



Certificate of Compliance

Certificate: 2714851 (011716_C_000)

Master Contract: 151933

Project: 70092962

Date Issued: 2016-08-23

Issued to: Killark Electric Manufacturing Co.
3940 Dr. Martin Luther King Dr.
St. Louis, Missouri 63113
USA

Attention: Brian Pegg

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by: Behzad Nejad
Behzad Nejad, P.Eng.

PRODUCTS

CLASS - C441803 - CONDUIT FITTINGS-Fittings - For Hazardous Locations

CLASS - C441883 - CONDUIT FITTINGS-Fittings - For Hazardous Locations - Certified to US Standards

[Ex e IIC Gb & Ex tb IIIC Db]*

[Class I, Div. 2, Groups A, B, C and D; Class II, Div. 1 and 2, Groups E, F and G; Class III, Div 1 and 2]*

[Class I, Zone 1, AEx e IIC Gb & Zone 21, AEx tb IIIC Db]**

[Class I, Div. 2, Groups A, B, C and D; Class II, Div. 2, Groups E, F and G; Class III, Div. 2]**

KDE Series Breather Drains: Type 3, 4, or 4X and IP66 (where applicable)

- KDE; followed by AL, BR, S3, S4, S6 or GF; followed by 0, 1, 2, 3, 6 or 8; followed by M20, M25, 050, 070, 050NPSM or 075NPSM



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Notes:

1. *Canadian Marking; ** US Markings
2. Breather drains with bodies produced from aluminum, 304 stainless steel, 316 stainless steel, or glass filled polyamide are rated Type 3, 4, 4X and IP66. Breather drains with bodies produced from brass (no surface finish or nickel plated) and 303 stainless steel are rated Type 3, 4 and IP66.
3. Ambient temperature range: -55°C to +80°C.

Installation Requirements:

1. The breather drains are intended for “enclosure bottom only” installation.
2. The breather drains are certified for installation into clearance holes only, using the locknuts provided. They are not intended for installation into threaded openings.
3. Breather drains are certified for installation into clearance holes having maximum diameters as follows:

4. Minimum required
is 4 Nm.
tightening torque

KDE Trade Size / Thread Form	Max. Opening Diameter (mm)	Max. Opening Diameter (in)
M20	21	0.815
1/2 in. NPT, NPSM	22	0.875
M25	26	1.030
3/4 in. NPT, NPSM	27	1.060

locknut tightening torque
Maximum locknut
is 8 Nm.



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APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 60079-0:07 General requirements	-	Electrical apparatus for explosive gas atmospheres - Part 0:
CAN/CSA-C22.2 No. 60079-7:12 increased safety "e"	-	Explosive Atmospheres – Part 7: Equipment protection by
ANSI/ISA-60079-31 (12.10.03)-2009 Enclosure "t"	-	Explosive Atmospheres – Part 31: Equipment Dust Protection by
CAN/CSA-C22.2 No. 60079-31:12 protection by enclosure "t"	-	Explosive Atmospheres – Part 31: Equipment dust ignition
CAN/CSA-C22.2 No. 60529:05	-	Degrees of protection provided by enclosures (IP Code)
ANSI/IEC 60529:2004	-	Degrees of Protection Provided by Enclosures (IP Code)
CSA C22.2 No. 18.3-12	-	Conduit, Tubing, and Cable Fittings
CSA C22.2 No. 94.1-07 - Environmental CSA C22.2 No. 94.2-07- Environmental	-	Considerations Enclosures for Electrical Equipment, Non- Considerations Enclosures for Electrical Equipment,
UL 514B - 6 th Edition	-	Standard for Safety Conduit, Tubing, and Cable Fittings
UL 50 - 12 th Edition	-	Standard for Safety Enclosures for Electrical Equipment, Non- Environmental Consideration
UL 50E – 1 st Edition	-	Standard for Safety Enclosures for Electrical Equipment
ANSI/UL 60079-0:09 General Requirements	-	Electrical Apparatus for Explosive Gas Atmospheres - Part 0:
ANSI/UL 60079-7 - 4th Edition increased safety "e"	-	Explosive Atmospheres – Part 7: Equipment protection by

MARKINGS

- Manufacturer's Identification "Killark" or Master Contract Number "151933".
- Part No. (e.g. "KDEBR1M25").
- "Type 3" and / or "Type 4" and / or "Type 4X", as applicable.
- "IP66"
- cCSAus Mark.

The following marking strings (or equivalent) may be marked on the product or the installations instructions:

- CSA Certificate (Report) number
- "Ex e IIC Gb" and "Ex tb IIIC Db" .
- "Class I Zone 1 AEx e IIC Gb" and "Zone 21 AEx tb IIIC Db" .
- "Class I, Div 2, Groups A, B, C and D"
- "Class II, Div 1, Grp E, F, G (mandatory for Canada Only)"; "Class II, Div 2".
- "Class III, Div 1 (mandatory for Canada Only)" or Class III, Div 2".
- $-55^{\circ}\text{C} \leq T_{\text{amb}} \leq +80^{\circ}\text{C}$

The Installation, Operation & Maintenance data sheet (IOM) shall be provided with each smallest unit packaging of the breather drains and shall contain the following installation instructions (or equivalent):



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- "The breather drains are suitable for installation into clearance holes of enclosure only, using the locknuts provided. The breather drains must not be installed into threaded hubs."

"To maintain Type 3, Type 4/4X and IP66 environmental ratings, KDE breather drains are suitable for installation into clearance holes having maximum diameters as follows:"

KDE Trade Size / Thread Form	Max. Opening Diameter (mm)	Max. Opening Diameter (in)
M20	21	0.815
1/2 in. NPT, NPSM	22	0.875
M25	26	1.030
3/4 in. NPT, NPSM	27	1.060

- "To maintain the Type 3, and Type 4/4X and IP66 environmental ratings, the minimum specified locknut tightening torque must be observed. The tightening torque shall not exceed the maximum specified values to avoid damage to the sealing O-ring and to the threads of the breather drains".



Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
70092962	2016-08-23	Update to Report 2714851 to add alternate Parker Silicon LM100 O-ring.
2714851	2015-02-04	cCSAus certification of Bottom-Mount only Breather Drains-KDE Series with 7 breather drain body materials and 6 Thread Sizes (1/2" and 3/4" NPT & NPSM, M20, M25) for Class I Div 2, Class II, Div 1 & 2, Class III, Type 3, 4, 4X