

# Certificate of Compliance

**Certificate:** 70010166 (085562\_0\_000)

**Master Contract:** 180267

**Project:** 70175774

**Date Issued:** 2018-12-21

**Issued to:** **BARTEC GmbH**  
**Max-Eyth-Str 16**  
**Bad Mergentheim, Baden-Württemberg 97980**  
**GERMANY**  
**Attention: Mr. Roberto Singer**

*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:** *Marin Banu*  
Marin Banu

## PRODUCTS

### **CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations**

Ex db eb mb q [ib op pr] IIC T4; Gb

Ex mb tb IIIC T120 °C; Db

- POLARIS Visual Unit, Type 17-71V\*-\*\*\*\*/\*\*\*\*, rated voltage DC 24 V resp. AC 90-253 V rated current max. 4A resp. 1.2 A, Com Interfaces up to AC/DC 30 V, Ethernet up to AC/DC 5 V, Ambient temperature range: -20°C up to +60°C. Temperature Class T4, T120 °C. Degrees of Protection IP54/6X.

Ex mb IIC T4; Gb

Ex mb IIIC T120 °C, Db

- POLARIS USB Accessories, WLAN and BlueTooth modules, rated max. 5 V (USB Standard). Ambient temperature range: -20 °C up to +60 °C. Temperature Class T4, T120 °C.

### **CLASS 2258 82 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations – Certified to US Standards**

Zone 1

AEx db eb mb q [ib op pr] IIC T4; Gb



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Zone 21  
AEx tb IIIC T120 °C; Db

- POLARIS Visual Unit, Type 17-71V\*-\*\*\*\*/\*\*\*\*, rated voltage DC 24 V resp. AC 90-253 V rated current max. 4A resp. 1.2 A, Com Interfaces up to AC/DC 30 V, Ethernet up to AC/DC 5 V, Ambient temperature range: -20°C up to +60°C. Temperature Class T4, T120 °C. Degrees of Protection IP54/6X.

Class I, Zone 1  
AEx ib IIC T4; Gb  
Zone 21  
AEx ib IIIC T120 °C; Db

- POLARIS Intrinsically Safe Accessories, Type 17-71VZ-\*\*\*\*/\*\*\*\*, rated voltage max. 6,3 V, rated current max. 2,29 A Ambient temperature range: -0 °C up to +60 °C. Temperature Class T4, T120 °C, Degrees of Protection IP65 front.
- The USB flash drive type 17-A1Z0-0007 may be operated in an ambient temperature range of -20 °C up to +50 °C.

Zone 1  
AEx mb IIC T4; Gb  
Zone 21  
AEx mb IIIC T120 °C, Db

- POLARIS USB Accessories, WLAN and BlueTooth modules, rated max. 5 V (USB Standard). Ambient temperature range: -20 °C up to +60 °C. Temperature Class T4, T120 °C.

**CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations**

Ex db eb mb q [ib op pr] IIC T4; Gb

- POLARIS Visual Unit, Type 17-71V\*-\*\*\*\*/\*\*\*\*, rated voltage DC 24 V resp. AC 90-253 V rated current max. 4A resp. 1.2 A, Com Interfaces up to AC/DC 30 V, Ethernet up to AC/DC 5 V, Ambient temperature range: -20 °C up to +60 °C. Temperature Class T4, T120 °C. Degrees of Protection IP54/6X.

Ex ib IIC T4; Gb

- POLARIS Accessories, Type 17-71VZ-\*\*\*\*/\*\*\*\*, rated voltage max. 6,3 V, rated current max. 2,29 A Ambient temperature range: -20 °C up to +60 °C. Temperature Class T4, Degrees of Protection IP65 front.  
The USB flash drive type 17-A1Z0-0007 may be operated in an ambient temperature range of -20 °C up to +50 °C.



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Ex mb tb IIIC T120 °C; Db

- POLARIS Visual Unit, Type 17-71V\*-\*\*\*\*/\*\*\*\*, rated voltage DC 24 V resp. AC 90-253 V rated current max. 4A resp. 1.2 A, Com Interfaces up to AC/DC 30 V, Ethernet up to AC/DC 5 V, Ambient temperature range: -20 °C up to +60 °C. Temperature Class T120 °C. Degrees of Protection IP54/6X.

Ex ib IIIC T120 °C, Db

- POLARIS Accessories, Type 17-71VZ-\*\*\*\*/\*\*\*\*, rated voltage max. 6,3 V, rated current max. 2,29 A Ambient temperature range: -20 °C up to +60 °C. Temperature Class T120 °C, Degrees of Protection IP65 front.

Ex mb IIC T4; Gb

Ex mb IIIC T120 °C, Db

- POLARIS USB Accessories, WLAN and BlueTooth modules, rated max. 5 V (USB Standard). Ambient temperature range: -20 °C up to +60 °C. Temperature Class T4, T120 °C.

**CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations – Certified to US Standards**

Class I, Zone 1

AEx db eb mb q [ib op pr] IIC T4; Gb

- POLARIS Visual Unit, Type 17-71V\*-\*\*\*\*/\*\*\*\*, rated voltage DC 24 V resp. AC 90-253 V rated current max. 4A resp. 1.2 A, Com Interfaces up to AC/DC 30 V, Ethernet up to AC/DC 5 V, Ambient temperature range: -20°C up to +60°C. Temperature Class T4. Degrees of Protection IP54/6X.

Class I, Zone 1

AEx ib IIC T4; Gb

- POLARIS Accessories, Type 17-71VZ-\*\*\*\*/\*\*\*\*, rated voltage max. 6,3 V, rated current max. 2,29 A Ambient temperature range: -20 °C up to +60°C. Temperature Class T4, Degrees of Protection IP65 front. The USB flash drive type 17-A1Z0-0007 may be operated in an ambient temperature range of -20 °C up to +50 °C.

Class I, Zone 1

Ex mb IIC T4; Gb

- POLARIS USB Accessories, WLAN and BlueTooth modules, rated max. 5 V (USB Standard). Ambient temperature range: -20 °C up to +60 °C. Temperature Class T4.

Zone 21



**Certificate:** 70010166 (085562\_0\_000)  
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AEx tb IIIC T120 °C; Db

- POLARIS Visual Unit, Type 17-71V\*-\*\*\*\*/\*\*\*\*, rated voltage DC 24 V resp. AC 90-253 V rated current max. 4A resp. 1.2 A, Com Interfaces up to AC/DC 30 V, Ethernet up to AC/DC 5 V, Ambient temperature range: -20 °C up to +60 °C. Temperature Class T120 °C. Degrees of Protection IP54/6X.

Zone 21

AEx ib IIIC T120 °C, Db

- POLARIS Accessories, Type 17-71VZ-\*\*\*\*/\*\*\*\*, rated voltage max. 6,3 V, rated current max. 2,29 A Ambient temperature range: -20 °C up to +60 °C. Temperature Class T120 °C, Degrees of Protection IP65 front.

Zone 21

Ex mb IIIC T120 °C, Db

- POLARIS USB Accessories, WLAN and BlueTooth modules, rated max. 5 V (USB Standard). Ambient temperature range: -20 °C up to +60 °C. Temperature Class T120 °C.

**Conditions of Acceptability:**

- (1) The intrinsically safe circuits and the enclosure are galvanically connected. In the whole course of the formation of intrinsically safe circuits equipotential bonding must be guaranteed.
- (2) High energy load mechanism on the operating surface of the Visual units respectively of equipment (for example pneumatic particle transport, **ELECTROSTATIC SPRAY**) have to be excluded.
- (3) The degree of protection (IP code) for Dust protection must be ensured by mounting the units in enclosures appropriately IP rated.
- (4) Equipment has only been tested for electrical safety. No evaluation of functional safety and performance characteristics has been conducted.

**APPLICABLE REQUIREMENTS**

CAN/CSA C22.2 No. 61010-1-12	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
CAN/CSA-C22.2 No. 0-10 (R2015)	General Requirements – Canadian Electrical Code, Part II
CAN/CSA-C22.2 No. 60079-0:15	Electrical apparatus for explosive gas atmospheres – Part 0: General requirements
CAN/CSA-C22.2 No. 60079-1:16	Electrical apparatus for explosive gas atmospheres – Part 1: Flameproof enclosures "d"
CAN/CSA-C22.2 No. 60079-11:14	Electrical apparatus for explosive gas atmospheres – Part 11: Intrinsic safety "i"
CAN/CSA-C22.2 No. 60079-7:16	Electrical apparatus for explosive gas atmospheres – Part 7: Increased safety "e"
CAN/CSA-C22.2 No. 60079-5:16	Explosive atmospheres – Part 5: Equipment protection by powder filling "q"



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CAN/CSA-C22.2 No. 60079-18:16	Electrical apparatus for explosive gas atmospheres – Part 18: Encapsulation "m"
CAN/CSA-C22.2 No. 60079-28:16	Explosive atmospheres – Part 28: Protection of Equipment and Transmission Systems using optical radiation
CAN/CSA-60079-31:15	Electrical apparatus for use in the presence of combustible dust - Part 1: Electrical apparatus protected by enclosures
CAN/CSA-C22.2 No. 60529:16	Degrees of protection provided by enclosures (IP Code)
ANSI/UL Std. No. 61010-1, Ed 3 <sup>rd</sup> (2012)	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements - Third Edition
ANSI/UL 60079-0 (6th Ed. 2013)	Explosive Atmospheres – Part 0: Equipment - General Requirements
ANSI/UL 60079-1 (7 <sup>th</sup> Ed. 2015)	Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures "d"
ANSI/UL 60079-11(6th Ed. 2013)	Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety "i"
ANSI/UL 60079-18 (Ed 4 <sup>th</sup> 2015)	Explosive Atmospheres – Part 18: Equipment Protection by Encapsulation "m"
ANSI/UL 60079-7 (5 <sup>th</sup> Ed. 2017)	Explosive Atmospheres – Part 7: Equipment Protection by Increased Safety "e"
ANSI/ISA 60079-28:17	Explosive atmospheres – Part 28: Protection of Equipment and Transmission Systems using optical radiation
ANSI/ISA -60079-31 (2 <sup>nd</sup> Ed. 2015)	Electrical apparatus for use in the presence of combustible dust - Part 1: Electrical apparatus protected by enclosures
ANSI/ISA-60079-5 (4 <sup>th</sup> Ed. 2016)	Explosive Atmospheres – Part 5: Equipment Protection by powder filling "q"
ISA 60079-28:12 (2 <sup>nd</sup> Edition 2017)	Explosive atmospheres – Part 28: Protection of Equipment and Transmission Systems using optical radiation
ANSI/IEC 60529-2004	Degrees of protection provided by enclosures (IP Code)

*Table 1:* Applicable Requirements

## **MARKINGS**

Product markings shall be in accordance with the related standards. In addition, it shall be the responsibility of the manufacturer to provide additional markings on the product to comply with the requirements of the local regulatory authorities. For example, in Canada, any caution and warning markings must be provided in French and English.

- Company name
- Model number
- Serial number
- Electrical rating
- CSA Monogram with C/US indicators
- CSA Certificate Number CSA 15.70010166



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- Maximum ambient
- Caution re Substitution of components
- Caution re Explosion hazard
- Hazardous location ratings
- Temperature Class



## *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**

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<b>Project</b>	<b>Date</b>	<b>Description</b>
700175774	2018-11-19	Update to CSA Report 70010166 to update the standards for zones certification
70010166	2015-11-12	cCSAus certification of Visual Unit polaris, 17-71V*-****/**** series