IECEx Test Report Cover
ATEX Assessment Report Cover

IECEx ExTR Reference Number ...:	See Report No. above.
ATEX Assessment Report Number:	See Report No. above.
Free Reference Number.....:	230478600
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Reviewed by + signature (ExTL)....:	B.P.O. Meijer
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Date of issue (yyyy-mm-dd).....:	2026-06-08
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IECEx Certification Body (ExCB)...:	DEKRA Certification B.V.
Address .....:	Meander 1051, 6825 MJ Arnhem, The Netherlands
ATEX Notified Body (0344).....:	DEKRA Certification B.V.
Applicant's name.....:	Professional & Sustainable Performance Lighting B.V.
Address .....:	Tasveld 4, 3417 XS Montfoort, the Netherlands
Standards associated with this report package .....:	IEC 60079-0 : 2017 (Ed. 7) IEC 60079-11 : 2011 (Ed. 6) IEC 60079-28 : 2015 (Ed. 2)
Clauses considered.....:	All clauses considered
Test Report Form Number.....:	See footer below, based on ExTR Cover_11 (released 2025-06)
Related Amendments, Corrigenda or ISHs.....:	For ExTAG Decision Sheets see the individual ExTR parts It is verified that all recent ExTAG DS, applicable to one or more standard(s) in the scope are included in the new or revised report part(s). For IEC Corrigenda and IEC Interpretation Sheets see the overview in this IECEx Test Report Cover. For EN Corrigenda, Amendments and Interpretation Sheets see the ATEX Assessment Report of National Differences EU (ATEX).
Test item description .....:	Wireless communication module
Model/type reference.....:	PSPL-WCM-V2-LIGHT, PSPL-WCM-V2-RN, PSPL-WCM-V2-AP, PSPL-WCM-V2-BTN, PSPL-WCM-V2-CL, PSPL-WCM-V2-PT1000
Code (e.g. Ex __ II__ T__) .....:	Ex ib op is IIC Gb
Rating .....:	See electrical data.

Report Package Contents	
Assembled ExTR documents and Additional reference material:	
*	IECEx Test Report NL/DEK/ExTR19.0036/02 Cover
*	IECEx Test Report NL/DEK/ExTR19.0036/02 IEC 60079-0 : 2017 (Ed. 7)
*	IECEx Test Report NL/DEK/ExTR19.0036/02 IEC 60079-11 : 2011 (Ed. 6)
*	IECEx Test Report NL/DEK/ExTR19.0036/02 IEC 60079-28 : 2015 (Ed. 2)
*	IECEx Test Report NL/DEK/ExTR19.0036/02 National Differences EU (ATEX)

Report Package Contents	
Assembled ExTR documents and Additional reference material:	
*	IECEx Test Report NL/DEK/ExTR19.0036/02 Appendix A; Description of the Test item

Note: An * is included before the title of documents that are new or revised at an up- issue of the report.

Manufacturer's name.....:	VDL-RENA Electronica B.V.
Address.....:	Industrieweg 13, 4881 EW Zundert, The Netherlands.
Trademark.....:	

Particulars: Test item vs. Test requirements

Equipment classification of installation and use..... :	Fixed
Ingress protection ..... :	IP20 minimum according IEC 60529
Rated service temperature range (°C) for Ex Components ... :	-40 °C to +75 °C

General remarks:

The test results presented in this report package relate only to the item or product tested.

- "(See Attachment #)" refers to additional information appended to this report package.
- "(See appended table)" refers to a table appended to the report package.
- Throughout this report package, a point is used as the decimal separator.
- *Where the term "N/A" appears in any part of a report package, it indicates that the associated issue was considered "Not applicable" to the involved evaluation.*
- *In accordance with IECEx 02, a Receiving ExCB may request a sample of the Ex equipment and copies of the documentation referred to in an report Cover.*

The technical content of this report package shall not be reproduced except in full without the written approval of the issuing Body and Ex Testing Laboratory.

Use of uncertainty of measurement for decisions on conformity (Decision rule):

No decision rule is specified by the standards associated with this ExTR package, when comparing the measurement result with the applicable limit according to the specification in these standards. The decisions on conformity are made without applying the measurement uncertainty as described in IECEx OD 012 (i.e. "simple acceptance" decision rule, previously known as "accuracy method").

General product information:

The wireless control module types PSPL-WCM-V2-LIGHT, PSPL-WCM-V2-RN, PSPL-WCM-V2-AP, PSPL-WCM-V2-BTN, PSPL-WCM-V2-CL and PSPL-WCM-V2-PT1000 are electronic boards in type of protection Ex ib and Ex op is.

Following module types are designed to be used within luminary for wireless access.
They are to be powered by a certified Ex ib intrinsically safe interface. The WCM board provides wireless control and monitoring functions for the luminary.

- PSPL-WCM-V2-LIGHT: Via RJ9 connector.
- PSPL-WCM-V2-RN: Via screw terminal connector.
- PSPL-WCM-V2-AP: Via screw terminal connector.

Following module types are to be powered by a 3V battery pack. Depending the module type they provide interfacing to two mechanical switches, one temperature sensor or one current loop.

- PSPL-WCM-V2-BTN: For connecting one or two mechanical switches.
- PSPL-WCM-V2-PT1000: For connecting one PT1000 sensor.
- PSPL-WCM-V2-CL: For connecting one Ex ib certified 4-20mA current loop.

Depending the module type there are embedded sensors for measuring the temperature, relative humidity, vibration and ambient light. They all support wireless communication.

All module types are Ex components intended for fixed installation.
Module PSPL-WCM-V2-BTN can also be used for mobile tracking & tracing solutions.

Electrical data:
Entity parameters per module type (pin assignment below):

PSPL-WCM-V2-LIGHT, Connector P3 (type RJ9):
PSPL-WCM-V2-RN, Connector P2 (screw terminals):
PSPL-WCM-V2-AP, Connector P2 (screw terminals):
U_i = 7.14 V; I_i = 261 mA; P_i = 465 mW; L_i = 0 µH; C_i = 7 µF

PSPL-WCM-V2-BTN,
PSPL-WCM-V2-PT1000,
PSPL-WCM-V2-CL:
Connector P1 (header) – As battery supply input:
U_i = 3 V nominal; 3.66 V maximum open-circuit voltage; L_i = 0 µH; C_i =333 µF

Connector P2 (screw terminals) – For the external interfacing.
Entity parameters per input:
PSPL-WCM-V2-BTN:
U_o = 3.66 V; I_o = 7.8 mA; P_o = 4.8 mW; L_o = 10 µH; C_o = 12 µF
PSPL-WCM-V2-PT1000:
U_o = 3.66 V; I_o = 10 mA; P_o = 6 mW; L_o = 20 µH; C_o = 24 µF
PSPL-WCM-V2-CL:
U_o = 3.66 V; I_o = 3.9 mA; P_o = 2.4 mW; L_o = 20 µH; C_o = 24 µF;
U_i=30 V; I_i = 25 mA; L_i = 0 µH; C_i = 0 µF

Pin assignments:
Connector P1 header pins:
PSPL-WCM-V2-BTN, -PT1000, -CL (pin1: supply input, pin2: removed, pin3: supply ground)
Note that pin3 is close to connector P2.

Connector P2 screw terminals:
PSPL-WCM-V2-RN (pin 1: RS485_A, pin 2: supply input, pin 3: RS485_B, pin 4: supply/signal ground),
PSPL-WCM-V2-AP (pin 1: RS485_A, pin 2: supply input, pin 3: RS485_B, pin 4: supply/signal ground),
PSPL-WCM-V2-BTN (pin1: switch2_A, pin2: switch2_B, pin3: switch1_A, pin4: switch1_B),
PSPL-WCM-V2-PT1000 (pin1: PT1000_A, pin2: PT1000_B),
PSPL-WCM-V2-CL (pin1: signal, pin 2 and pin 3 are interconnected, pin 4: return signal).
Note that pin1 is close to connector P1.

Connector P3 RJ9 pins:
PSPL-WCM-V2-LIGHT (pin1: supply/signal ground, pin 2: RS485_A, pin 3: RS485_B, pin 4: supply input)
Note that pin4 is close to the board edge.

Details of change:

- Change in Applicant, Manufacturer name and address.
- Change in model reference (addition “PSPL-“).

This is a full report, including the relevant details of earlier issues.

Document Control:

For each document the differences between the used version and the latest version of the controlled document are assessed as summarized in the narrative remarks of the report parts.

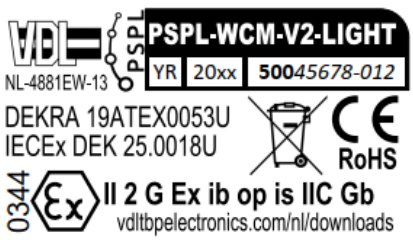
For this report cover, all the recent IEC and ISO Corrigenda, Amendments and Interpretation Sheets are applied per the latest template of AM 2819:14.

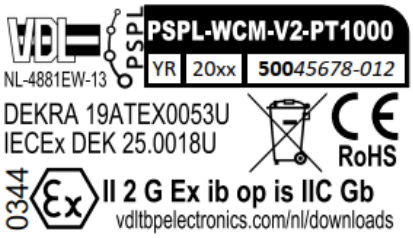
Report history:

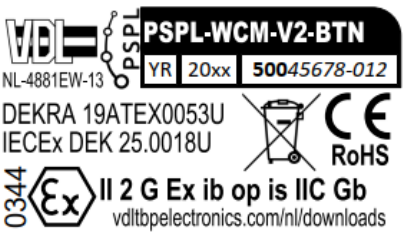
Report	Free Reference Number
NL/DEK/ExTR19.0036/00	223298300
NL/DEK/ExTR19.0036/01	224935300
NL/DEK/ExTR19.0036/02	230478600

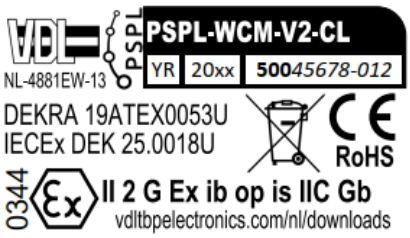
Copy of Marking Plate:

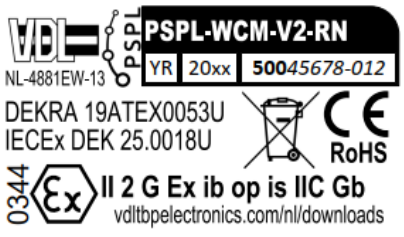
Examples:

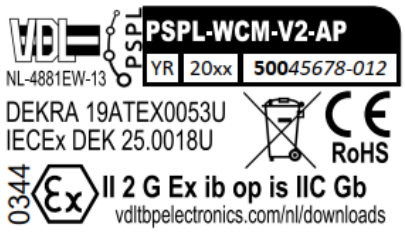












Details regarding ‘trade agent’ / ‘local assembler’ application in accordance with OD 203:

N/A.

Testing not fully performed by ExTL staff at the above ExTL address:

N/A

National differences considered as part of this evaluation:

For the EU, ATEX: National differences from directive 2014/34/EU and national differences between the applied IEC and EN standards were assessed and reported in the part “National differences for ATEX” of this ExTR.

Schedule of Limitations:

Protecting enclosure required with IP20 rating minimum according IEC 60529.

Ambient temperature range is -40 °C to +75°C.

The clearance between the board parts and metal objects shall be 1.5 mm minimum.

The clearance between the LED and any object shall be 1.5 mm minimum.

Maximum board temperature is 94 °C under fault conditions.

Maximum component temperature is 147 °C, for components with a surface area < 1000mm^2.

The PSPL-WCM-V2-BTN and PSPL-WCM-V2-PT1000 screw terminals shall only be connected to passive devices.

Routine tests:

N/A

Date(s) of performance for all testing:

No testing.

Technical Documents

No.	(*)	Title:	Document No.:	Rev.	Date:
1		PSPL WCM-V2-LIGHT Schematic	AT2070 WCM 2.0	16	28-10-2020
2		PSPL Ex WCM-V2-LIGHT BOM Part number: 860.0013		1.3.1	28-10-2020
3		PSPL WCM-V2-BTN Schematic	AT2070 WCM 2.0	16	28-10-2020
4		PSPL Ex WCM-V2-BTN BOM Part number: 860.0014		1.3.1	28-10-2020
5		PSPL WCM-V2-PT1000 Schematic	AT2070 WCM 2.0	16	28-10-2020
6		PSPL Ex WCM-V2-PT1000 BOM Part number: 860.0015		1.4.0	28-10-2020
7		PSPL WCM-V2-CL Schematic	AT2070 WCM 2.0	16	28-10-2020
8		PSPL Ex WCM-V2-CL BOM Part number: 860.0016		1.4.0	28-10-2020
9		PSPL WCM-V2-AP Schematic	AT2070 WCM 2.0	16	28-10-2020
10		PSPL Ex WCM-V2-AP BOM Part number: 860.0017		2.0.0	28-10-2020
11		PSPL WCM-V2-RN Schematic	AT2070 WCM 2.0	16	28-10-2020
12		PSPL Ex WCM-V2-RN BOM Part number: 860.0018		1.0.1	28-10-2020

13		PCB 2d drawings (Board layers, Layer stack, Silkscreen)	WCM-V2 AT2070	4.60	26-10-2020
14		PCB 2d drawings (Refdes)	WCM-V2 AT2070	4.60	26-10-2020
15a	*	WCM-V2 EX Certification labels	PSPL-WCM-V2-LIGHT	V3	29-05-2026
15b	*	WCM-V2 EX Certification labels	PSPL-WCM-V2-PT1000	V3	29-05-2026
15c	*	WCM-V2 EX Certification labels	PSPL-WCM-V2-BTN	V3	29-05-2026
15d	*	WCM-V2 EX Certification labels	PSPL-WCM-V2-CL	V3	29-05-2026
15e	*	WCM-V2 EX Certification labels	PSPL-WCM-V2-RN	V3	29-05-2026
15f	*	WCM-V2 EX Certification labels	PSPL-WCM-V2-AP	V3	29-05-2026
16	*	Installation instructions PSPL-WCM-V2-LIGHT		R4.74R1	29-05-2026
17	*	Installation instructions PSPL-WCM-V2-PT1000		R4.74R1	29-05-2026
18	*	Installation instructions PSPL-WCM-V2-BTN		R4.74R1	29-05-2026
19	*	Installation instructions PSPL-WCM-V2-CL		R4.74R1	29-05-2026
20	*	Installation instructions PSPL-WCM-V2-RN		R4.74R1	29-05-2026
21	*	Installation instructions PSPL-WCM-V2-AP		R4.74R1	29-05-2026
22		Coating Instructions WCM V2 Modules			27-10-2020

Note: An * is included before the title of documents that are new or revised at an up- issue of the report.

Separately Certified Equipment/Components Included in Test Item Description:					
Part Type	Manufacturer	Model/Type	Certificate No.	Ex Marking String	Standard(s) and date(s)/edition(s)
N/A					

Corrigenda, Amendments and Interpretation Sheets			
Decision	**Requirement – Test**	**Result – Remark**	**Verdict**
IEC 60079-0: 2017 (Edition 7.0)			
IEC 60079-0 : 2017 COR1 : 2020	cl. 26.5.1.1 Temperature tests shall be done in still ambient air and shall be linearly corrected for the rated ambient temperature	No temperature test included	N/A
IEC 60079-0 : 2017 ISH1 : 2019	cl. 16.6. internal air temperature may represent other temperatures of electrical machines	The internal air temperature is not taken as a representation of other temperatures.	N/A
IEC 60079-0 : 2017 ISH2 : 2019	cl.29. marking of Equipment which includes both an electrical part and a non-electrical part shall have combined marking	The Equipment includes only electrical parts	N/A

Corrigenda, Amendments and Interpretation Sheets			
Decision	**Requirement – Test**	**Result – Remark**	**Verdict**
IEC 60079-11 : 2011 (Edition 6.0)			
IEC 60079-11 : 2011 C1 : 2012	Table 1 cl. 26.4.4 changed Table 3 8th footnote changed Fig 1b changed cl. 8.2.3 4th paragraph changed cl. 12.1 5th, 6th and 8th paragraph changed Fig. D.3a changed Fig. G.1 changed	Corrigendum taken into account. For details see EXTR 60079-11	Pass
IEC 60079-11 : 2011 / I-SH 01 : 2014	Significant changes compared to Edition 5	This overview of changes is not used for a gap analysis. The reported assessment covers all actual requirements in the standard.	N/A
IEC 60079-11 : 2011 ISH2 : 2016	clause 6.2.5 clarified. IEC 60079-11 is not applicable for voltage limitation to guarantee U_m.	This interpretation sheet is mainly for the end user and not for the assessment of the product.	N/A
IEC 60079-11 : 2011 ISH3 : 2016	guide for level of protection "ic" evaluations	"ic" not applied	N/A
IEC 60079-11 : 2011 / ISH4 : 2019	cl. 6.1.3. group III enclosures	Not group III	N/A
IEC 60079-11 : 2011 / ISH5 : 2019	Table 4 - group III with component(s) immersed in dust	Not group III	N/A
IEC 60079-11 : 2011 / ISH6 : 2019	cl. 10.5.3 b) current limiting devices to be disabled at the determination of the surface temperature of cells.	No cells and batteries included	N/A
IEC 60079-11 : 2011 / ISH7 : 2024	5.6.1 of IEC 60079-11:2011 states, in part: "Surfaces of components, enclosures, wiring and the tracks on printed circuit boards"	This interpretation sheet confirms normal practice. For details see ExTR 60079-11.	Pass
IEC 60079-28 : 2015 (Edition 2.0)			
IEC 60079-28 : 2015 / ISH1 : 2019	Interpretation of the 6th paragraph of the scope	The product is not in the scope. But, it is applied at the request of the manufacturer. Since a solid absorber is present (wall inside enclosure) close to the LED.	N/A