



	PROSJEKTDOKUMENTASJON / FDV LED VMS RGB		
Prosjekt:	RV9 Tallaksbru		
Prosjekt nr.:	722907		
Synopsis:			
Kunde:	Traftec AS	Versjon:	A
Byggherre:	Statens Vegvesen	Ant sider:	11

02	27.08.2019	Revidert	BEP	FW
01	20.12.2018	Første utgave	RH	TPK
Rev	Dato	Beskrivelse	Skrevet av	Godkjent av

1 Godkjent	☐	Sign.
2 Ikke godkjent	☐	Sign.
Kommentarer:		

Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
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Innholdsfortegnelse

1	Om LED VMS RGB Skilt	3
2	Forklaring på CE merke	4
3	Godkjenninger	6
4	Skilt	7
4.1	Variabel opplysningstavle m/kasse	7
5	MERKING.....	8
5.1	Merking	8
5.2	IP-adresser	8
6	Montering	9
6.1	Montering på Norsafe mast	9
7	Service.....	10
7.1	Service/Vedlikehold	10
8	VEDLEGG.....	11

Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
------------------	---------------------	--------------------	--------	--------------	------------	-------------	----

1 Om LED VMS RGB Skilt

LED VMS RGB modulskilt er utviklet spesielt for krevende norske forhold. Skilt er bygd opp av moduler som er IP66 godkjent. ITS kontroller er plassert i eget koblingsskap på mast.

TEKNISKE SPESIFIKASJONER

LED, elektronikk

Spredningsvinkel: B1, B2, B3, B4, B5 (EN12966)

Strømtrekket over diodene er lavere enn 60% av diodenes maksimale strømtrekk.

Kapslingsgrad: IP66 Diodetype: Nitchia

Strømforsyning: 230Vac / 24VDC

Godkjenning:

Godkjent i henhold til EN 12966-1:2005 + A1:2009,

(C2L3R2B4/T1, T2, T3/P3),

(C2L3(*) R2B4/T1, T2, T3/P3),

(C2L3(T)R0B4/T1, T2, T3/P3)

Sert. nr. 0402-CPD-SC0543-13

Snøbrøytelast i henhold til EN12899:2007 DSL4

Vindlast i henhold til EN12899:2007 WL5

Tilkobling:

Skruterminal på hurtigplugg eller rekkeklemme i koblingsboks

Materiale og

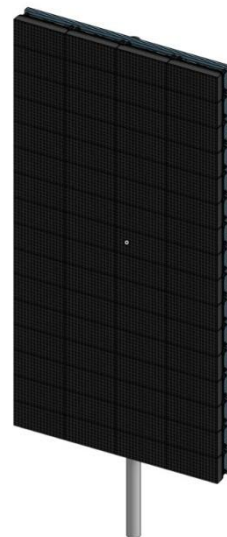
overflatebehandling:

Panel i kromatert, pulverlakkert 6063T6 aluminium.

Skruer og festemateriell er i syrefast stål (A4).

Lagring og frakt:

Under frakt og lagring må skiltet stå oppreist i normalposisjon for drenering og lufting.



Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
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2 Forklaring på CE merke

Forklaring på CE merket og klasser i EN12966 standarden:

Impact Test

Compliant

Vibration test

Compliant

Corrosion test

Compliant to D1

Degrees of protection IP

Our Led VMS are tested and complies to IP54, IP56, IP66
Class used for sign is mention in CE mark

Change of temperature

Our Led VMS are tested and complies to T1, T2, T3
Class used for sign is mention in CE mark

Damp heat

Compliant

Colour

Our Led VMS are tested and complies to C1, C2

C2 exceeds C1.

Class used for sign is mention in CE mark

Luminance

Our Led VMS complies to L1, L2, L3, L3(T), L3(*)

Our Led VMS are tested and complies to L3.
L3 exceeds L3(T), L3(*), L1 and L2.

Class used for sign is mention in CE mark

Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
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Luminance ratio

Compliant to D1

Beam width

Our Led VMS complies to B1, B2, B3, B4, B5 and B6

Our Led VMS are tested and complies to B6.
B6 exceeds B1, B2, B3, B4, B5

Class used for sign is mention in CE mark

12899-1

Wind load

Our Led VMS complies to WL1, WL2, WL3, WL4, WL5, WL6, WL7, WL8, WL9

Our Led VMS are tested and complies to WL9.
WL9 exceeds WL1, WL2, WL3, WL4, WL5, WL6 WL7, WL8, WL9

Class used for sign is mention in CE mark

Bending

Our Led VMS complies to TDB2

Dynamic snow load

Our Led VMS complies to DSL1, DSL2, DSL3, DSL4

Our Led VMS are tested and complies to DSL4.
DSL4 exceeds DSL1, DSL2, DSL3.

Class used for sign is mention in CE mark

Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
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3 Godkjenninger

Nemko **Statement of Conformity**
Ingress Protection (IP)
Order No.: 343684

Applicant Euroskilt AS
Reservatveien 8
3118 Tønsberg
Norway

Manufacturer Euroskilt AS a/s, Tønsberg
Reservatveien 8
3118 Tønsberg
Norway

Product LED VMS cabinet

Models LED VMS cabinet

Brand Name / Trade mark

Additional information Metal enclosure made of aluminum profile system; dimension 900x500x150mm (h/w/d). Hinged door with three rubber seals in profile and two locking devices prepared for padlock.

IP classification IP56 category 2

The above product is tested according to the following standards:
EN 60529 (1991) + A1 (2000)
Degree of protection provided by enclosures (IP Code)
EN 12966 (2014), IPXX category 2
Road vertical signs / Variable message traffic signs

IP56
Cat. 2

Nemko confirms that one sample of the mentioned product has been tested and found to be in conformity with the requirement for the degree of protection as specified above.
This statement gives no right to use Nemko's name or certification mark on the products.

Date 2017-12-12

Finn-Tore Jørgensen

Tested by: Finn-Tore Jørgensen

Espen Erikson

Approved by: Espen Erikson

Nemko Group
Nemko AS, Gaustadalléen 30, P.O. Box 73 Blindern, 0314 Oslo, Norway
Tel: +47 22 96 03 30 Fax: +47 22 96 05 50 www.nemko.com
certification number NC27444532

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nemko.com/no

Nemko **Statement of Conformity**
Ingress Protection (IP)
Order No.: 343684

Applicant Euroskilt AS
Reservatveien 8
3118 Tønsberg
Norway

Manufacturer Euroskilt AS
Reservatveien 8
3118 Tønsberg
Norway

Product LED VMS module

Models LED VMS module

Brand Name / Trade mark

Additional information Insulating enclosure with LED lenses in front. Backside cover with dual rubber seal and electrical connectors for power input and signal input.

IP classification IP66

The above product is tested according to the following standards:
EN 60529 (1991) + A1 (2000)
Degree of protection provided by enclosures (IP Code)

IP66

Nemko confirms that one sample of the mentioned product has been tested and found to be in conformity with the requirement for the degree of protection as specified above.
This statement gives no right to use Nemko's name or certification mark on the products.

Date 2017-12-12

Finn-Tore Jørgensen

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Tel: +47 22 96 03 30 Fax: +47 22 96 05 50 www.nemko.com
certification number NC27444532

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Nemko **Test Report**
Electromagnetic Compatibility
Report No.: E17198.00

Product Euroskilt Traffic Variable Message Sign, LED RGB

Name and address of the applicant Euroskilt AS
Reservatveien 8
3118 Tønsberg
Norway

Name and address of the manufacturer Euroskilt AS
Reservatveien 8
3118 Tønsberg
Norway

Model P20 and P16

Rating 230V AC 50Hz

Trademark -

Serial number -

Additional information CI. I

Tested according to EN 50293:2012
EN 61000-3-2:2014
EN 61000-3-3:2013

Order number 335624

Tested in period 2017-08-24 and 2017-08-25

Issue date 2017-11-13

Name and address of the testing laboratory Nemko Group
Nemko AS
Gaustadalléen 30,
P.O. Box 73 Blindern,
0314 Oslo, Norway
TEL: +47 22 96 03 30
FAX: +47 22 96 05 50

An accredited technical test executed under the Norwegian accreditation scheme

Anh Dung Lam
Prepared by [Lam Anh Dung]

Roger Berget
Approved by [Roger Berget]

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Side 1 av 1
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ISTITUTO GIORDANO
CE NOTIFIED BODY No. 0407
CERTIFICATE OF CONSTANCY OF PERFORMANCE
0407-CPR-1350 (IG-228-2017)

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction products

VARIABLE MESSAGE TRAFFIC SIGNS
Identified as shown overleaf (Annex)
placed on the market by
YAHAM OPTOELECTRONICS CO., LTD.
Bldg A & Bldg D, Yongwei Industrial Park, #118 Yongfu Rd, Fuyong, Bao'an District, Shenzhen, China (PRC)
and produced in the manufacturing plant
Bldg A & Bldg D, Yongwei Industrial Park, #118 Yongfu Rd, Fuyong, Bao'an District, Shenzhen, China (PRC)

This certificate attests that all provisions concerning the assessment and verification of constancy of performance at system level and the performances described in Annex 2A of the standard
EN 12966-1:2005 + A1:2009
are applied and that
the products fulfil all the prescribed requirements.

This certificate was first issued on 30/10/2017 and will remain valid as long as the harmonised standard remains valid or the manufacturing conditions in the plant or the factory production control itself are not modified significantly.
Bellaria-Igea Marina - Italia, 30/10/2017
Revision No. 0

CPD Department Technical Manager
(Dott. Ing. Giuseppe Persano Adorno)
Giuseppe Persano Adorno

Chief Executive Officer
(Dott. Arch. Sara Lorenza Giordano)
Sara Lorenza Giordano
Firma elettronica di SARA LORENZA GIORDANO

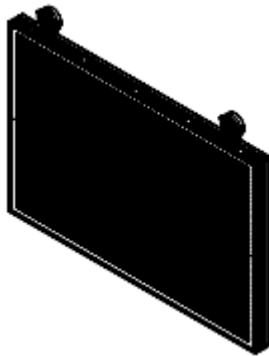
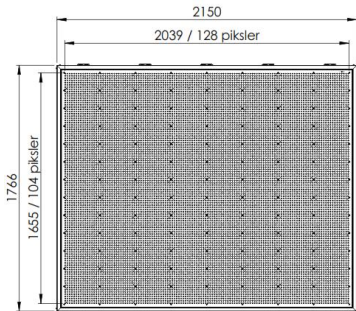
The original of this document consists of an electronic document with a digital signature affixed pursuant to DPR (Presidential Decree) 131/01. Sheet 1 of 2

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www.giordano.it - info@giordano.it - PEC: ist-giordano@legalmail.it - tel. +39/0541/343030

Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
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4 Skilt

4.1 Variabel opplysningstavle m/kasse

Skiltbilde	Variabel opplysningstavle montert på plate	 
Produktnr.	160 160 240 12	
Type	LED VMS kasse løsning	
Mål skiltansikt (mm)	2039 x 1655 mm	
Mekanisk størrelse (mm)	2170 x 1766 mm	
Fargekode	RAL 9005 glans 3 - 10	
Antall:	1	
Styring	ITS controller	
Feste:	2 stykk NM 190 - 60 mast	
Kabelgjennomføring:	M32, M20	
Driftsspenning:	230VAC	
Styreprotokoll	OPC-UA	
Effekt maks:	2350W	
Effekt nominell:	1400W	
Diodeavstand:	P16	
Vekt	250 kg	
El. tegninger:	Se vedlegg	

Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
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5 MERKING

5.1 Merking

Anlegg	Objekt	Merking
Tallaksbru	Fritekstsilt VS001	SSA001

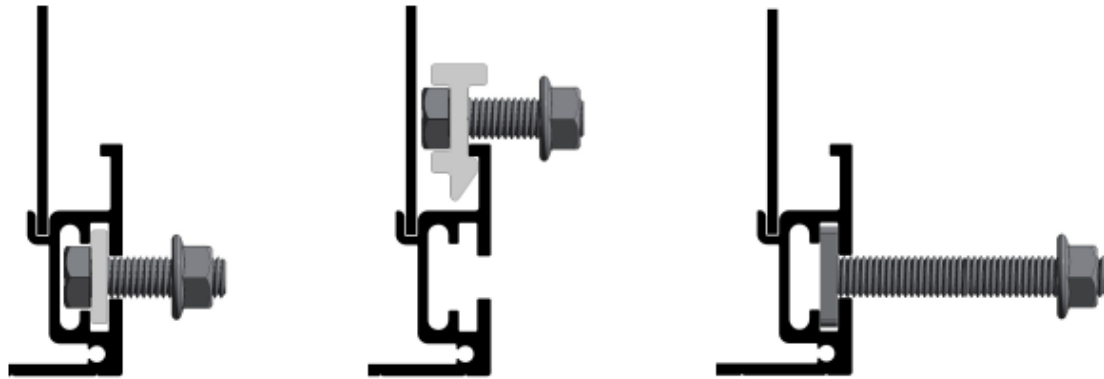
5.2 IP-adresser

Objekt	VTS-TAG	Nettverk	Gateway	IP-adresse
Skilt	F08XTA.SSA001.VS001	10.17.0.176/29	10.17.0.177	10.17.0.180
OPC-server	F08XTA.SSA001.VS001.72. RUNTELLER	10.17.0.176/29	10.17.0.177	10.17.0.179

Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
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6 Montering

6.1 Montering på Norsafe mast



Figur 6-1: M12 Boltfester, T-bolt og hammerboltfeste

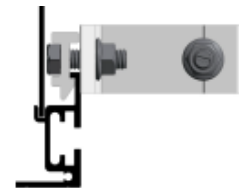
Følgende fester med glideskinne brukes for montering på Norsafe mast:

Varenr: 21190022618 Klammer alu Ø90mm med flatskinne

Varenr: 22330020012 NM120 Skiltfeste m/60mm glideskinne

Varenr: 22330030015 NM150 Skiltfeste m/60mm glideskinne

Varenr: 22330030019 NM190/290 Skiltfeste m/60mm glideskinne



Figur 6-2: Glideskinne

Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
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7 Service

7.1 Service/Vedlikehold

Vennligst se vedlegg XX «Vaskerutiner RGB» for detaljer.

For å holde frontplater rene må produktene inspiseres årlig og rengjøres for smuss.
For å unngå vanninntrenging med påfølgende kondensoppbygging og skader på elektronikk må det utføres kontroll av pakninger jevnlig.

Påse at dreneringshull og luftenipler er åpne og at varmeelement fungerer.

Produktene tåler Statens Vegvesens normale vaskeprosedyrer.

Det anbefales ikke å vaske skiltene fra undersiden/i underkant på grunn av luftenipler og dreneringshull.

Ved bytte av styrekort må «Jumpere» settes lik utbyttet enhet (setter tilbakemeldinger og styrker).

Dette må settes før skiltet kobles til spenning. Se vedlagte skjemategninger for hvilke typer «jumpere» som er benyttet.

NB! Ved vedlikehold og bytte av enhet må enheten være strømløs og spenningsprøving må være foretatt.

Ved behov for service:

Euroskilt AS
Reservatveien 8
3118 Tønsberg



service@euroskilt.no

0 60 80

Prosjekt:	RV9 TallaksbruFeil!	Prosjektnr.	722907	Dato:	27.08.2019	Rev.	02
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8 VEDLEGG

Nr	Beskrivelse	Rev.
1.	Vaskerutiner RGB	
2.	General Arrangement / RGB P16 GA	0
3.	Tekniske Tegninger / LED VMS Tallaksbru	0

Vaskerutine for Euroskilt RGB skilter

Renholdanvising

Benytt høytrykksspyling

Front

Dysetrykk: Max 100 bar

Dysevinkel 90° på skilt

Avstand.: Minimum 50 cm

Vanntemperatur: maks 80° C

Vaskemiddel: pH 6-8

Bakside

Dysetrykk: Max 100 bar

Dysevinkel 90° på skilt

Avstand.: Minimum 100 cm

Vanntemperatur: maks 80° C

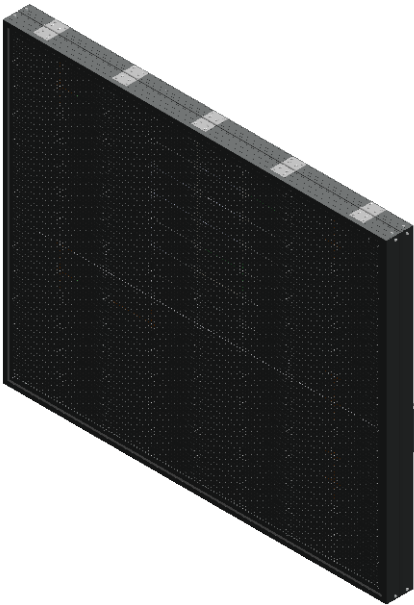
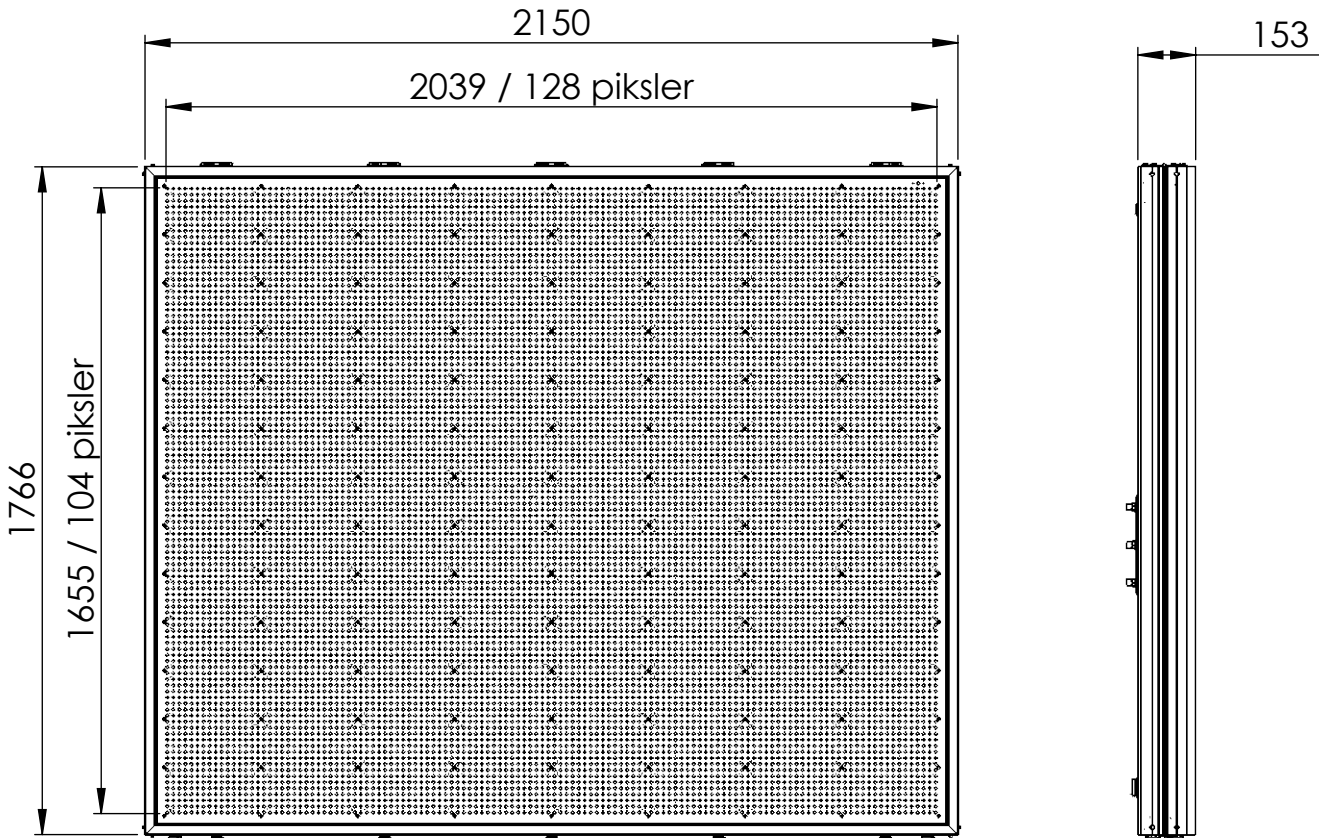
Vaskemiddel: pH 6-8

OBS: Det bør ikke spyles inn i luftespalter på skiltets bakside.

Kopiering av dette dokumentet, gjødet til andre og eller kommunikasjon av innholdet er forbudt uten særskilt tillmakt. Overtredelse vil kunne medføre straff og/eller erstatningsansvar i henhold til gjeldende lov. Alle rettigheter er reservert i tillegg en innvilgelse av patent og/eller annen registrering av immatrimelle rettigheter.

Geometri fra 3D CAD-modellen er ledende med mindre annet er oppgitt på 2D tegning eller i tilleggsspesifikasjon

Endret dato	Endret av	Godkjent dato	Godkjent av	Endringsbeskrivelse	Revisjon

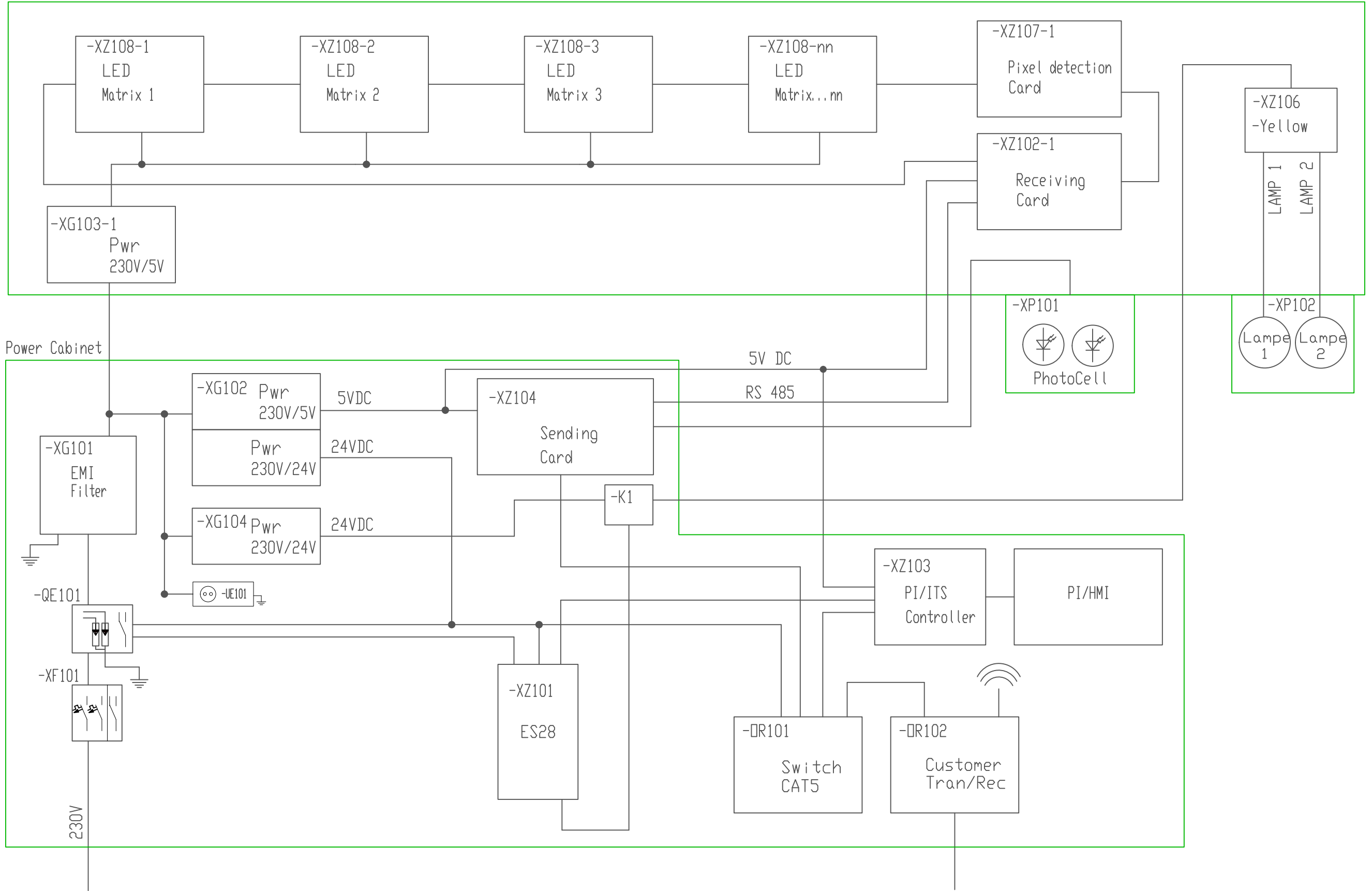


Tegnet dato 03.12.2018	Tegner CBO	Godkjent dato 19.02.2019	Godkjent av CBO	Generell Toleranse NS-ISO 2768-1 M	Projeksjon 	Side 1 av 1	Skala 1:20		
Material			Overflatebehandling		Vekt NA kg	Prod. gruppe 073	Format A4		
Tittel RGB P16 GA					Status APPROVED		Tegningsnr. 10000640		Revisjon 0
Tilleggsbeskrivelse 128 x 104 piksler, RV9 Rassikring Haukeli Hovden					Artikkelnr.			Prosjektnr. 722907	Dokument Type Prospekt

Geometry from 3D CAD-models is leading unless otherwise stated on the 2D drawing or in the additional specifications document

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Sign - LED Matrix Row x n



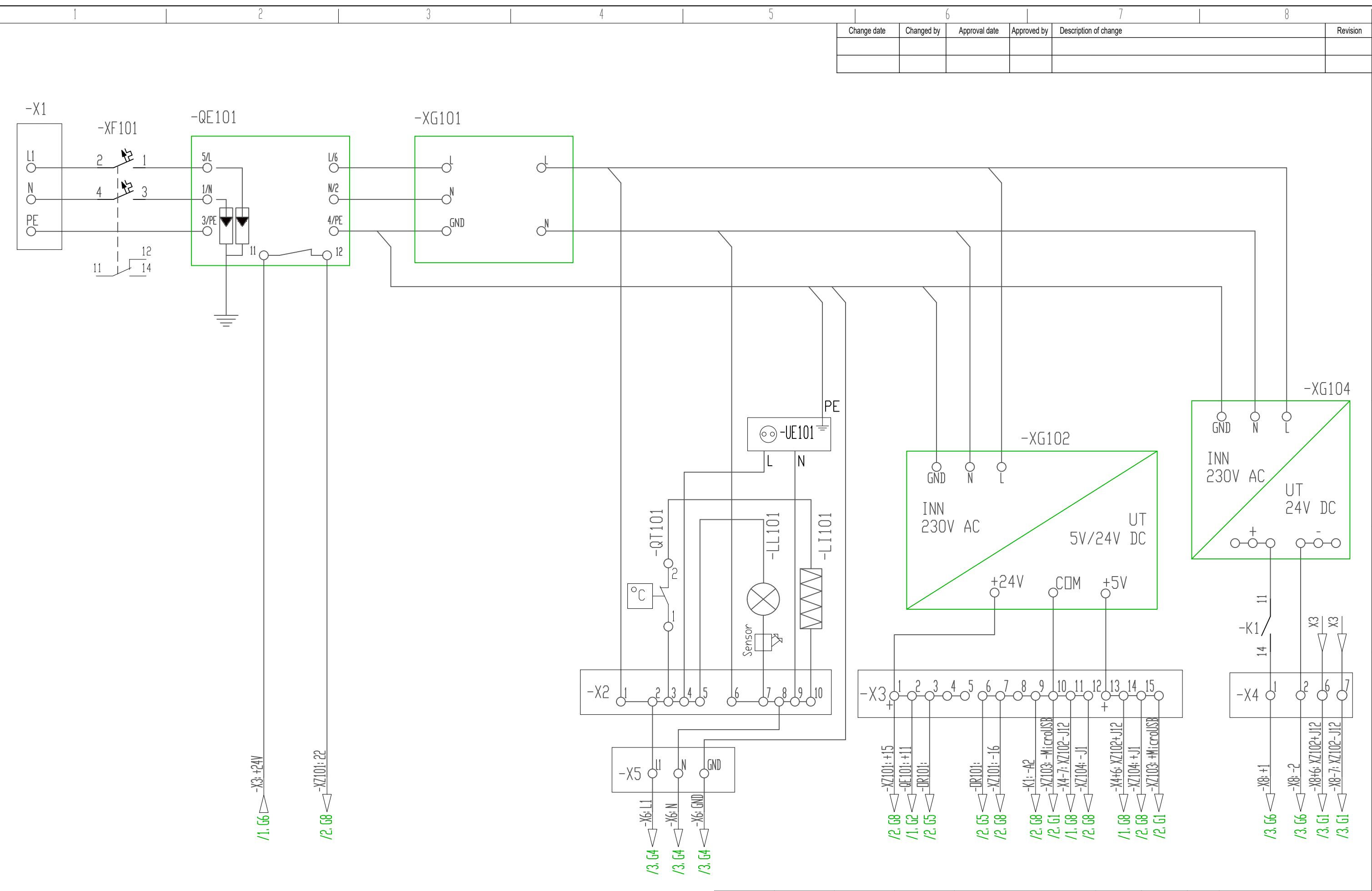
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02. 09. 19	BEP	02. 09. 19	FW			1					
Material			Surface treatment			Prod. groupe	Format				
LED Electronic						073	A3				
Title					Status		Drawing no.			Revision	
LED VMS - Tallaksbru					Approved					0	
Additional description					Article no.					Project no.	Document type
Block Diagram									RGB		

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Material LED Electronic		Surface treatment				Prod. groupe 073	Format A3		
Title LED VMS - Tallaksbru					Status Approved		Drawing no.		Revision 0
Additional description BOM					Article no.			Project no.	Document type RGB

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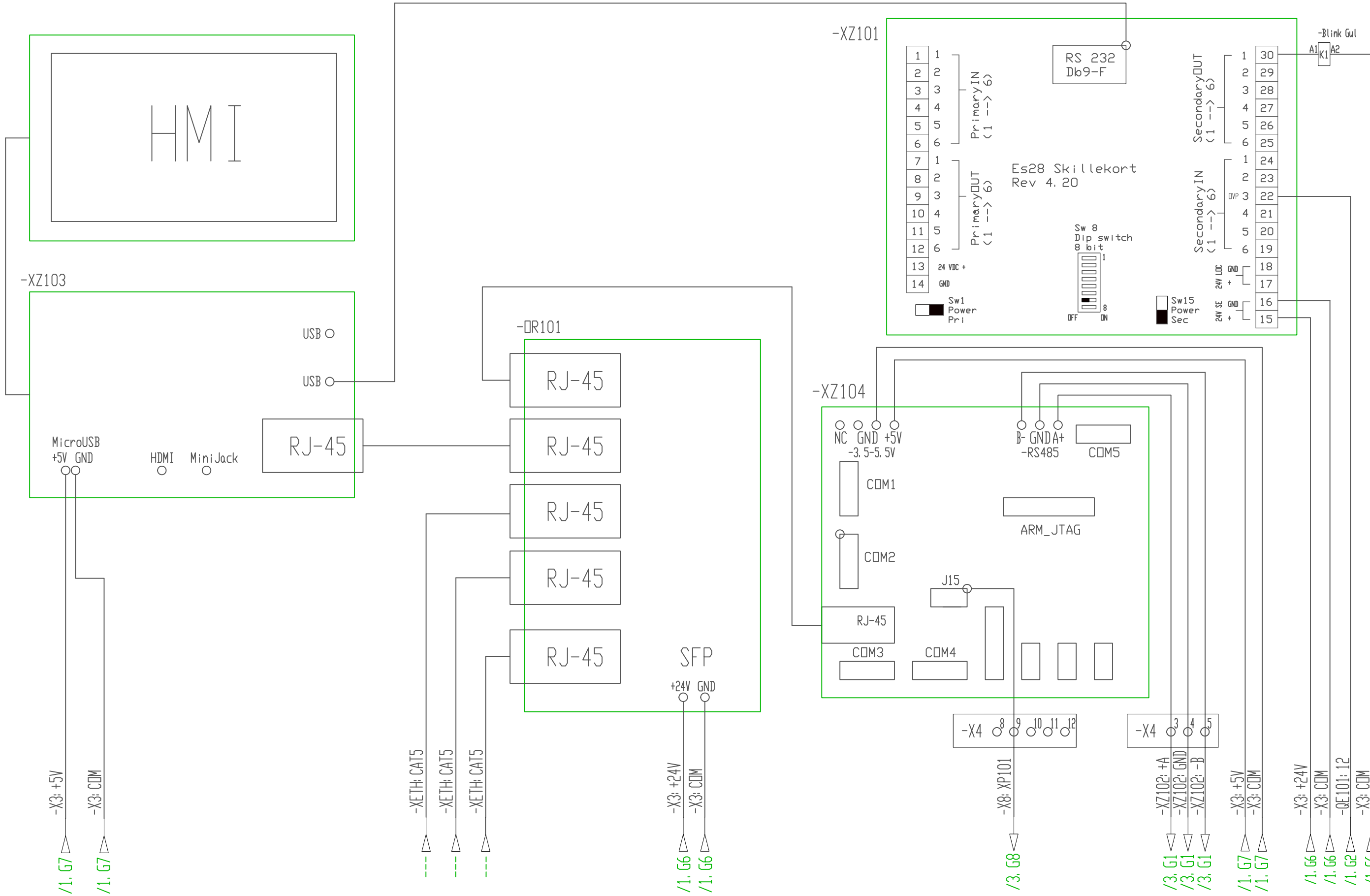
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Material		Surface treatment			Prod. groupe	Format		
LED Electronic					073	A3		
Title					Status	Drawing no.		Revision
LED VMS - Tallaksbru					Approved			0
Additional description					Article no.		Project no.	Document type
Wiring Diagram - Power Cabinet								RGB

Geometry from 3D CAD-models is leading unless otherwise stated on the 2D drawing or in the additional specifications document

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02. 09. 19	BEP	02. 09. 19	FW		2					
Material			Surface treatment			Prod. groupe	Format			
LED Electronic						073	A3			
Title					Status		Drawing no.		Revision	
LED VMS - Tallaksbru					Approved				0	
Additional description					Article no.			Project no.		Document type
Wiring Diagram - Power Cabinet										RGB

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Drawn date 02. 09. 19	Drawn by BEP	Approval date 02. 09. 19	Approved by FW		Sheet 3	Scale		
Material LED Electronic			Surface treatment		Prod. groupe 073	Format A3		
Title LED VMS - Tallaksbru					Status Approved	Drawing no.		Revision 0
Additional description Wiring Diagram - Sign					Article no.		Project no.	Document type RGB

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The diagram illustrates the layout of a control cabinet, organized into three horizontal sections. The top section contains three components: -XZ103, -XZ101, and -XZ104. The middle section contains -QR102, -QR101, -XG102, -X3, and -XG101. The bottom section contains -DIN47100, -X4, -X5, -QG104, -QT101, -K1, -UE101, -QE101, -XF101, and -X1. The components are connected to a power supply -LI101 at the top and a terminal block -LI101 at the bottom. The connections are as follows: -LI101 (top) connects to -XZ103, -XZ101, and -XZ104. -LI101 (bottom) connects to -DIN47100, -X4, -X5, -QG104, -QT101, -K1, -UE101, -QE101, -XF101, and -X1. -XZ103 connects to -QR102 and -QR101. -XZ101 connects to -XG102 and -X3. -XZ104 connects to -XG101. -QR102 connects to -DIN47100. -QR101 connects to -X4. -XG102 connects to -UE101. -X3 connects to -QE101. -XG101 connects to -XF101. -DIN47100 connects to -X5. -X4 connects to -QG104. -X5 connects to -QT101. -QG104 connects to -K1. -QT101 connects to -UE101. -K1 connects to -QE101. -UE101 connects to -XF101. -QE101 connects to -X1. -XF101 connects to -X1.

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Change date	Changed by	Approval date	Approved by	Description of change	Revision

INSIDE SIGN - FRONT SIDE

-XZ108-n							
	-XZ107-1					-XZ102-1	
						-XZ102-2	
						-XZ102-3	
	-XZ107-2						
						-XZ102-4	

Drawn date	Drawn by	Approval date	Approved by		Sheet	Scale		
02. 09. 19	BEP	02. 09. 19	FW		2			
Material				Surface treatment		Prod. groupe	Format	
LED Electronic						073	A3	
Title					Status		Drawing no.	Revision
LED VMS - Tallaksbru					Approved			0
Additional description					Article no.		Project no.	Document type
Layout - Sign								RGB

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2

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Change date	Changed by	Approval date	Approved by	Description of change	Revision

INSIDE SIGN - BACK SIDE

-X9

-XG103-3

-XG103-2

-XG103-1

-XG103-4

-XG103-5

-XG103-6

-X10

-XZ105

-X6

-X7

-X8

-XP101

Drawn date	Drawn by	Approval date	Approved by		Sheet	Scale		
02. 09. 19	BEP	02. 09. 19	FW		3			
Material			Surface treatment		Prod. groupe	Format		
LED Electronic					073	A3		
Title					Status	Drawing no.		Revision
LED VMS - Tallaksbru					Approved			0
Additional description					Article no.		Project no.	Document type
Layout - Sign								RGB

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