



DirectConnect™ Medium Voltage Certifications and Codes



DirectConnect™ Medium Voltage Heaters and Power Converter Systems are certified to a maximum rated voltage of 4,760V (4,160V nominal) or 7,200V (6,600V nominal).

NORTH AMERICAN CERTIFICATIONS AND CODES

DirectConnect™ Medium Voltage Heaters

Ordinary Location Rating:

ETL Listed to UL and CSA standards for use in ordinary (non hazardous) locations.

Standards:

UL 499

CSA C22.2 No. 88

Hazardous Location Rating:

ETL Listed to UL and CSA standards for explosive atmospheres.

Class I, Zone 1: AEx eb IIC T1–T6 Gb

Class I, Division 2: Groups B, C, D, T1–T6

Protection Type: Ex eb IIC T1–T6 Gb

Ambient Range: –40°C to +60°C

Standards:

UL 60079-0, UL 60079-7

CSA C22.2 No. 60079-0, CSA C22.2 No. 60079-7

DirectConnect™ Medium Voltage Power Converter Systems

Ordinary Location Rating:

CSA certified (available upon request for relevant Canadian province)

Standard:

CSA SPE-1000

INTERNATIONAL CERTIFICATIONS AND CODES

DirectConnect™ Medium Voltage Heaters

Ordinary and Hazardous Location Rating:

ATEX/IECEX certified

II 2G Ex eb IIC T1-T6 Gb $-40^{\circ}\text{C} \leq \text{Ta} \leq +60^{\circ}\text{C}$

Standards:

IEC/CE 60079-0, IEC/CE 60079-7

IECEX Certificate No. IECEX ITS 18.0046X

ATEX Certificate No. ITS18ATEX303898X R.01

DirectConnect™ Medium Voltage Power Converter Systems:

IEC/CE marked¹

Standards:

IEC/EN 62477-2

Directive 2014/30/EU (RoHS 3), Directive 2014/30/EU (EMC)

EN 61000-6-2, EN 61000-4, EN 61000-6-4, and EN 55011 (CISPR 11)

ENCLOSURES

DirectConnect™ Medium Voltage Heaters

NEMA 4X / IP66

DirectConnect™ Medium Voltage Power Converter Systems

NEMA 1 / IP20D (Arc-Resistant), NEMA 2 / IP42 (Non-Arc Resistant),

NEMA 3R / IP54 (Non-Arc-Resistant), or NEMA 3RX / IP54 (Non-Arc Resistant)

¹ Dielectric tests (Impulse and Power Frequency [Hipot] tests) and Short Circuit tests (3-phase and phase to ground) were carried out by CESI (KEMA Labs). EMC tests were carried out by Element Testing Labs. Circuit resistance (Ductor) and heat rise tests were carried out by Chromalox.