



# Customer Approval Form

HM Number	2X1255-01351.A-BZA
Order Confirmation Number	66307
HET Sales Contact	Lino Cacciola
Project Owner	Abigail Spiteri
Request Revision	A
Date of Revision	21/06/2019

Hetronic Malta - A Division of Methode Electronics, Mrieħel Industrial Estate, Mrieħel.

Phone: +356 2389 4000 Fax: +356 2389 4400

Customer

INGERSOLL

Technical Contact

Fabio Presti

Attached please find the following Customer Approval documents:

Transmitter Layout Drawing

Transmitter marking **II 2G Ex ib IIB T4 Gb**

Receiver Layout Drawing

Receiver marking **II 2G Ex db [Ex ia Ga/Gb] IIC T6 Gb**

Receiver Output wiring Drawing

Notes:

Customer to verify system layouts and transmitter's label set drawings.

x2pcs Transmitters Ex NOVA-XL designed for Zone 1

x1pc Receiver RX BMS-HL in Ex d Enclosure - Size 5

x1pc Connection Cables 70pol -> O/E , Length = 5.0m

Also included are x4pcs Ex Batteries and x2pcs Battery Charger AC

x2pcs Antenna Miniflex

x1pc Antenna Gainflex AK1

x1pc Antenna Extension Length = 3.0m

ATEX Certification

\_\_\_\_\_

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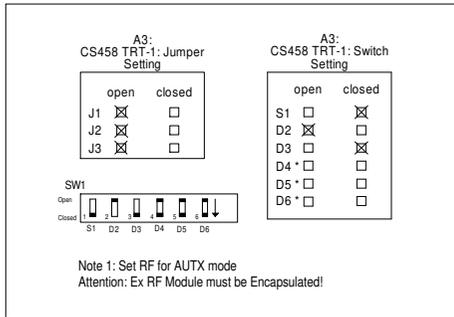
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\* Drawings are to be confirmed within two days of receipt of this Request for Approval in order not to impact delivery lead-time. Production will be kicked off after receipt of Customer Approval in writing as a reply to this email.

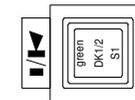
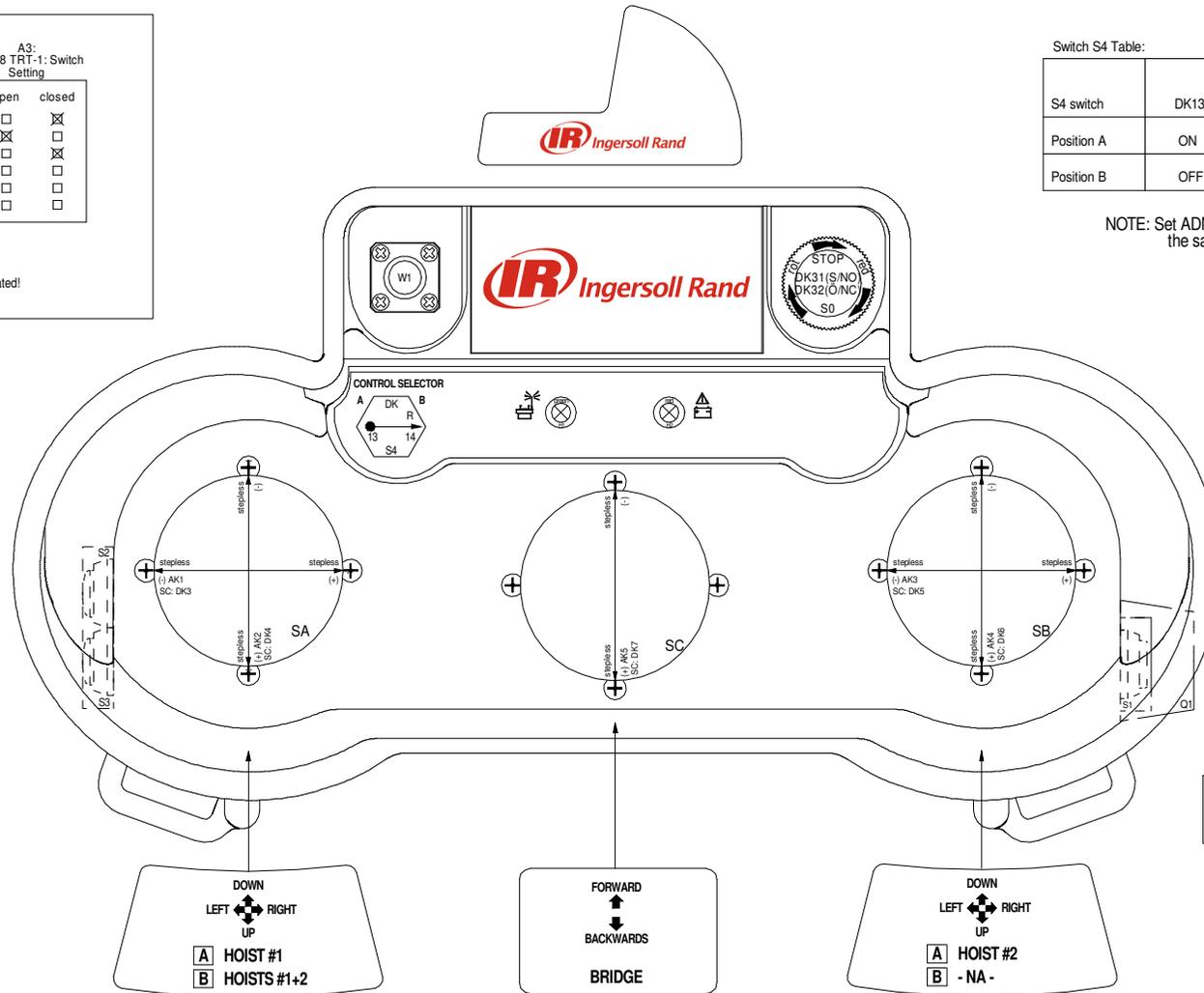
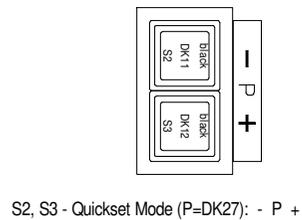
# Transmitter S1 - Layout



Switch S4 Table:

S4 switch	DK13	DK14	Control of Hoist 1	Control of Hoist 2
Position A	ON	OFF	SA	SB
Position B	OFF	ON	SA	SA

NOTE: Set ADMO number and frequency settings the same on both transmitters.



R: rastend/maintain  
T: tastend/momentary

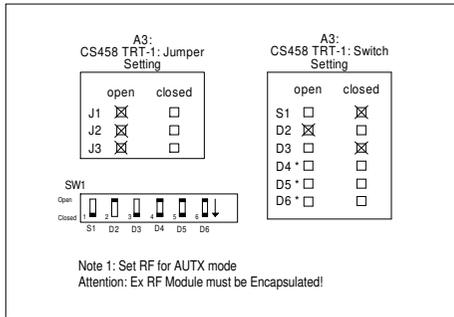


This is an ATEX Certified Explosion Proof system drawing. Any changes must be approved by the Notified Body, prior to implementation. Failure to do so may result in loss of product certificate.

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0	New Drawing	Jun 17, 2019	SAS	KC	AJP	Jun 21, 2019

Transmitter	Type:	Drawing No: 2X1255-01351.A-BZA_UT1	
Customer: INGERSOLL	Certificate No.: TRAC14ATEX0035X	Page: 1 of 5	
Article-name: NOVA-XL II 2G Ex ib IIB T4 Gb	Item-No.: 2X1255-01351.A-BZA		

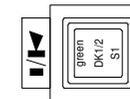
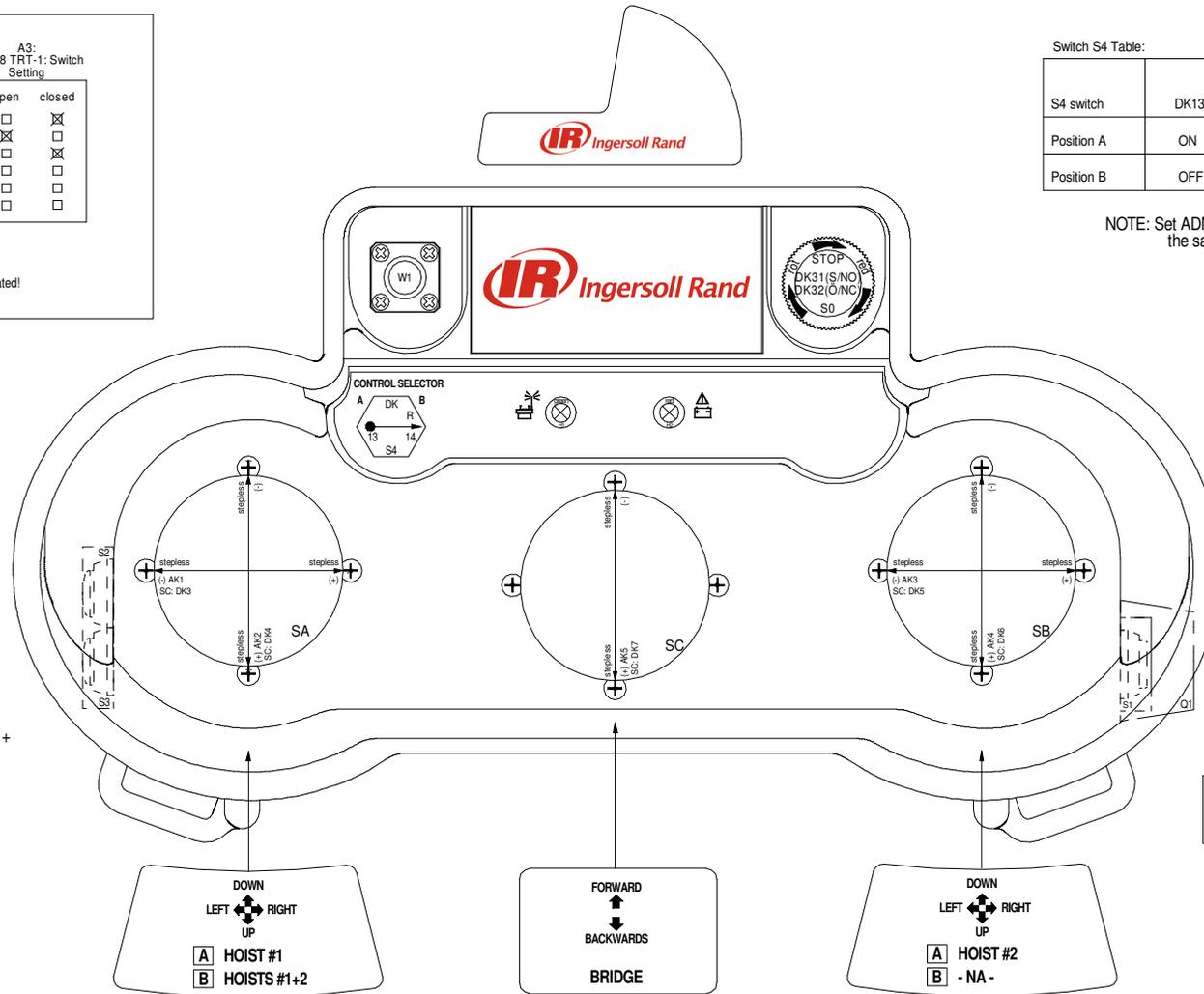
# Transmitter S2 - Layout



Switch S4 Table:

S4 switch	DK13	DK14	Control of Hoist 1	Control of Hoist 2
Position A	ON	OFF	SA	SB
Position B	OFF	ON	SA	SA

NOTE: Set ADMO number and frequency settings the same on both transmitters.



R: rastend/maintain  
T: tastend/momentary

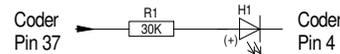
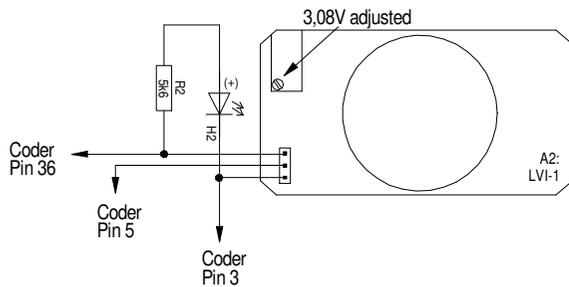
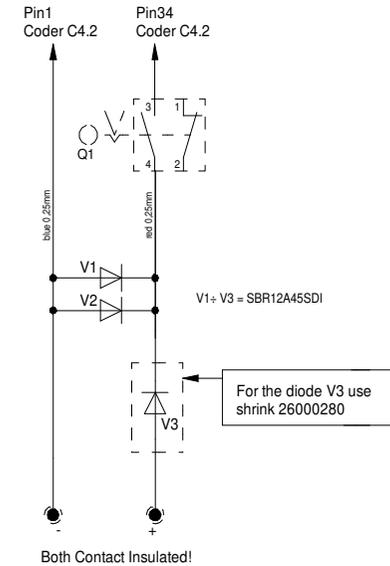
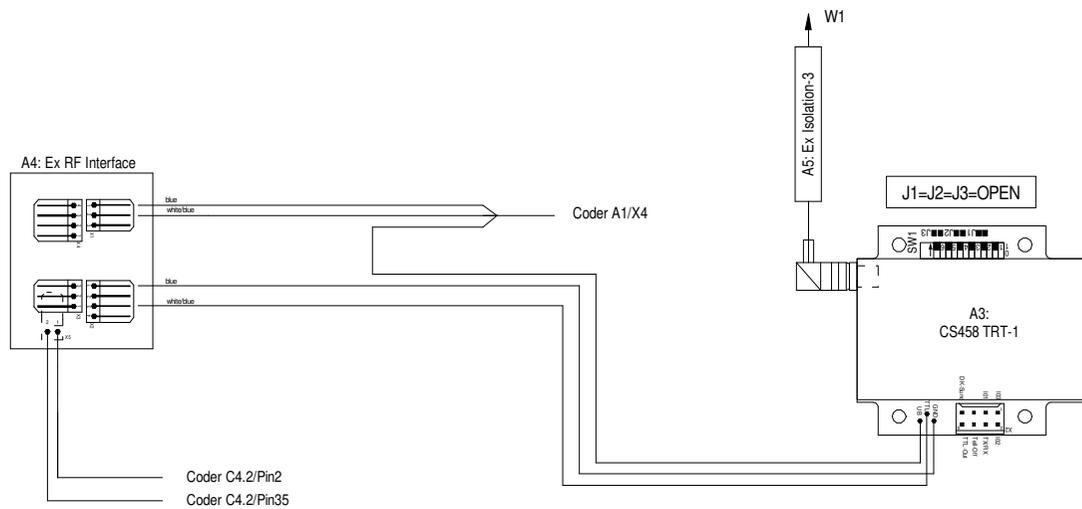


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Transmitter	Type:	Drawing No: 2X1255-01351.A-BZA_UT2	
Customer: INGERSOLL	Certificate No.: TRAC14ATEX0035X	Page: 2 of 5	
Article-name: NOVA-XL II 2G Ex ib IIB T4 Gb	Item-No.: 2X1255-01351.A-BZA		

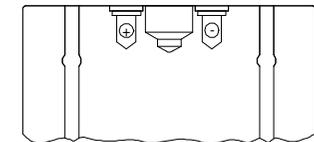
# Transmitters S1 & S2 - Electrical Layout



A1: Coder C4.2 jumper settings

	open	close
J1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
J2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
J3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
J4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
J5	<input checked="" type="checkbox"/>	<input type="checkbox"/>
J6	<input type="checkbox"/>	<input checked="" type="checkbox"/>
J7	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Modification Accubox for Ex Zone



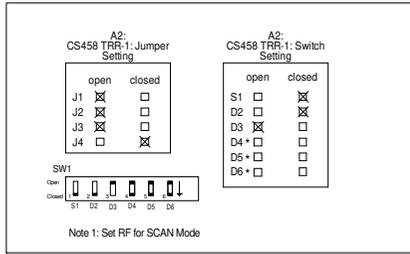
Battery Box modified with insulation bushes at contact pins and addition of rubber kicker

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Transmitter	Type:	Drawing No: 2X1255-01351.A-BZA_UT3	
Kunde: INGERSOLL	Certificate No.: TRAC14ATEX0035X	Page: 3 of 5	
Artikel-Bez.: NOVA-XL Article-name: II 2G Ex ib IIB T4 Gb	Item-No.: 2X1255-01351.A-BZA		

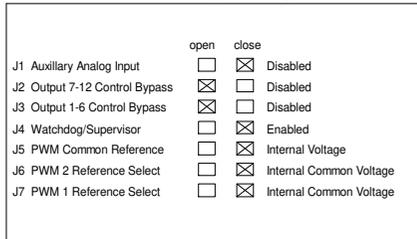
# Receiver Electrical Layout



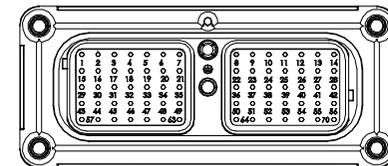
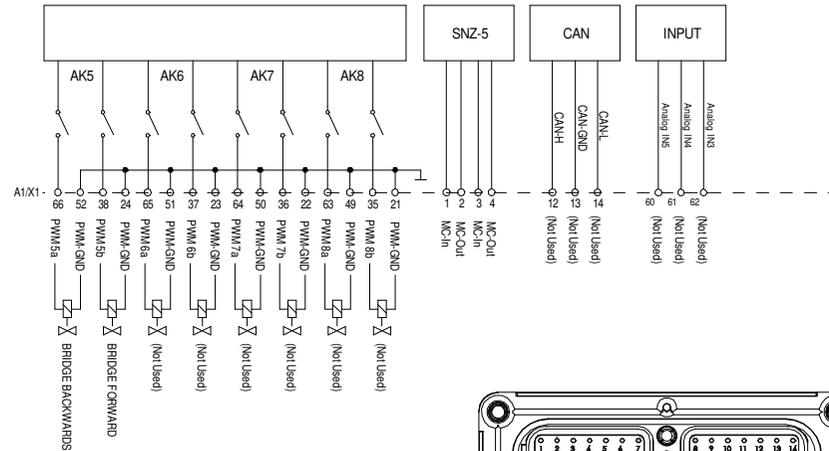
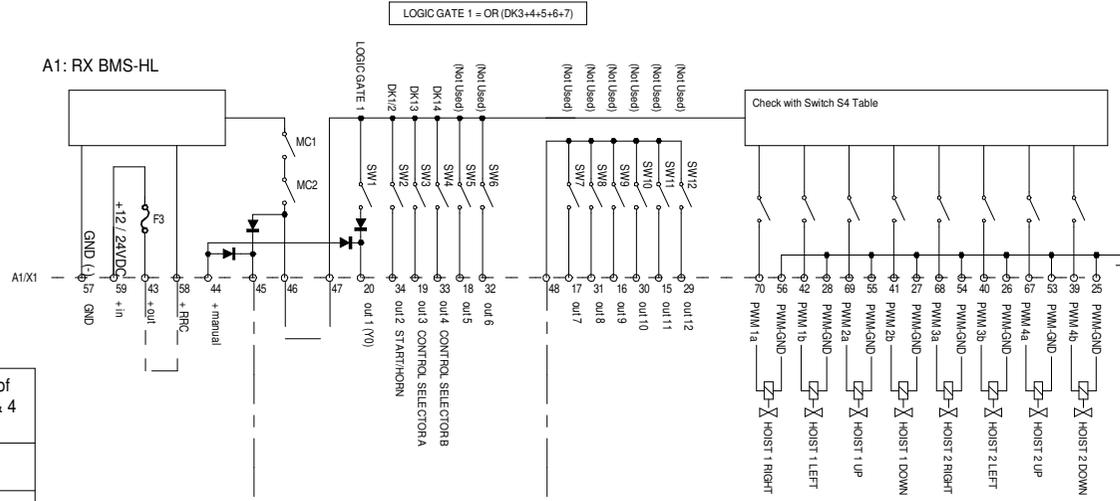
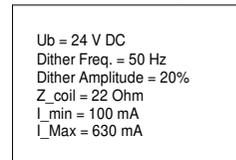
Switch S4 Table:

S4 switch	DK13	DK14	Control of PWM 1 & 2 Output	Control of PWM 3 & 4 Output
Position A	ON	OFF	SA	SB
Position B	OFF	ON	SA	SA

A1: Default RX BMS-HL Jumper Settings



A1: RX BMS-HL Setting



A1/X1

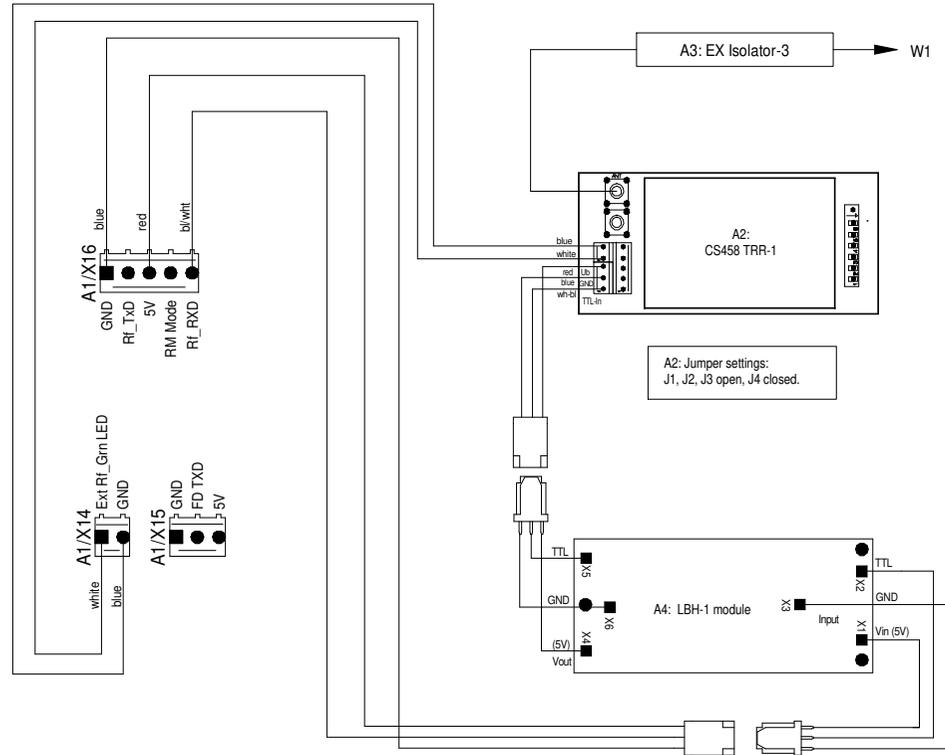
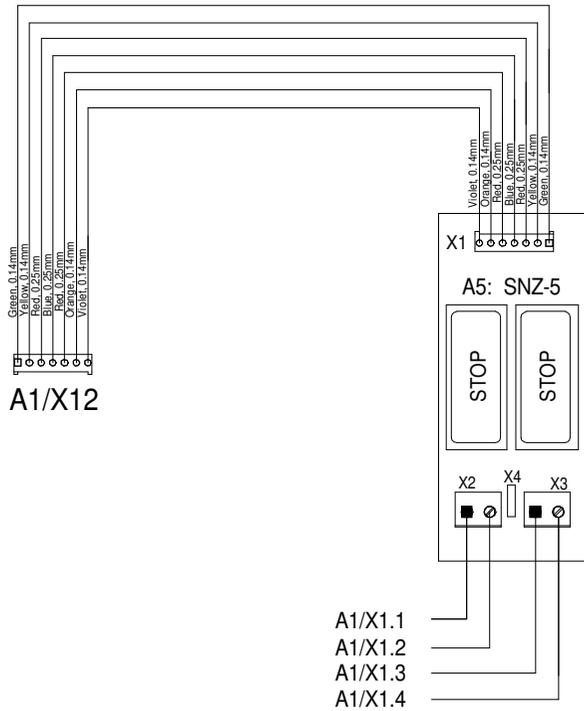
**!** This is an ATEX Certified Explosion Proof system drawing. Any changes must be approved by the Notified Body prior to implementation. Failure to do so may result in loss of product certificate.

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0	New Drawing	Jun 17, 2019	SAS	KC	AJP	Jun 21, 2019

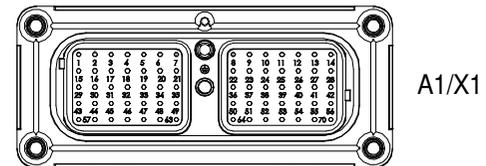
Receiver	Type:	Drawing No: 2X1255-01351.A-BZA_UR1
Kunde: Customer: INGERSOLL	Certificate No.: EPS 15 ATEX 1 051 X	Page: 1 of 7
Artikel-Bez.: Article-name: RX-BMS-HL-IIC-EX1 II 2G Ex db (Ex ia Ga/Gb) IIC T6 Gb	Item-No.: 2X1255-01351.A-BZA	



## Receiver Electrical Layout



This is an ATEX Certified Explosion Proof system drawing.  
Any changes must be approved by the Notified Body prior to implementation.  
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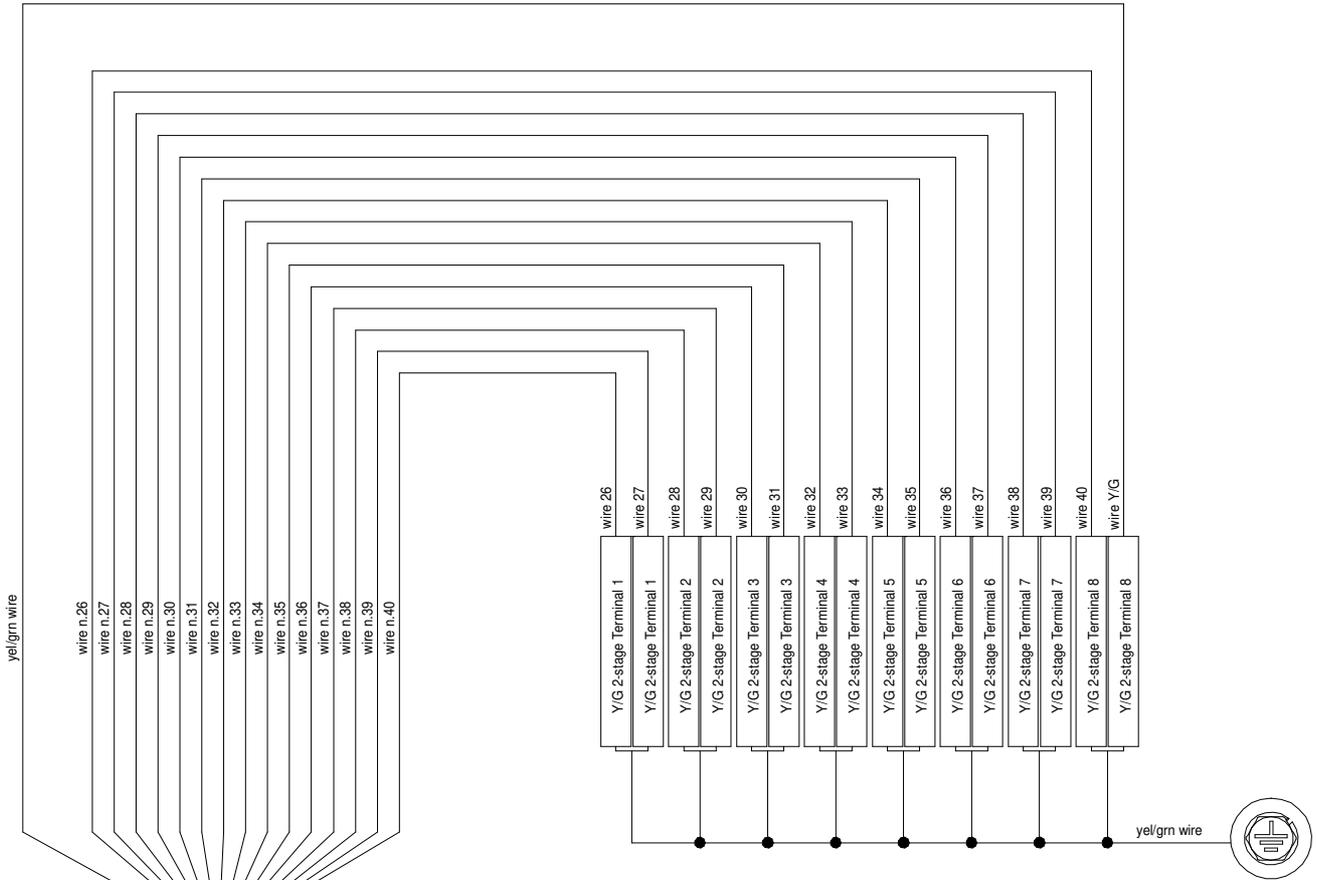


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0	New Drawing	Jun 17, 2019	SAS	KC	AJP	Jun 21, 2019

<b>Receiver</b>	Type:	Drawing No: 2X1255-01351.A-BZA_UR2
Kunde: Customer: <b>INGERSOLL</b>	Certificate No.: EPS 15 ATEX 1 051 X	Page: <b>2 of 7</b>
Artikel-Bez.: Article-name: <b>RX-BMS-HL-IIC-EX1 II 2G Ex db (Ex ia Ga/Gb) IIC T6 Gb</b>	Item-No.: 2X1255-01351.A-BZA	



# Receiver Electrical Layout



Connection  
Cable 41x0.75mm

To the PE on the  
bottom of the Ex d  
Enclosure

Note: Connect the not used  
wires of the connection cable  
to the PE screw, as shown in  
the drawing.

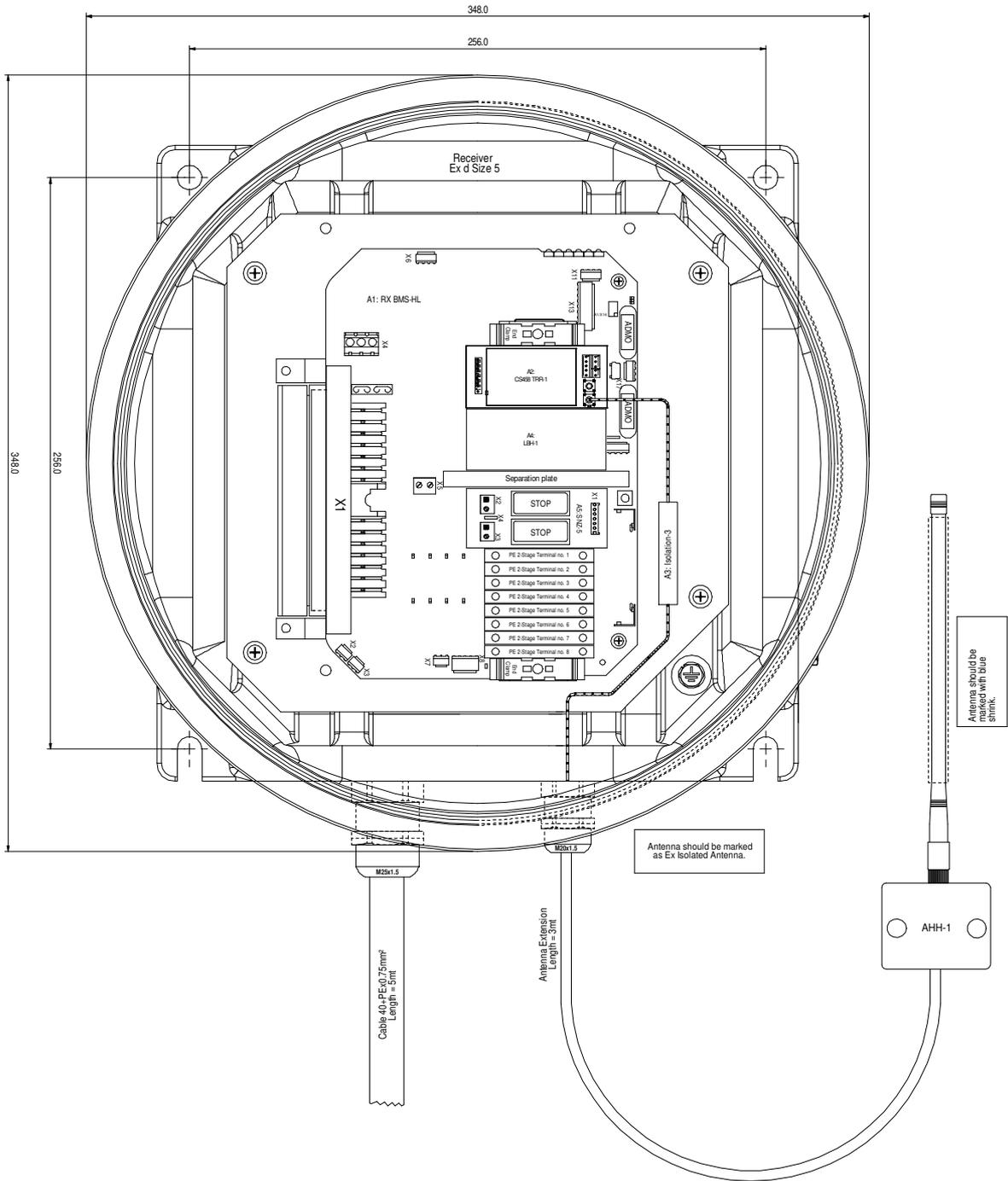


This is an ATEX Certified Explosion Proof system drawing. Any changes must be approved by the Notified Body prior to implementation. Failure to do so may result in loss of product certificate.

Receiver		Type:
Kunde: Customer:	INGERSOLL	Certificate No.: EPS 15 ATEX 1 051 X
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Drawing No: 2X1255-01351.A-BZA_UR3		
Page: 3 of 7		
Item-No.: 2X1255-01351.A-BZA		

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0	New Drawing	Jun 20, 2019	SAS	KC	AJP	Jun 21, 2019

# Receiver Layout



All measurements are in mm.

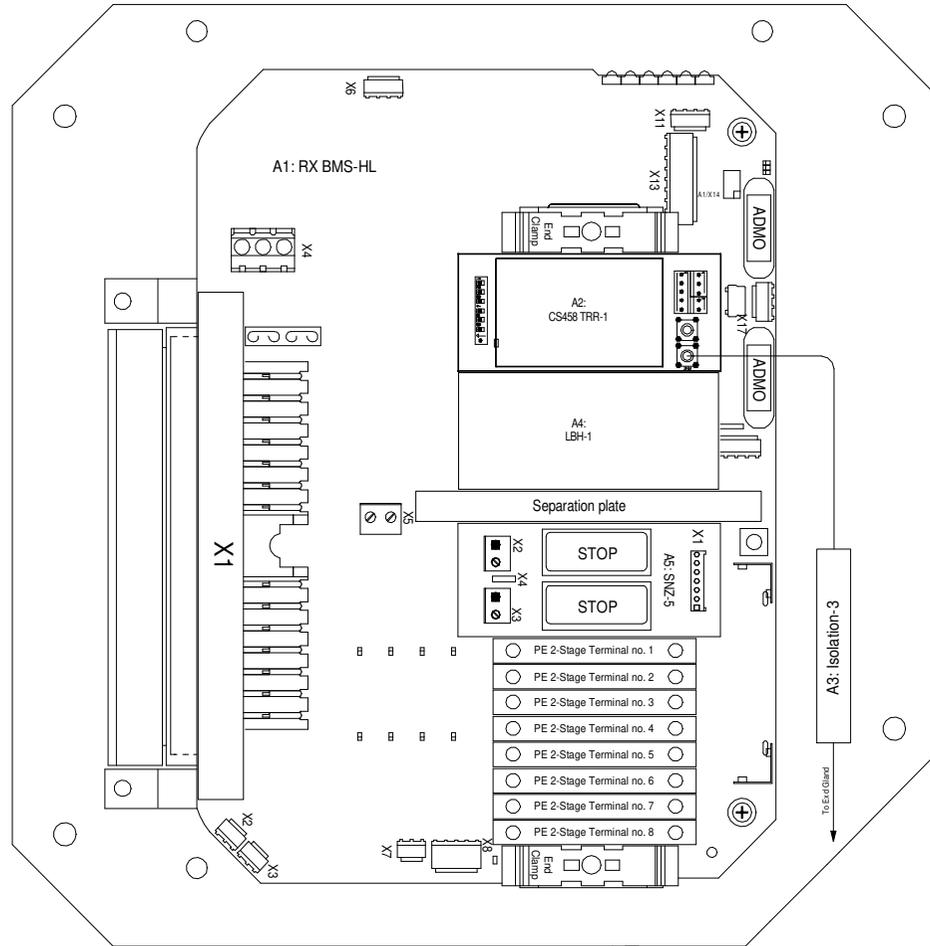


This is an ATEX Certified Explosion Proof system drawing. Any changes must be approved by the Notified Body prior to implementation. Failure to do so may result in loss of product certificate.

Receiver		Type:
Kunde: Customer:	INGERSOLL	Certificate No.: EPS 15 ATEX 1 051 X
Article-name: RX-BMS-HL-IIC-EX1 II 2G Ex db [Ex ia Ga/Gb] IIC T6 Gb		
Drawing No: 2X1255-01351.A-BZA_UR4		
Page: 4 of 7		
Item-No.: 2X1255-01351.A-BZA		

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1	---	---	---	---	---	---
0	New Drawing	Jun 20, 2019	SAS	KC	AJP	Jun 21, 2019

# Receiver Layout



**!** This is an ATEX Certified Explosion Proof system drawing. Any changes must be approved by the Notified Body prior to implementation. Failure to do so may result in loss of product certificate.

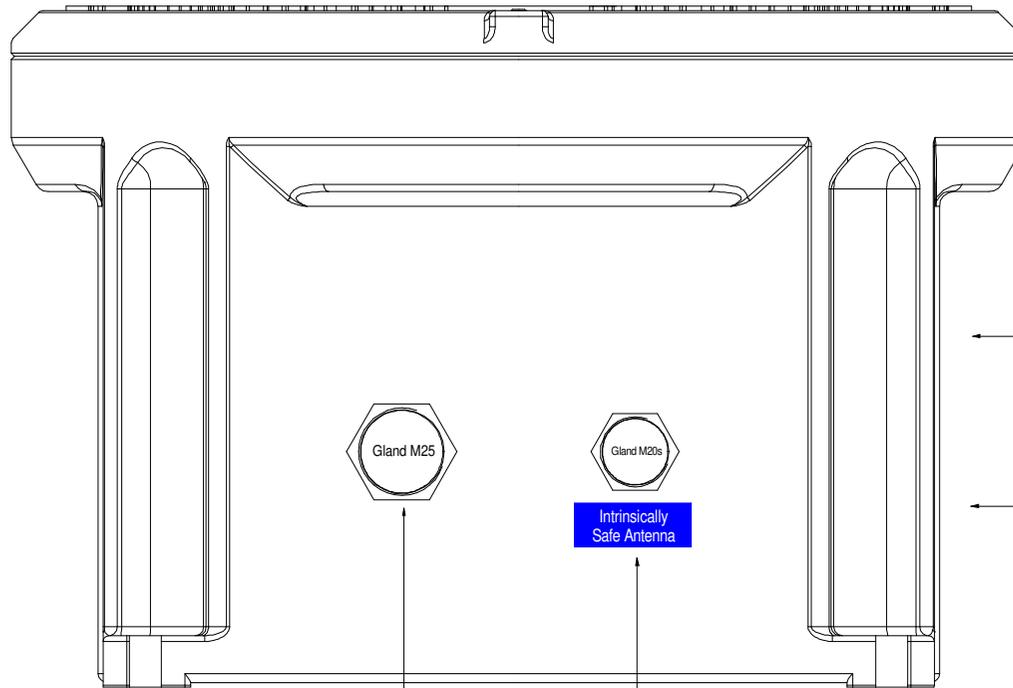
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Receiver		Type:	Drawing No: 2X1255-01351.A-BZA_UR5
Kunde: Customer:	INGERSOLL	Certificate No.: EPS 15 ATEX 1 051 X	Page: 5 of 7
Artikel-Bez.: Article-name:	RX-BMS-HL-IIC-EX1 II 2G Ex db (Ex ia Ga/Gb) IIC T6 Gb	Item-No.:	2X1255-01351.A-BZA



# Receiver Layout

Front view



Ex d Gland M25x1.5  
for Connection Cable

Ex d Gland M20s x1.5  
for Antenna Ext.



Attach the Ex Marking label and the Ex d Warning label on the side of the enclosure.



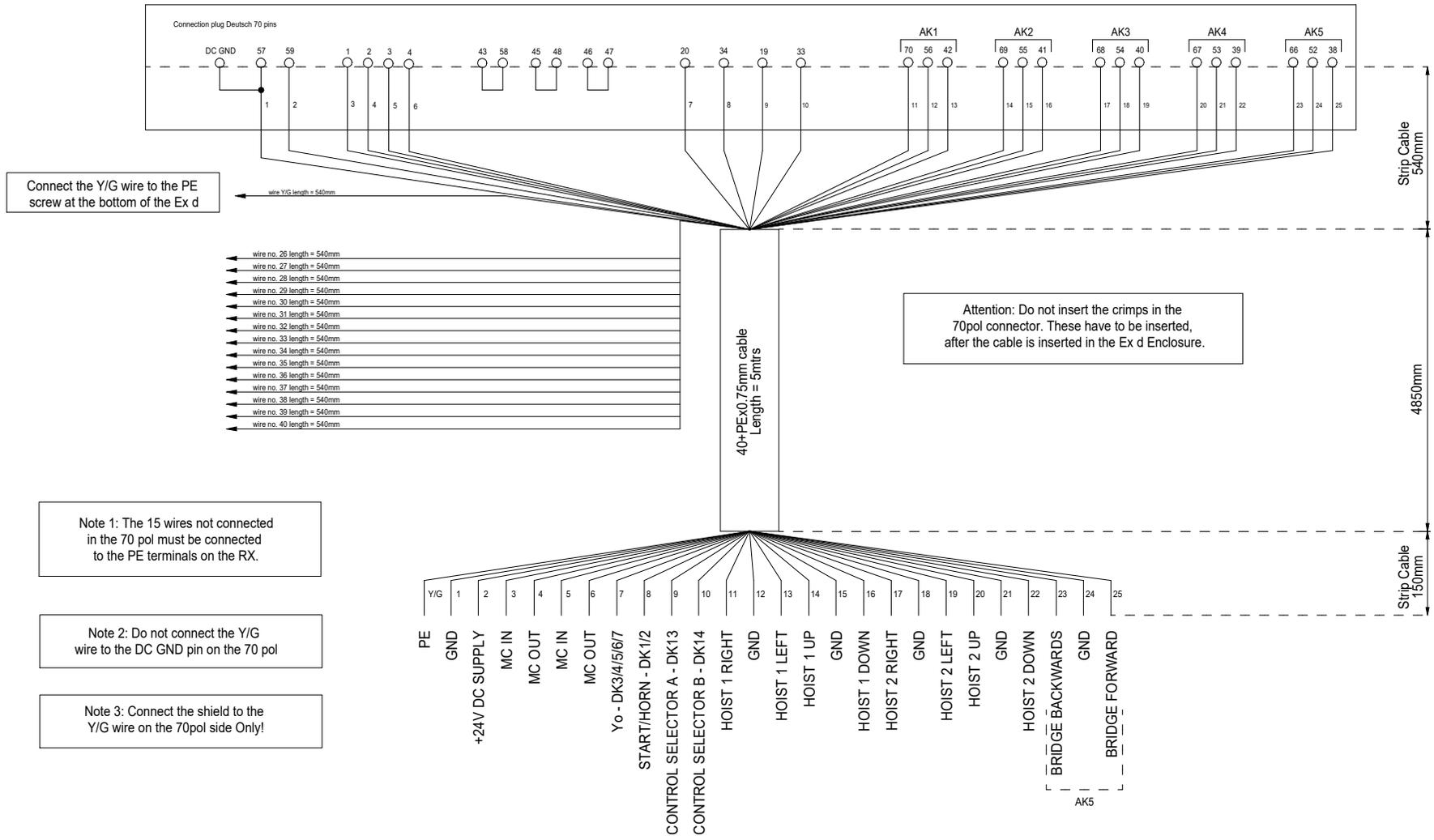
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Artikel-Bez.: Article-name: RX-BMS-HL-IIC-EX1 II 2G Ex db (Ex ia Ga/Gb) IIC T6 Gb	Item-No.: 2X1255-01351.A-BZA	



# Connection Cable Layout

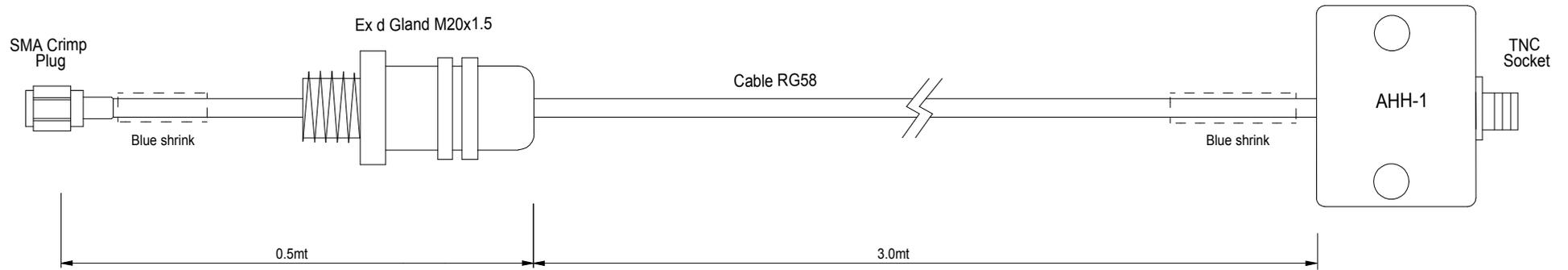


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Projection:	Scale:	Units:	Tolerances:
---	---	mm	DIN 7168-m
Material:	Finish:	Type:	Drawing No:
---	---		CUS03849.1
Article-name:	Connection Cable Length=5mt 70pol -> O/E		Sheet: 1 of 1
			Item-No.: CUS03849



# Antenna Extension Layout



No	Remark	Drawn Date	Drawn by	Checked by	Approved by	Approved Date
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4	---	---	---	---	---	---
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0	New Drawing	May 15, 2017	KZ	AJP	AJP	May 15, 2017

Projection:	Scale:	Units:	Tolerances:	
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Material:	Finish:	Type:	Drawing No:	Sheet:
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Article-name:	Antenna Extension L=0.5+3mt SMA -> TNC (AHH-1)		Item-No.:	CUS02657

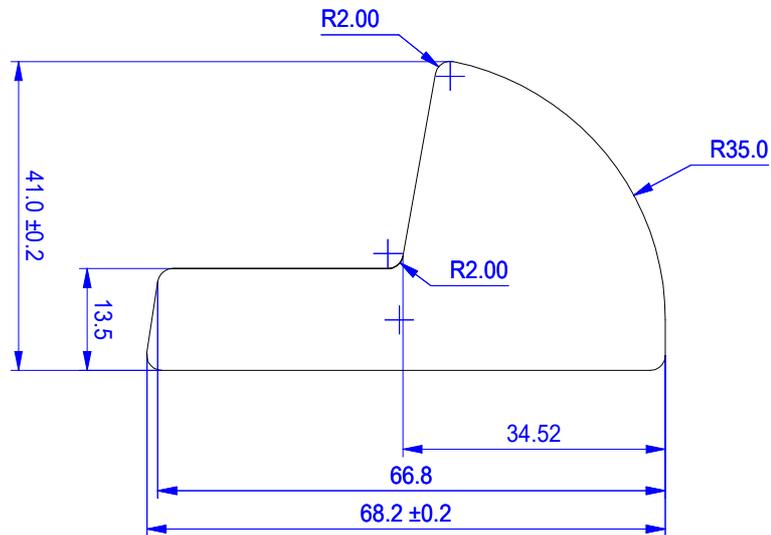
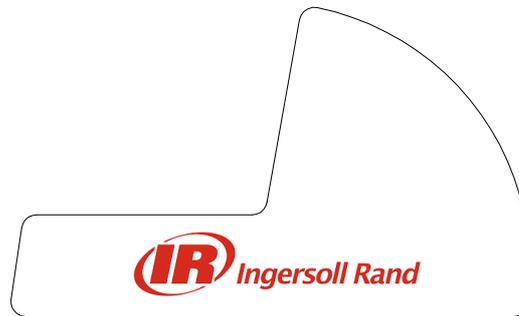


Item No.: CUS03834

Distribution						
Supp	H-I	H-M	H-A	H-CH	H-US	H-IT
X		X				

Type / Use						
Self-adhesive	Non-stick	Outside	Inside	For arched surface	Ø Punched out	
X		X				

Background	glossy	mat	Imprint	Thickness
White		X	Red	0.50mm
RAL 9016			RAL 3000	



Important Note: Colours used in drawing are not the actual RAL colours

Projection: ---	Scale: 1 : 1	Units: mm
Material: RCS-PE-ESD	Finish: ---	Tolerances: unless specified use DIN 7168-m

No	Remark	Drawn Date	Drawn by	Checked by	Approved by	Approved Date
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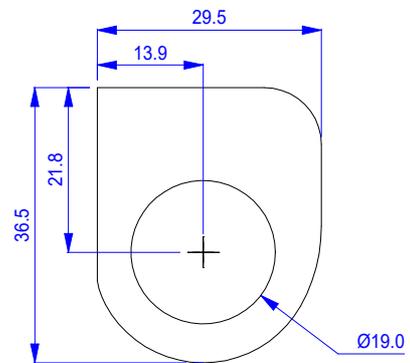
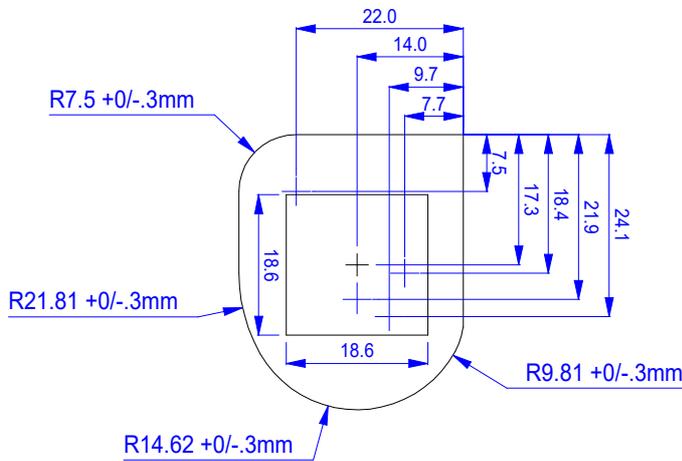
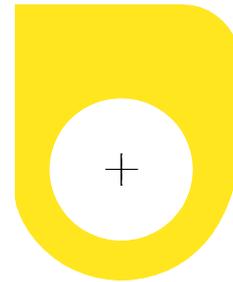
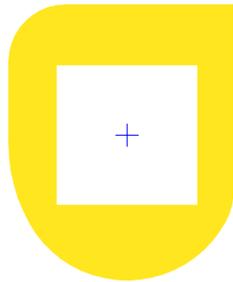
Article-name: Ex Label Logo 'INGERSOLL'	
Type:	
Drawing No: CUS03834.1	
Sheet: 1 of 1	
Item-No.: CUS03834	

Item No.: CUS03835

Distribution						
Supp	H-I	H-M	H-A	H-CH	H-US	H-IT
X		X				

Type / Use						
Self-adhesive	Non-stick	Outside	Inside	For arched surface	Ø Punched out	
X		X			X	

Color	glossy	mat	Thickness
Yellow		X	0.25mm
RAL 1033			



All Holes Punched Out

Important Note: Colours used in drawing are not the actual RAL colours

Projection: ---	Scale: 1 : 1	Units: mm
Material: RCS-PE-ESD	Finish: ---	Tolerances: unless specified use DIN 7168-m

No	Remark	Drawn Date	Drawn by	Checked by	Approved by	Approved Date	Article-name:
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4	---	---	---	---	---	---	Type: 
3	---	---	---	---	---	---	Drawing No: CUS03835.1
2	---	---	---	---	---	---	Sheet: 1 of 5
1	---	---	---	---	---	---	Item-No.: CUS03835
0	New Drawing	Jun 17, 2019	SAS	AJP	AJP	Jun 17, 2019	

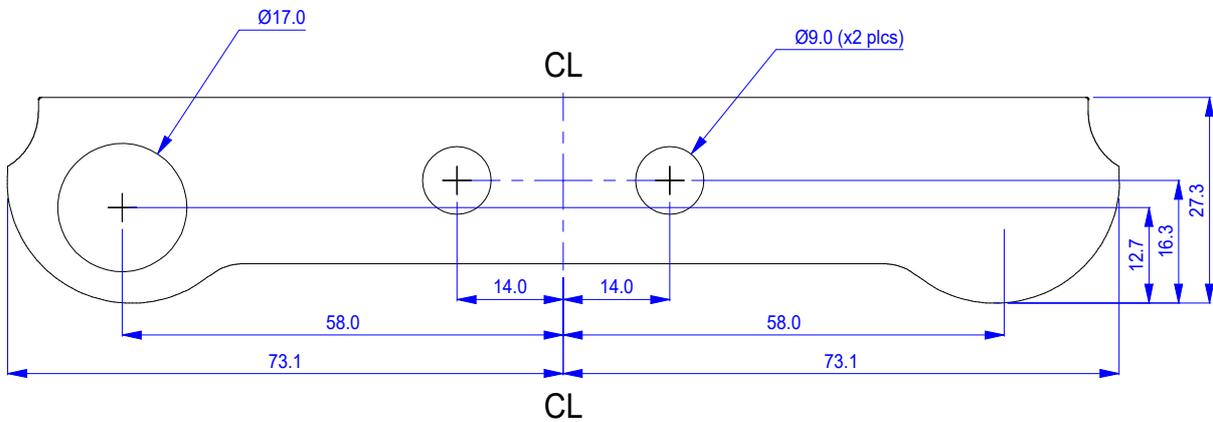
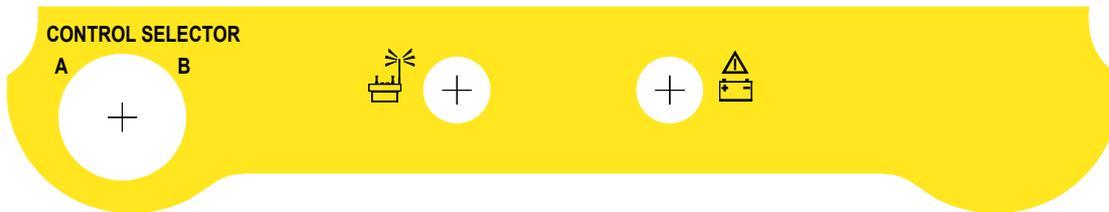


Item No.: CUS03835

Distribution							
Supp	H-I	H-M	H-A	H-CH	H-US	H-IT	
X		X					

Type / Use						
Self-adhesive	Non-stick	Outside	Inside	For arched surface	Ø Punched out	
X		X			X	

Color	glossy	mat	Imprint	Thickness
Yellow		X	black	0.25mm
RAL 1033			RAL 9005	



All Holes are Punched Out

Important Note: Colours used in drawing are not the actual RAL colours

Projection: ---	Scale: 1 : 1	Units: mm
Material: RCS-PE-ESD	Finish: ---	Tolerances: unless specified use DIN 7168-m

No	Remark	Drawn Date	Drawn by	Checked by	Approved by	Approved Date
5	---	---	---	---	---	---
4	---	---	---	---	---	---
3	---	---	---	---	---	---
2	---	---	---	---	---	---
1	---	---	---	---	---	---
0	New Drawing	Jun 17, 2019	SAS	AJP	AJP	Jun 17, 2019

Article-name: Ex Label Set TX NOVA-XL - 10pcs

Type: 

Drawing No: CUS03835.2      Sheet: 2 of 5

Item-No.: CUS03835

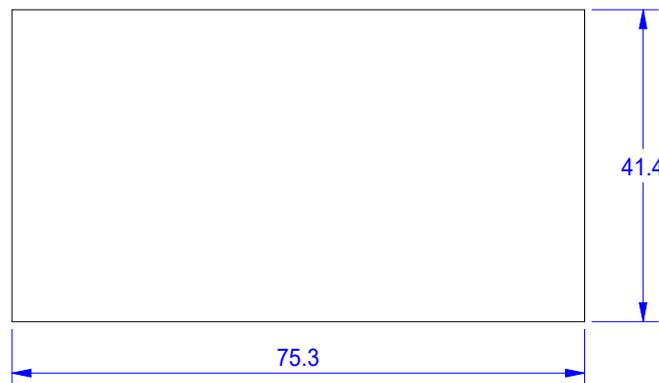


Item No.: CUS03835

Distribution							
Supp	H-I	H-M	H-A	H-CH	H-US	H-IT	
X		X					

Type / Use						
Self-adhesive	Non-stick	Outside	Inside	For arched surface	Ø Punched out	
X		X				

Background	glossy	mat	Imprint	Thickness
White		X	Red	0.50mm
RAL 9016			RAL 3000	



Important Note: Colours used in drawing are not the actual RAL colours

Projection: ---	Scale: 1 : 1	Units: mm
Material: RCS-PE-ESD	Finish: ---	Tolerances: unless specified use DIN 7168-m

No	Remark	Drawn Date	Drawn by	Checked by	Approved by	Approved Date
5	---	---	---	---	---	---
4	---	---	---	---	---	---
3	---	---	---	---	---	---
2	---	---	---	---	---	---
1	---	---	---	---	---	---
0	New Drawing	Jun 17, 2019	SAS	AJP	AJP	Jun 17, 2019

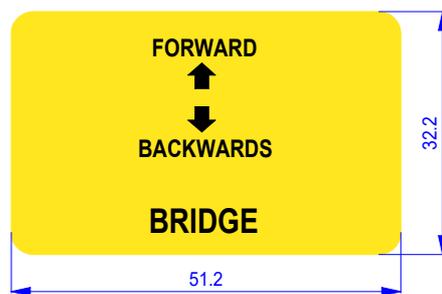
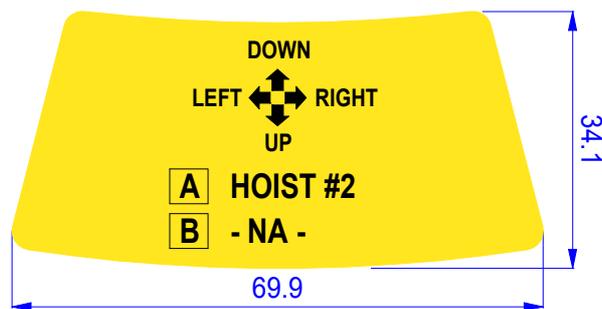
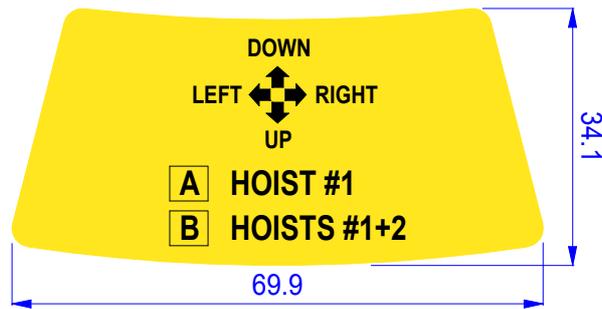
Article-name: Ex Label Set TX NOVA-XL - 10pcs	
Type:	
Drawing No: CUS03835.3	
Sheet: 3 of 5	
Item-No.: CUS03835	

Item No.: CUS03835

Distribution						
Supp	H-I	H-M	H-A	H-CH	H-US	H-IT
X		X				

Type / Use						
Self-adhesive	Non-stick	Outside	Inside	For arched surface	Ø Punched out	
X		X				

Color	glossy	mat	Imprint	Thickness
Yellow		X	Black	0.25mm
RAL 1033			RAL 9005	



Important Note: Colours used in drawing are not the actual RAL colours

Projection: ---	Scale: 1 : 1	Units: mm
Material: RCS-PE-ESD	Finish: ---	Tolerances: unless specified use DIN 7168-m

No	Remark	Drawn Date	Drawn by	Checked by	Approved by	Approved Date	Article-name:	Type:	Drawing No:	Sheet:	Item-No.:
5	---	---	---	---	---	---	Ex Label Set TX NOVA-XL - 10pcs		CUS03835.4	4 of 5	CUS03835
4	---	---	---	---	---						
3	---	---	---	---	---						
2	---	---	---	---	---						
1	---	---	---	---	---						
0	New Drawing	Jun 17, 2019	SAS	AJP	AJP	Jun 17, 2019					

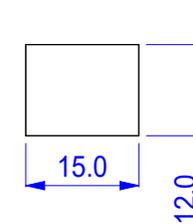
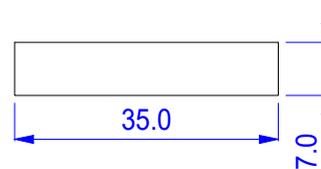
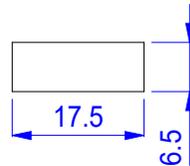
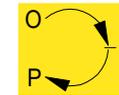


Item No.: CUS03835

Distribution							
Supp	H-I	H-M	H-A	H-CH	H-US	H-IT	
X		X					

Color	glossy	mat	Imprint	Thickness
Yellow		X	black	0.25mm
RAL 1033			RAL 9005	

Type / Use						
Self-adhesive	Non-stick	Outside	Inside	For arched surface	Ø Punched out	
X		X				



Important Note: Colours used in drawing are not the actual RAL colours

No	Remark	Drawn Date	Drawn by	Checked by	Approved by	Approved Date
5	---	---	---	---	---	---
4	---	---	---	---	---	---
3	---	---	---	---	---	---
2	---	---	---	---	---	---
1	---	---	---	---	---	---
0	New Drawing	Jun 17, 2019	SAS	AJP	AJP	Jun 17, 2019

Projection: ---	Scale: 1 : 1	Units: mm	Tolerances: unless specified use DIN 7168-m
Material: RCS-PE-ESD	Finish: ---	Type:	Drawing No: CUS03835.5 Sheet 5 of 5
Article-name: Ex Label Set TX NOVA-XL - 10pcs		Item-No.: CUS03835	

