14.0 | 9.5 | — | 0.9 | 350 | — |
| MB4/4/34ac 34ac | 14.0 | 9.5 | — | 0.9 | 350 | — |
| 12 V ac System Applications | | | | | | |
| MB3/1/24ac | 21.4 | 14.5 | — | 0.25 | 150 | — |
| MB3/2/24ac 24ac | 21.4 | 14.5 | — | 0.25 | 150 | — |
| MB3/3/24ac 24ac 24ac | 21.4 | 14.5 | — | 0.25 | 150 | — |
| MB4/2/25ac | 21.4 | 14.5 | — | 0.25 | 150 | — |
| MB4/4/25ac 25ac | 21.4 | 14.5 | — | 0.25 | 150 | — |
| Ungrounded 3 Wire Strain Gauge Bridge Applications | | | | | | |
| MB3/3/2ac 17ac 17ac | | | 21.8 | 0.23 | 0.68 | — |
| Terminal 7 | 10.9 | 220.6 | | | | |
| Terminal 8 | 10.9 | 7.4 | | | | |
| Terminal 9 | 10.9 | 7.4 | | | | |
| MB3/3/31ac 33ac 33ac | | | 28.0 | 0.12 | 3.0 | — |
| Terminal 7 | 14.0 | 94.3 | | | | |
| Terminal 8 | 14.0 | 9.5 | | | | |
| Terminal 9 | 14.0 | 9.5 | | | | |
| MB3/3/35ac 37ac 37ac | | | 16.8 | 0.5 | 0.52 | — |
| Terminal 7 | 8.4 | 257 | | | | |
| Terminal 8 | 8.4 | 5.7 | | | | |
| Terminal 9 | 8.4 | 5.7 | | | | |
| MB3/3/19ac 24ac 24ac | | | 42.8 | 0.048 | 0.9 | — |
| Terminal 7 | 21.4 | 144 | | | | |
| Terminal 8 | 21.4 | 14.5 | | | | |
| Terminal 9 | 21.4 | 14.5 | | | | |

| Series | Each Channel to Ground | | V_t (V) | C_a (μF) | *La_1 (mH) | $^{**}La_2$ (mH) |
|--|---------------------------|------------------|--------------|----------------------|------------------|---------------------|
| | V_{oc} (V) | I_{sc} (mA) | | | | |
| Ungrounded 4 Wire Strain Gauge Bridge Applications | | | | | | |
| MB4/4/32ac 34ac | | | 28.0 | 0.12 | 1.0 | — |
| Terminal 7 | 14.0 | 94.3 | | | | |
| Terminal 8 | 14.0 | 94.3 | | | | |
| Terminal 10 | 14.0 | 9.5 | | | | |
| Terminal 11 | 14.0 | 9.5 | | | | |
| MB4/4/36ac 38ac | | | 16.8 | 0.5 | 0.16 | — |
| Terminal 7 | 8.4 | 257 | | | | |
| Terminal 8 | 8.4 | 257 | | | | |
| Terminal 10 | 8.4 | 5.7 | | | | |
| Terminal 11 | 8.4 | 5.7 | | | | |
| Ungrounded 6 Wire Strain Gauge Bridge Applications | | | | | | |
| MB3/3/3ac 17ac 17ac, MB3/3/3ac 17ac 17ac | | | 21.8 | 0.23 | 0.68 | — |
| Terminal 7,7 | 9.9 | 110 | | | | |
| Terminal 8,8 | 10.9 | 7.4 | | | | |
| Terminal 9,9 | 10.9 | 7.4 | | | | |
| MB3/3/31ac 33ac 33ac, MB3/3/31ac 33ac 33ac | | | 28.0 | 0.12 | 0.8 | — |
| Terminal 7,7 | 14.0 | 94.3 | | | | |
| Terminal 8,8 | 14.0 | 9.5 | | | | |
| Terminal 9,9 | 14.0 | 9.5 | | | | |
| MB3/3/35ac 37ac 37ac, MB3/3/31ac 33ac 33ac | | | 16.8 | 0.5 | 0.15 | — |
| Terminal 7,7 | 8.4 | 257 | | | | |
| Terminal 8,8 | 8.4 | 5.7 | | | | |
| Terminal 9,9 | 8.4 | 5.7 | | | | |

*Max allowable inductance when connected to FM Approved apparatus only.

**Max allowable inductance when connected to simple apparatus.

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series MB. Shunt Diode Barrier Assembly.

AIS / I,II,III / 1 / CDEFG — S-2371/1; Entity

Entity Parameters:

| Series | Each Channel to Ground | | V_t (V) | C_a (μF) | *La_1 (mH) | $^{**}La_2$ (mH) |
|--|---------------------------|------------------|--------------|----------------------|------------------|---------------------|
| | V_{oc} (V) | I_{sc} (mA) | | | | |
| Grounded 2 Wire Transmitter Applications | | | | | | |
| MB3/1/26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/1/26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/2/26+ 26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/2/26- 26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/3/26+ 26+ 26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/3/26- 26- 26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/2/27+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/2/27- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/4/27+ 27+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/4/27- 27- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| Ungrounded 2 Wire Transmitter Applications | | | | | | |
| MB3/2/26+ 2+ | | | 30.1 | 0.3 | 3.0 | 0.8 |
| Terminal 7 | +28.9 | 195 | | | | |
| Terminal 8 | +10.7 | 216 | | | | |
| MB3/2/26- 2- | | | 30.1 | 0.3 | 3.0 | 0.8 |
| Terminal 7 | -28.9 | 195 | | | | |
| Terminal 8 | -10.7 | 216 | | | | |
| MB4/2/28+ | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | +28.9 | 195 | | | | |
| Terminal 8 | +10.6 | 191 | | | | |
| MB4/2/28- | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | -28.9 | 195 | | | | |
| Terminal 8 | -10.6 | 191 | | | | |

| Series | Each Channel to Ground | | V_t (V) | C_a (μF) | *La_1 (mH) | $^{**}La_2$ (mH) |
|--|---------------------------|------------------|--------------|----------------------|------------------|---------------------|
| | V_{oc} (V) | I_{sc} (mA) | | | | |
| MB4/2/28R+ | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | +28.9 | 195 | | | | |
| Terminal 8 | +10.6 | 191 | | | | |
| MB4/2/28R- | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | -28.9 | 195 | | | | |
| Terminal 8 | -10.6 | 191 | | | | |
| MB4/4/28+ 28+ | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | +28.9 | 195 | | | | |
| Terminal 8 | +10.6 | 191 | | | | |
| MB4/4/28- 28- | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | -28.9 | 195 | | | | |
| Terminal 8 | -10.6 | 191 | | | | |
| MB4/4/28R+ 28R+ | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | +28.9 | 195 | | | | |
| Terminal 8 | +10.6 | 191 | | | | |
| MB4/4/28R- 28R- | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | -28.9 | 195 | | | | |
| Terminal 8 | -10.6 | 191 | | | | |
| Grounded I/P; LED; Solenoid Valves and Switches Applications | | | | | | |
| MB3/1/26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/1/26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/2/26+ 26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/2/26- 26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/3/26+ 26+ 26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/3/26- 26- 26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/2/27+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/2/27- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/4/27+ 27+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/4/27- 27- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| Ungrounded I/P; LED; Solenoid Valves and Switches Applications | | | | | | |
| MB3/2/26+ 12+ | | | 30.1 | 0.3 | 4.0 | 4.0 |
| Terminal 7 | +28.9 | 195 | | | | |
| Terminal 8 | +28.9 | 0 | | | | |
| MB3/2/26- 12- | | | 30.1 | 0.3 | 4.0 | 4.0 |
| Terminal 7 | -28.9 | 195 | | | | |
| Terminal 8 | -28.9 | 0 | | | | |
| 2 Wire Transmitter & I/P Applications | | | | | | |
| MB4/4/28+ 29+ | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | +28.9 | 195 | | | | |
| Terminal 8 | +10.6 | 191 | | | | |
| Terminal 9 | +15.9 | 167.4 | 17.1 | 1.5 | 5.4 | 5.4 |
| Terminal 10 | +15.9 | 0 | | | | |
| MB4/4/28R+ 29+ | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | +28.9 | 195 | | | | |
| Terminal 8 | +10.6 | 191 | | | | |
| Terminal 9 | +15.9 | 167.4 | 17.1 | 1.5 | 5.4 | 5.4 |
| Terminal 10 | +15.9 | 0 | | | | |
| MB4/4/28+ 30+ | | | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 7 | +28.9 | 195 | | | | |
| Terminal 8 | +10.6 | 191 | | | | |
| Terminal 9 | +19.1 | 62.4 | 20.3 | 0.9 | 35.0 | 35.0 |
| Terminal 10 | +19.1 | 0 | | | | |

| Series | Each Channel to Ground | | V_t (V) | C_a (μF) | *La_1 (mH) | $^{**}La_2$ (mH) |
|---|---------------------------|------------------|--------------|----------------------|------------------|---------------------|
| | V_{oc} (V) | I_{sc} (mA) | | | | |
| MB4/4/28R+ 30+ | | | | | | |
| Terminal 7 | +28.9 | 195 | 30.1 | 0.3 | 4.0 | 0.96 |
| Terminal 8 | +10.6 | 191 | | | | |
| Terminal 9 | +19.1 | 62.4 | 20.3 | 0.9 | 35.0 | 35.0 |
| Terminal 10 | +19.1 | 0 | | | | |
| I.S. Apparatus With 2 Diode Return Channels | | | | | | |
| MB3/3/26+ 12+ 12+ | | | | | | |
| Terminal 7 | +28.9 | 195 | 30.1 | 0.3 | 4.0 | — |
| Terminal 8 | +28.9 | 0 | | | | |
| Terminal 9 | +28.9 | 0 | | | | |
| MB3/3/26- 12- 12- | | | | | | |
| Terminal 7 | -28.9 | 195 | 30.1 | 0.3 | 4.0 | — |
| Terminal 8 | -28.9 | 0 | | | | |
| Terminal 9 | -28.9 | 0 | | | | |
| MB4/4/27+ 13+ | | | | | | |
| Terminal 7 | +28.9 | 195 | 30.1 | 0.3 | 4.0 | — |
| Terminal 8 | +28.9 | 195 | | | | |
| Terminal 9 | +28.9 | 0 | | | | |
| Terminal 10 | +28.9 | 0 | | | | |
| MB4/4/27- 13- | | | | | | |
| Terminal 7 | -28.9 | 195 | 30.1 | 0.3 | 4.0 | — |
| Terminal 8 | -28.9 | 195 | | | | |
| Terminal 9 | -28.9 | 0 | | | | |
| Terminal 10 | -28.9 | 0 | | | | |
| I.S. Apparatus With 2 Separate Ground Return Applications | | | | | | |
| MB3/2/26+ 26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/2/26- 26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/2/27+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/2/27- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/4/27+ 27+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/4/27- 27- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| Ungrounded 4 Wire Strain Gauge Bridge Applications | | | | | | |
| MB4/4/8ac 38ac | | | | | | |
| Terminal 7 | 10.9 | 220.6 | 21.8 | 0.69 | 0.86 | — |
| Terminal 8 | 10.9 | 220.6 | | | | |
| Terminal 10 | 8.4 | 5.7 | | | | |
| Terminal 11 | 8.4 | 5.7 | | | | |
| Ungrounded 6 Wire Strain Gauge Bridge Applications | | | | | | |
| MB3/3/2ac 17ac 17ac, MB3/3/2ac 17ac 17ac | | | | | | |
| Terminal 7,7 | 10.9 | 220.6 | 21.8 | 0.69 | 0.78 | — |
| Terminal 8,8 | 10.9 | 7.4 | | | | |
| Terminal 9,9 | 10.9 | 7.4 | | | | |
| 24 V dc System Applications | | | | | | |
| MB3/1/26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/1/26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/2/26+ 26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/2/26- 26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/3/26+ 26+ 26+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB3/3/26- 26- 26- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/2/27+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/2/27- | -28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/4/27+ 27+ | +28.9 | 195 | — | 0.36 | 4.0 | — |
| MB4/4/27- 27- | -28.9 | 195 | — | 0.36 | 4.0 | — |

*Max allowable inductance when connected to FM Approved apparatus only.

**Max allowable inductance when connected to simple apparatus.

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series MB. Shunt Diode Barrier Assembly.

AIS / I,II,III / 1 / DFG — S-2371/1; Entity
 Entity Parameters:

| Series | Each Channel to Ground | | V_t (V) | C_a (μF) | $^*L_{a1}$ (mH) | $^{**}L_{a2}$ (mH) |
|--|---------------------------|------------------|--------------|----------------------|--------------------|-----------------------|
| | V_{oc} (V) | I_{sc} (mA) | | | | |
| Ungrounded 4 Wire Strain Gauge Bridge Application. | | | | | | |
| MB4/4/20ac 25ac | | | 42.8 | 0.384 | 3.0 | — |
| Terminal 7 | 21.4 | 144 | | | | |
| Terminal 8 | 21.4 | 144 | | | | |
| Terminal 10 | 21.4 | 14.5 | | | | |
| Terminal 11 | 21.4 | 14.5 | | | | |

*Max allowable inductance when connected to FM Approved apparatus only.

**Max allowable inductance when connected to simple apparatus.

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Smart Transmitter Intrinsically Safe Isolated Barrier.

AIS / I,II,III / 1 / ABCDEFG — IM. 015 / 3; Entity
 Entity Parameters:

| Model No. | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-----------------|-----------------|------------------|----------------------|---------------|
| CS-I-7021/IS-ST | 25.5 | 96.3 | 0.16 | 4.0 |
| CS-I-7022/IS-ST | 25.5 | 96.3 | 0.16 | 4.0 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

411, 412, 421, 422, 431, 432, 441, 442. Series uD 400 Galvanically Isolated Barriers.

AIS / I,II,III / 1 / ABCDEFG — SD-CD-001 / 4 — May 95; Entity

Entity Parameters:

Terminals 11, 12 and 14, 15: $V_{oc} = 11$ V, $I_{sc} = 22$ mA, $C_a = 2$ μF , $L_a = 70$ mH.

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

471, 472. Series uD 400 Galvanically Isolated Barriers.

AIS / I,II,III / 1 / ABCDEFG — SD-CD-001 / 4 — May 95; Entity

Entity Parameters:

Terminals 11, 12, 13 and 14, 15, 16: $V_t = 27$ V, $I_t = 110$ mA, $C_a = 0.14$ μF , $L_a = 3$ mH.

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series uD 300. Galvanically Isolated Barriers.

IS / I,II,III / 1 / ABCDEFG — SD-CD-002 / 6-19-96; Entity

Entity Parameters:

| Model No. | Type | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|------------|-----------------|-----------------|------------------|----------------------|---------------|
| 321 | Terminals 11-12 | 26 | 93 | 0.14 | 4.1 |
| | Terminals 12-13 | 11 | 2.0 | 2.1 | 2000 |
| 323 | Terminals 11-12 | 26 | 93 | 0.14 | 4.1 |
| | Terminals 12-13 | 11 | 2.0 | 2.1 | 2000 |
| 325 | Terminals 11-12 | 26 | 93 | 0.14 | 4.1 |
| | Terminals 14-15 | 26 | 93 | 0.14 | 4.1 |
| 326 | Terminals 11-12 | 26 | 93 | 0.14 | 4.1 |
| | Terminals 14-15 | 26 | 93 | 0.14 | 4.1 |
| 333 | Terminals 11-12 | 17.2 | 93 | 0.48 | 3.0 |
| | Terminals 14-15 | 17.2 | 93 | 0.48 | 3.0 |
| 334 | Terminals 11-12 | 17.2 | 93 | 0.48 | 3.0 |
| | Terminals 14-15 | 17.2 | 93 | 0.48 | 3.0 |
| 301 | Terminals 11-16 | 13.3 | 15 | 1.1 | 145 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 1000 Intrinsically Safe System.

AIS / I,II,III / 1 / ABCDEFG — S-2852 / 6; Entity; NI / I / 2 / ABCD / T6 Ta = 55°C

Entity Parameters:

| Model No. | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-----------|-----------------|------------------|----------------------|---------------|
| 1029 | 26.1 | 93.0 | 0.15 | 4.2 |
| 1030 | 26.1 | 93.0 | 0.15 | 4.2 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 1000 Intrinsically Safe System.

AIS / I,II,III / 1 / ABCDEFG — S-2852 / 4; Entity; NI / I / 2 / ABCD / T6 Ta = 55°C

Entity Parameters:

| Model No. | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|-----------|-----------------|------------------|----------------------|---------------|
| 1020 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1021 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1022 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1023 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1025 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1026 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1027 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1031 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1032 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1033 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1034 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1871 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1872 | 26.4 | 99.0 | 0.14 | 3.6 |
| 1861 | 0 | 0 | 10,000 | 1000 |
| 1862 | 0 | 0 | 10,000 | 1000 |
| 1891 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1893 | 13.1 | 26.0 | 1.1 | 47.0 |

Entity Parameters:

| Model No. | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|-----------|--------------|---------------|----------------------|---------------|
| 1011 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1012 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1061 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1062 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1071 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1072 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1310 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1311 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1360 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1361 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1370 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1371 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1821 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1822 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1841 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1842 | 13.1 | 26.0 | 1.1 | 47.0 |
| 1090 | 18.5 | 185 | 0.4 | 0.9 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 1000 Intrinsically Safe System.

AIS / I,II,III / 1 / CDEFG — S-2852 / 2; Entity; NI / I / 2 / ABCD / T6 Ta = 55°C

Entity Parameters:

| Type | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|------|-----------------|------------------|----------------------|---------------|
| 1881 | 26.4 | 198 | 0.42 | 3.8 |
| 1882 | 26.4 | 198 | 0.42 | 3.8 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 1000, Models 1037/1038 Galvanically Isolated Barriers.

AIS / I,II,III / 1 / ABCDEFG — S-2852 / 23 / A2; Entity; NI / I / 2 / ABCD / T6 Ta = 55°C
 Entity Parameters:

| Type | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|------|-----------------|------------------|----------------------|---------------|
| C-B | 26.4 | 99 | 0.14 | 3.6 |
| F-E | 26.4 | 99 | 0.14 | 3.6 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 1600 Intrinsically Safe System.

AIS / I,II,III / 1 / ABCDEFG — 3060 / 1; Entity; NI / I / 2 / ABCD / T6 Ta = 55°C
 Entity Parameters:

| Model No. | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---------------|--------------|---------------|----------------------|---------------|
| 1620-aD-b-c-d | 29.9 | 309 | 0.11 | 0.36 |
| 1621-aD-b-c-d | 29.6 | 333 | 0.11 | 0.31 |
| 1623-aD-b-d | 27.8 | 140 | 0.13 | 1.7 |
| 1630-aD-b-d | 29.9 | 94.0 | 0.12 | 4.1 |
| 1631-aD-b-d | 29.6 | 118 | 0.12 | 2.5 |
| 1640-aD-AS-d | 16.0 | 323.6 | 0.5 | 0.27 |
| 1660-aD-AS-d | 7.12 | 288.5 | 12.0 | 0.5 |
| 1670-aT-A-d | 9.3 | 1410 | 4.22 | 0.024 |
| 1690-1H-AS-d | 13.95 | 18.8 | 1.0 | 90 |
| 1690-1H-AS*-d | 27.8 | 413.4 | 0.13 | 0.14 |

*6 channels with common return.

a = Number of circuits 1, 2 or 3.

b = Polarity P, N or A.

c = Option blank or R.

d = Fuse option blank, NF or FF.

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 1600 Intrinsically Safe System.

AIS / I,II,III / 1 / CDEFG — 3060 / 1; Entity; NI / I / 2 / ABCD / T6 Ta = 55°C
 Entity Parameters:

| Model No. | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---------------|--------------|---------------|----------------------|---------------|
| 1622-aD-b-c-d | 29.6 | 407 | 0.33 | 0.9 |
| 1650-aS-b-d | 42.75 | 288 | 0.15 | 1.9 |

a = Number of circuits 1, 2 or 3 (for 1622); 1, 2, 3, 4, 5 or 6 (for 1650).

b = Polarity P or N (for 1622); P, N or A (for 1650).

c = Option blank or R.

d = Fuse option blank, NF or FF.

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Series 1600 Intrinsically Safe System.

AIS / I,II,III / 1 / ABCDEFG — 3060 / 1; Entity; NI / I / 2 / ABCD / T6 Ta = 55°C
 Entity Parameters:

| Model No. | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|--------------|-----------------|------------------|----------------------|---------------|
| 1640-aD-AS-c | 16.0 | 161.8 | 0.5 | 4.1 |
| 1650-aS-b-c | 21.3 | 144 | 0.25 | 1.6 |
| 1680-aS-b-c | 28.7 | 94.0 | 0.12 | 4.1 |

a = Number of circuits 1, 2 or 3 (for 1640); 1, 2, 3, 4, 5 or 6 (for 1650 and 1680).

b = Polarity P, N or A.

c = Fuse option blank, NF or FF.

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Z Series 600. Shunt Diode Barrier Assemblies.AIS / I,II,III / 1 / ABCDEFG — SD-CD-003 / F / A1; Entity
Entity Parameters:

| Model | Terminal | V_t (V) | I_t (mA) | V_{oc} (V) | I_{sc} (mA) | C_a (μF) | L_a (mH) |
|---------------------------------|-------------|--------------|---------------|-----------------|------------------|----------------------|---------------|
| μZ 620+ | 3-4 | 29.2 | 292 | | | 0.11 | 0.40 |
| μZ 620R+ | 3-4 | 29.2 | 292 | | | 0.11 | 0.40 |
| μZ 623- | 3-4 | 27.2 | 137 | | | 0.14 | 1.90 |
| μZ 630+ | 3-4 | 29.2 | 92 | | | 0.11 | 4.20 |
| μZ 631+ | 3-4 | 29.2 | 110 | | | 0.11 | 2.90 |
| μZ 650+ | 3-Gnd | | | 21.0 | 142 | 0.26 | 1.80 |
| | 4-Gnd | | | 21.0 | 142 | 0.26 | 1.80 |
| μZ 680+ | 3-Gnd | | | 28.0 | 92 | 0.13 | 4.20 |
| | 4-Gnd | | | 28.0 | 92 | 0.13 | 4.20 |
| μZ 680- | 3-Gnd | | | 28.0 | 92 | 0.13 | 4.20 |
| | 4-Gnd | | | 28.0 | 92 | 0.13 | 4.20 |
| μZ 681+ | 3-4 and Gnd | | | 28.0 | 92 | 0.13 | 4.20 |
| μZ 681- | 3-4 and Gnd | | | 28.0 | 92 | 0.13 | 4.20 |
| μZ 610ac | 3-Gnd | | | 13.0 | 9 | 1.10 | 400 |
| | 4-Gnd | | | 13.0 | 9 | 1.10 | 400 |
| | 3-4 | 13.0 | 18 | | | 1.10 | 100 |
| μZ 640ac | 3-Gnd | | | 15.5 | 157 | 0.60 | 1.20 |
| | 4-Gnd | | | 15.5 | 157 | 0.60 | 1.20 |
| | 3-4 | 15.5 | 314 | | | 0.60 | 0.28 |
| μZ 660ac | 3-Gnd | | | 9.0 | 122 | 4.10 | 2.30 |
| | 4-Gnd | | | 9.0 | 122 | 4.10 | 2.30 |
| | 3-4 | 9.0 | 244 | | | 4.10 | 0.60 |
| μZ 667ac | 3-Gnd | | | 18.0 | 147 | 0.40 | 1.40 |
| | 4-Gnd | | | 18.0 | 147 | 0.40 | 1.40 |
| | 3-4 | 18.0 | 294 | | | 0.40 | 0.23 |
| μZ 670ac | 3-Gnd | | | 4.7 | 435 | 1000 | 0.21 |
| | 4-Gnd | | | 4.7 | 435 | 1000 | 0.21 |
| | 3-4 | 9.4 | 870 | | | 4.00 | 0.05 |
| μZ 690ac | 3-Gnd | | | 13.0 | 176 | 1.10 | 1.00 |
| | 4-Gnd | | | 13.0 | 176 | 1.10 | 1.00 |
| | 3-4 | 13.0 | 352 | | | 1.10 | 0.25 |

Entity Parameters (combined barrier assemblies):

| Model | Terminal | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---------------------------------|--|--------------|---------------|----------------------|---------------|
| Barrier 1 and 2 | 3-4-3 | 26 | 27 | 0.16 | 46.0 |
| μZ 610ac | (Barrier 2 – terminal 4 not connected) | | | | |
| Barrier 1 and 2 | 3-4-3-4 | 26 | 36 | 0.16 | 26.0 |
| μZ 610ac | | | | | |
| Barrier 1 and 2 | 3-4-3 | 18 | 366 | 0.40 | 0.25 |
| μZ 660ac | (Barrier 2 – terminal 4 not connected) | | | | |
| Barrier 1 and 2 | 3-4-3-4 | 18 | 488 | 0.40 | 0.13 |
| μZ 660ac | | | | | |
| Barrier 1 and 2 | 3-4-3 | 9.4 | 1305 | 4.00 | 0.02 |
| μZ 670ac | (Barrier 2 – terminal 4 not connected) | | | | |
| Barrier 1 | 3-4-3 | 26 | 361 | 0.16 | 0.24 |
| μZ 690ac | (Barrier 2 – terminal 4 not connected) | | | | |
| Barrier 2 | | | | | |
| μZ 610ac | | | | | |
| Barrier 1 | 3-4-3-4 | 26 | 370 | 0.16 | 0.23 |
| μZ 690ac | | | | | |
| Barrier 2 | | | | | |
| μZ 610ac | | | | | |
| Barrier 1 | 3-4-3-4-3-4 | 26 | 388 | 0.16 | 0.21 |
| μZ 690ac | | | | | |
| Barrier 2 | | | | | |
| μZ 610ac | | | | | |
| Barrier 3 | | | | | |
| μZ 610ac | | | | | |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Z Series 600. Shunt Diode Barrier Assemblies.AIS / I,II,III / 1 / CDEFG — SD-CD-003 / F / A1; Entity
Entity Parameters (individual assembly):

| Model | Terminal | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|--------------------------------|----------|--------------|---------------|----------------------|---------------|
| μZ 650+ | 3-4 | 21.0 | 84 | 0.78 | 1.90 |
| μZ 680+ | 3-4 | 28.0 | 184 | 0.39 | 4.40 |
| μZ 68+ | 3-4 | 28.0 | 184 | 0.39 | 4.40 |

| Model | Terminal | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|-------|----------|--------------|---------------|----------------------|---------------|
|-------|----------|--------------|---------------|----------------------|---------------|

Entity Parameters (combined barrier assemblies):

| Model | Terminal | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---|---|--------------|---------------|----------------------|---------------|
| Barrier 1 and 2 μZ 640ac | 3-4-3 (Barrier 2 – terminal 4 not connected) | 31 | 471 | 0.3 | 0.31 |
| Barrier 1 and 2 μZ 690ac | 3-4-3-4 | 26 | 704 | 0.48 | 0.1 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Z Series 600. Shunt Diode Barrier Assemblies.

AIS / I,II,III / 1 / DEFG — SD-CD-003 / F / A1; Entity

Entity Parameters (combined barrier assemblies):

| Model | Terminal | V_t (V) | I_t (mA) | C_a (μF) | L_a (mH) |
|---|----------|--------------|---------------|----------------------|---------------|
| Barrier 1 and 2 μZ 640ac | 3-4-3-4 | 31 | 628 | 0.8 | 0.4 |

Special Conditions of Use:

1. Must be installed in suitable equipment enclosure in accordance with ANSI/ISA S82.01 and S82.03.

Perma-Pipe Inc 7720 N Lehigh Ave Niles IL 60714

AT20C, AT50C, AT20K, AT40K, AT80K. Leak Location and Detection System

AIS / I / 1 / CD — PA1000 / 8-95

The following cable types, probes and probe integrators may be used in conjunction with the above models.

Cable Types: AGC, AGW, AGT, FGH, JMP, JPL, JPP, TFH, AGT-Gold, AGW-Gold, AGH, JMP-U w/waterblock, JMP-U w/o waterblock, JPL-U w / waterblock and TFH Gold.

Probes: PHL-S, PFS-S, PSTV-S, PWS-S, PHFW-S, PTHL-S, PHFW-MS, PHL-L, PFS-L, PWS-L, PHFW-L, PTHL-L and PHFW-ML.

Probe Integrators: PT10-SC, PHL-S, PFS-S, PSTV-S, PHFWS-S, PTHL-S, PHFW-MS, PT10-LC, PHL-L, PFS-L, PSTV-L, PHFW-L, PTHL-L, PHFW-ML, PT10-SO, PWS-S, PT10-LO and PWS-L.

Pfudler Inc 1000 West Ave Rochester NY 14692

IS / I / 1 / BCD

Fault Finder System 125. Model 105. Instrument Assembly and Associated Probe. Types 10, 11, 12, 13A, 13B, 40 or 43.

GlasSentinel Multi-Channel Monitor

AIS / I / 1 / CD — 3167797 / sheet 4

Special Conditions of Use:

1. The Multi-Channel GlasSentinel Monitor shall be installed in an enclosure meeting the requirements of ISA S82.02.01 or other applicable ordinary location standards.

Phase Dynamics Inc 1343 Columbia Dr Richardson TX 75081

A abcdEXe2fg. Process Analyzer.

XP / 1 / 1 / CD / T6 Ta = 54°C; Type 4

a = Inlet / outlet configuration L, U or Z.

b = Process connection 1F, 1J, 1R, 3F, 3J, 3R, 5F, 5J, 5R, 6F, 6J, 6R, 9F, 9J, 9R, SW, TC or TH.

c = Measurement section diameter and material type 05,10, 12, 13, 14, 15, 16, 20, 21, 22, 23, 24, 25, 30, 31, 32, 33, 40, 41, 42 or 43.

d = Measurement section internal configuration 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18 or 19.

e = System cable length 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9.

f = Communications protocol 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9.

g = Power requirements blank, A, B, or C.

AI abcdEXe2fg. Process Analyzer Insertion.

XP / 1 / 1 / CD / T6 Ta = 54°C; Type 4

a = Process connection 1F, 1J, 1R, 3F, 3J, 3R, 5F, 5J, 5R, 6F, 6J, 6R, 9F, 9J or 9R.

b = Measurement section diameter 2 or 3.

c = Measurement section material type 0, 1, 2 or 3.

d = Measurement section internal configuration 15, 16, 18 or 19.

e = System cable length 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9.

f = Communications protocol 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9.

g = Power requirements blank, A, B, or C.

F abcdefEXg2hi. Process Analyzer Full Range.

H abcdefEXg2hi. Process Analyzer High Range.

XP / 1 / 1 / CD / T6 Ta = 54°C; Type 4

a = Inlet / outlet configuration L, U or Z.

b = Process connection 1F, 1J, 1R, 3F, 3J, 3R, 5F, 5J, 5R, 6F, 6J, 6R, F, 9J or 9R.

c = Measurement section diameter 2, 3 or 4.

d = Measurement section material type 0, 1, 2 or 3.

e = Measurement section temperature range 1, 2, 4 or 6.

f = Salinity range 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9.

g = System cable length 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9.

h = Communications protocol 0, 1, 2, 3, 4, 5, 6, 7, 8 or 9.

i = Power requirements blank, A, B, or C.