

READ SYSTEM MANUAL
BEFORE OPERATING EQUIPMENT

USA: CLASS I DIVISION 2 GROUPS ABCD T4
CLASS I ZONE 2 GROUP IIC T4
CLASS I ZONE 2 AEx ec nC IIC Gc T4 IP64

Ex ec nC IIC T4 Gc IP64
-45°C to +85°C
IECEx ETL 19.0008X

II 3 G Ex ec nC IIC T4 Gc IP64
ITS19ATEX14543X
-45°C ≤ Ta ≤ 85°C

Segurança
NCC
Ex ec nC IIC T4 Gc IP64
(-40°C ≤ Tamb ≤ 85°C)
NCC 20.0088X

CANADA: CLASS I DIVISION 2 GROUPS ABCD T4
CLASS I ZONE 2 GROUP IIC T4
Ex ec nC IIC Gc T4 IP64

SPECIAL CONDITION: X
AMBIENT TEMPERATURE: -45°C to +85°C
TYPE 4X SIL3

TESTED PER THE FOLLOWING STANDARDS:
USA» UL50E, UL 60730-1, UL 60730-2-5, UL 121201, ANSI Z21.20, UL 60079-0, UL 60079-7, UL 60079-15
CANADA» CSA C22.2#213, CSA E60730-1, CSA C22.2#60730-2-5, CSA C22.2#60079-0, CSA C22.2#60079-7, CSA C22.2#60079-15
IEC» IEC 60079-0, IEC 60079-7, IEC 60079-15
EUROPE» EN 60730-1, EN 60730-2-5, EN 60079-0, EN 60079-7, EN 60079-15, EN 298
BRAZIL» ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-7, ABNT NBR IEC 60079-15

PENDING CERTIFICATIONS

APPLICATION	GAS/DIESEL PILOT IGNITION AND FLAME DETECTION (FLAME ROD TYPE)
INPUT POWER	24VDC±4, 2A MAX
FLAME DETECTOR	FLAME RECTIFICATION TYPE, RELAY CONTACT OUTPUT: 0.5A @ 125VAC, 1.0A @ 24VDC, 0.5A @48VDC
EXCITER ENERGY	2J NOMINAL
EXCITER SPARK RATE	5SPS NOMINAL
EXCITER DUTY CYCLE	30 SEC ON / 2 MIN OFF
SPARK DIAGNOSTIC	OUTPUT RELAY
AMBIENT TEMP	-45°C TO +85°C [-49°F TO +185°F]
MATERIAL	BODY: 316 STAINLESS STEEL I/O CONNECTOR: ZnNi PLATED (MARINE GRADE)
UNIT WEIGHT	~ 4 lbs



POWER AND SIGNAL I/O CONNECTOR
MATES TO:
HARNESS SUCH AS PN: 03001000
SEE PAGE 3



OUTPUT CONNECTOR
MATES TO:
INTEGRATED IGNITION / FLAME ROD
SUCH AS PN: 04000400

RELATED DOCUMENT - MUST COMPLY WITH SCHEDULE DOCUMENT(S):

CDM-10000100 , CDM-10000101 ,CDM-10000102 , CDM-10000103,
CDM-10000104, CDM-10000120, CDM-10000121 , CDM-10000162

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TOLERANCE NOTES
FABRICATED TOLERANCES
≥ 2 ft (610 mm) ± 0.250 in (6.4 mm)
< 2ft (610 mm) ± 0.125 in (3.2 mm)
MACHINED TOLERANCES
± 0.050 DECIMAL DIM (1 PLACE)
± 0.010 DECIMAL DIM (2 PLACES)
± 0.005 DECIMAL DIM (3 PLACES)

FOR A LIST OF RELEVANT PATENTS
AND TRADEMARKS PLEASE SEE
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ISO 9001 CERTIFIED

DRAWN BY:
EMK

ON:
16-Jan-20

LAST REV. BY:
JJE

ON:
16-Nov-20

EXCITER
IGNITION AND FLAME DETECTION

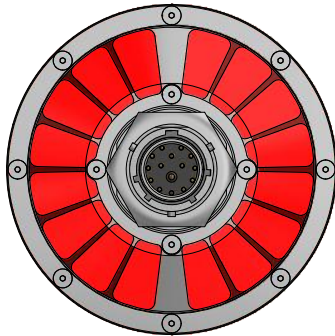
DCO NO. 13615 DWG. NO. 04001000 REV. B

PAGE 1 OF 3

STATUS INDICATOR COLOR STATES

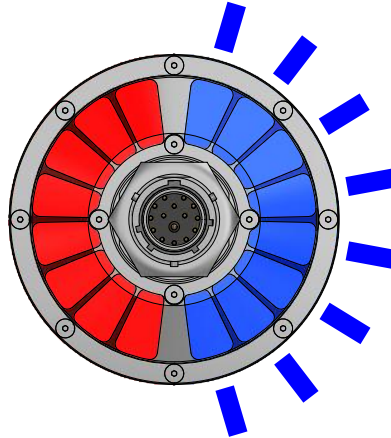
LED RING SOLID RED

- POWER APPLIED TO UNIT
- IGNITION SYSTEM IN STANDBY MODE
- NO FLAME DETECTED



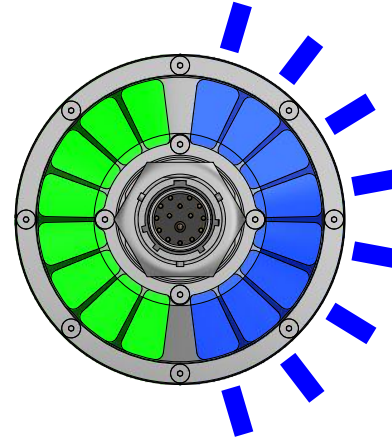
1/2 LED RING SOLID RED

- NO FLAME DETECTED
- 1/2 LED RING BLUE FLASHING
- IGNITION SYSTEM IS SPARKING



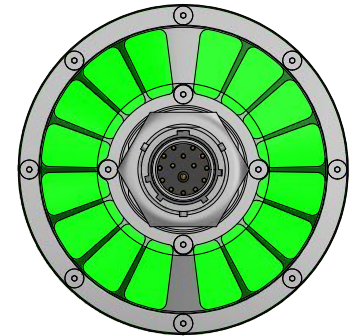
1/2 LED RING SOLID GREEN

- FLAME IS DETECTED
- 1/2 LED RING BLUE FLASHING
- IGNITION SYSTEM IS SPARKING



LED RING SOLID GREEN

- FLAME IS DETECTED
- IGNITION SYSTEM IN STANDBY



WARNING

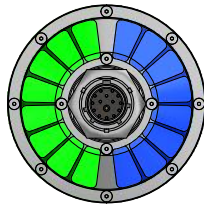
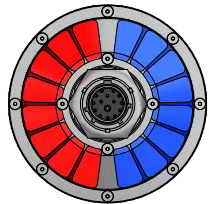
LED RING FAULT CONDITIONS

1/2 LED RING SOLID BLUE

- SPARK PLUG AT END OF LIFE - REPLACE NOW

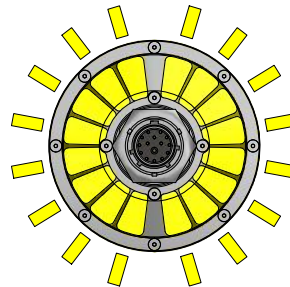
*OTHER HALF OF LED RING WILL CONTINUE TO FUNCTION AS SHOWN ABOVE (SOLID RED OR SOLID GREEN)

* THIS FAULT DOES NOT IMPACT THE UNIT'S ABILITY TO DETECT FLAME



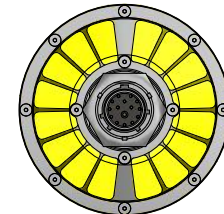
LED RING FLASHES YELLOW

- RECOVERABLE FAULT



LED RING SOLID YELLOW

- NON-RECOVERABLE FAULT, UNIT WILL NO LONGER FUNCTION



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DRAWN BY: EMK **ON:** 16-Jan-20
LAST REV. BY: JJE **ON:** 16-Nov-20

EXCITER STATUS INDICATOR COLOR STATES

DCO 13615

DWG. 04001000

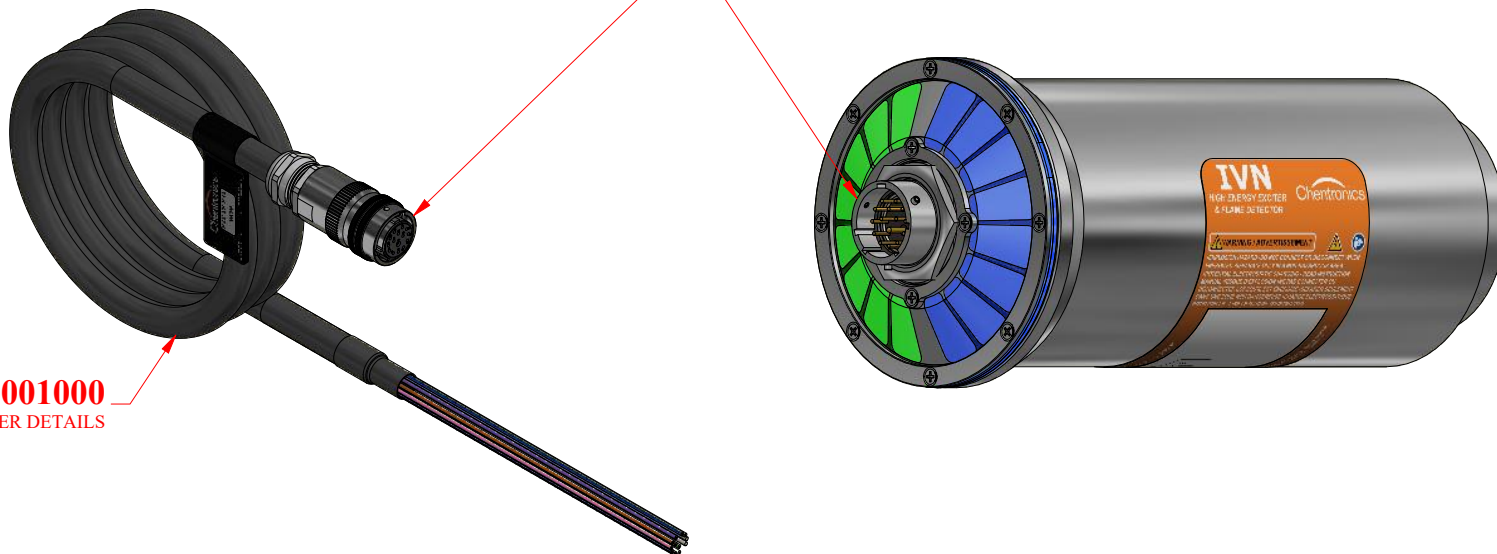
REV. B

 **Chentronics®**

QUICK DISCONNECT INPUT AND OUTPUT CONNECTIONS

QUICK-DISCONNECT POWER AND I/O CONNECTION

HARNESS PN 03001000
SEE DRAWING FOR FURTHER DETAILS



CONNECTION TABLE

NAME	PIN	WIRE COLOR	DESCRIPTION
DC (+)	D	RED	24VDC SUPPLY POSITIVE
DC (-)	C	BLACK	24VDC SUPPLY RETURN
EARTH	P	GREEN	EARTH CONNECTION
CTS	A	BLUE	CLOSE TO START CONTACT: CLOSE WITH DRY CONTACT TO DC (-) TO COMMAND EXCITER TO SPARK
F420	B	YELLOW	4-20mA FLAME STRENGTH SIGNAL, TERMINATE TO 24VDC SUPPLY RETURN
SRNO	H	WHITE/BLUE	SPARK DIAGNOSTIC RELAY NORMALLY OPEN CONTACT
SRNC	F	WHITE	SPARK DIAGNOSTIC RELAY NORMALLY CLOSED CONTACT
SRC	G	BLUE/WHITE	SPARK DIAGNOSTIC RELAY COMMON CONTACT
FR1NO	L	VIOLET	FLAME RELAY 1 NORMALLY OPEN CONTACT
FR1NC	J	PINK	FLAME RELAY 1 NORMALLY CLOSED CONTACT
FR2NO	R	GREY	FLAME RELAY 2 NORMALLY OPEN CONTACT
FR12C	K	ORANGE	FLAME RELAY COMMON CONTACT

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EXCITER QUICK DISCO I/O CONNECTIONS

DCO
NO. 13615

DWG.
NO. 04001000

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