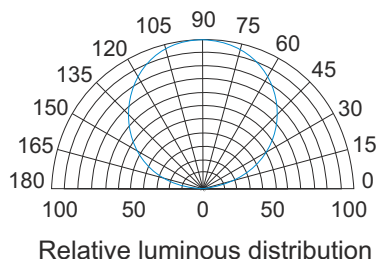


A0852031 Havana Ribbon WW-60-24 24V

Technical specifications:

LED system: 300x 0.08W warm-white LED 3000K (3528)
View angle: 120°
Light output: 1200 Lumen/5mtr.
Power consumption: 5mtr max. 1A (24W)
1mtr max. 0.2A (4.8W)
Strip: IP20
Cutting length: 10cm (6 LED's) = 0.48W = 24Lm
Working temperature: -20°C until +50° C
Backside: Self adhesive 3M tape

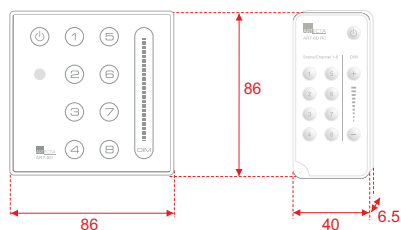
The Havana Ribbon should not be used in hot places
The best heat dissipation is to mount the Ribbon on an aluminum strip or Arctea Alu-Pro Profile. Ensure a proper heat dissipation



Advised 8 ch. DMX controller:

A9915063
Domotion ART-8D white
included IR remote control

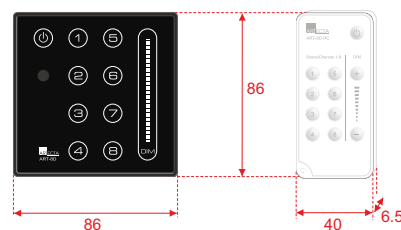
- 8 DMX channels
- 8 programmable scenes
- Masterdim
- Switch-Fade-Off-time 1-8 sec.
- Scene to Scene fade 1-8 sec.



Advised 8 ch. DMX controller:

A9915062
Domotion ART-8D black
included IR remote control

- 8 DMX channels
- 8 programmable scenes
- Masterdim
- Switch-Fade-Off-time 1-8 sec.
- Scene to Scene fade 1-8 sec.



Advised 24V DC LED powersupplies:

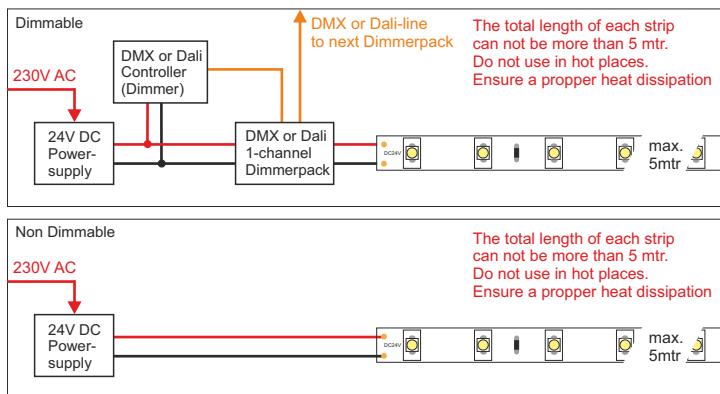
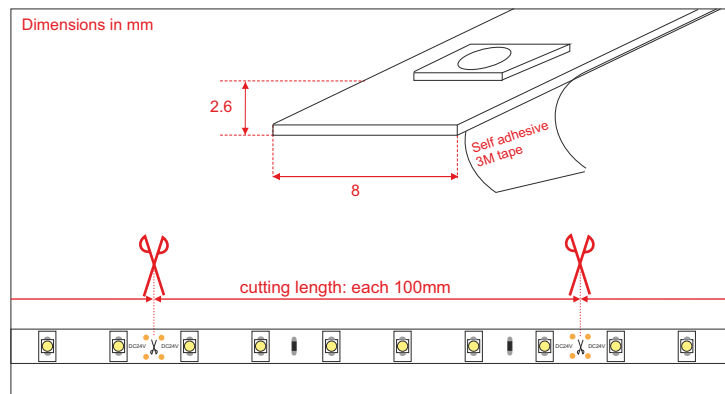
A9900361 DC 24V 60W
(load max. 2x 5m A0852030)
Dimensions: 181x62x35mm
Weight: 0.50 Kg)

A9900362 DC 24V 96W
(load max. 2x 5m A0852030)
Dimensions: 200x71x35mm
Weight: 0.52 Kg)



Advised DMX PWM Dimmer:

A9915016 1 channel PWM Dimmer
max. load 24V/4A = 96W
Load max. 2x 5m A0852030
Dimensions: 90x40x20mm
weight: 0.05Kg



A. Dimmable

A9915094 ART-8D DMX-512 Controller
8 DMX-Channels & 8 Programable scenes
Included IR remote control
(without using the built-in Dimmerpack)



DMX-line

230V AC

A9930004 Attema U50 Wallbox
(not included)

Wallbox-Powersupply
(not included)
A9900030 PSU-12 12VDC
or
A9900031 PSU-24 24VDC
Dimensions: Ø53 x 29.3 mm

DMX-line to next
Dimmerpack

24V DC LED powersupply

24V DC



A9915016 Domotion 1 ch. DMX PWM-Dimmerpack
max. total load 24V/4A = 96W

5 mtr. (one chain) Havana Ribbon WW-60 contents 150 LED's (= 24W)
Load max. 2x 5 meter Havana Ribbon WW-60 (= 48W)
to Domotion 1-ch. DMX-512 PWM Dimmerpack
and keep 24V DC cables short as possible (see Notes)
(max 24V DC cable length (see page 3-7))

230V AC

24V DC



max.
5mtr

max.
5mtr

24V DC LED powersupply

24V DC



A9915016 Domotion 1 ch. DMX PWM-Dimmerpack
max. total load 24V/4A = 96W

5 mtr. (one chain) Havana Ribbon WW-60 contents 150 LED's (= 24W)
Load max. 2x 5 meter Havana Ribbon WW-60 (= 48W)
to Domotion 1-ch. DMX-512 PWM Dimmerpack
and keep 24V DC cables short as possible (see Notes)
(max 24V DC cable length (see page 3-7))

230V AC

24V DC



max.
5mtr

max.
5mtr

B. Non Dimmable

230V AC

24V DC LED powersupply

5 mtr. (one chain) Havana Ribbon WW-60 contents 150 LED's (= 24W)
Load max. 2x 5 meter Havana Ribbon WW-60 (= 48W)
to Domotion 1-ch. DMX-512 PWM Dimmerpack
and keep 24V DC cables short as possible (see Notes)
(max 24V DC cable length (see page 3-7))

24V DC



max.
5mtr

max.
5mtr

Notes:

UK

The thickness of the 24V DC cable depends on the total cable length and total power consumption of all connected fixtures. (See page 3)

NL

De diameter van de 24V DC-kabel is afhankelijk van de totale lengte van de kabel en het totale stroomverbruik van alle verbonden toestellen. (zie tabel op pagina 4)

D

Der Durchmesser des 24V DC-Kabels hängt von der Gesamtlänge des Kabels und der gesamten Leistungsaufnahme aller angeschlossenen Geräte ab. (Siehe Tabelle auf Seite 5)

FR

Le diamètre du câble d'alimentation 24V DC dépend de la longueur totale du câble et la consommation électrique totale de tous les périphériques connectés. (voir page 6)

ES

La sección del cable de 24V DC depende de la longitud total del cable y el consumo de energía total de todas las luminarias (véase la página 7)

IT

Il diametro del cavo 24V DC dipende dalla lunghezza totale del cavo e il consumo di energia totale di tutti apparecchi collegati.

Recommended cable conductor surface (mm²) with cable lengths of 1-50 meters.
for parallel connected 24 volt LED fixtures.

Note; This table is an obligation and not a binding opinion. If necessary, make a electrical resistance calculation (Pouillet $A \times R = p \times l$)

24 Volt		Cable inner conductor 1.5mm ²					Cable inner conductor 2.5mm ²					Cable inner conductor 4mm ²				
Watt		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360
Kabel- lengthe (m)	Ampere	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																
31																
32																
33																
34																
35																
36																
37																
38																
39																
40																
41																
42																
43																
44																
45																
46																
47																
48																
49																
50																

As much as possible shortest path for the 12V cables

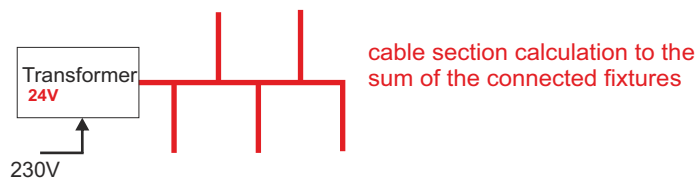
Branching cables without interrupting the main cable

Transformer must be placed in centre of the connected fixtures

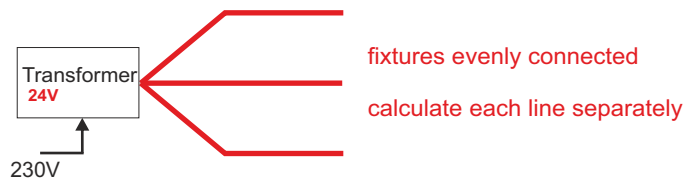
Polarity: positive (+) = red or brown, minus (-) = black or blue

Transformer-capacity 25% greater than the sum of conected fixtures

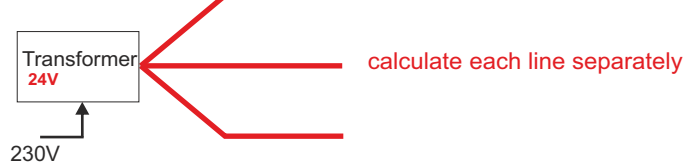
short range, low power



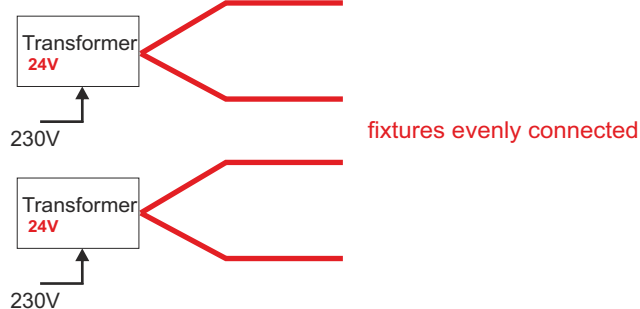
short range, high power



longe range, low power



longe range, high power



Geadviseerd kabelgeleider-oppervlak (mm²) bij kabellengtes van 1-50 mtr. voor 24 Volt parallel aangesloten LED armaturen.

Note; Deze tabel is een vrijblijvend en geen dwingend advies. Maak indien nodig een berekening van elektrische weerstand en geleidbaarheid met de wet van Pouillet ($A \times R = p \times l$)

24 Volt		Kabelgeleider 1.5mm ²					Kabelgeleider 2.5mm ²					Kabelgeleider 4mm ²				
Watt		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360
Kabel- lengte (m)	Ampere	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																
31																
32																
33																
34																
35																
36																
37																
38																
39																
40																
41																
42																
43																
44																
45																
46																
47																
48																
49																
50																

Zoveel mogelijk kortste weg voor de 24V kabels

Kabels aftakken zonder de hoofdkabel te onderbreken

Trafo mogelijk in het midden plaatsen

Polariteit: plus(+) = rood of bruin, min(-) = zwart of blauw

Trafo-capaciteit 25% hoger kiezen dan de som der belastingen

korte afstanden, laag vermogen



korte afstanden, hoog vermogen



lange afstanden, laag vermogen



lange afstanden, hoog vermogen



Empfohlener Querschnitt vom Kabelinnenleiter in mm² bei Kabellängen von 1-50 Meter für parallel geschaltete 24-Volt-LED-Leuchten.

Bitte beachten: Diese Tabelle ist eine unverbindliche Beratung. Falls erforderlich, eine Berechnung vom elektrischen Widerstand und Leitfähigkeit mit der Formel von Pouillet machen

24 Volt		Kabelinnenleiter 1.5mm ²					Kabelinnenleiter 2.5mm ²					Kabelinnenleiter 4mm ²				
Leistung (Watt)		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360
Kabel- länge (m)	Ampere	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																
31																
32																
33																
34																
35																
36																
37																
38																
39																
40																
41																
42																
43																
44																
45																
46																
47																
48																
49																
50																

So viel wie möglich dem kürzesten Weg für die 24V-Leitungen

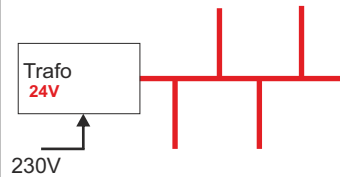
Kabel abzweigen ohne Unterbrechung der Hauptleitung

Trafo wenn möglich in der Mitte montieren

Polarität: positiv(+) = rot oder braun, minus(-) = schwarz oder blau

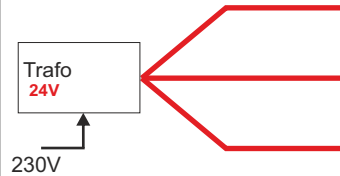
Trafo-Kapazität immer 25% größer wählen als die Summe der Last

kurze Leitungen, niedriger Stromverbrauch



Kabelquerschnitt berechnen nach der Summe der Last

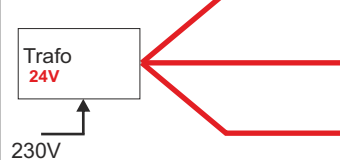
kurze Leitungen, hoher Stromverbrauch



Last möglichst gleichmäßig verteilen

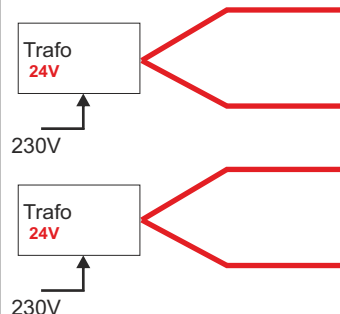
jeder Abschnitt separat berechnen

lange Leitungen, niedriger Stromverbrauch



jeder Abschnitt separat berechnen

lange Leitungen, hoher Stromverbrauch



Last möglichst gleichmäßig verteilen

Surface recommandée conducteur de câble (mm²) 1-50 m longueurs de câble. connectés en parallèle pour 24 volts luminaires à LED.

Remarque, Ce tableau est un des conseils informels et non contraignants. Si nécessaire, un calcul de résistance électrique et la conductivité avec la loi de Pouillet ($A \times R = p \times l$)

24 Volts		Conducteur de câble 1.5mm²					Conducteur de câble 2.5mm²					Conducteur de câble 4mm²				
Puissance (Watt)		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360
Kabel- länge (m)	Ampere	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																
31																
32																
33																
34																
35																
36																
37																
38																
39																
40																
41																
42																
43																
44																
45																
46																
47																
48																
49																
50																

Choisir le chemin le plus court pour les câbles 24V

Éclaircie câbles sans interrompre le câble principal

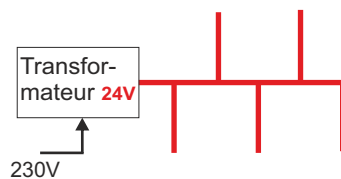
Transformer peut être centrée

Polarité: positive (+) = rouge ou brun, moins (-) = noir ou bleu

Transformateur-capacité de 25% de plus que de choisir la charge

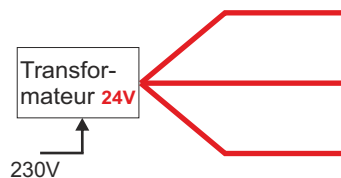
LED-lampes Parallèlement interrupteur

courte portée, de faible puissance



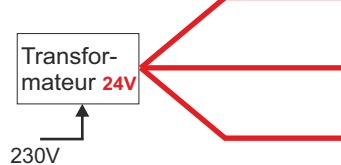
Calcul de la section de câble
la somme des luminaires
connectés

courtes distances, de forte puissance



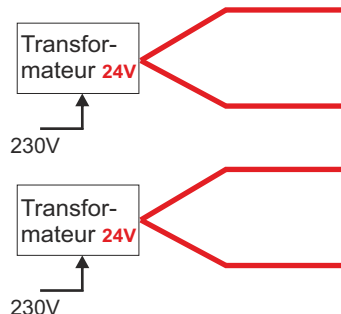
luminaires raccordés
possible uniformément
section de chaque ligne
calculer séparément

Les longues distances, de faible puissance



section de chaque ligne
calculer séparément

Les longues distances, de forte puissance



luminaires raccordés
possible uniformément

Sección de cable recomendada en mm² con longitudes de cable 1-50 metros. para conectar en paralelo de 24 voltios LED fixtures.

Note; Este cuadro es un consejo informal y no vinculante. Si es necesario, un cálculo de resistencia eléctrica y la conductividad con la ley de Pouillet ($A \times R = p \times l$)

24 Voltios		Sección de cable 1.5mm ²					Sección de cable 2.5mm ²					Sección de cable 4mm ²				
Watt		24	48	72	96	120	144	168	192	216	240	264	288	312	336	360
Kabel- lengte (m)	Ampere	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																
25																
26																
27																
28																
29																
30																
31																
32																
33																
34																
35																
36																
37																
38																
39																
40																
41																
42																
43																
44																
45																
46																
47																
48																
49																
50																

Intente utilizar la mínima distancia de cable en líneas de 12V.

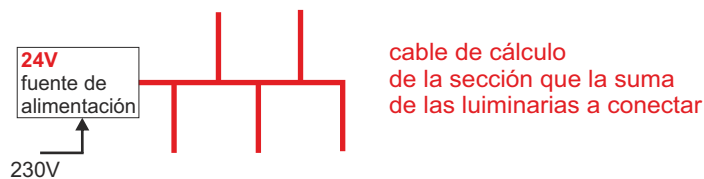
Intente utilizar una línea principal sin cortarlo y sacar de el derivaciones individuales

Si es posible coloque la fuente de alimentación en el centro de la línea [principal de distribución]

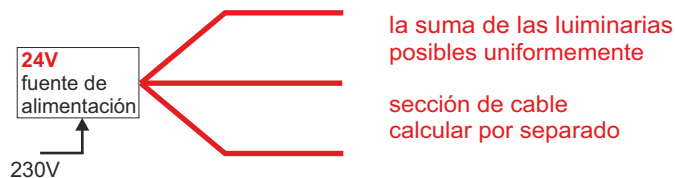
Polaridad: positivo (+) = rojo o marrón, negativo (-) = negro o azul

La fuente de alimentación debe ser 25% mayor que la suma de las luminarias a conectar

distancias cortas, de baja potencia



distancias cortas, de alta potencia



distancias largas, de baja potencia



distancias largas, de alta potencia

