



Certificate of Compliance

Certificate: 2379426

Master Contract: 176674

Project: 70186006

Date Issued: August 08, 2019

Issued to: Dynapar Corporation
1675 Delany Rd
Gurnee, IL
60031-1282
USA

Attention: Brad Stecker

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and US Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by:

Oong Lee

PRODUCTS

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations
CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations - CERTIFIED TO U.S. STANDARDS

Class I, Div. 1, Groups C and D:

Ex ia op is IIB T4 Ga:

Class I, Zone 0, AEx ia op is IIB T4 Ga:

Model HD25abbbbc6ef Optical Encoder; input rated 5-15 Vdc, 50 mA max; intrinsically safe for Class I, Division 1 and Zone 0 with entity parameters of: $U_i/V_{max} = 15V$, $I_i/I_{max} = 222mA$, $P_i/P_{max} = 1 W$; $C_i = 2.01\mu F$, $L_i = 0$; when installed per installation Dwg. 502591-0001; Ambient: -40 to +80 Deg. C; Temperature Code T4.

Models HD25abbbbcdefgg, HD20abbbbcdefgg, ISW38bbbbcddefgg, ISD25bbbbcddefghh and ISD37bbbbcddefghh Optical Encoder; input rated 5-26 Vdc or 5-15 Vdc, 50 mA; intrinsically safe for Class I, Division 1 and Zone 0



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with entity parameters of: $U_i/V_{max} = 28V$, $I_i/I_{max} = 222mA$, $P_i/P_{max} = 1 W$; $C_i = 0.6\mu F$, $L_i = 0$; when installed per installation Dwg. 502591-0001; Ambient: -40 to +80 Deg. C; Temperature Code T4.

Nomenclature:

HD25abbbbcdefgg

Where :a (Model Code) = 1, 2, 3
b (PPR) = 0000 to 9999 - any four digit numerical combination
c (Shaft) = 0 to 9, A to Z
d (Electrical ratings) = 0, 2, 3, 4, 6, F, G
e (Termination) = 0 to 9, A to Z
f (Options) = A to Y
g (Special) = blank, 01 to 99, AA to ZZ

HD20abbbbcdefgg

Where :a (Model Code) = 1, 2, 3
b (PPR) = 0000 to 9999 - any four digit numerical combination
c (Shaft) = 0 to 9, A to Z
d (Electrical ratings) = 0, 2, 3, 4, F, G
e (Termination) = 0 to 9, A to Z
f (Options) = A to R
g (Special) = blank, 01 to 99, AA to ZZ

ISW38abbbbcdefgg

Where :b (PPR) = 0000 to 9999 - any four digit numerical combination
c (Shaft) = 0, 1, 2
d (Output format) = 0, 1, 2, 3, 4, 5, 6, 7, A, C, D, E, F, G, H, J, K, L, M, N, P
e (Termination) = 0, 1, 2, 5, 6, 7, 8, A, C, D, H, J, K, M, N
f (Options) = 0, 1, 2, 3, 4, 5
g (Special) = blank, 01 to 99, AA to ZZ

ISD25abbbbcdefghh

Where :b (PPR) = 0000 to 9999 - any four digit numerical combination
c (Shaft) = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, C, D
d (Output format) = 0, 1, 2, 3, 4, 5, 6, 7, A, C, D, E, F, G, H, J, K, L, M
e (Termination) = 0, 1, 2, 5, 6, 7, 8, A, C, D, E, H, J, K, L, M, N
f (Options) = 0, 1, 2, 3, 4, 5
g (Special Options) = 01, 02
h (Special) = blank, 01 to 99, AA to ZZ



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ISD37bbbbcdefghh

Where :b (PPR) = 0000 to 9999 - any four digit numerical combination
c (Shaft) = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, C, D, E, F, G, H, P, R
d (Output format) = 0, 1, 2, 3, 4, 5, 6, 7, A, C, D, E, F, G, H, J, K, L, M
e (Termination) = 0, 1, 2, 5, 6, 7, 8, 9, A, C, D, H, J, K, L, M, N, T
f (Options) = 0, 1, 2, 3, 4, 5, 6, 7, A, C, D, E
g (Special Options) = 01, 02
h (Special) = blank, 01 to 99, AA to ZZ

Conditions of Acceptability

- Light metals may be used as the accessible surface of this equipment. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered when the equipment is installed in Zone 0 locations.

APPLICABLE REQUIREMENTS

C22.2 No. 0-10	General Requirements – Canadian Electrical Code, Part II
CAN/CSA C22.2 No. 61010-1-12,	Safety Requirements for Electrical Equipment for
UPD1:2015, UPD2:2016, AMD1:2018,	Measurement, Control, and Laboratory Use – Part 1: General
Edition 3	Requirements
CAN/CSA C22.2 No. 60079-0:15 (R2018),	Electrical apparatus for explosive gas atmospheres - Part 0:
Edition 3	General requirements
CAN/CSA C22.2 No. 60079-11:14 (R2018),	Electrical apparatus for explosive gas atmospheres - Part 11:
Edition 2	Intrinsic Safety "i"
CAN/CSA C22.2 No. 60079-28:16, Edition 1	Explosive atmospheres – Part 28: Protection of Equipment and
	Transmission Systems using Optical Radiation
UL 61010-1-12, AMD1:2018, Edition 3	Electrical Equipment For Measurement, Control, and
	Laboratory Use; Part 1: General Requirements
UL 60079-0-2013 (R2017), Edition 6	Electrical Apparatus for Explosive Gas Atmospheres - Part 0:
	General Requirements
UL 60079-11-2018, Edition 6	Electrical apparatus for Explosive Gas Atmospheres - Part 11:
	Intrinsic Safety "i"
ANSI/UL 60079-28-2017, Edition 2	Explosive Atmospheres – Part 28: Protection of Equipment
	and Transmission Systems using Optical Radiation



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MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Markings may appear on a CSA Accepted Adhesive-type nameplate, manufactured by Brady, Type B-435. Alternatively, markings appear on a min 0.02 in thick metal nameplate, secured to the enclosure with screws, mounted in bottomed holes. Refer to Drawing 114237-0001. The following marking details appear:

- CSA Monogram with C US Indicator (The products listed 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)
- Company name
- Model number
- Serial number (appears on separate label)
- Electrical input rating (appears on separate label)
- Certificate reference (i.e. "CSA 11CA2379426")
- Hazardous locations designations
- Temperature Code Rating
- Max Ambient
- The Symbol Ex ia
- A statement re Intrinsically Safe and reference to I.S. installation instructions
- the statement: "WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY" (appears on referenced Installation Drawing)
- Caution re. use of grounded shielded cable for each Intrinsically Safe field circuit. (appears on referenced Installation Drawing)
- Caution re. avoidance of impact (appears on referenced Installation Drawing)

Note - Jurisdictions in Canada may require these markings to also be provided in French language. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the "Markings".