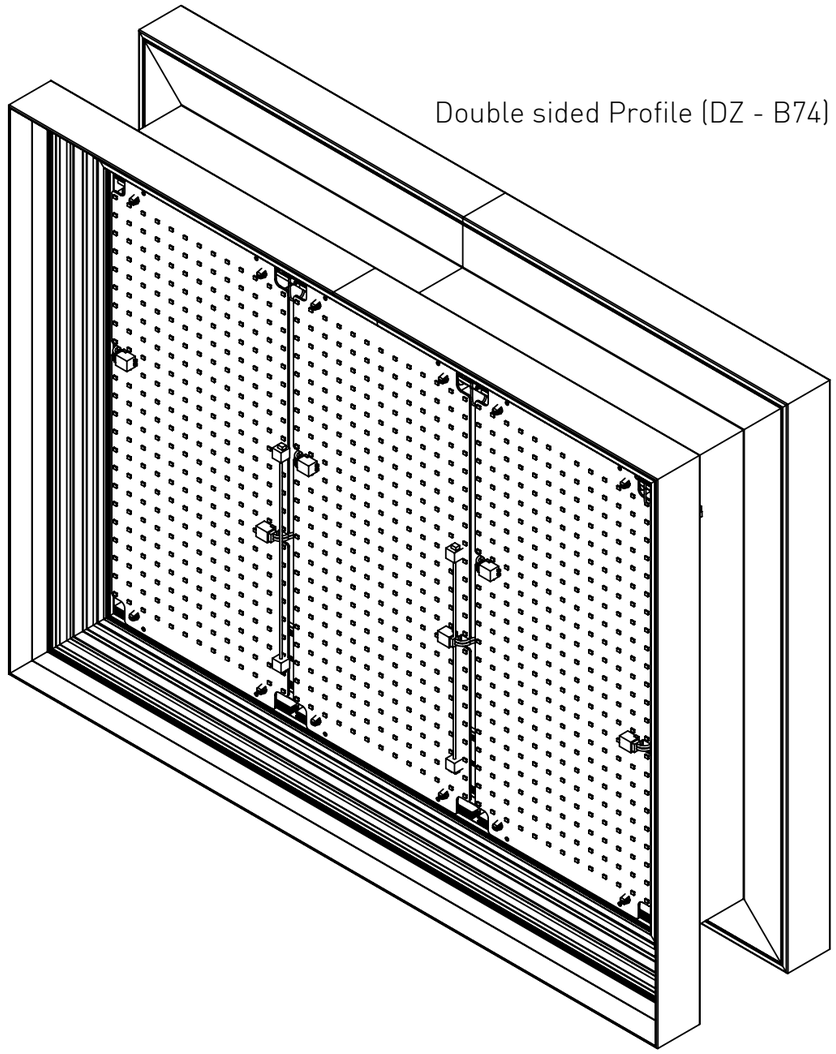
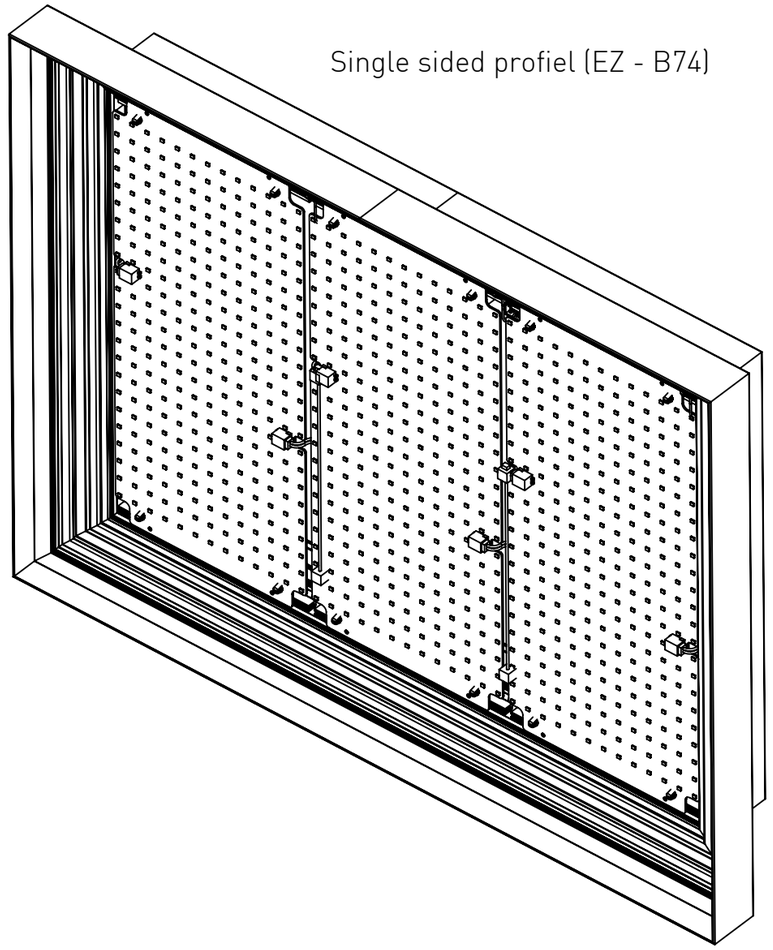
Double sided Profile (DZ - B74)



Single sided profiel (EZ - B74)



General note:
Lifespan of the complete set: >15years

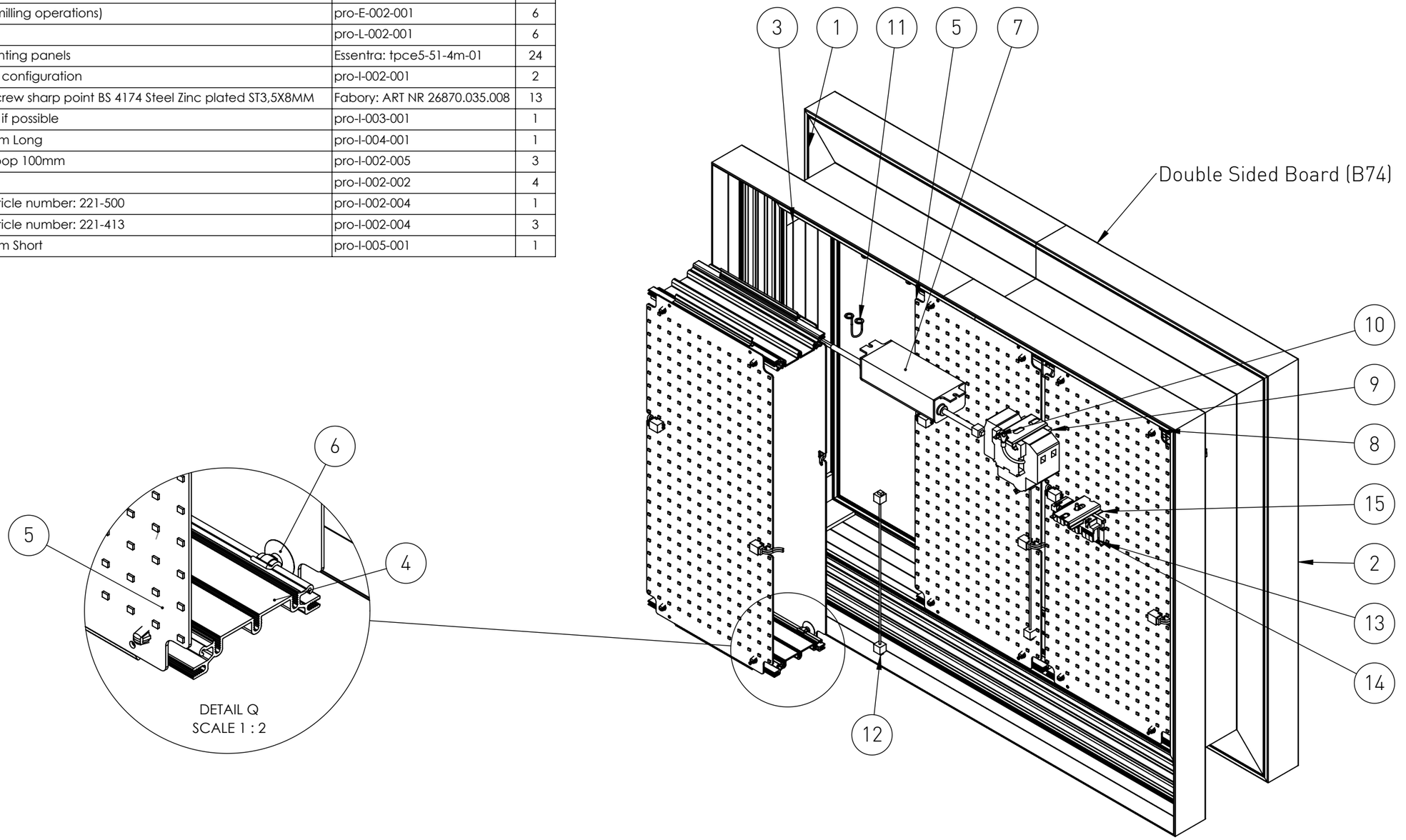
File name project#_concept_part-name_revision 220120 PRO_BWW-Assem			**projection**
scope	**Description** 220120 PRO-BWW-Assem	**Drawing status**	**scale** 1:5
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Requirements Wayfinding LED Retrofit (complete assembly)

V1.5 (02-09-2020)

Nr	Demands
1. Introduction	
1.1	The LEDs and power supply (driver) can be installed without having to adjust the appearance, onstruction or power connection (RETROFIT)
2. Functional and technical requirements - hardware	
2.1	Suitable for 10 widths and 4 heights, single-sided and double-sided
2.2	Connection is resistant to heat, cold (-20 to 60 degrees Celsius), vibrations, corrosion, moisture, UV (light)
2.3	The solution and the fixing method must be resistant to vibrations.
2.4	Lighting evenness equal to or better than current signs
2a. Functional and Technical requirements - LED and driver	
2.5	Power factor of the applied driver must be greater than 0.9.
2.6	Energy consumption may be a maximum of 45W/m2.
2.8	The brightness, measured on the white part of the front panel, should be on average 340 Cd/m2 (+/- 5%).
2.9	The color temperature, measured on the white part of the front plate, should be 4000K +/- 500K.
2.10	The color rendering of the light source must be at least 75Ra.
2.11	The lumen output must be at least 70 Lm/W. The LED fixture must be measured in accordance with IES LM-79-08 or equivalent.
2.12	The driver must be insensitive to environmental influences, in particular grounding, return currents, EMC, etc. in accordance with ProRail requirements.
2.13	The solution should continue to function under the following conditions: -20 degrees to 60 degrees, Relative humidity of 30% to 90%.
2.14	The solution should not be damaged under the following conditions: -20 degrees to 70 degrees, Relative humidity of 20% to 100%.
2.15	The regulation or control of the LEDs must comply with the international standard IEEE1789, mandatory CCR use for stroboscopic effect.
2.16	The quality selection (binning) with regard to the light color and color rendering depreciation should have a maximum spread of greater/equal than 3 MacAdam Steps.
2.17	When using the pulse width modulation (PWM) technique, the frequency and flicker must at least comply with the following limit values: Frequency greater/equal to 120Hz a maximum flicker of 10%, Frequency greater/equal to 1250Hz a maximum flicker of 100% .
2.18	The solution must be able to be connected to both solid and flexible cable with a diameter of 1.5-6mm2.
2.19	The solution must have a safety built-in that protects the wiring of electrical installations against damage caused by excessive electrical currents. This must be selective on the fuse in front, assuming that it is 16A (ampere).
2.20	As far as possible, all conductive parts not belonging to the electrical installation are connected to the PE pipe of the electrical installation in a central location.
2.21	Solution must comply with EMC requirements (RLN000007): equipment near all electrified and non-electrified track sections managed by ProRail
2.22	To be connected to current power supply (230V)
3. RAMSCHE-requirements	
3.1	The light source must have a service life of at least 50,000 burning hours.
3.2	At the end of the service life of the light source, 90% of the LEDs should still produce at least 80% of the initial luminous flux. (In accordance with IEC 62717: Lp 80 Bp 10)
3.3	The lifespan of the LEDs must be specified in accordance with LM-79-08 and TM21.
3.4	The availability of the BWW is only limited by carrying out technical maintenance, by carrying out adjustments and by carrying out repairs as a result of vandalism.
3.5	Worn and defective parts must be exchanged quickly with simple hand tools. The details of these requirements will be determined together with ProRail during the project.
3.6	The subsequent delivery of components or an alternative equivalent product must be guaranteed during the technical lifespan (15 years).
3.7	All components used must be freely available on the market, so that ProRail is not tied to a supplier for maintenance.
3.8	The driver required for the LEDs must have a protection factor of at least IP67 and must at least comply with ENEC guidelines for safety and interference suppression.
3.9	After the end of their use, the products must be reusable or destroyed with the least possible impact on the environment
4. Additional requirements	
4.1	It must be possible to convert the BWW to LED by 1 person (switching power supply not included)
4.2	The solution should pay for itself in a period to be determined during the project
	* For deliverables we refer to pro bww 200611 offer.pdf
5. Wishes	
2.7	Light distribution from the front plate must have uniformity of at least 0.75 (uniformity is the minimum brightness divided by the average brightness). However, requirement 2.4 is leading. At an evenness of at least 0.75, the outer edge may not need to be included.

ITEM NO.	DESCRIPTION	Article Number	QTY.
1	Base Profile DZ B74	none	1
2	Window Profile B74	none	2
3	Corner Piece	none	4
4	Base Profile DZ (Including milling operations)	pro-E-002-001	6
5	LED-Panel Confi B	pro-L-002-001	6
6	Essentra Clip - nylon - mounting panels	Essentra: tpce5-51-4m-01	24
7	LED Driver as specified per configuration	pro-I-002-001	2
8	Flange head PZ tapping screw sharp point BS 4174 Steel Zinc plated ST3,5X8MM	Fabory: ART NR 26870.035.008	13
9	Switch - as existing - re-use if possible	pro-I-003-001	1
10	Standard DIN-Rail 35x7.5mm Long	pro-I-004-001	1
11	211208 Ground wire with loop 100mm	pro-I-002-005	3
12	LED Panel connector	pro-I-002-002	4
13	WAGO Terminal block - Article number: 221-500	pro-I-002-004	1
14	WAGO Terminal block - Article number: 221-413	pro-I-002-004	3
15	Standard DIN-Rail 35x7.5mm Short	pro-I-005-001	1



See the BOM on page 6 for all the configurations.

File name
project#_concept_part-name_revision
220120 PRO_BWW-Assem

projection

scope

Description
220120 PRO-BWW-Assem

Drawing status

scale
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Material

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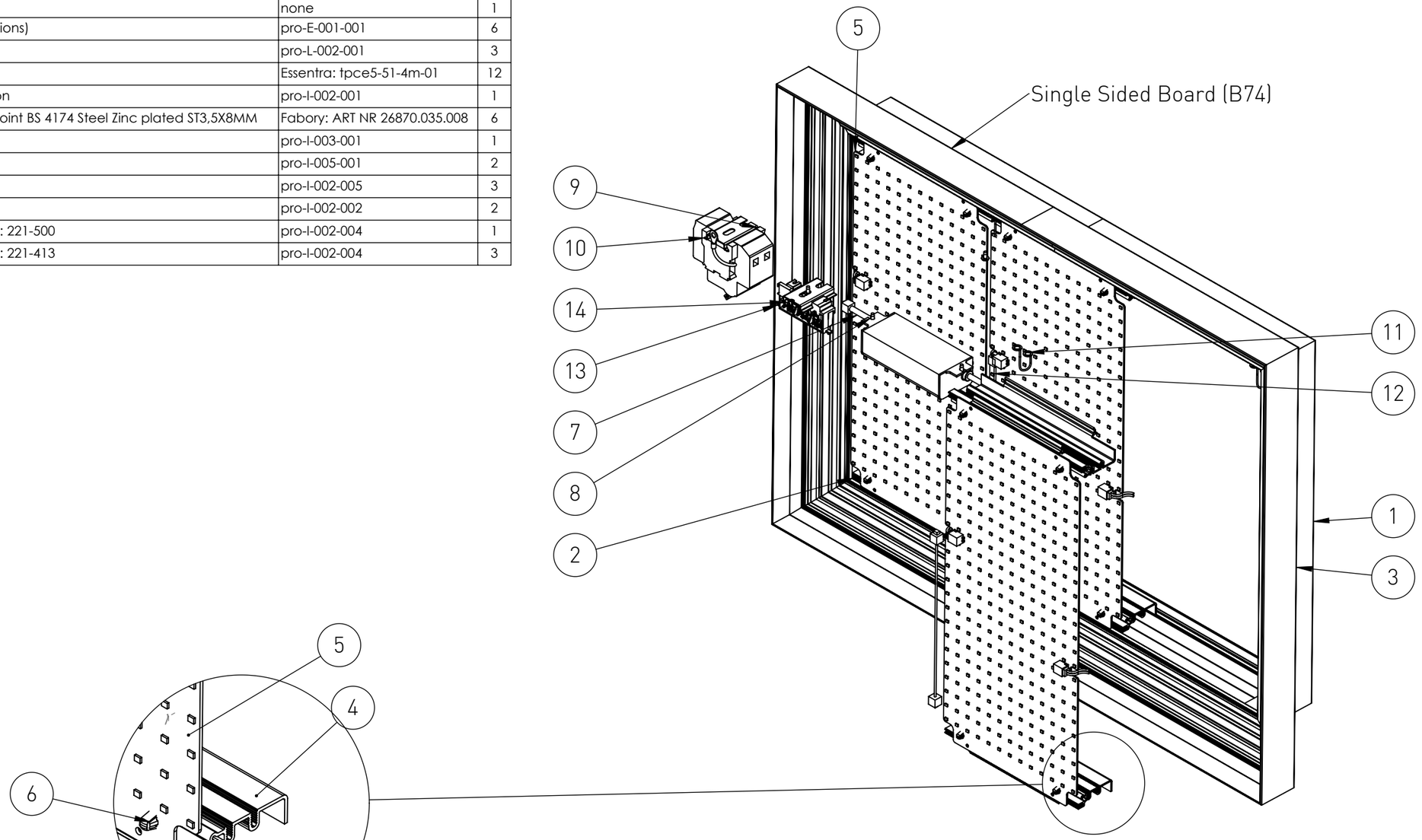
Date
220120

Finish

Volume[cubic cm]

Paper size
A3

ITEM NO.	DESCRIPTION	Article Number	QTY.
1	Base Profile EZ B74 (as existing)	none	1
2	Corner Piece EZ (as existing)	none	4
3	Window Profile B74	none	1
4	Base Profile EZ (including milling operations)	pro-E-001-001	6
5	LED-Panel Confi B	pro-L-002-001	3
6	Essentra Clip - nylon - mounting panels	Essentra: tpce5-51-4m-01	12
7	LED Driver as specified per configuration	pro-I-002-001	1
8	Flange head PZ tapping screw sharp point BS 4174 Steel Zinc plated ST3,5X8MM	Fabory: ART NR 26870.035.008	6
9	Switch - as existing - re-use if possible	pro-I-003-001	1
10	Standard DIN-Rail 35x7.5mm Short	pro-I-005-001	2
11	211208 Ground wire with loop 100mm	pro-I-002-005	3
12	LED Panel connector	pro-I-002-002	2
13	WAGO Terminal block - Article number: 221-500	pro-I-002-004	1
14	WAGO Terminal block - Article number: 221-413	pro-I-002-004	3



See the BOM on page 6 for all the configurations.

File name
project#_concept_part-name_revision
220120 PRO_BWW-Assem

projection

scope

Description
220120 PRO-BWW-Assem

Drawing status

scale
1:5

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Finish

Volume[cubic cm]

Paper size
A3

Total configurations overview:

			breedte plaatmaat									
		mm	320	560	740	800	960	1048	1345	1643	2140	2440
hoogte plaatmaat	A	320	A32	A56	A74	A80	A96	A105	A135	A165	A215	A245
	B	560		B56	B74	B80	B96	B105	B135	B165	B215	
	C	800				C80	C96	C105	C135	C165		
	D	1040						D105	D135	D165		

File name project#_concept_part-name_revision 220120 PRO_BWW-Assem			projection
scope	Description Total configuration overview	Drawing status	scale 1:5
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Drawn by PL / Date 220120	Finish	Volume[cubic cm]	Paper size A3

Partlist (BOM) all configurations:

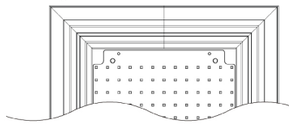
LED PANELS & PARTS SUPPLIER																				Extrusion parts supplier	
description	*LED Panel A*	*LED Panel B*	*LED Panel C*	*LED Panel D*	*No. Of drivers V1*	*Power per driver V1 (W)*	*No. Of drivers V2*	*Power per driver V2 (W)*	*Amount of power supplied per board (W)*	*Amount of power needed per board (W)*	*Connector cable between LED panels*	*Driver incomming cable length (mm)*	*Driver to LED panel cable length (mm)*	*Terminal (from switch to multiple drivers)*	*DIN Rail EZ (for switch mounting)*	*DIN Rail DZ (for switch mounting)*	*Essentra mounting clip*	*Groundwire 100mm Connect clickprofile to base profile*	*st.3.5 self tapping screw - Numbers depending on configurations*	*Double sided-profiles*	*One sided-profiles*
article no.	*pro-L-001-001*	*pro-L-002-001*	*pro-L-003-001*	*pro-L-004-001*		*pro-I-002-001*		*pro-I-002-001*			*pro-I-002-002*			*pro-I-002-004*	*pro-I-005-001*	*pro-I-004-001*	*TPCE5-51-4M-01 (Essentra)*	*pro-I-002-005*	*26660035006 (Fabory)*	*pro-E-002-001*	*pro-E-001-001*
Type of board																					
A																					
A32D	*2*				1	4,1			4,1	4,1	1	400	200	0		1	8	2		2	
A32E	*1*				1	2,0			2,0	2,0	0	400	200	0	1		4	2			2
A56D	*4*				2	4,1			8,2	8,2	2	550	700	1		1	16	4		4	
A56E	*2*				1	4,1			4,1	4,1	1	150	700	0	1		8	4			4
A74D	*6*				2	6,1			12,2	12,2	4	350	800	1		1	24	6		6	
A74E	*3*				1	6,1			6,1	6,1	2	150	800	0	1		12	6			6
A96D	*8*				2	8,2			16,3	16,3	6	350	950	1		1	32	8		8	
A96E	*4*				1	8,2			8,2	8,2	3	150	950	0	1		16	8			8
A105D	*8*				2	8,2			16,3	16,3	6	300	1050	1		1	32	8		8	
A105E	*4*				1	8,2			8,2	8,2	3	150	1050	0	1		16	8			8
A135D	*12*				2	12,2			24,5	24,5	10	300	1050	1		1	48	12		12	
A135E	*6*				1	12,2			12,2	12,2	5	150	1050	0	1		24	12			12
A165D	*14*				2	14,3			28,6	28,6	12	300	1050	1		1	56	14		14	
A165E	*7*				1	14,3			14,3	14,3	6	150	1050	0	1		28	14			14
A215D	*18*				6	6,1			36,7	36,7	12	750	1050	1		1	72	18		18	
A215E	*9*				3	6,1			18,4	18,4	6	550	1050	1	1		36	18			18
A245D	*22*				2	14,3	2	8,2	45,0	44,9	18	500	650	1		1	88	22		22	
A245E	*11*				1	14,3	1	8,2	22,5	22,4	9	500	650	1	1		44	22			22
B																					
B56D		*4*			2	9,4			18,8	18,8	2	550	700	1		1	16	4		4	
B56E		*2*			1	9,4			9,4	9,4	1	150	700	0	1		8	4			4
B74D		*6*			2	14,1			28,2	28,2	4	350	800	1		1	24	6		6	
B74E		*3*			1	14,1			14,1	14,1	2	150	800	0	1		12	6			6
B96D		*8*			2	18,8			37,6	37,6	6	350	950	1		1	32	8		8	
B96E		*4*			1	18,8			18,8	18,8	3	150	950	0	1		16	8			8
B105D		*8*			2	18,8			37,6	37,6	6	300	1050	1		1	32	8		8	
B105E		*4*			1	18,8			18,8	18,8	3	150	1050	0	1		16	8			8
B135D		*12*			2	28,2			56,4	56,4	10	300	1050	1		1	48	12		12	
B135E		*6*			1	28,2			28,2	28,2	5	150	1050	0	1		24	12			12
B165D		*14*			2	32,9			65,8	65,8	12	300	1050	1		1	56	14		14	
B165E		*7*			1	32,9			32,9	32,9	6	150	1050	0	1		28	14			14
B215D		*18*			6	14,1			84,6	84,6	12	750	1050	1		1	72	18		18	
B215E		*9*			3	14,3			42,8	42,3	6	550	1050	1	1		36	18			18
C																					
C80D			*6*		2	22,7			45,4	45,4	4	350	950	1		1	24	6		6	
C80E			*3*		1	22,7			22,7	22,7	2	150	950	0	1		12	6			6
C96D			*8*		2	30,2			60,5	60,5	6	350	950	1		1	32	8		8	
C96E			*4*		1	30,2			30,2	30,2	3	150	950	0	1		16	8			8
C105D			*8*		2	30,2			60,5	60,5	6	300	1050	1		1	32	8		8	
C105E			*4*		1	30,2			30,2	30,2	3	150	1050	0	1		16	8			8
C135D			*12*		2	45,4			90,7	90,7	10	300	1050	1		1	48	12		12	
C135E			*6*		1	45,4			45,4	45,4	5	150	1050	0	1		24	12			12
C165D			*14*		2	52,9			105,8	105,8	12	300	1050	1		1	56	14		14	
C165E			*7*		1	52,9			52,9	52,9	6	150	1050	0	1		28	14			14
D																					
D105D				*8*	2	40,8			81,6	81,6	*6*	*300*	*1050*	*1*		1	32	8		8	
D105E				*4*	1	40,8			40,8	40,8	*3*	*150*	*1050*	*0*	1		16	8			8
D135D				*12*	2	61,2			122,4	122,4	*10*	*300*	*1050*	*1*		1	48	12		12	
D135E				*6*	1	61,2			61,2	61,2	*5*	*150*	*1050*	*0*	1		24	12			12
D165D				*14*	2	71,4			142,8	142,8	*12*	*300*	*1050*	*1*		1	56	14		14	
D165E				*7*	1	71,4			71,4	71,4	*6*	*150*	*1050*	*0*	1		28	14			14

This page shows the quantity and required components for every configuration.

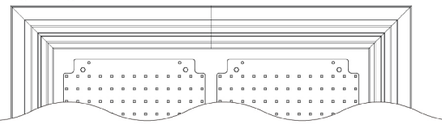
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scope	**Description** Partlist of all configurations	**Drawing status**	**scale** 1:5
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Overview of LED spacing, spacing between the LED-Panels and the amount of LED-Panels per board configuration:

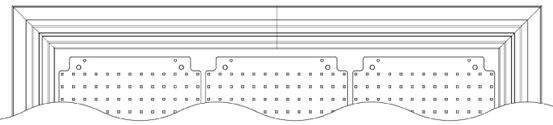
A320



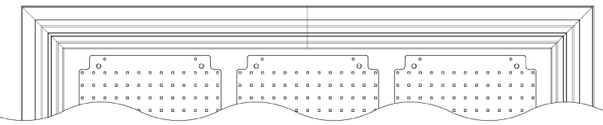
A560 - B560



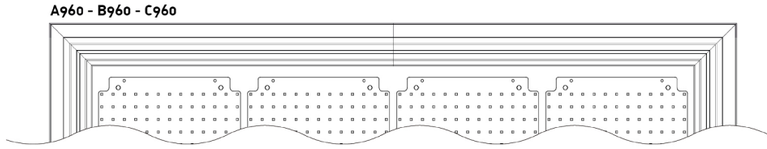
A740-B740



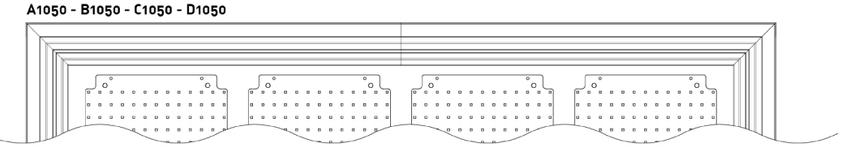
A800 - B800 - C800



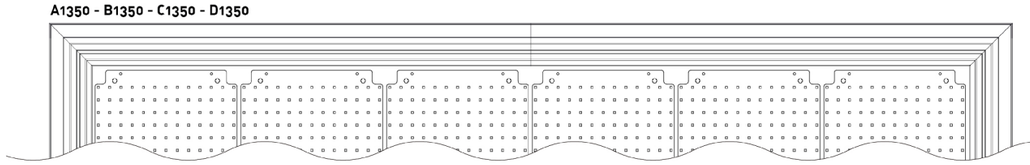
A960 - B960 - C960



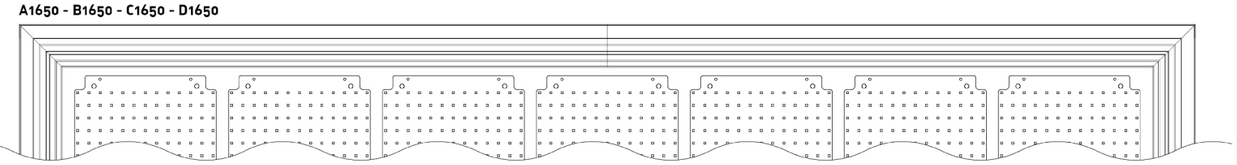
A1050 - B1050 - C1050 - D1050



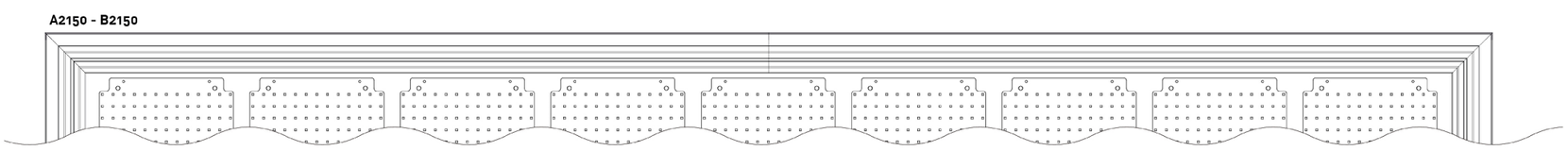
A1350 - B1350 - C1350 - D1350



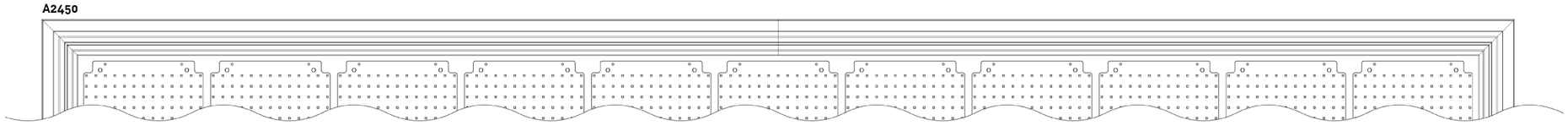
A1650 - B1650 - C1650 - D1650



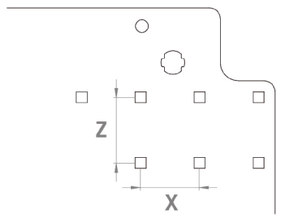
A2150 - B2150



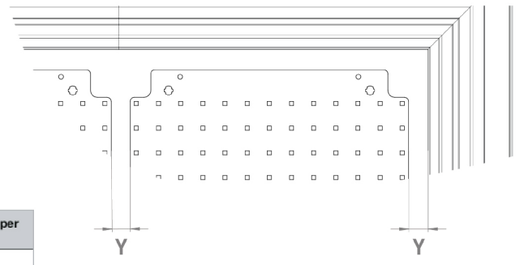
A2450



	Amount of panels One-sided boards	Amount of panels Dubble-sided boards	Y - Spacing between panels (mm)
A32	1	2	2.50
A56, B56	2	4	14.00
A74, B74	3	6	4.75
A80, B80, C80	3	6	19.75
A96, B96, C96	4	8	9.00
A105, B105, C105, D105	4	8	24.00
A135, B135, C135, D135	6	12	2.15
A165, B165, C165, D165	7	14	13.75
A215, B215	9	18	20.10
A245	11	22	7.95



	X - Horizontal LED pitch (mm)	Z - Vertical LED pitch (mm)	Amount of LED's per panel
A	16.15	17.13	130
B	16.15	18.01	299
C	16.15	17.67	481
D	16.15	17.88	650



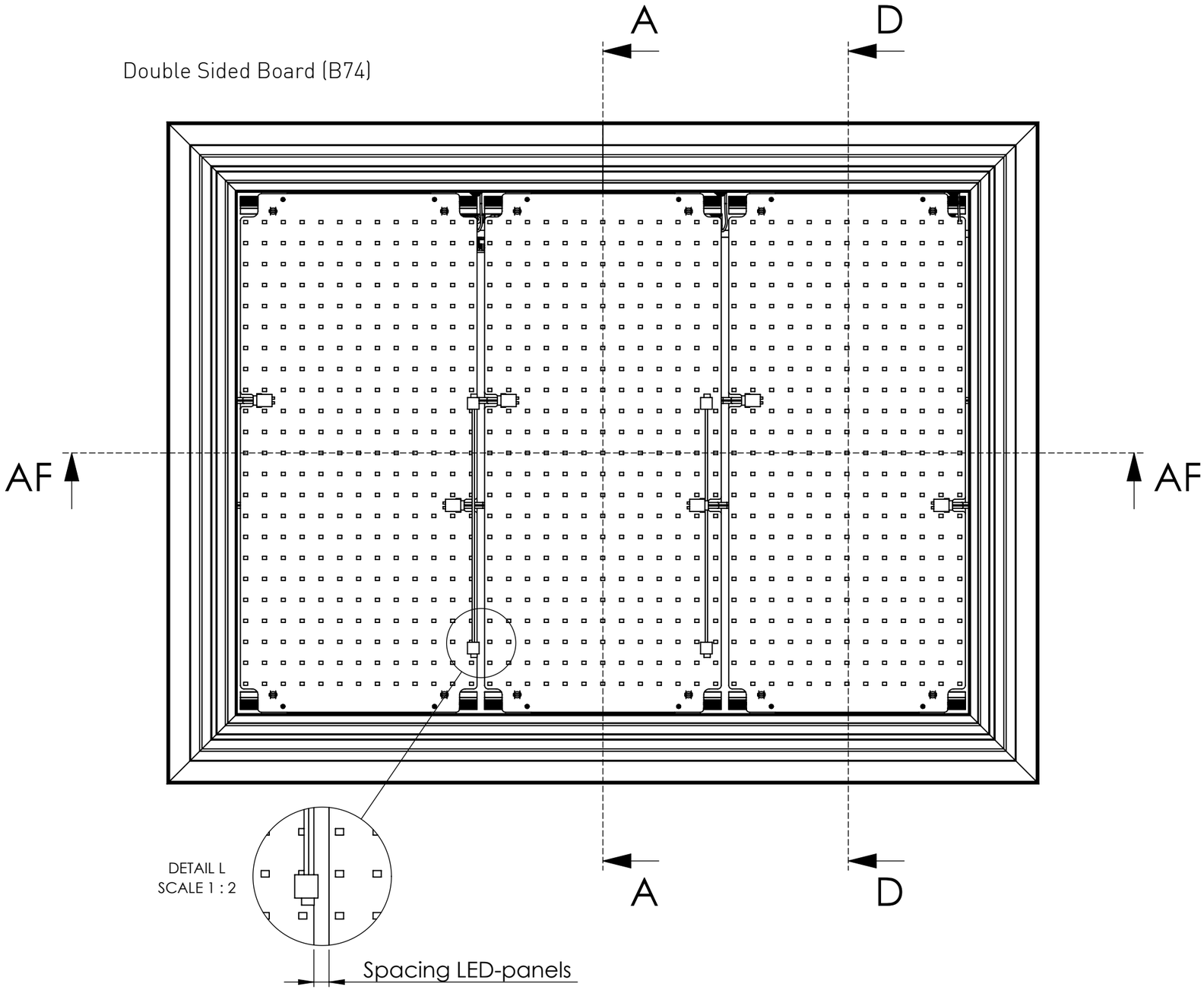
Note:
LED-Panels should have equal spacing (See Y-spacing in table) to ensure evenly distributed light.

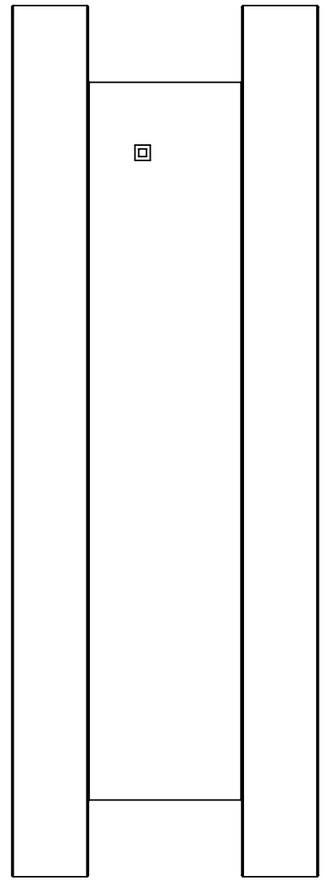
A visual check is always required after mounting the system.

Maximum light intensity difference may be a maximum of 2-3% between the least bright and most bright LED panel in all different configurations.

LED-panels degradation end of life is 5%

Double Sided Board (B74)





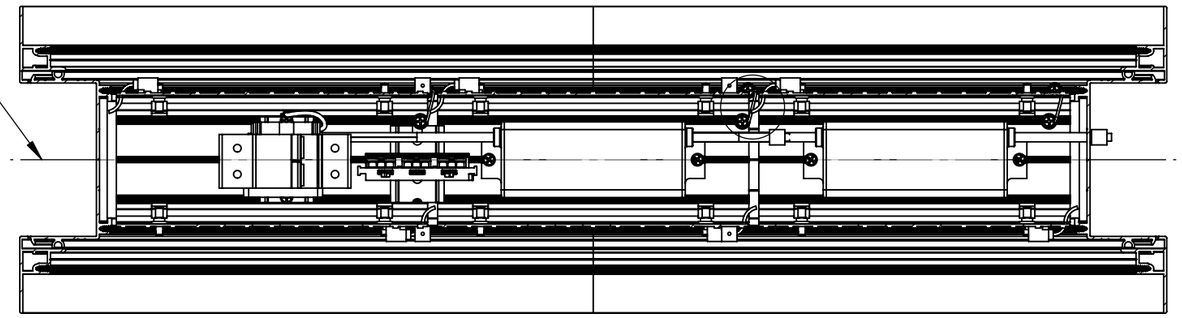
Spacing between panels is different in every configuration see page 7

File name project#_concept_part-name_revision 220120 PRO_BWW-Assem			**projection**
scope	**Description** 220120 PRO-BWW-Assem	**Drawing status**	**scale** 1:4
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Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

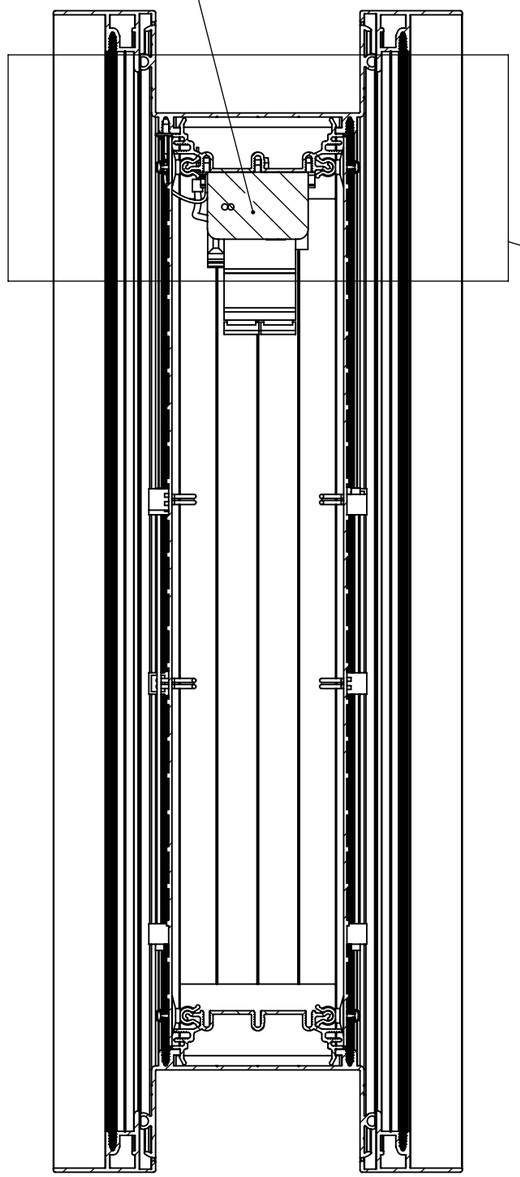
Mount all the components in
the center of the ProRail profiles to maximize
the internal space
(see the centered screw detail on page 20)

Mount the components to the
top of the board for easy on-
site mounting

BN

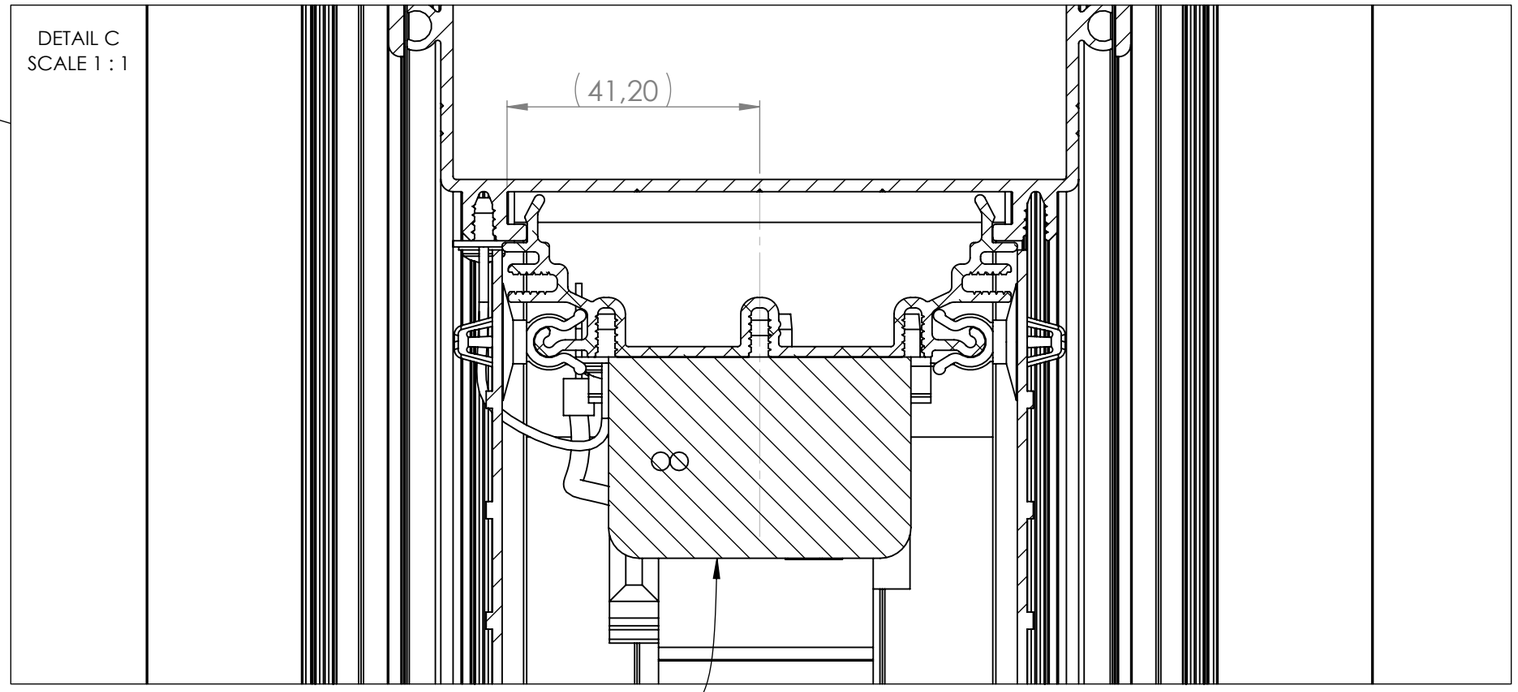


SECTION AF-AF



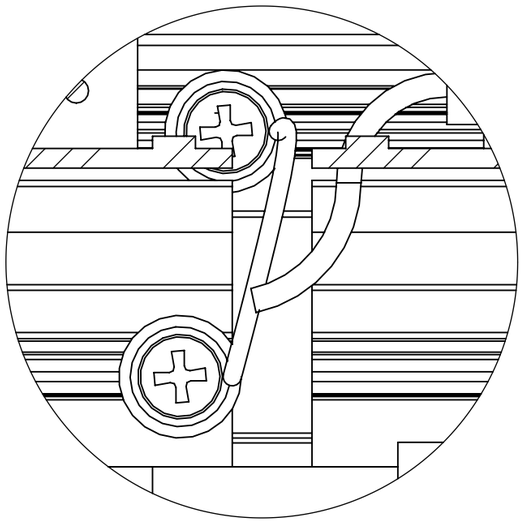
SECTION A-A

DETAIL C
SCALE 1 : 1



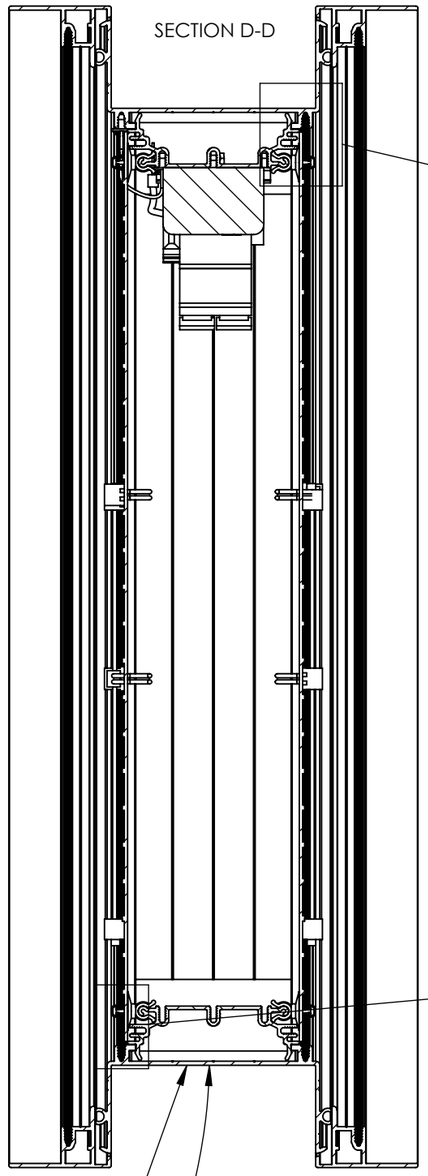
Quantity of drivers and the power of every Driver must be specified per board configurations,
also a double sided board needs at least two drivers (one driver a side).

File name project#_concept_part-name_revision 220120 PRO_BWW-Assem			projection
scope	Description 220120 PRO-BWW-Assem	Drawing status	scale 1:3
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Drawn by PL	Date 220120	Finish	Volume[cubic cm]	Paper size A3



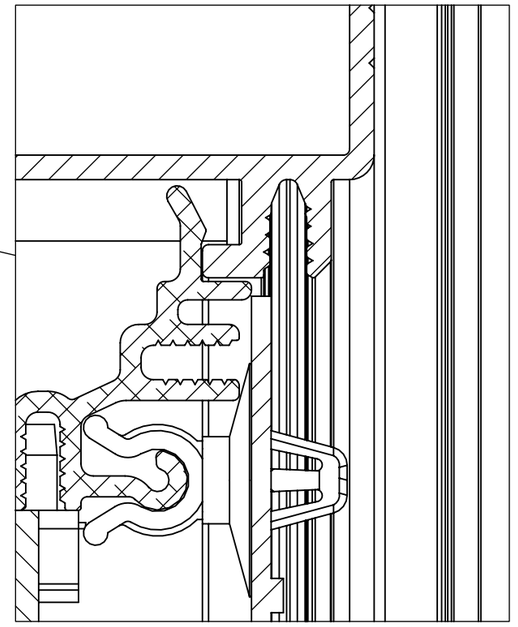
DETAIL BN
SCALE 2 : 1

SECTION D-D



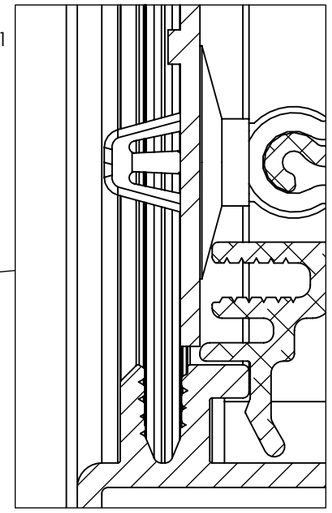
Existing profile

DETAIL E
SCALE 2 : 1



Spacing between clip and profile detail

DETAIL F
SCALE 2 : 1

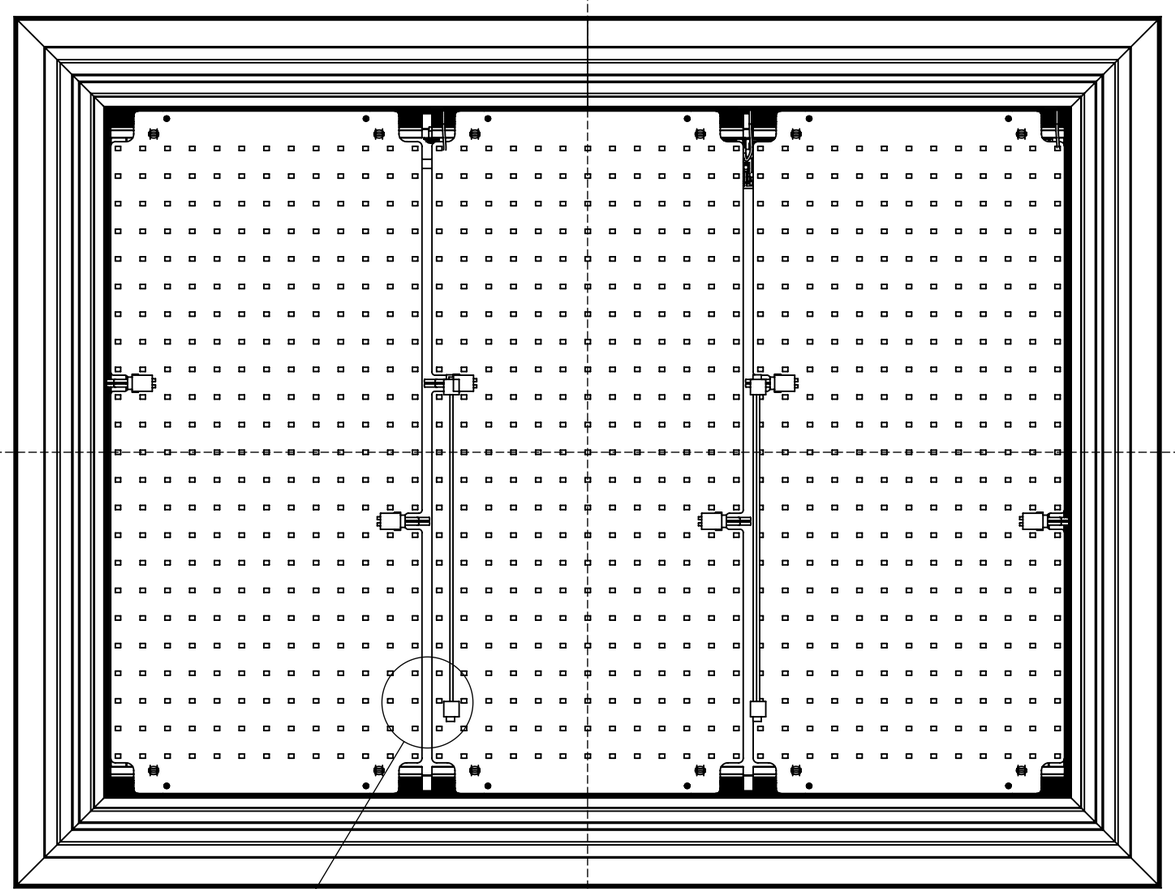


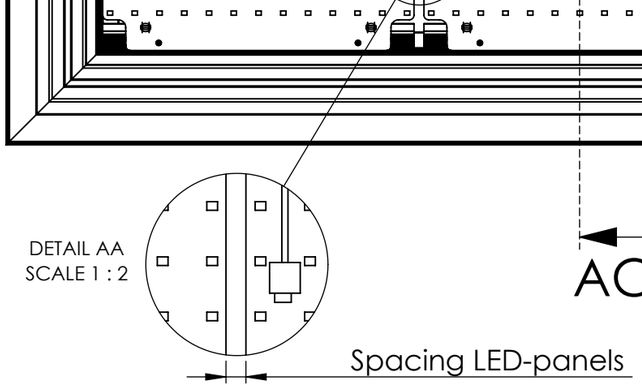
Overlap clicker to clicksurface

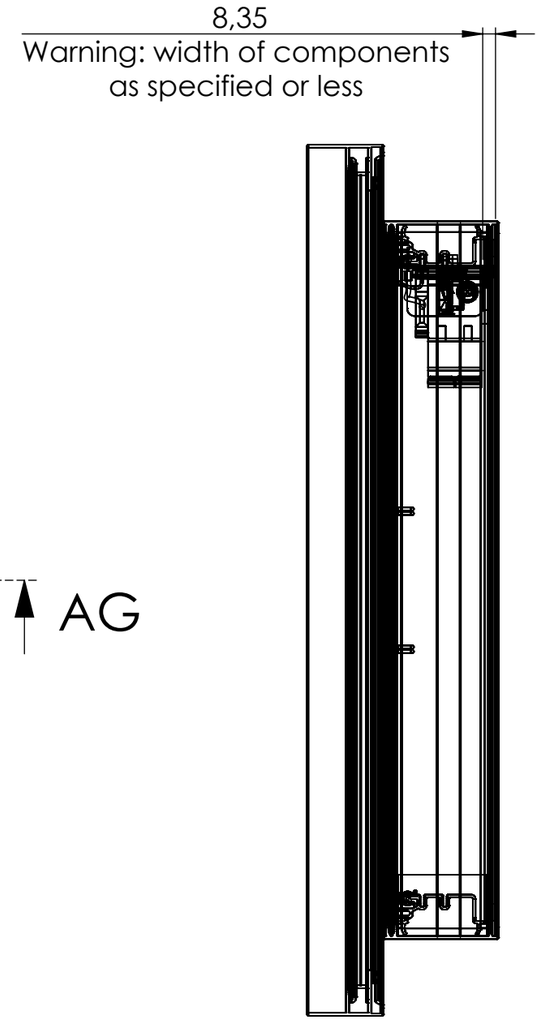
Screw a groundwire in every clicked-in profile (pro-E-001-001 & pro-E-002-001) upon which an electric component is mounted.
Screw/connect the groundwire onto the existing base profile.
Length of groundwire is 100mm.

File name project#_concept_part-name_revision 220120 PRO_BWW-Assem				**projection**
scope	**Description** 220120 PRO-BWW-Assem		**Drawing status**	**scale** 1:3
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Drawn by PL	**Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

Single Sided Board (B74)



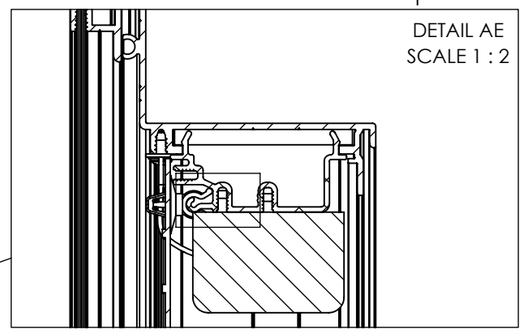




Spacing between panels is different in every configuration see page 7

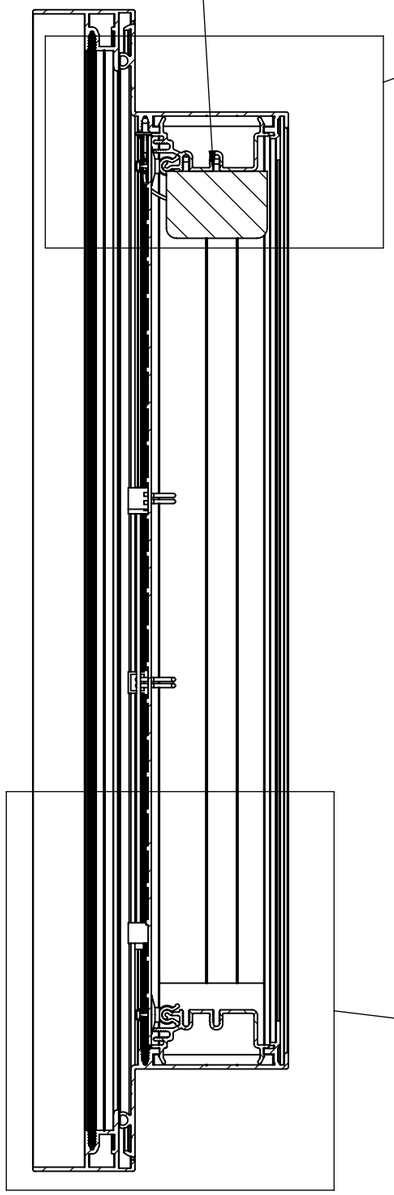
File name project#_concept_part-name_revision 220120 PRO_BWW-Assem			**projection**
scope	**Description** 220120 PRO-BWW-Assem	**Drawing status**	**scale** 1:4
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Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

Position driver between clips



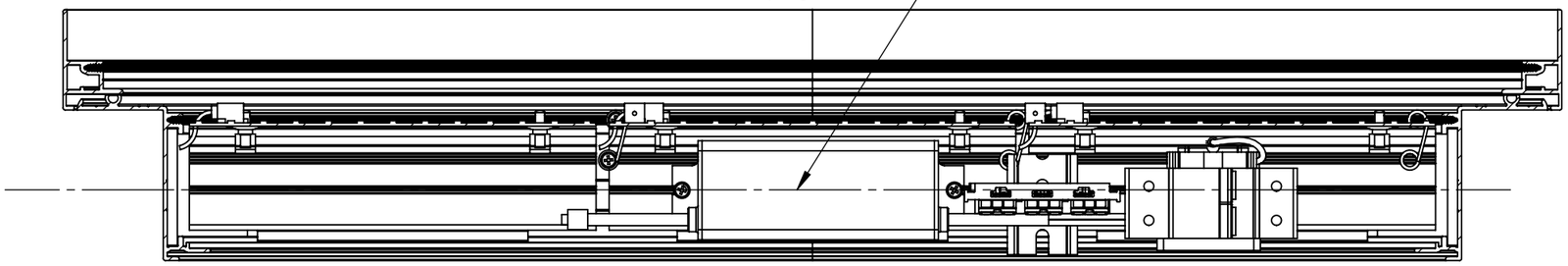
DETAIL AE
SCALE 1 : 2

Mount the components to the top of the board for easy on-site mounting

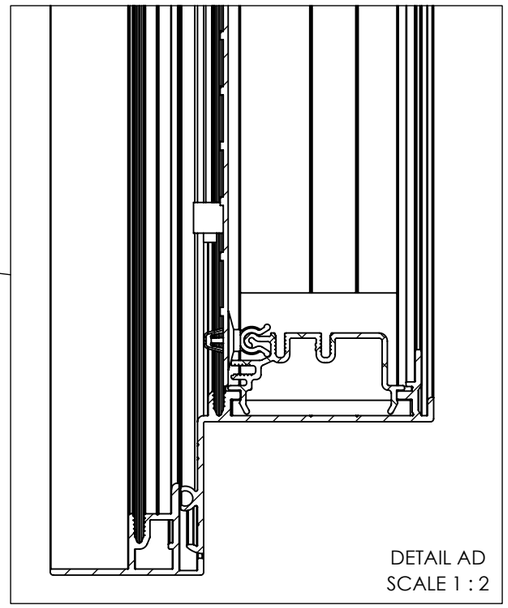


SECTION AC-AC

Mount all the components in the center of the ProRail profiles to maximize the internal space (see the centered screw detail on page 22)



SECTION AG-AG

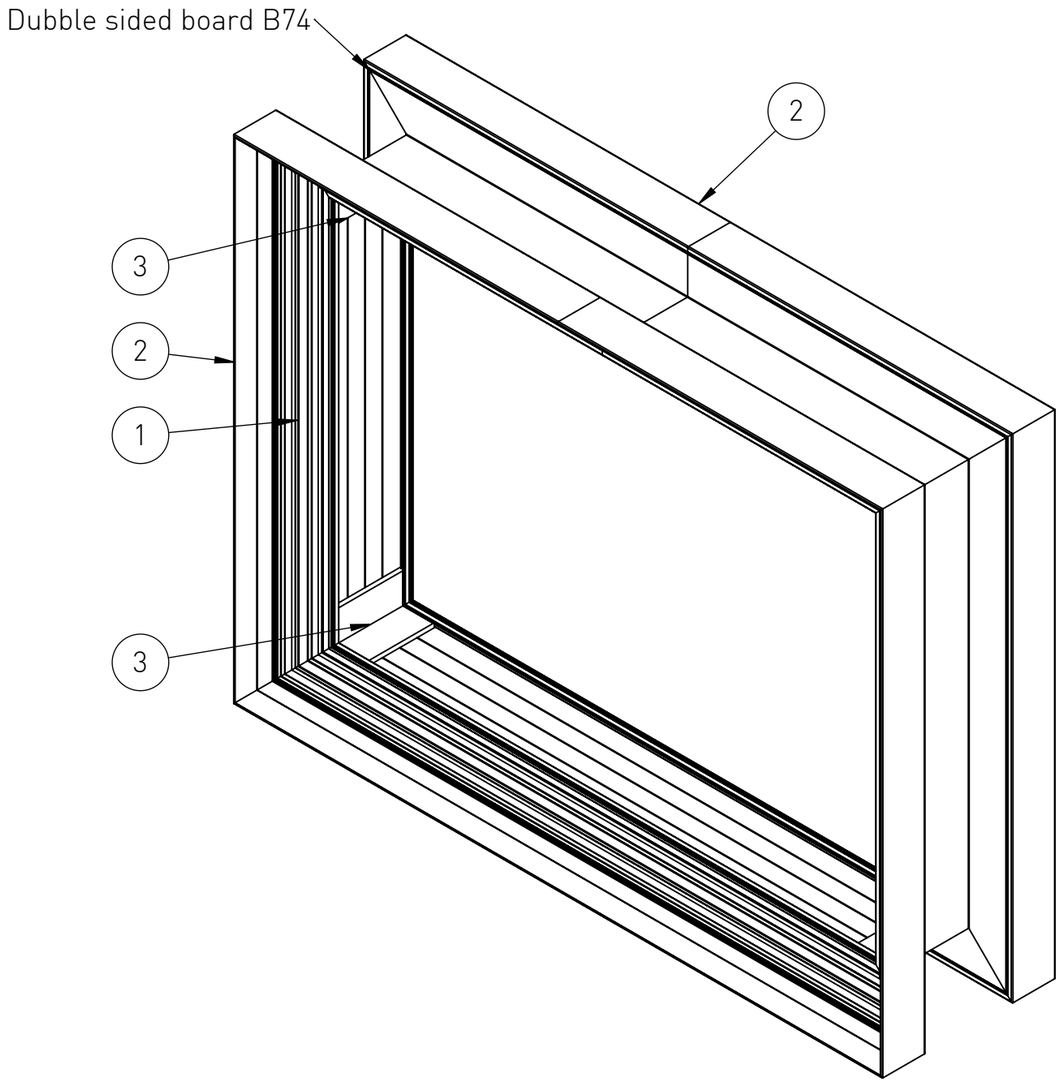


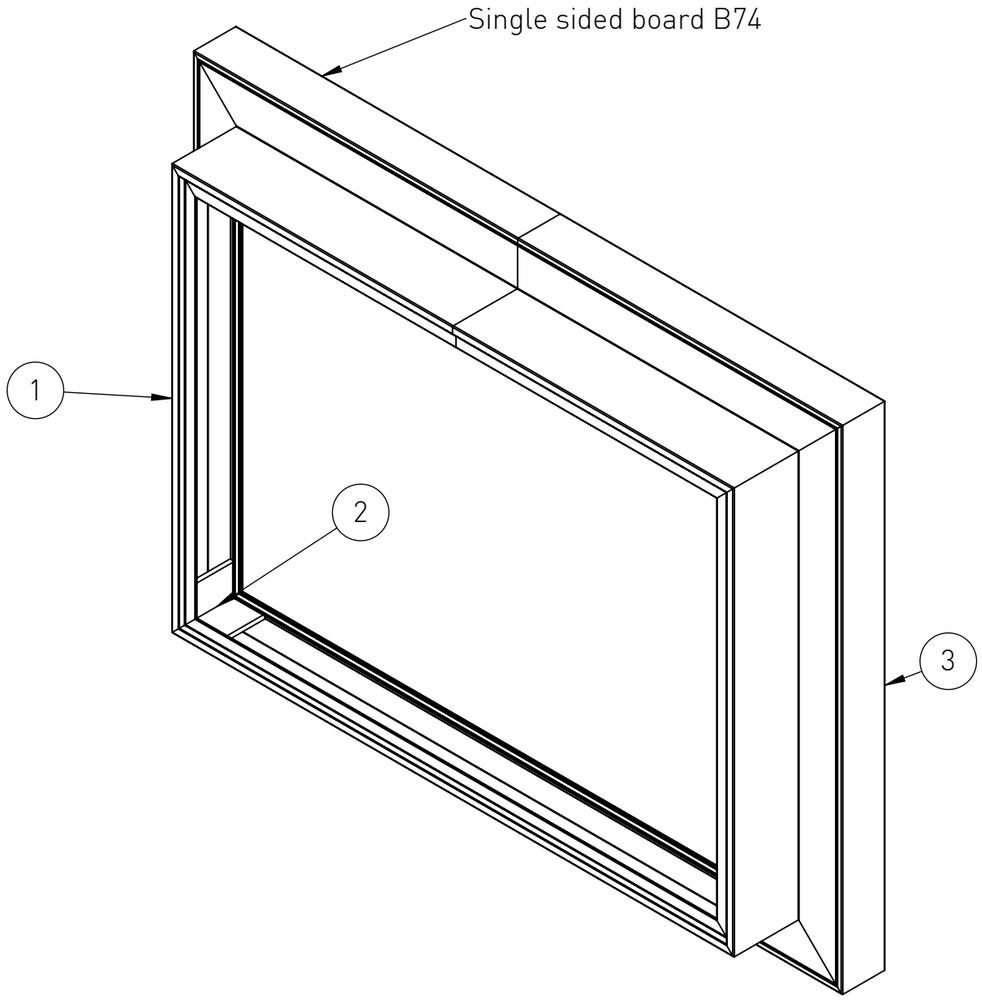
DETAIL AD
SCALE 1 : 2

File name project#_concept_part-name_revision 220120 PRO_BWW-Assem			**projection**
scope	**Description** 220120 PRO-BWW-Assem	**Drawing status**	**scale** 1:3
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Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

ITEM NO.	DESCRIPTION	QTY.
1	Base Profile DZ B74	1
2	Window Profile B74	2
3	Corner Piece	4

ITEM NO.	DESCRIPTION	QTY.
1	Base Profile EZ B74 (as existing)	1
2	Corner Piece EZ (as existing)	4
3	Window Profile B74	1





Existing model= needs to be Retro-fitted

File name
project#_concept_part-name_revision
220120-PRO_BWW-Profiles

projection

scope

Description
DZ-B74 (Existing Profiles)

Drawing status

scale
1:5

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Material

General tollerances
unless otherwise specified

Page
13/35

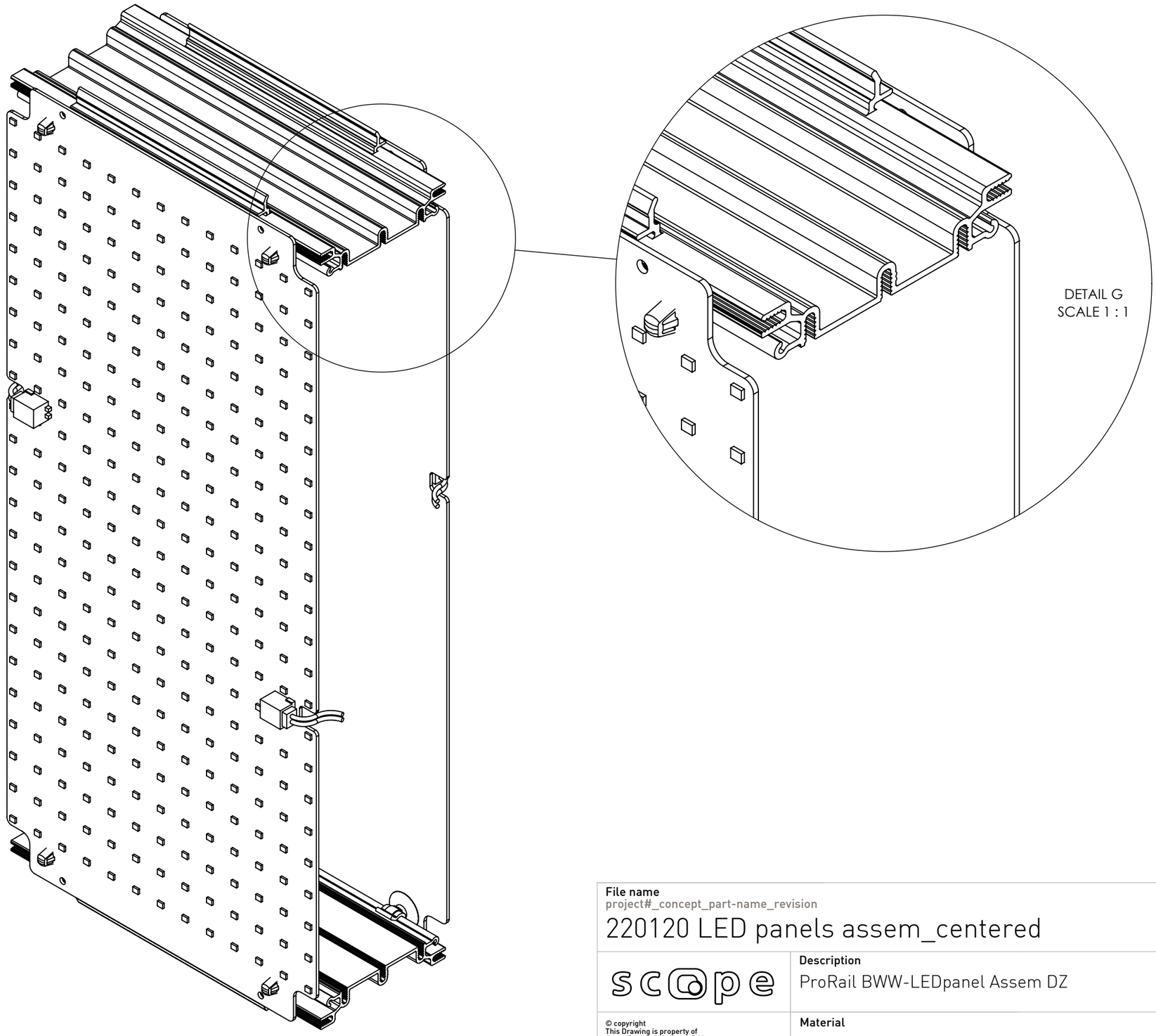
Drawn by
PL

Date
220120

Finish

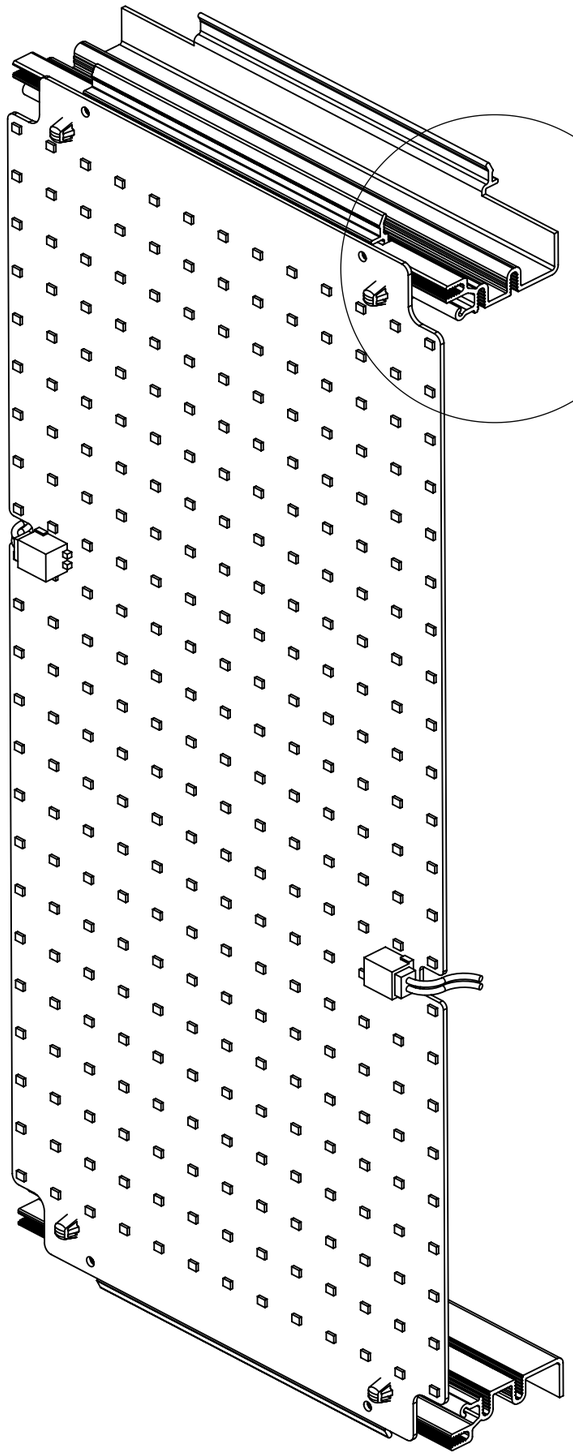
Volume[cubic cm]

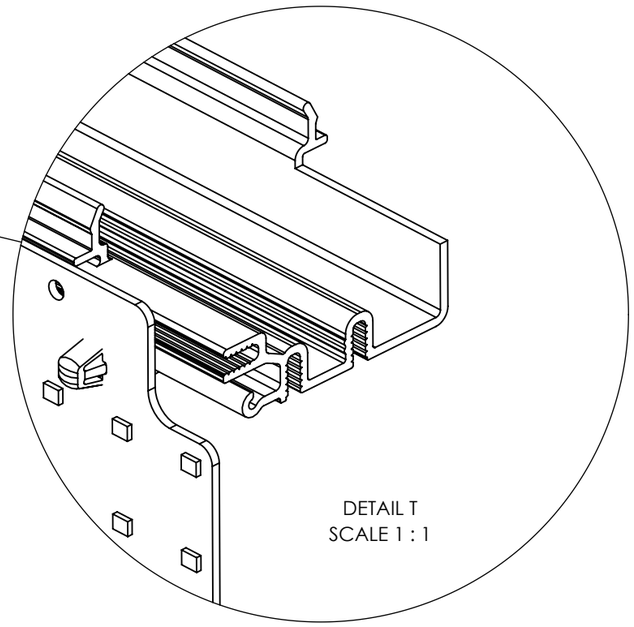
Paper size
A3



DETAIL G
SCALE 1 : 1

File name project#_concept_part-name_revision 220120 LED panels assem_centered			**projection**
scope	**Description** ProRail BWW-LEDpanel Assem DZ	**Drawing status**	**scale** 1:2
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Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3





File name
project#_concept_part-name_revision
220120 LED panels assem_centered

projection

scope

Description
ProRail BWW-LEDpanel Assem EZ

Drawing status

scale
1:2

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Material

General tollerances
unless otherwise specified

Page
15/35

Drawn by
PL

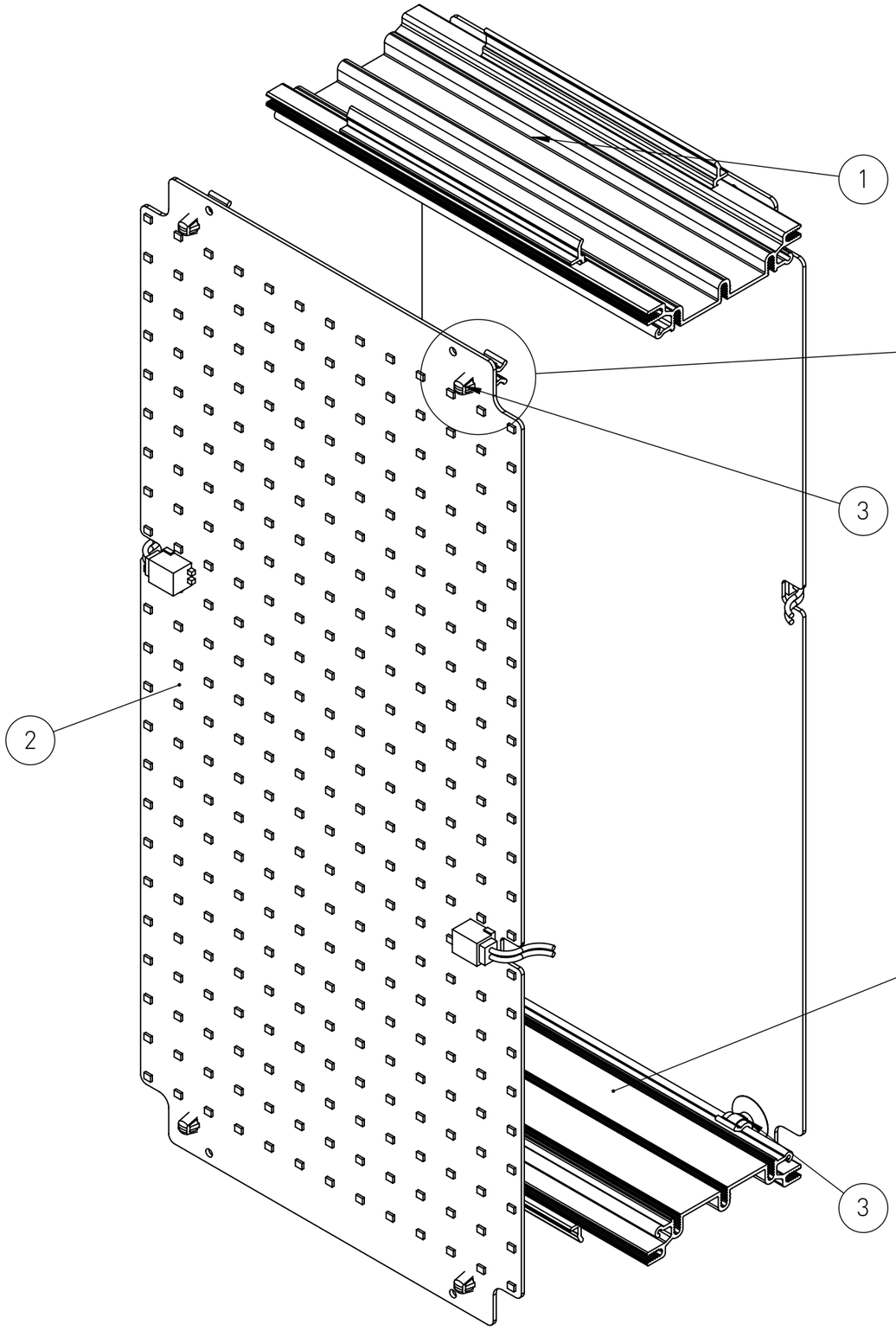
Date
220120

Finish

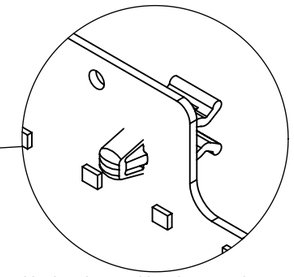
Volume[cubic cm]

Paper size
A3

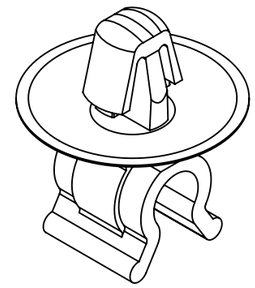
ITEM NO.	DESCRIPTION	Article Number	QTY.
1	Base Profile DZ (Including milling operations)	pro-E-002-001	2
2	LED-Panel Confi B	pro-L-002-001	2
3	Essentra Clip - nylon - mounting panels	Essentra: tpce5-51-4m-01	8



DETAIL BP
SCALE 1 : 1

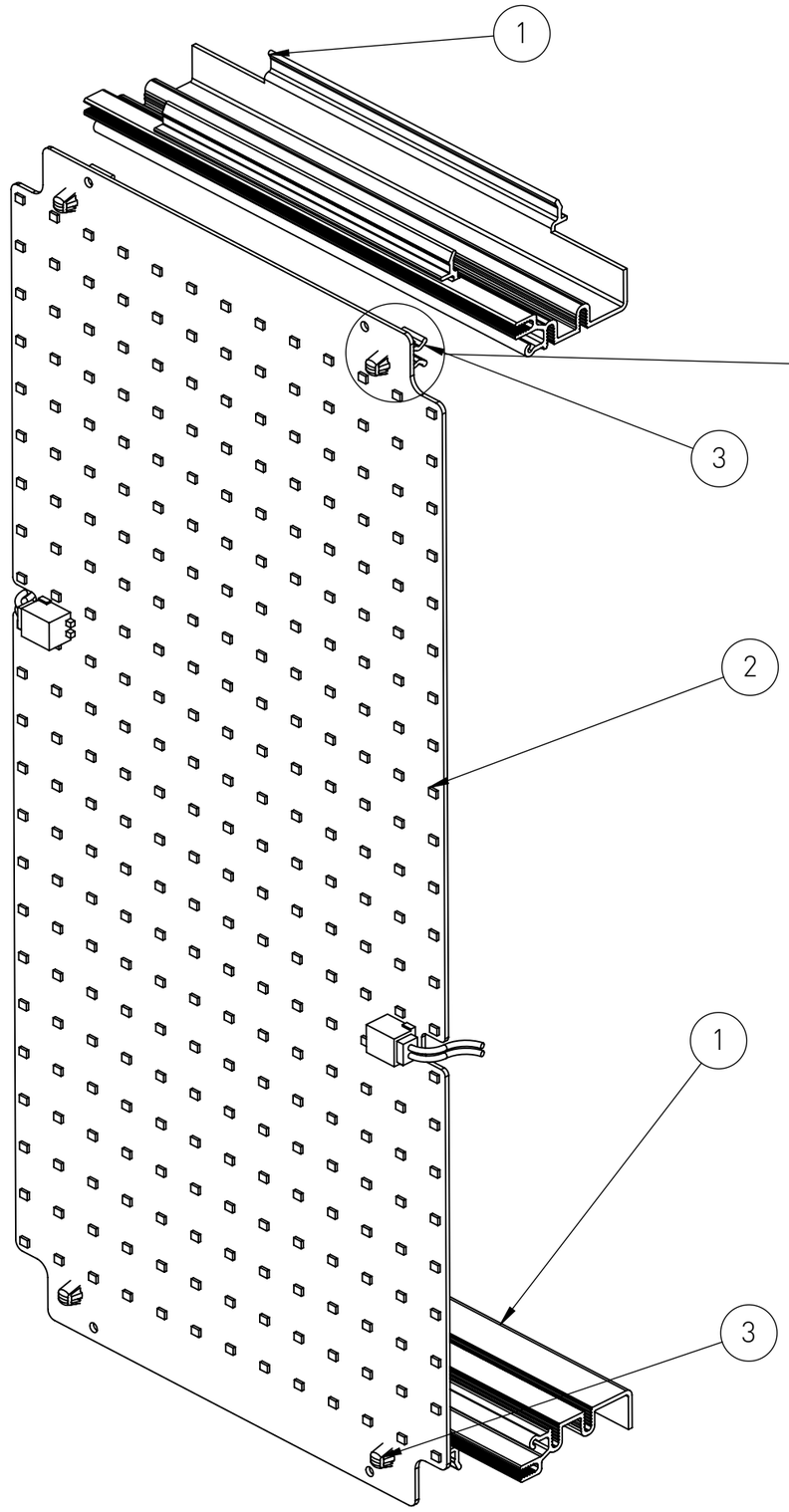


click the clip into the
LED panels (4x per panel)

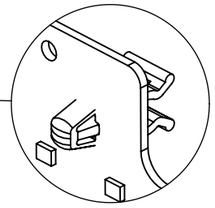


File name project#_concept_part-name_revision 220120 LED panels assem_centered			projection
scope	Description ProRail BWW-LEDpanel Assem DZ	Drawing status	scale 1:2
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Drawn by PL / Date 220120	Finish	Volume[cubic cm]	Paper size A3

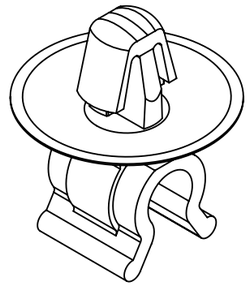
ITEM NO.	DESCRIPTION	Article Number	QTY.
1	Base Profile EZ (including milling operations)	pro-E-001-001	2
2	LED-Panel Confi B	pro-L-002-001	1
3	Essentra Clip - nylon - mounting panels	Essentra: tpce5-51-4m-01	4



DETAIL BQ
SCALE 1 : 1

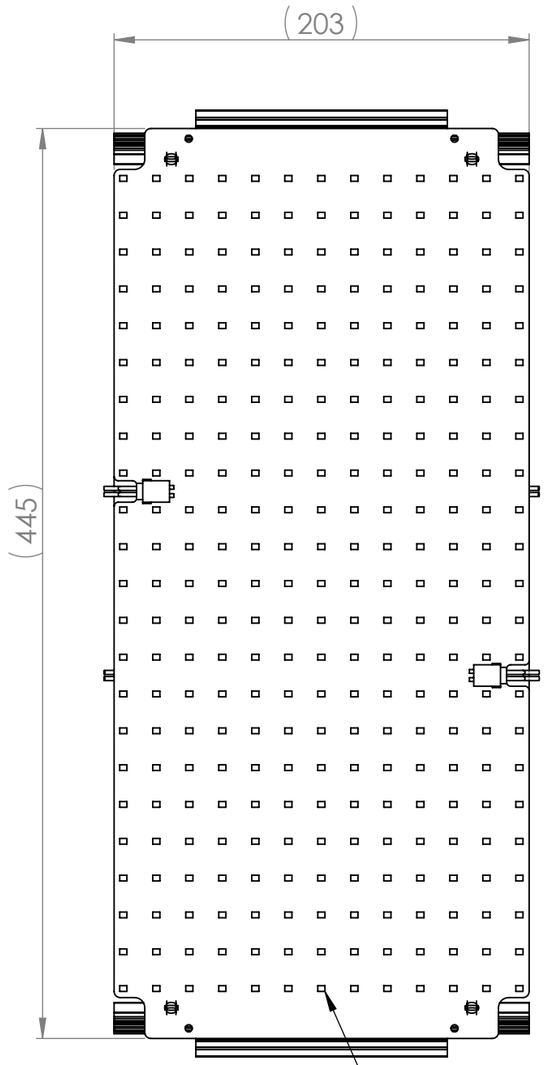


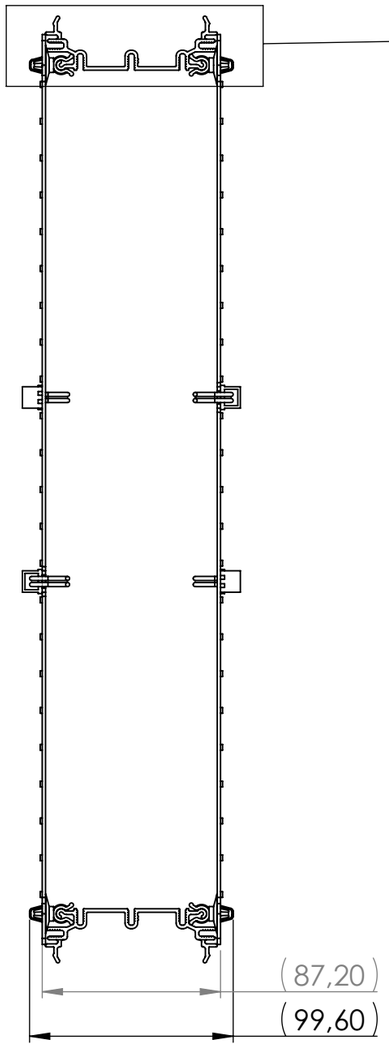
click the clip into the
LED panels (4x per panel)

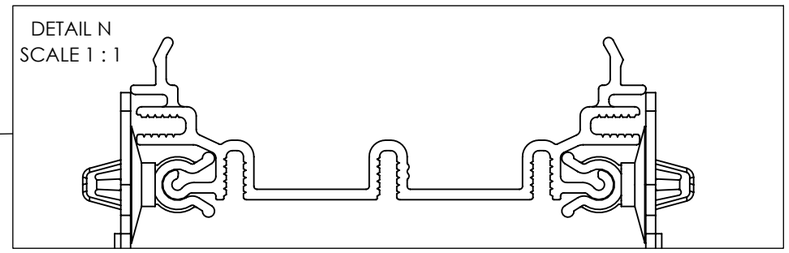


File name project#_concept_part-name_revision 220120 LED panels assem_centered			**projection**
scope	**Description** ProRail BWW-LEDpanel Assem EZ	**Drawing status**	**scale** 1:2
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Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

Main Dimensions LED Unit including aluminium extrusion profiles



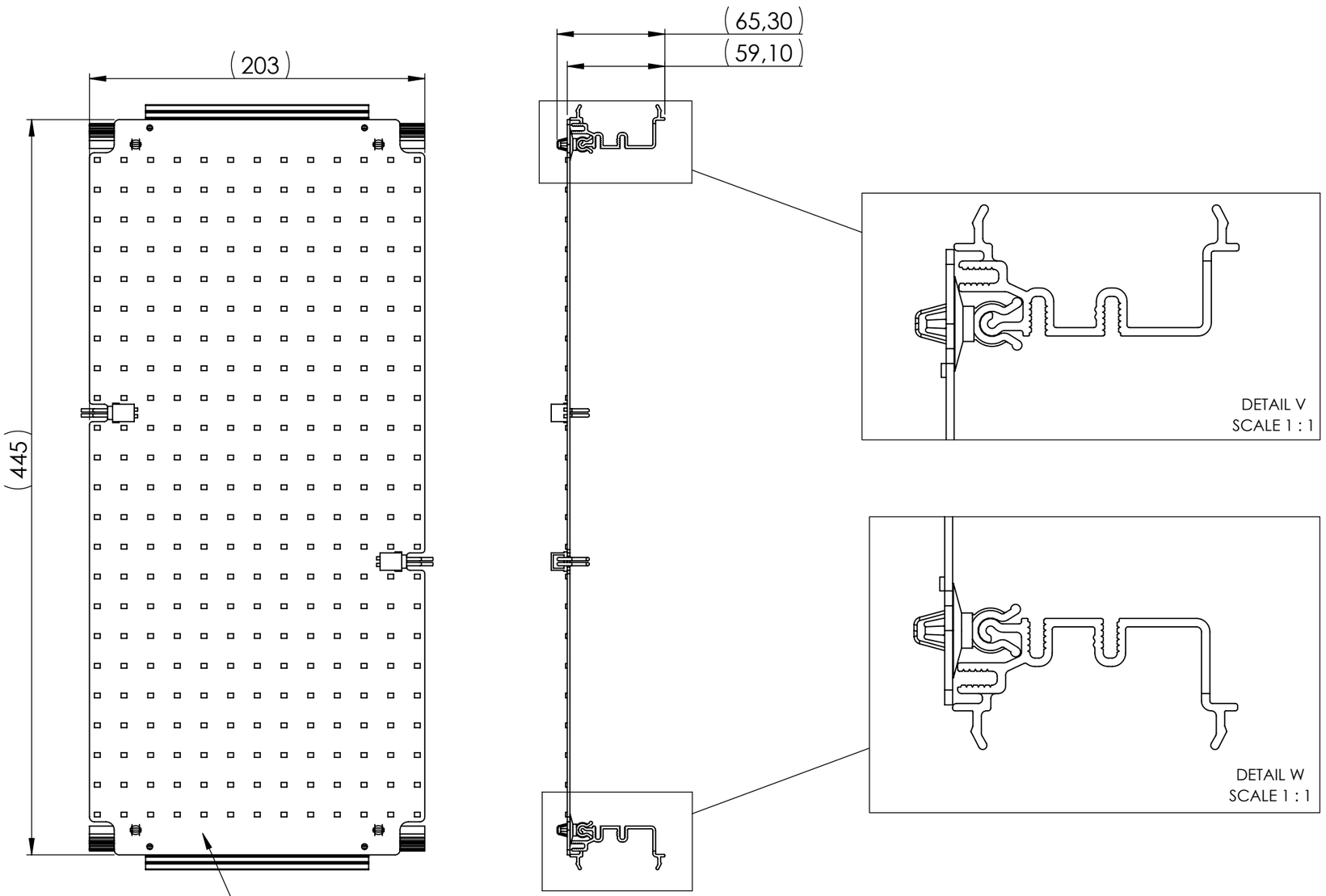




(pro-L-002-001: B,
for other LED sizes see page 23)

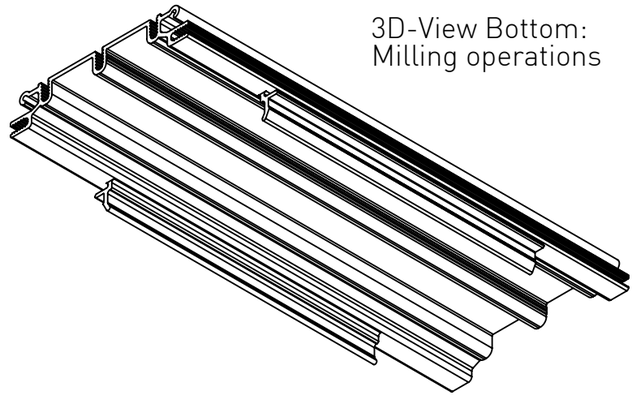
File name project#_concept_part-name_revision 220120 LED panels assem_centered			**projection**
scope	**Description** ProRail BWW-LEDpanel Assem DZ	**Drawing status**	**scale** 1:3
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Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

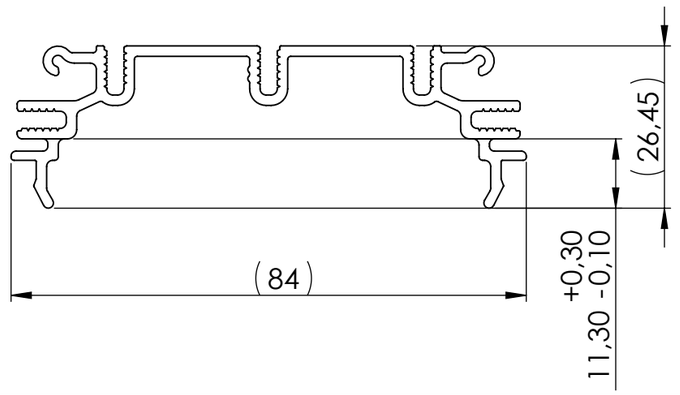
Main Dimensions LED Unit including aluminium extrusion profiles



File name project#_concept_part-name_revision 220120 LED panels assem_centered			**projection**
scope	**Description** ProRail BWW-LEDpanel Assem EZ	**Drawing status**	**scale** 1:3
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Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3







File name
project#_concept_part-name_revision

220120 ProRail - Extrusion profiles (click-in) - RevA

projection

scope

Description
Base Profile DZ (Including milling operations)

Drawing status

scale
1:1

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Material
EN-AW-6063-T6 AlMg0.7Si

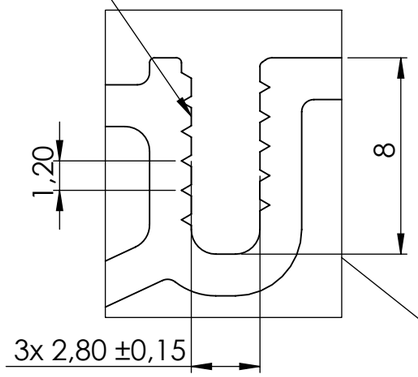
General tollerances
vlgs EN 12020-2
unless otherwise specified

Page
20/35

Drawn by	Date	Finish	Volume[cubic cm]	Paper size
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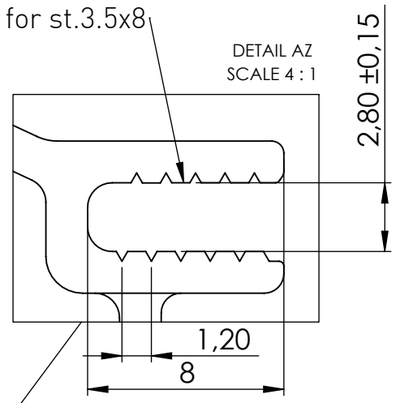
(3x)Detail for st.3.5x8

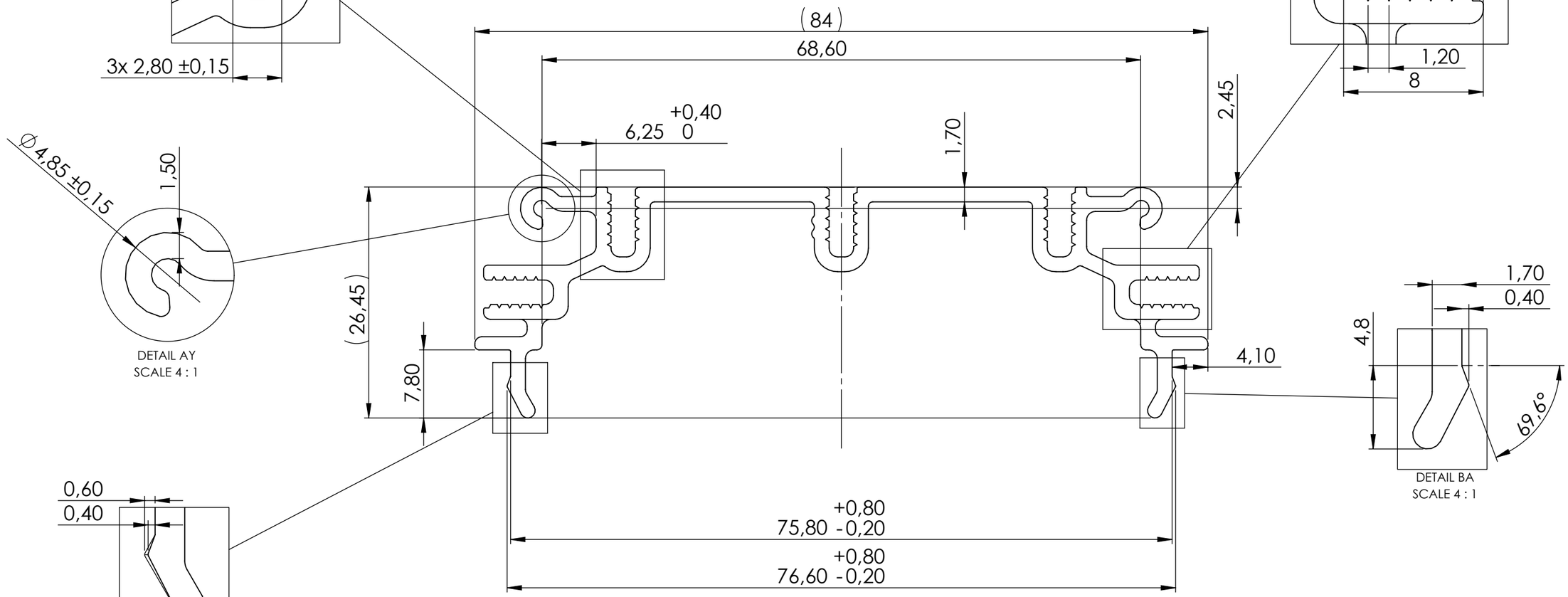
DETAIL BB
SCALE 4 : 1



(2x)Detail for st.3.5x8

DETAIL AZ
SCALE 4 : 1





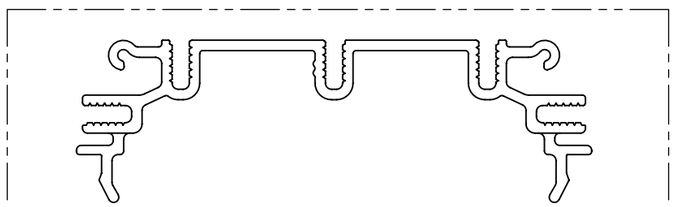
DETAIL AY
SCALE 4 : 1

DETAIL BA
SCALE 4 : 1

DETAIL BC
SCALE 4 : 1

General note:
Tuning is required to achieve the right click-in force.
General tollerances vlgs EN12020-2

Visible side



File name
project#_concept_part-name_revision

220120 ProRail - Extrusion profiles (click-in) - RevA

projection

scope

Description
Base Profile DZ (Including milling operations)

Drawing status

scale
2:1

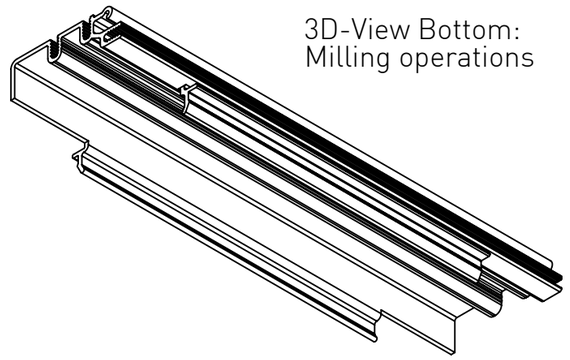
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Material
EN-AW-6063-T6 AlMg0.7Si

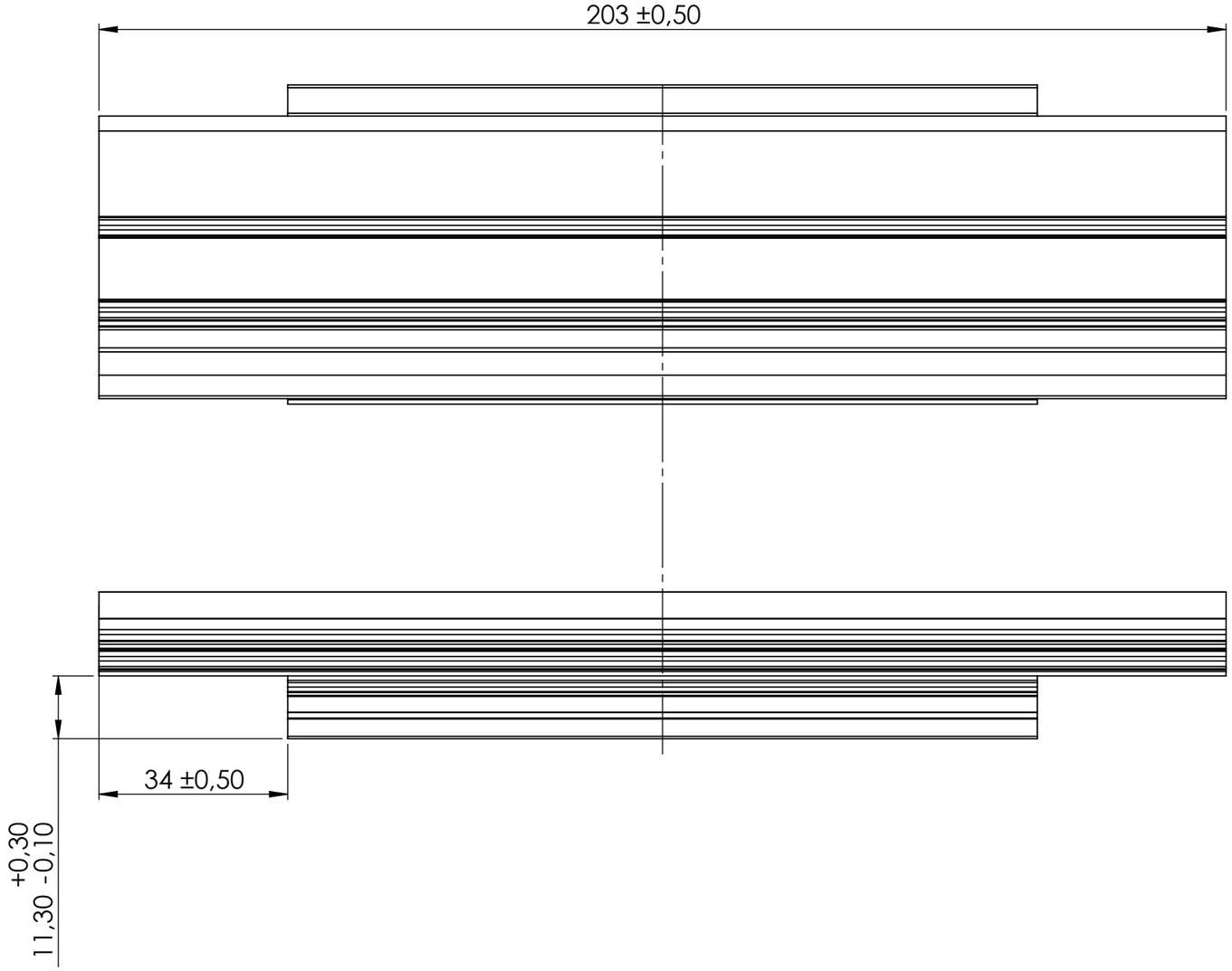
General tollerances
vlgs EN 12020-2
unless otherwise specified

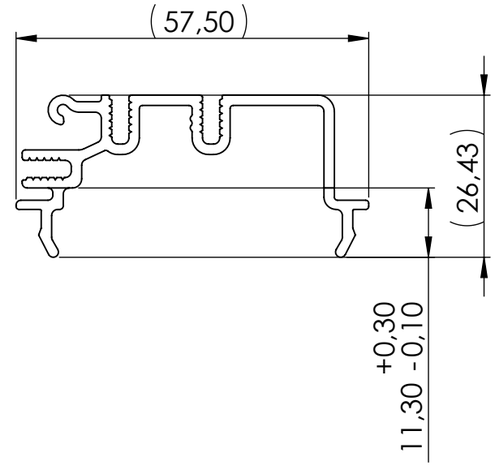
Page
21/35

Drawn by	Date	Finish	Volume[cubic cm]	Paper size
PL	220120	Anodised Standard Natural	66.03	A3

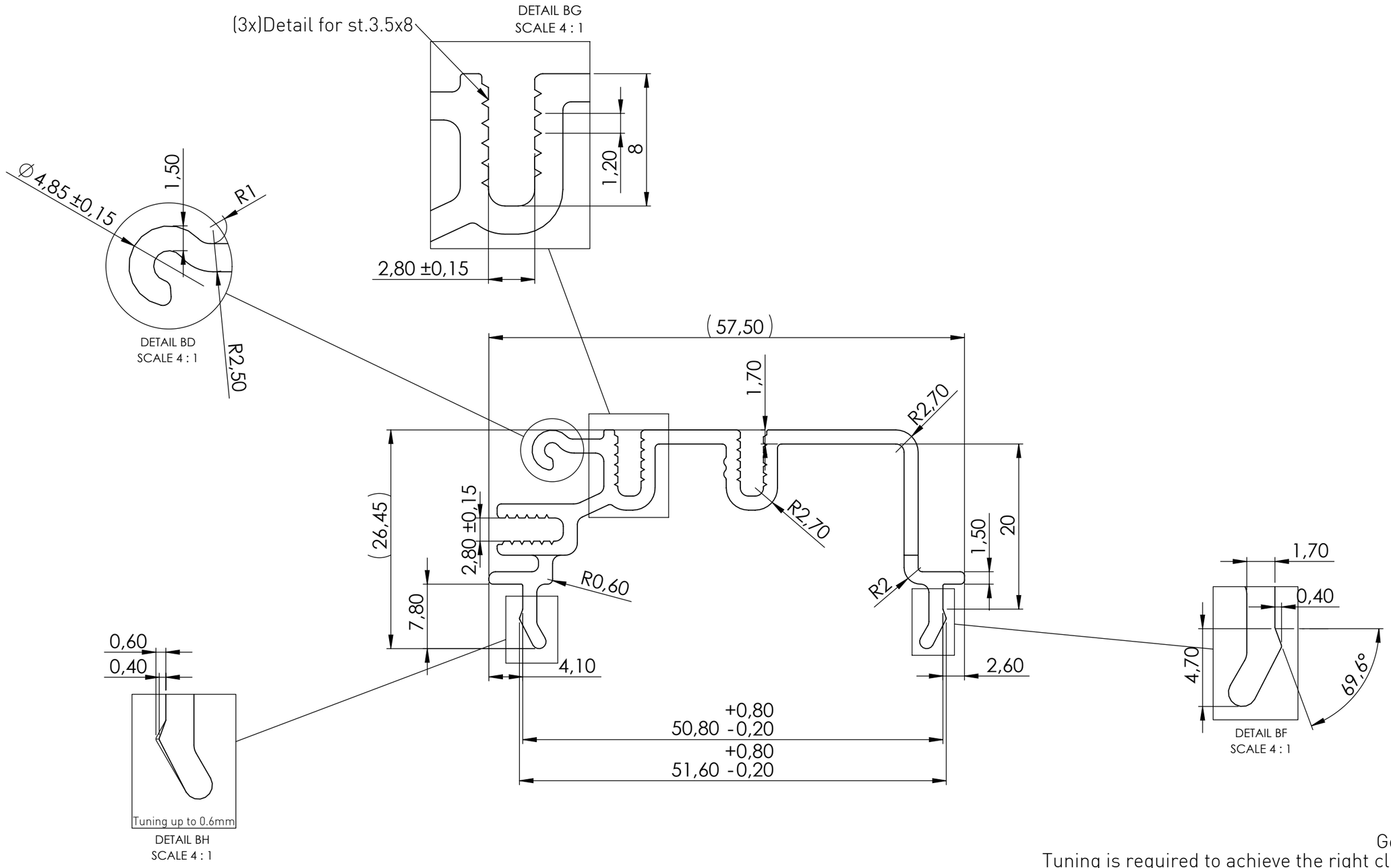


3D-View Bottom:
Milling operations



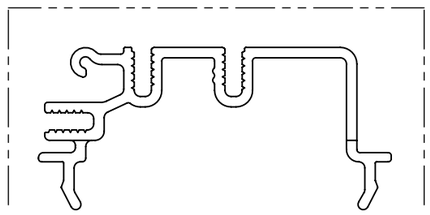


File name project#_concept_part-name_revision 220120 ProRail - Extrusion profiles (click-in) - RevA			**projection**
scope	**Description** Base Profile EZ (including milling operations)	**Drawing status**	**scale** 1:1
© copyright This Drawing is property of Scope Design & Strategy B.V. It may not be reproduced or passed on to third parties without the permission of the owner.	**Material** EN-AW-6063-T6 AlMg0.7Si	**General tollerances** vlgs EN 12020-2 unless otherwise specified	**Page** 22/35
Drawn by PL / **Date** 220120	**Finish** Anodised Standard Natural	**Volume[cubic cm]** 47.26	**Paper size** A3



General note:
Tuning is required to achieve the right click-in force.
General tollerances vlgs EN12020-2

Visible side



File name
project#_concept_part-name_revision

220120 ProRail - Extrusion profiles (click-in) - RevA

projection

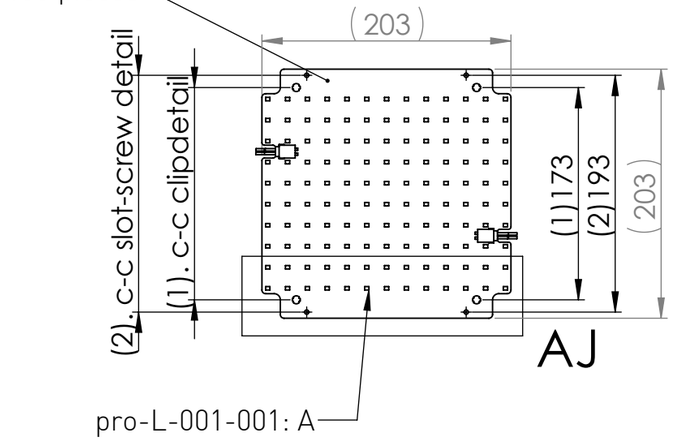
scope

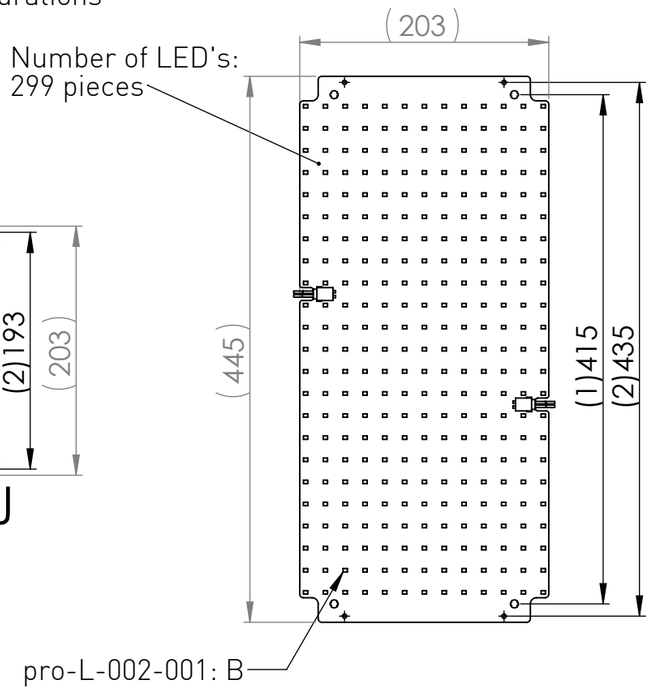
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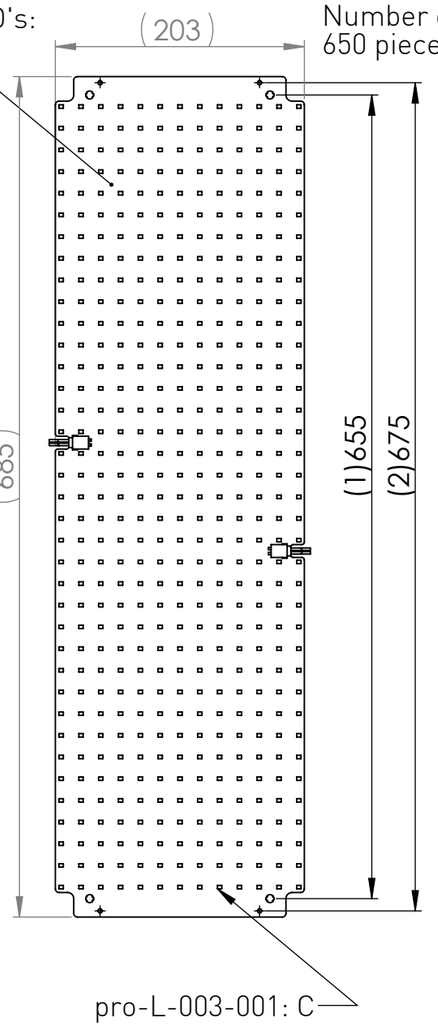
Description	Drawing status	scale
Base Profile EZ (including milling operations)		2:1
Material	**General tollerances**	**Page**
EN-AW-6063-T6 AlMg0.7Si	vlgs EN 12020-2 unless otherwise specified	23/35

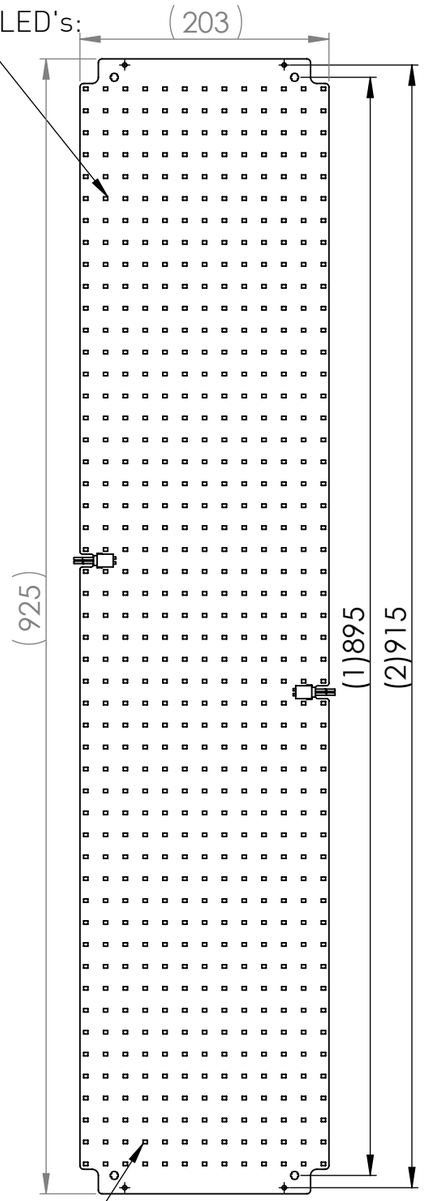
Drawn by	Date	Finish	Volume[cubic cm]	Paper size
PL	220120	Anodised Standard Natural	47.26	A3

Number of LED's as defined
Spacing LED to edge is the same in all configurations
Spacing holes to edge is the same in all configurations

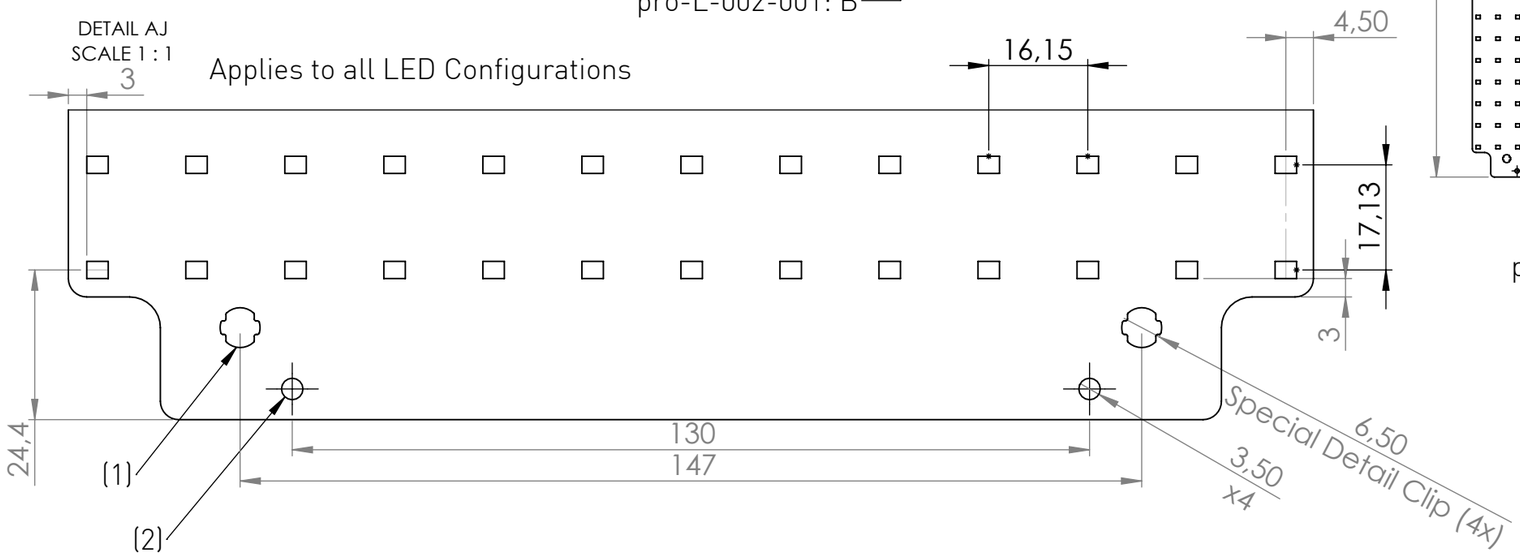






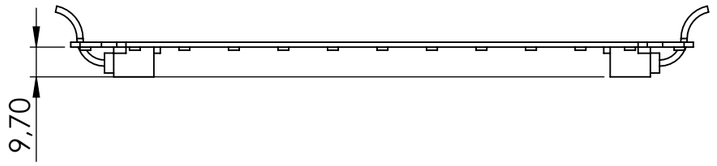


DETAIL AJ
SCALE 1 : 1

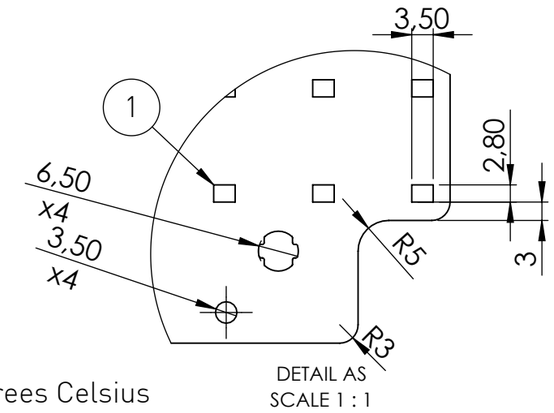


Center to center distance of the clipdetails(1) and the slot-screwdetails(2) depend on the specific board configurations.
These dimensions may vary within different configurations.

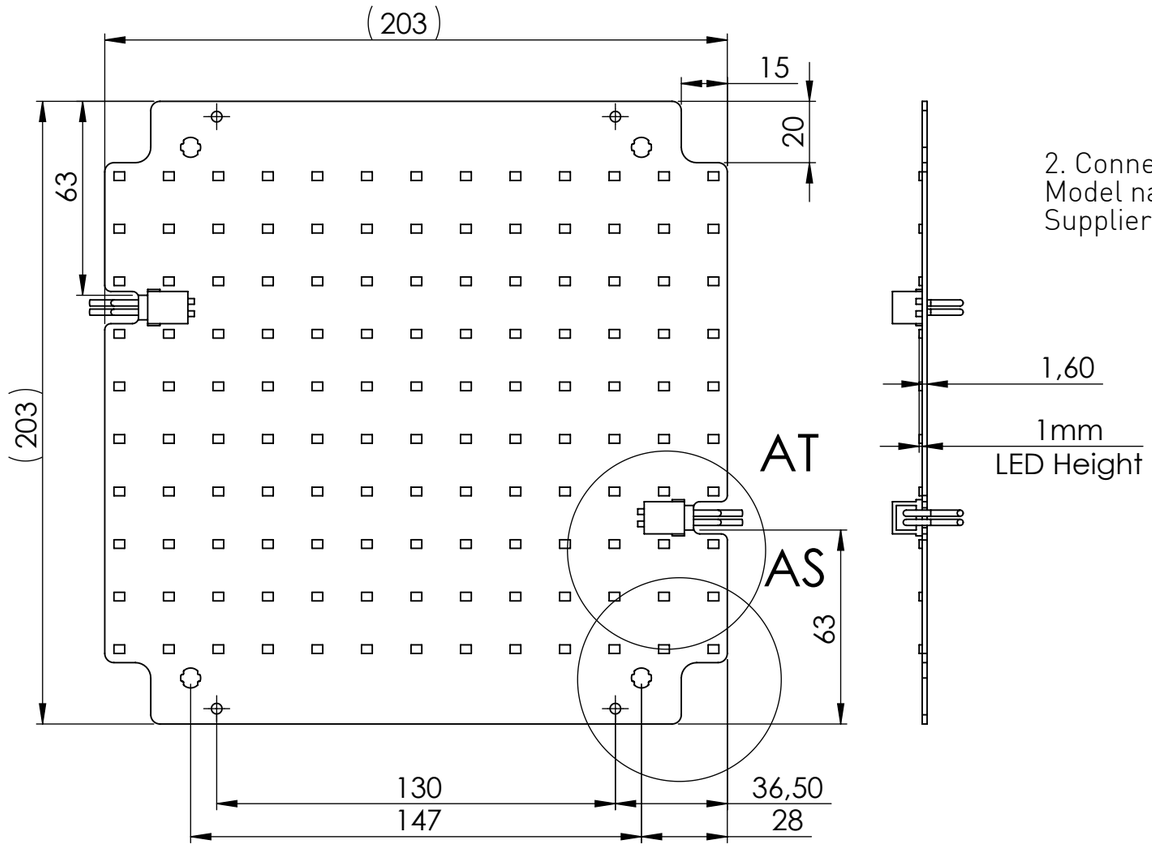
File name project#_concept_part-name_revision 220120 LED panel_configurations			**projection**
scope	**Description** LED-Panels All Configurations	**Drawing status**	**scale** 1:5
© copyright This Drawing is property of Scope Design & Strategy B.V. It may not be reproduced or passed on to third parties without the permission of the owner.	**Material** Panel Material: ALU 1,6mm thickness	**General tollerances** unless otherwise specified	**Page** 24/35
Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3



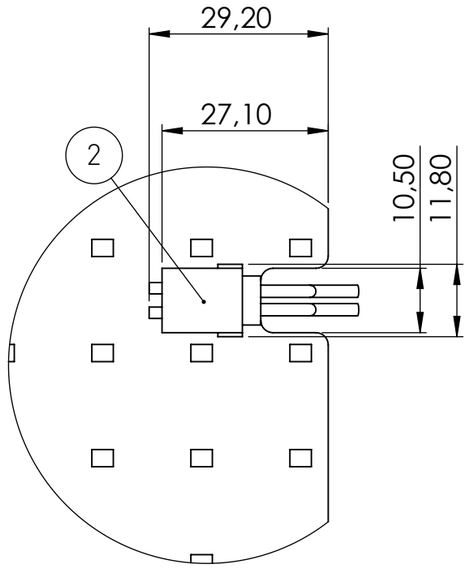
1. LED SPECS
LED Dimensions: 2,8x3,5mm
LED CCT (temperature): 4000K
LED Voltage: 3V
LED Ampere: 60mA
LED Power: 0,18W
Lumen/Watt: 134 L/W
LED CRI (Color Rendering Index):82,6Ra
Beam Angle: 120graden
Operating temperature LED's: -35 tot 100 degrees Celsius



DETAIL AS
SCALE 1 : 1

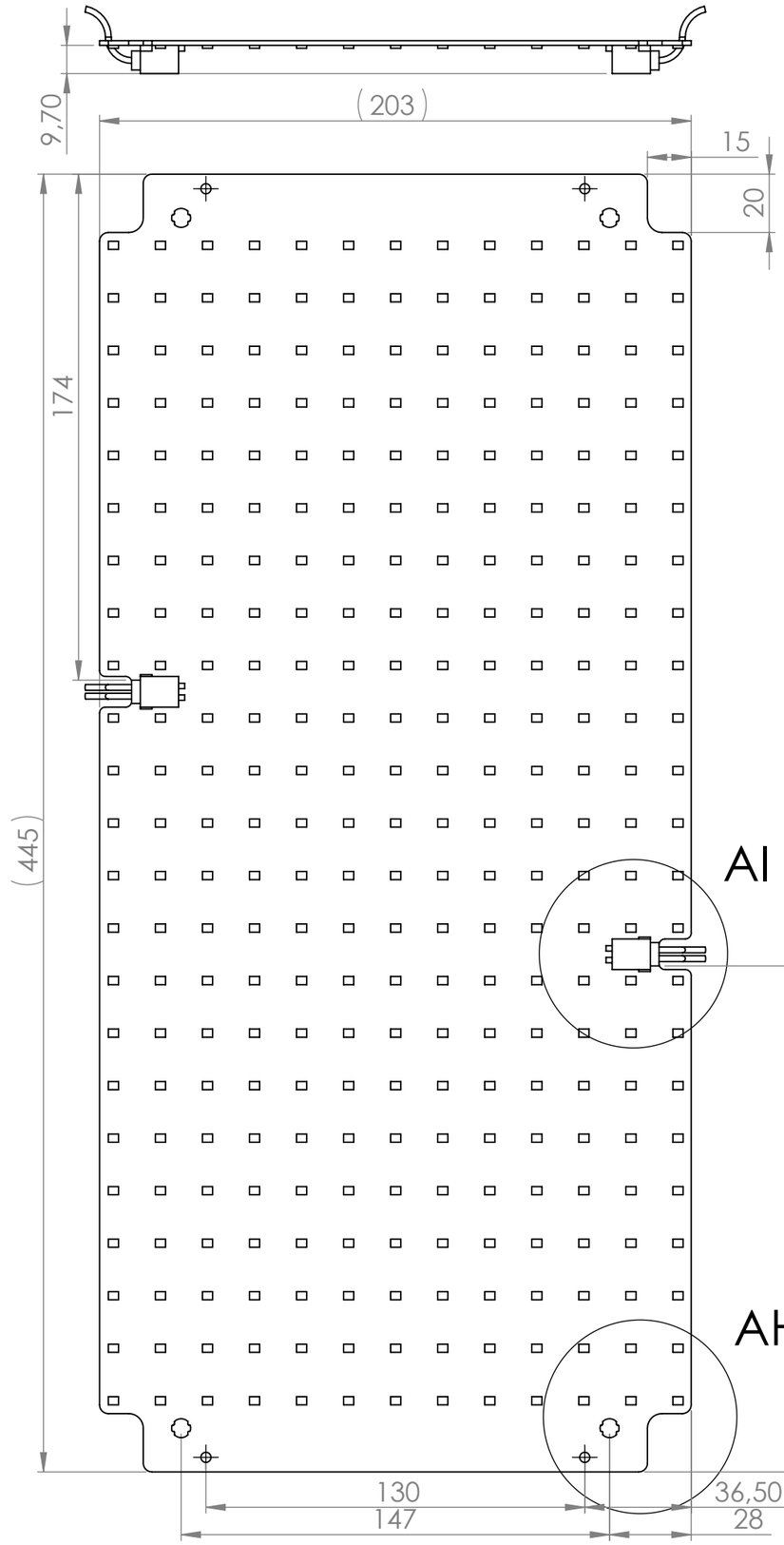


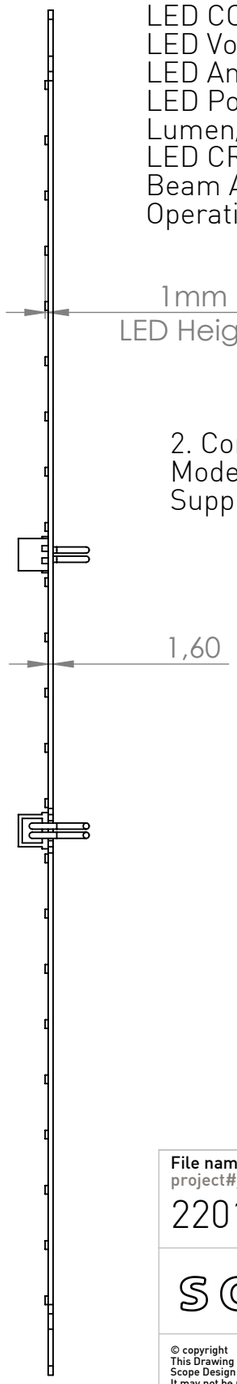
2. Connector SPECS
Model name: A3962WR-**-C1CA-G
Supplier: WAFER



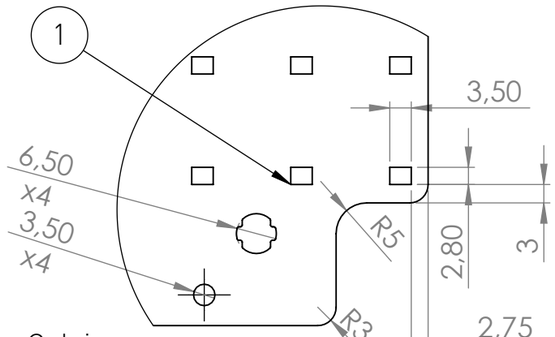
DETAIL AT
SCALE 1 : 1

File name project#_concept_part-name_revision 220120 LED panel_configurations			projection
scope	Description LED-Panel Confi A	Drawing status	scale 1:2
© copyright This Drawing is property of Scope Design & Strategy B.V. It may not be reproduced or passed on to third parties without the permission of the owner.	Material Panel Material: ALU 1,6mm thickness	General tollerances unless otherwise specified	Page 25/35
Drawn by PL	Date 220120	Finish	Volume[cubic cm]	Paper size A3



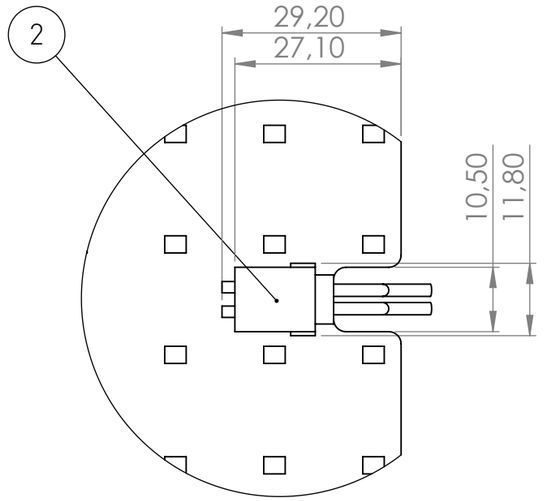


1. LED SPECS
LED Dimensions: 2,8x3,5mm
LED CCT (temperature): 4000K
LED Voltage: 3V
LED Ampere: 60mA
LED Power: 0,18W
Lumen/Watt: 134 L/W
LED CRI (Color Rendering Index):82,6Ra
Beam Angle: 120graden
Operating temperature LED's: -35 tot 100 degrees Celsius



DETAIL AH
SCALE 1 : 1

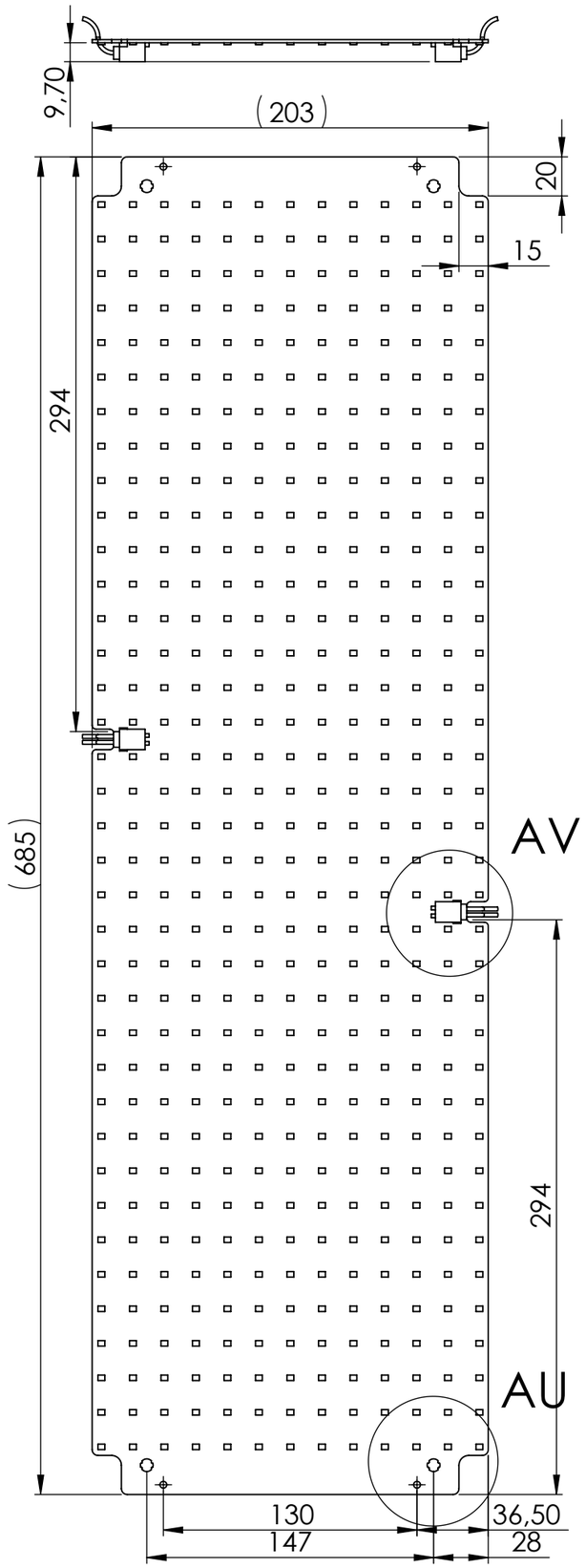
2. Connector SPECS
Model name: A3962WR-**-C1CA-G
Supplier: WAFER

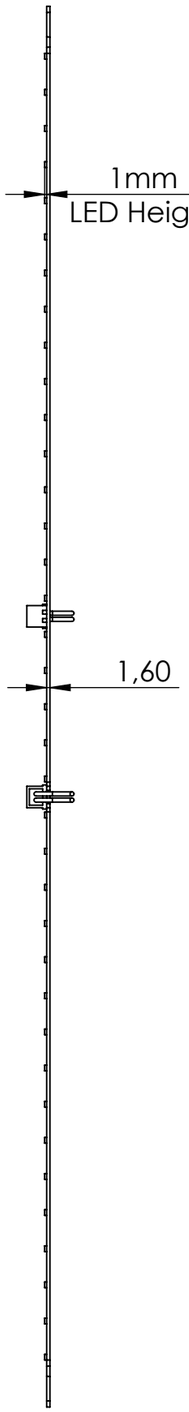


DETAIL AI
SCALE 1 : 1

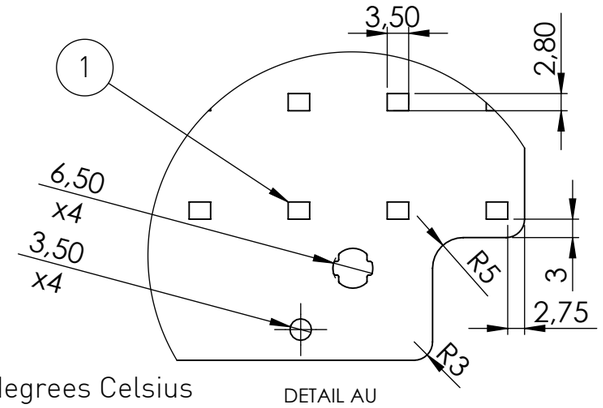
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File name: project#_concept_part-name_revision — 220120 LED panel_configurations			projection
scope	Description: LED-Panel Confi B	Drawing status	scale: 1:2
	Material: Panel Material: ALU 1,6mm thickness	General tollerances: unless otherwise specified	Page: 26/35
Drawn by: PL	Date: 220120	Finish	Volume[cubic cm]	Paper size: A3



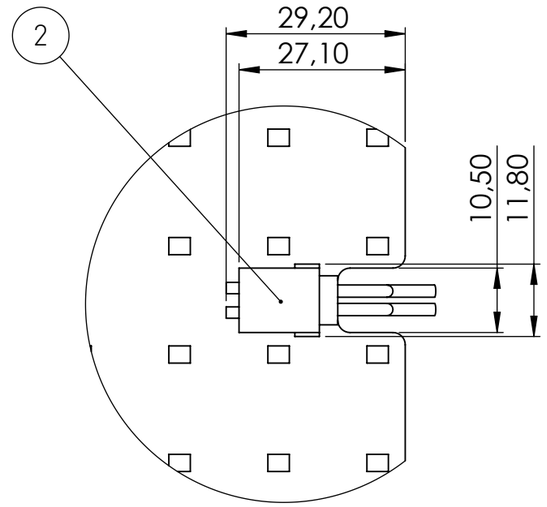


1. LED SPECS
LED Dimensions: 2,8x3,5mm
LED CCT (temperature): 4000K
LED Voltage: 3V
LED Ampere: 60mA
LED Power: 0,18W
Lumen/Watt: 134 L/W
LED CRI (Color Rendering Index):82,6Ra
Beam Angle: 120graden
Operating temperature LED's: -35 tot 100 degrees Celsius



DETAIL AU
SCALE 1 : 1

2. Connector SPECS
Model name: A3962WR-**-C1CA-G
Supplier: WAFER



DETAIL AV
SCALE 1 : 1

File name
project#_concept_part-name_revision
220120 LED panel_configurations

projection

scope

Description
LED-Panel Confi C

Drawing status

scale
1:3

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Material
Panel Material: ALU 1,6mm thickness

General tollerances
unless otherwise specified

Page
27/35

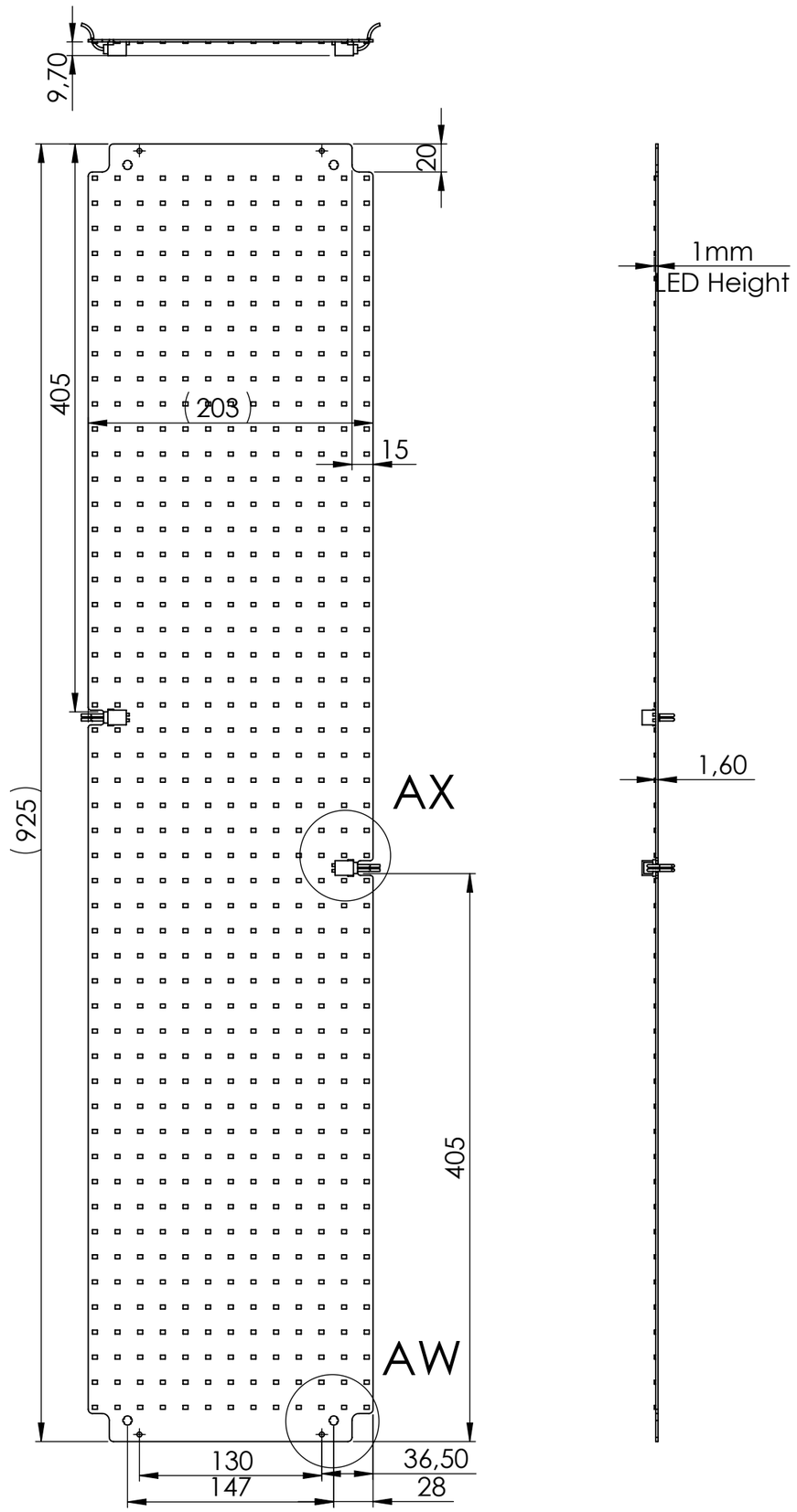
Drawn by
PL

Date
220120

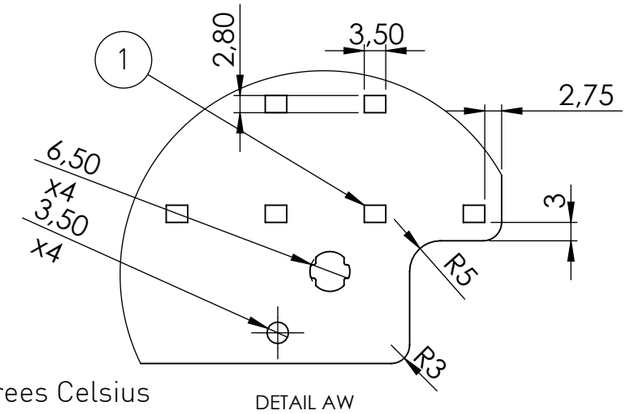
Finish

Volume[cubic cm]

Paper size
A3

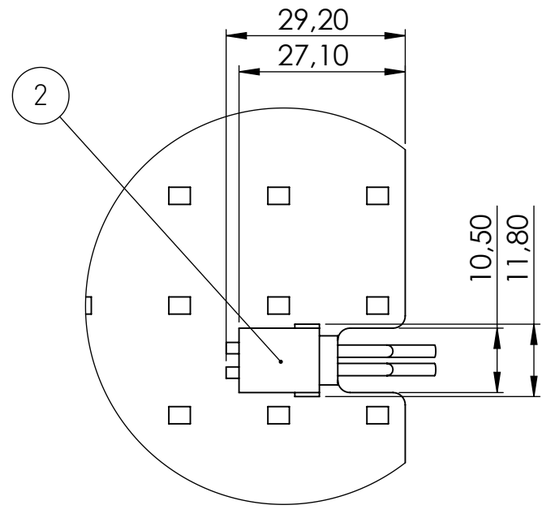


1. LED SPECS
LED Dimensions: 2,8x3,5mm
LED CCT (temperature): 4000K
LED Voltage: 3V
LED Ampere: 60mA
LED Power: 0,18W
Lumen/Watt: 134 L/W
LED CRI (Color Rendering Index):82,6Ra
Beam Angle: 120graden
Operating temperature LED's: -35 tot 100 degrees Celsius



DETAIL AW
SCALE 1 : 1

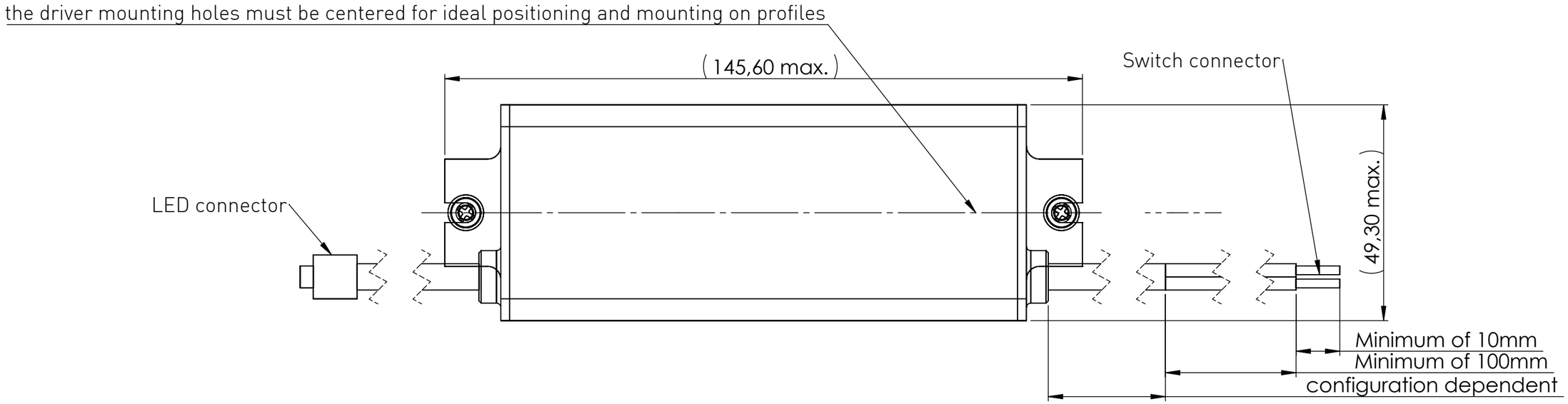
2. Connector SPECS
Model name: A3962WR-**-C1CA-G
Supplier: WAFER

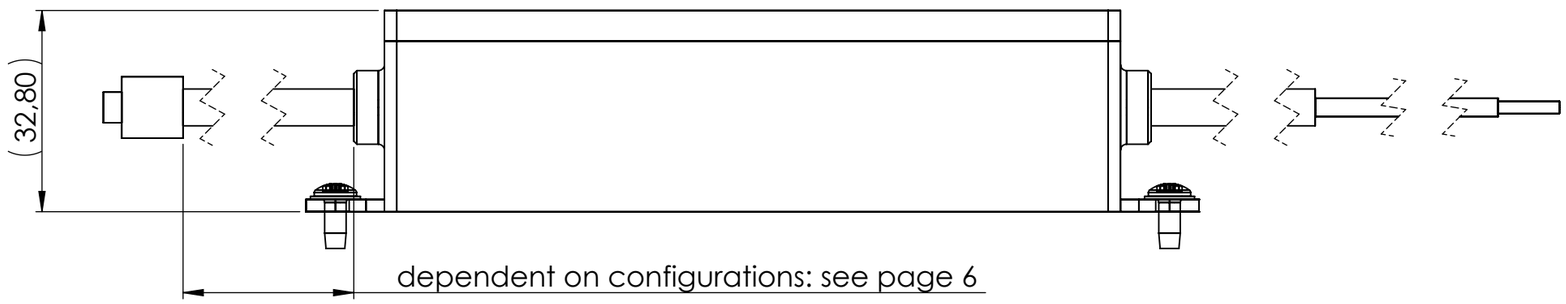


DETAIL AX
SCALE 1 : 1

File name project#_concept_part-name_revision 220120 LED panel_configurations			**projection**
scope	**Description** LED-Panel Confi D	**Drawing status**	**scale** 1:4
© copyright This Drawing is property of Scope Design & Strategy B.V. It may not be reproduced or passed on to third parties without the permission of the owner.	**Material** Panel Material: ALU 1,6mm thickness	**General tollerances** unless otherwise specified	**Page** 28/35
Drawn by PL	**Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

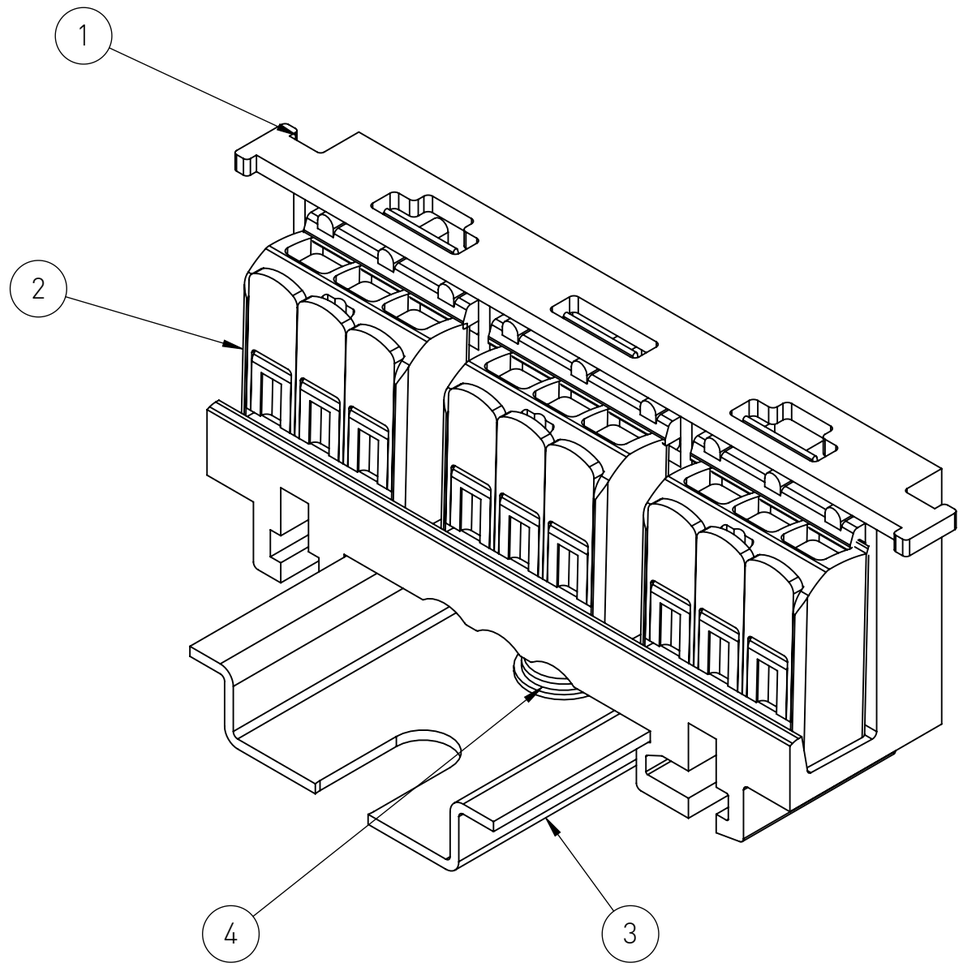
Driver maximum dimensions





File name project#_concept_part-name_revision 220120 DZ driver Assem incl			**projection**
scope	**Description** Driver: LF-GOE030YF/YE	**Drawing status**	**scale** 1:1
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Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

ITEM NO.	DESCRIPTION	Article Number	QTY.
1	WAGO Terminal block - Article number: 221-500	pro-I-002-004	1
2	WAGO Terminal block - Article number: 221-413	pro-I-002-004	3
3	Standard DIN-Rail 35x7.5mm Short	pro-I-005-001	1
4	Flange head PZ tapping screw sharp point BS 4174 Steel Zinc plated ST3,5X8MM	Fabory: ART NR 26870.035.008	1

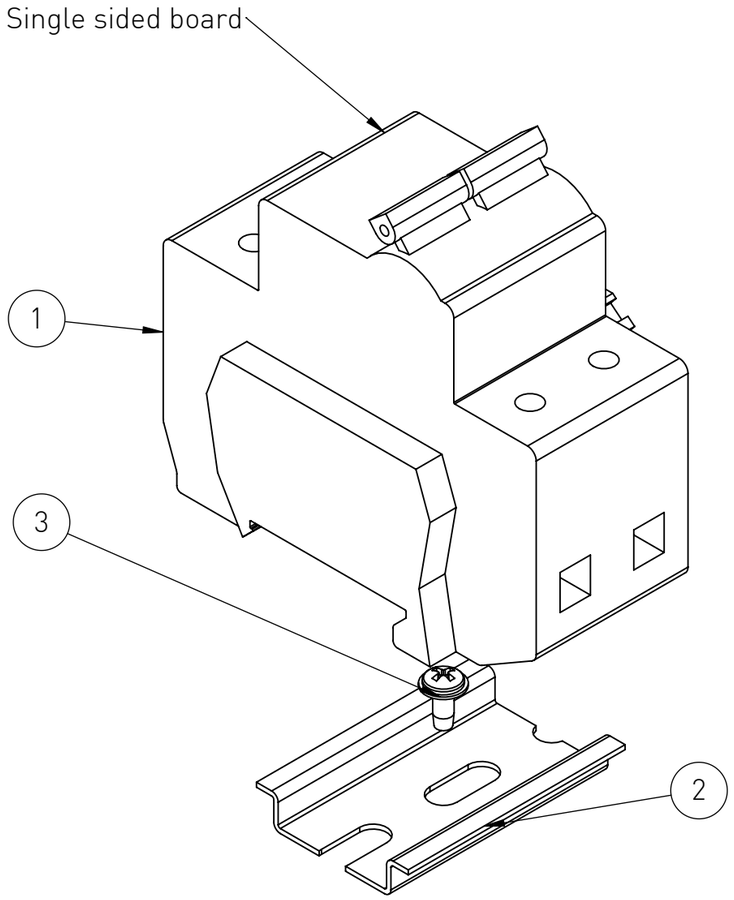


General note:
Terminal block can be mounted (clicked) on the Switch assembly (page 31)

File name project#_concept_part-name_revision 220120 WAGO 221-500 - 221-413 Terminal block Assem			**projection**
scope	**Description** WAGO terminal block 221-500 - 221-413	**Drawing status**	**scale** 2:1
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Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

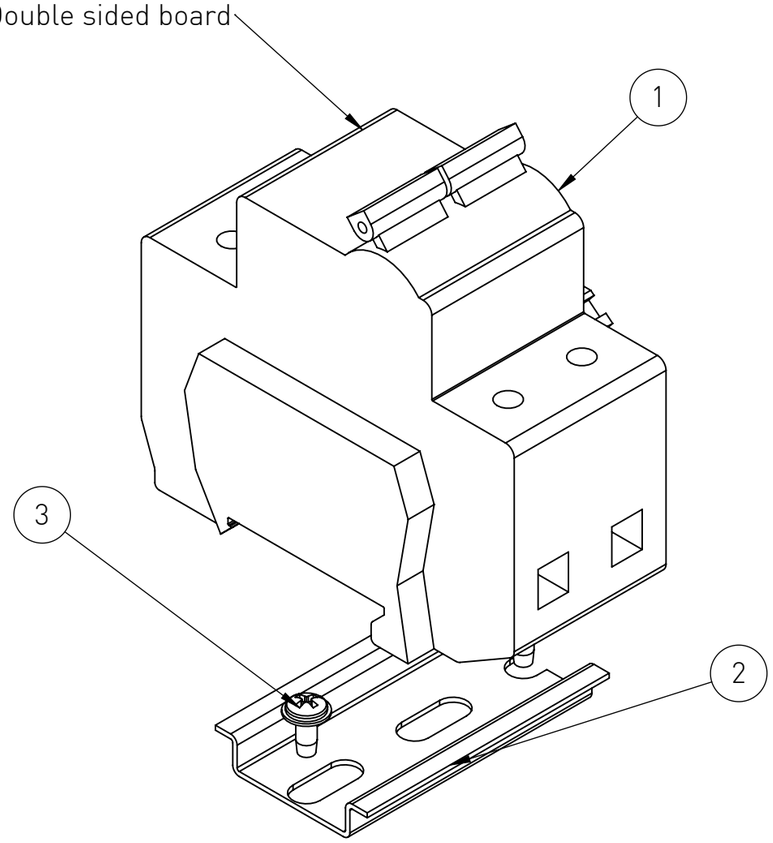
ITEM NO.	DESCRIPTION	Article Number	QTY.
1	Switch - as existing - re-use if possible	pro-I-003-001	1
2	Standard DIN-Rail 35x7.5mm Short	pro-I-005-001	1
3	Flange head PZ tapping screw sharp point BS 4174 Steel Zinc plated ST3,5X8MM	Fabory: ART NR 26870.035.008	1

Single sided board



ITEM NO.	DESCRIPTION	Article Number	QTY.
1	Switch - as existing - re-use if possible	pro-I-003-001	1
2	Standard DIN-Rail 35x7.5mm Long	pro-I-004-001	1
3	Flange head PZ tapping screw sharp point BS 4174 Steel Zinc plated ST3,5X8MM	Fabory: ART NR 26870.035.008	2

Double sided board



File name
project#_concept_part-name_revision
220120 Switch_1

projection

scope

Description
201118 PRO-BWW-Switch Assem EZ

Drawing status

scale
1:1

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Material

General tollerances
vlgs EN 12020-2
unless otherwise specified

Page
31/35

Drawn by
PL

Date
220120

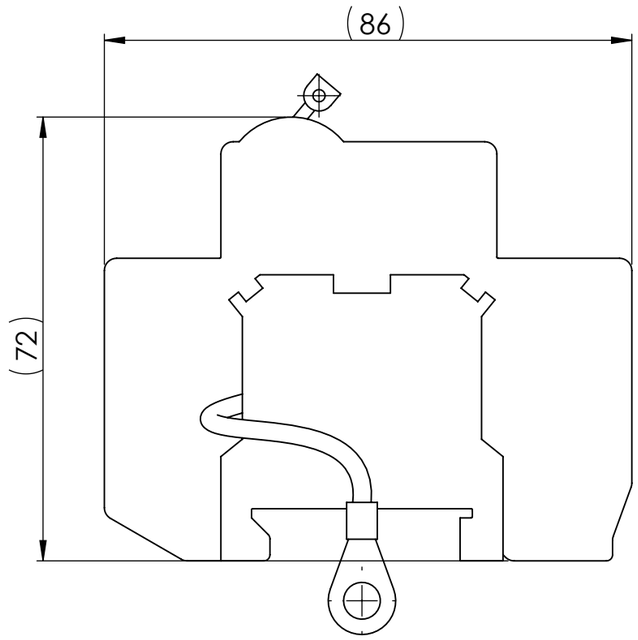
Finish

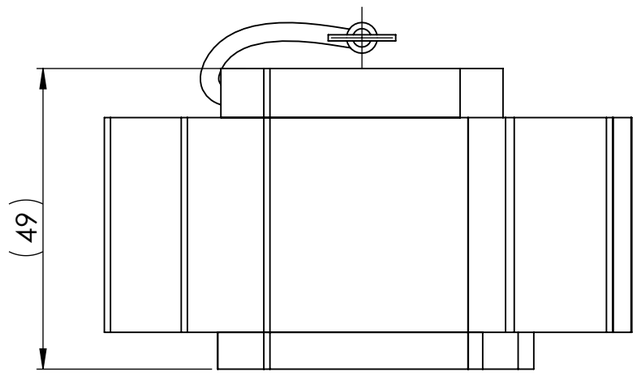
Volume[cubic cm]

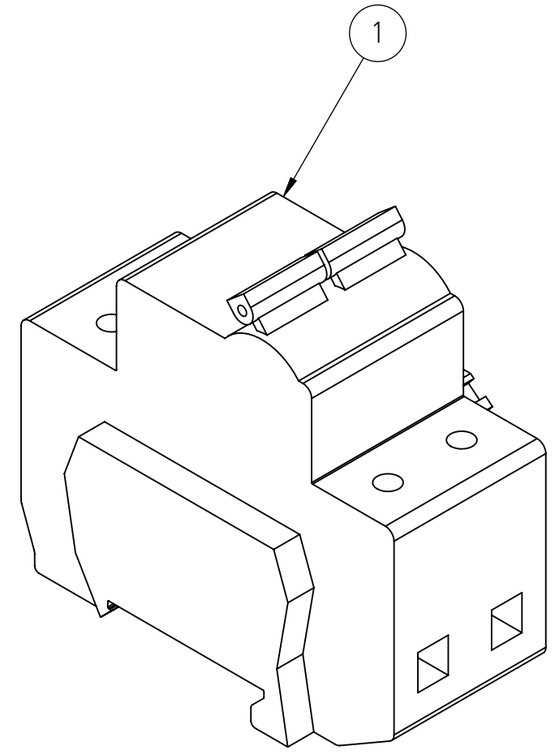
Paper size
A3

ITEM NO.	DESCRIPTION	Article Number	QTY.
1	Switch - as existing - re-use if possible	pro-I-003-001	1

Main dimensions existing switch







General note:
Reuse the switch if the condition of the switch is sufficient.
If the switch is in bad condition, replace the switch with a comparable component whichfits in the assemby.

File name
project#_concept_part-name_revision
220120 Switch_1

projection

scope

Description
Switch - as existing - re-use if possible

Drawing status

scale
1:1

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Material

General tollerances
vlgs EN 12020-2
unless otherwise specified

Page
32/35

Drawn by
PL

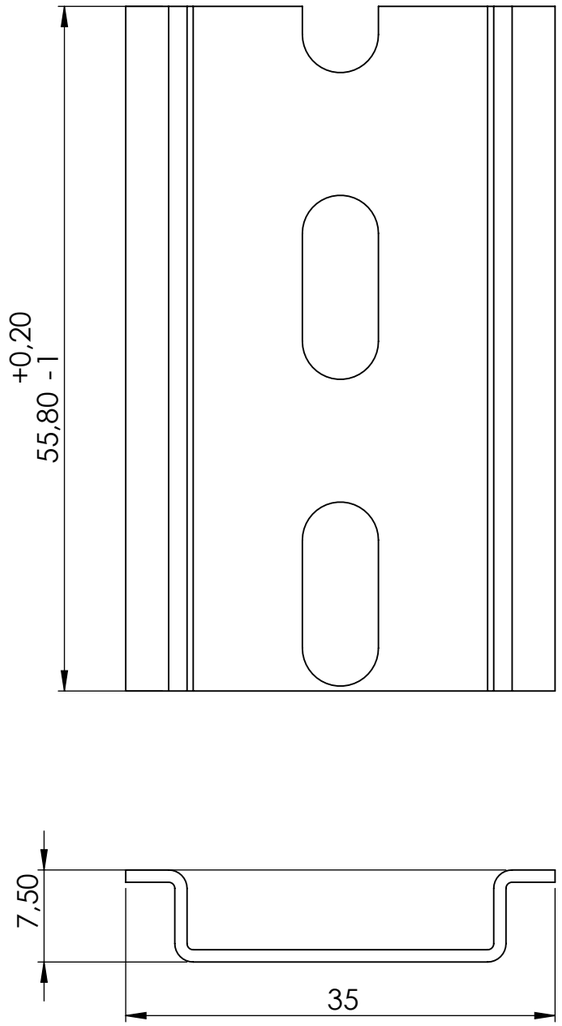
Date
220120

Finish

Volume[cubic cm]
184.92

Paper size
A3

Standard DIN-Rail configuration - Long



File name
project#_concept_part-name_revision

220120 Standard DIN-Rail 35mmx7.5

projection

scope

Description
Standard DIN-Rail 35x7.5mm Long

Drawing status

scale
2:1

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Material

General tollerances
vlgs EN 12020-2
unless otherwise specified

Drawn by
PL

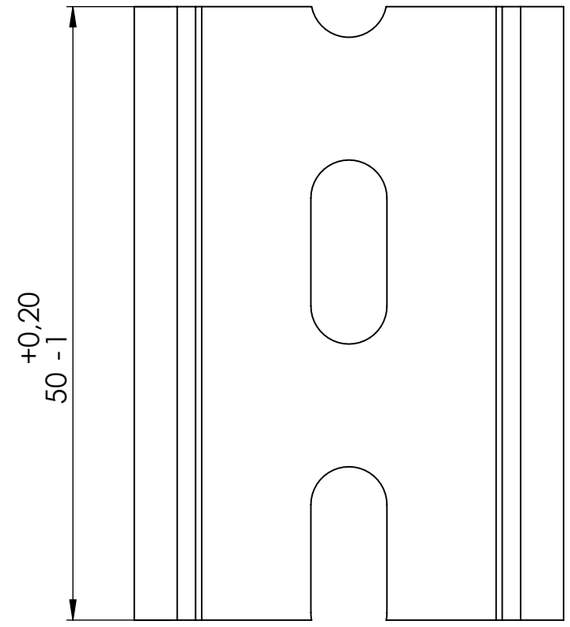
Date
220120

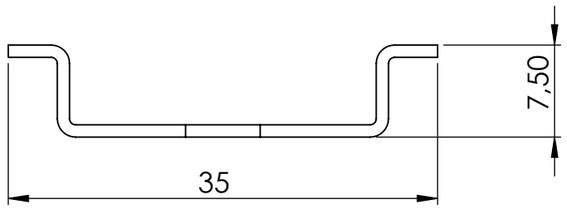
Finish

Volume[cubic cm]

Paper size
A3

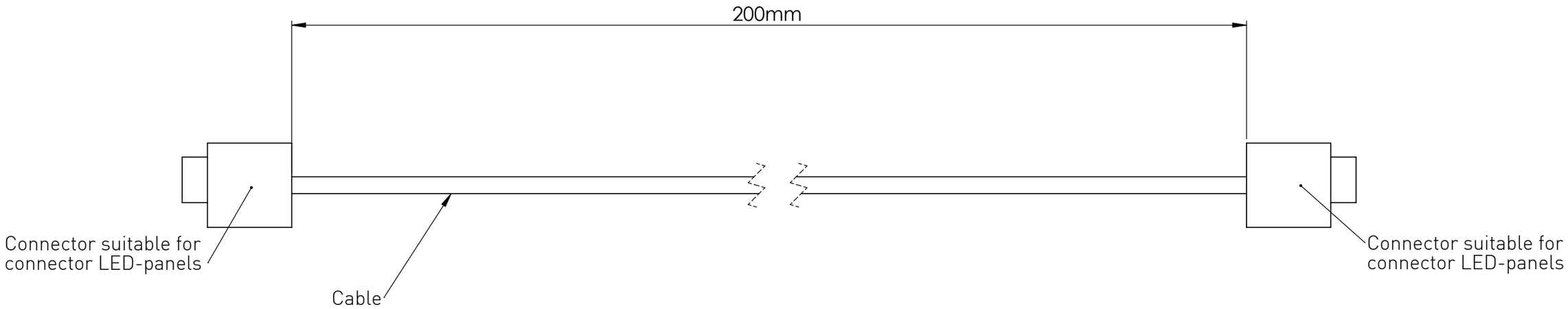
Standard DIN-Rail Configuration - Short





File name project#_concept_part-name_revision 220120 Standard DIN-Rail 35mmx7.5			**projection**
scope	**Description** Standard DIN-Rail 35x7.5mm Short	**Drawing status**	**scale** 2:1
© copyright This Drawing is property of Scope Design & Strategy B.V. It may not be reproduced or passed on to third parties without the permission of the owner.	**Material**	**General tollerances** vlgs EN 12020-2 unless otherwise specified	**Page** 34/35
Drawn by PL / **Date** 220120	**Finish**	**Volume[cubic cm]**	**Paper size** A3

This Cable is to interconnect LED-panels
Minimum lifespan 15 years
Quantity varies within the configurations.
If the amount of LED-panels increases, the amount of connection cables will also increase (page 5).



File name project#_concept_part-name_revision 220120 pro-I-002-002			projection
scope	Description LED Panel connector	Drawing status	scale 2:1
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Drawn by PL / Date 220120	Finish	Volume[cubic cm]	Paper size A3