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| http://directories.csa-international.org/html/images/CSAlogo2.gif |  | **Certification Record** |
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| **CUSTOMER** | **CLASS** | **FILE** |
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| PULS GmbH | [5311-07](http://directories.csa-international.org/xml_transform.asp?xml=classxml/5311-07.xml&xsl=xsl/class.xsl) | 095515\_0\_000 |
| Arabellastr. 15, | POWER SUPPLIES - Component Type-(CSA 60950-1-03) |  |
| Munich |  |  |
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| 81925 |  |  |
| Germany | **Refer to Class Description for program details** | |

TO THE REQUIREMENTS OF CSA 60950-1-03:

* DIN Rail Component type switching mode power supply\*, class I, model CS5.KKX-XX\*\* rated as follow:  
  - Model CS5.241:   
  Input:100-120Vac; 2.6 A; 50-60Hz  /  200-240Vac; 1.4A; 50-60Hz  
  Output: 24V-28V, 5A-4.3A; max. ambient 60°C. or  Output: 24V-28V, 6A - 5.1A; max.ambient 45°C  
    
  - Model CS5.243:  
  Input:100-120Vac; 2.6A; 50-60Hz  
  Output: 24V-28V, 5A-4.3A; max. ambient 60°C. or  Output:24V-28V, 6A - 5.1A; max.ambient 45°C  
    
  - Model CS5.244:   
  Input: 200-240Vac; 1.4A; 50-60Hz  
  Output: 24V-28V, 5A-4.3A; max. ambient 60°C. or Output:24V-28V, 6A - 5.1A; max.ambient 45°C

Notes:

(\*) - The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated  
- A suitable electrical and fire enclosure must be provided for the end product.  
(\*\*) - where KK represents the output voltage and can be 24Vdc to 28Vdc, X can be any character or number, not safety relevant.

* DIN Rail Component type switching mode power supply\*, class I, model CS10.KKX-XX\*\* Series, rated as follow:  
  Input: 100-120/ 200-240Vac, 50-60Hz, 5/2.7A;  
  - where KK is 24: Output: 24-28Vdc, 10-8.6A, 240W @ max. ambient 60°C. or 288W @ max. ambient 45°C or 75% rated load @ max. ambient 70°C.  
  -where KK is 48: Output: 48-52Vdc, 5.0-4.6A, 240W @ max. ambient 60°C. or 288W @ max. ambient 45°C or 75% rated load @ max. ambient 70°C

Notes:

(\*) - The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.  
- A suitable electrical and fire enclosure must be provided for the end product.  
(\*\*)where KK represents the output voltage and can vary from 24Vdc to 52Vdc, X can be any character or number, not safety relevant.

* DIN Rail Component type DC/DC switching mode power supply\*, class III, model UB10.KKX-XX and UBC10.KKX-XX\*, rated as follow:  
  Input: 22.5 to 30Vdc, 17A max  
  Output: Normal mode: 22.2VDC up to 29.7VDC (voltage drop input-output: 0.3V); 15A  
  Buffer mode: 22.3VDC; 10A  
  - where KK represents the input voltage and can be from 22.5Vdc to 30Vdc, X can be any character or number, not safety relevant.

Notes(\*):

1. The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.
2. A suitable electrical and fire enclosure must be provided for the end product.
3. The 2 models max ambient temp. Model UB10.KKX-XX = 60°C: Model UBC10.KKX-XX = 35ºC.
4. The units are not intended for direct connection to centralized DC.  The Units are intended to be supplied by SELV circuits.

* DIN Rail Component type switching mode power supply\*, class I, model QS10.YYZ-ZZ\*\* Series and QS10.DNET, rated as follow:  
  QS10.YYZ-ZZ Series:  
  AC Input : 100-240Vac, 50-60Hz, 2.8-1.2A or DC Input: 110-300Vdc, 2.4-0.9A.  
  DC output : 12-15Vdc @ 15-13.5A, 200W or 24-28Vdc @ 10-9A, 252W or 48-56Vdc @ 5-4.3A, 240W  
    
  - where YY represents the output voltage and can be 12-15 or 24-28 or 48-56 and Z can be any character or number, not safety relevant.  
    
  QS10.DNET:  
  AC Input : 100-240Vac, 50-60Hz, 2.3-1A or DC Input: 110-300Vdc, 1.9-0.72A and DC output : 24Vdc @ 8A.

Notes:

(\*) - The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.  
- A suitable mechanical, electrical and fire enclosure must be provided for the end product.

* DIN Rail Component type switching mode power supply\*, class I, model QT20.KKX-XX\* Series, rated as follow:  
  Input:  3x 380-480VAC, 50-60Hz, 0.9-0.65A (per phase);  
  Output: see table below;  
  where KK is 24: Output: 24 - 28VDC; 20 - 17.5A; 490W.  
  where KK is 36: Output: 36 - 42VDC; 13.3 - 11.4A; 480W.  
  where KK is 48: Output: 48 - 55VDC; 10 - 8.7A; 480W.  
    
  - where KK represents the output voltage and can be 24 to 55, X can be any character or number, not safety relevant.

Notes:

(\*) - The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.  
- A suitable mechanical, electrical and fire enclosure must be provided for the end product.

* DIN Rail Component type switching mode power supply\*, class I, models and rating as follow:  
  ML90.ZXX-YY rated:  
  Input: 2 x 380-480Vac, 50-60Hz, 0.5A (two phase):  
  Output: 24Vdc - 28Vdc, 3.75A-3.2A  
    
  ML100.ZXX-YY rated:  
  Input: 2 x 380V-480Vac, 50-60Hz, 0.6A (two phase)  
  Output: 24Vdc - 28Vdc, 4.2A-3.6A  
    
  - where Z is either 2 or 6 and stands for customer specific version,  XX and YY can be any character or number, not safety relevant.

Notes:

(\*) - The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.  
- A suitable mechanical, electrical and fire enclosure must be provided for the end product.

* DIN Rail Component type switching mode power supply\*, class I, model(s) QS20.KKZ-XX Series, rated as follow;  
  QS20.KK1-XX Series:  
  AC Input: 100-240Vac, 5.4-2.4A; 50-60Hz or DC Input: 110-300Vdc; 4.8-1.8A  
  Output: -Model QS20.241-XX: 24-28Vdc, 20-17.1A continuous \*  
  -Model QS20.361-XX: 36-42Vdc, 13.3-11.4A continuous \*  
  -Model QS20.481-XX: 48-55Vdc, 10-8.7A continuous \*  
    
  QS20.KK4-XX and QS20.KK6-XX Series:   
  Input: 200-240Vac, 4.8A; 50-60Hz  
  Output: -Model QS20.244-XX: 24-28Vdc, 20-17.1A continuous \*  
  -Model QS20.364-XX: 36-42Vdc, 13.3-11.4A continuous \*  
  -Model QS20.484-XX: 48-55Vdc, 10-8.7A continuous \*  
  -Model QS20.246-XX: 24-28Vdc, 20-17.1A continuous \*  
  -Model QS20.366-XX: 36-42Vdc, 13.3-11.4A continuous \*  
  -Model QS20.486-XX: 48-55Vdc, 10-8.7A continuous \*  
    
  QS20.249-XX:  
  Input: 370VDC, 1.4A. Output: 24-28VDC, 20-17A continuous\*.  
    
  \*For all models listed above: Repetitive pulse load rated at maximum of 150% of rated power.  
    
  - where KK represents the output voltage and can be 24V to 55V, Z can be 1, 4, 6 and 9 and X can be any character or number, not safety relevant.

Notes:

(\*) - The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.  
- A suitable mechanical, electrical and fire enclosure must be provided for the end product.

* DIN Rail Component type switching mode power supply\*, class I, Model SL10.3XX Series or SL10.6XX, rated as follow:  
  Input: 400-500V ac, 3 or 2 phases, 50-60Hz, 0.8-0.7A (per phase)  
  Output: 24-8V dc; 10A; 240W continuous or 288W peak power.  
  Output: 48-52V dc; 5A; 240W continuous or 288W peak power.  
  - where XX represents customer specific versions, not safety relevant.

Notes:

1. The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.
2. A suitable mechanical, electrical and fire enclosure must be provided for the end product.

* DIN Rail Component type DC/DC Redundancy Modules\*, models and rating as follow:  
  - SLR01, SLR02, MLY02 followed by .50X or .51X; rated: SLR01: input 24-28V dc, 0-40A, output: Vin-0,6V, 0-40A.  
  - SLR02: Input 24-28V dc, 0-30A, input 2: 24-28V(DC), 0-30A, output: Vin-0,5A, 0-30A.  
  - MLY02: Input 1: 10-60V dc, 0-10A, input 2: 10-60V dc, 0-10A, output: 0,9V, 0-10A  
  (Vin = Input Voltage from input 1 or Input 2)  
    
  - YR2.DIODE.XX and YRM2.DIODE.XX where XX is optional and can be any character or number, not safety relevant.  
  rated: input 1: 10-60V dc, 0-20A, input 2: 10-60V dc, 0-20A, output: Vin-0,9V, 0-20A.  
  (Vin = Input Voltage from Input 1 or Input 2)

Notes(\*):

1. The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.
2. A suitable mechanical, electrical and fire enclosure must be provided for the end product.

* DIN Rail Component type switching mode power supply\*, class I, model and rating as follow:  
  - Model CS3.KKX-XX;   
  - Input: 100-240Vac, 1.4-0.7A, 50-60Hz or 110-300Vdc, 0.9-0.3A  
  - Output: 24V-28V, 3.3-2.8A, max. ambient 60°C.

Notes (\*):

1. The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated
2. A suitable mechanical, electrical and fire enclosure must be provided for the end product.
3. Where KK represents the output voltage and can be 24Vdc to 28Vdc, X can be any character or number, not safety relevant.

* DIN Rail Component type switching mode power supply\*, class I, model and rating as follow;  
  - ML15.10K-XX and ML15.YYX-XX  
  rated input for all models; 100-240V ac, 0.3A, 50-60Hz or 110-300V dc, 0.17A  
  rated output;  
  - Model ML15.100 (ML15.241): 24-48V dc, 0.63-0.54A @ max ambient\* temp. of 60°C  
  - Model ML15.101 (ML15.051): 5-5.5V dc, 3A @ max ambient\* temps. of 60°C  
  - Model ML15.102 (ML15.121): 12-15V dc, 1.3-1.0A @ max ambient\* temps. of  60°C  
    
  where K can be 0, 1 or 2 and X can be any character or number, not safety relevant.  
  where YY can be 24, 05 or 12 and X can be any character or number, not safety relevant.  
    
  \*Note: Output can be derated at an ambient from 60-70°C at reduced power at a rate of 0.4W/°C.

Notes(\*):

1. The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.
2. A suitable mechanical, electrical and fire enclosure must be provided for the end product.

* DIN Rail Component type DC/DC Converter\*, class III, models\*\* and rating as follow:  
  - CD5.241 and CD5.241-S1:  
  Input: DC 24 V (-25% / +35%), 7 A ,   
  Output: DC 24 - 28 V / 5 - 4.3 A, -25 to +60°C or DC 24 - 28 V / 6 - 5.1 A, -25 to +45°C  
    
  - CD5.242:  
  Input: DC 48 V (-25% / +25%), 3.5 A   
  Output: DC 24 - 28 V / 5 - 4.3 A, -25 to +60°C or DC 24 - 28 V / 6 - 5.1 A, -25 to +45°C  
    
  - CD5.121:  
  Input: DC 24 V (-25% / +35%), 5.6 A   
  Output: DC 12 - 15 V / 8.0 - 6.4 A, -25 to +60°C or DC 12 - 15 V / 9.6 - 7.7 A, -25 to +45°C  
    
  - SLAD4.100:  
  Input: DC 24 V (-25% / +35%), 7 A   
  Output: DC-AS 30.5 V/ 4 A, -25 to +60°C, Use on AS-interface net only.

Notes:

(\*) - The products have been certified as components where the suitability of the combination with the end use product shall be re-evaluated.  
 - A suitable mechanical, electrical and fire enclosure must be provided for the end product.  
(\*\*) All model designations may be followed by any character or number or blank, not safety relevant.

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