

Festspielhaus Baden-Baden

Produktauswahl Saalbeleuchtung

FachWerk

Medien- und Gebäudesystemtechnik GmbH

Christian Kimmig

Geschäftsführung:
Dipl.-Ing. Christian Kimmig

Kohlmatzstraße 7
77876 Kappelrodeck

Bauherr:

Festspielhaus und Festspiele Baden-Baden gGmbH

Lars Sarnow
Teamleiter Gebäudemanagement
Beim Alten Bahnhof 2
76530 Baden-Baden

für



FESTSPIELHAUS
BADEN-BADEN

<https://www.festspielhaus.de/>

Baumaßnahme:

Erneuerung Saalbeleuchtung

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Dokumentenlenkung

Datum	Version	Ereignis	Bearbeiter
19.06.2023	1.0	Initiale Erstellung	C. Kimmig

1. Aufgabenstellung



Die Saalbeleuchtung im Festspielhaus Baden-Baden soll auf LED-Leuchten umgerüstet werden. Nach verschiedenen Bemusterungsterminen und Testaufbauten vor Ort, sind die folgenden Produkte aufgrund ihrer Eigenschaften bezüglich Dimmverhalten und Weiternutzung der Bestandsverkabelung ausgewählt worden

2. Leuchtentypen

2.1. Downlights (Leuchten Typ 1)

Reality Series, Puppis 1K, IPM, Captive Lead, Fade-to-Warm, Adjustable, White



Model No: SPL02448

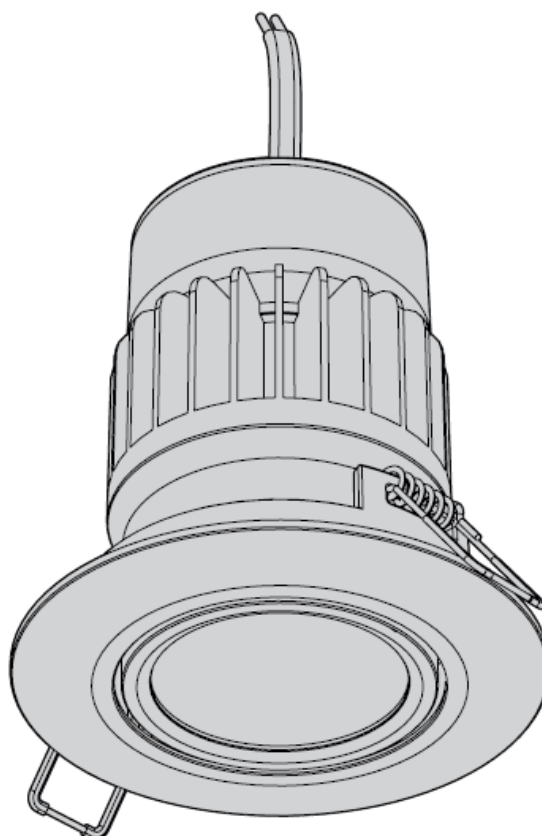
DATASHEET

Introduction

The Puppis 1K is a recessed adjustable downlight. Proprietary GDS IPM protocol carries data-over-power, allowing for up to 30 10W fixtures to be connected via existing cabling.

Key features

- Fade-to-warm white (3000K -> 1800K) with 90CRI.
- 24degree beam angle and high efficiency reflector
- 10W nominal power draw
- 280mA nominal current
- 36VDC feed.
- Adjustable bezel
- Solid construction, aluminium reflector
- 900 Lumen Output
- White bezel
- DMX-over IPM control
- Integrated IPM decoder



Technical Parameters

CCT	3000K FTW
CRI	90 Ra
Beam Angle	24°
Nominal Voltage	36V DC
Nominal Current	280mA
Nominal Power	10W
Control Protocol	IPM
Input	2-Core Captive Lead
Hole Cut Diameter	75mm
Ingress Protection	IP20
Bezel Colour	White
Inner Bezel Colour	White

2.2. Spots (2.Rang) für Deckenbeleuchtung (Leuchtentyp 2)

Focus Series Puppis DATASHEET



Product Description

Focus Series, Puppis, 4K, Recessed Downlight,
250x155mm, 55W, 3000K, 90CRI, 40°, Black, IP44,
No Driver

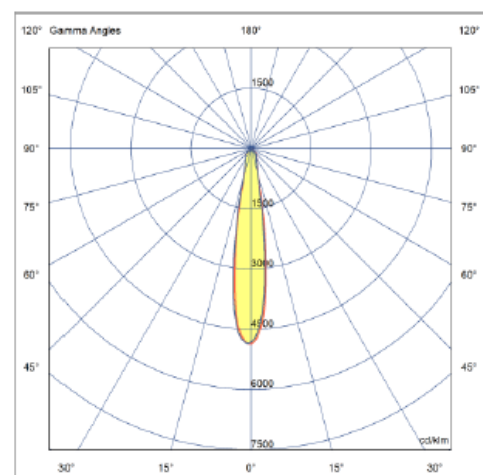
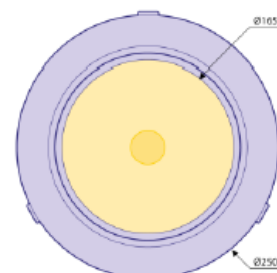
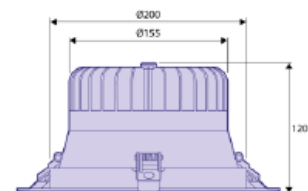


Product Code

250E.91R.1WK0G.4M03

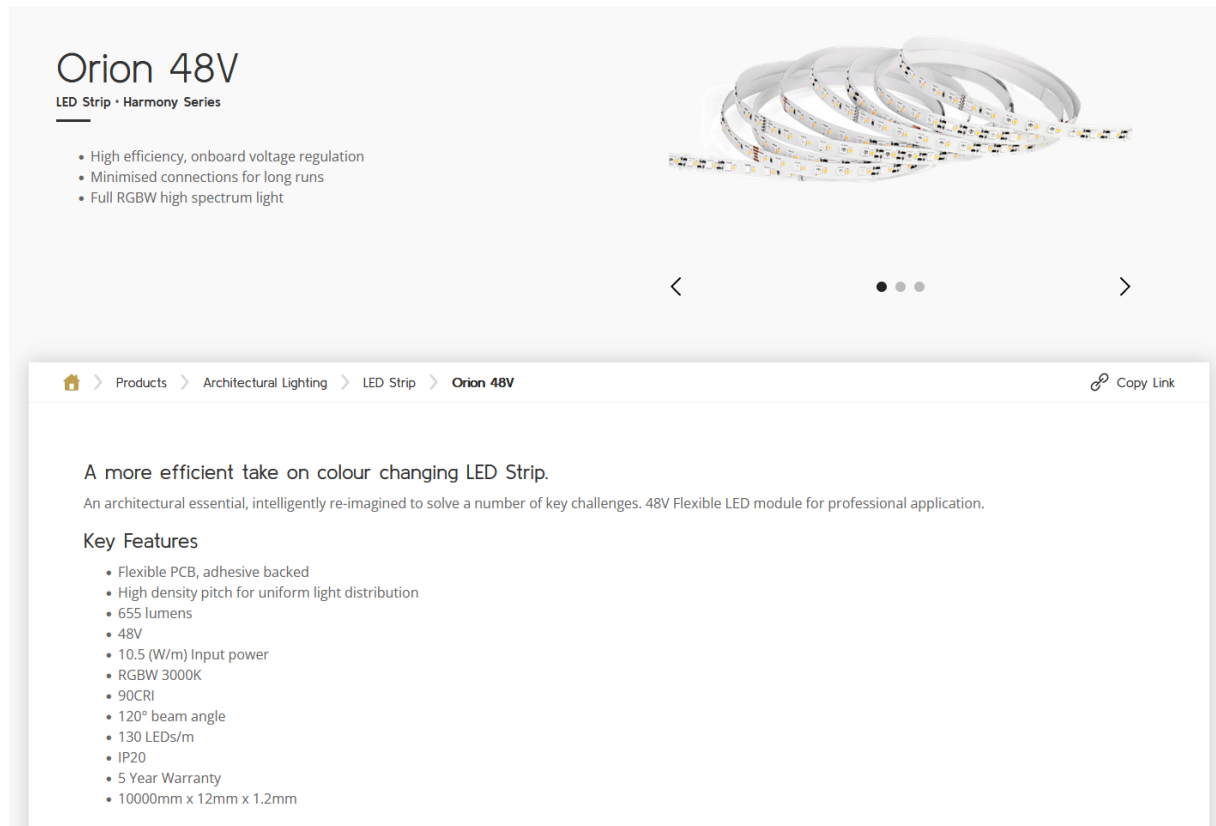
Specifications

Category	4K
Fitting Type	Recessed Downlight
Size	250x155mm
Cutout Size (mm)	200
Output Direction	Direct
Colour Temperature (K)	3000
Colour Rendering Index	90
Direct Lumen Output (lm)	4588
Lumen Efficacy (lm/W)	83.42
Direct Beam Angle	40
SDCM	3
Unified Glare Rating	<19
Input Power (W)	55
LED Source Current (mA)	1500
LED Voltage (V)	36
Primary Finish	Black
Driver Option	No Driver
Emergency Option	No Emergency
Sensor Option	No Sensor
IP Rating	IP44
Operating Temperature (°C)	-45 to +45
Lifetime (L80)	L80B20@50000
Warranty	5
Status	Production



2.3. LED-Stripes (Leuchtentyp 3 + 4)

Als Warmweiß (3000K mit Fade-to-Warm -> 1900K) und zusätzlich als RGB-W ausgeführt



The screenshot displays the product page for the Orion 48V LED Strip. At the top, the product name 'Orion 48V' is shown in a large font, with 'LED Strip • Harmony Series' underneath. To the right is a high-quality image of the flexible LED strip, coiled to show its flexibility. Below the product name, three bullet points highlight key features: high efficiency with onboard voltage regulation, minimised connections for long runs, and full RGBW high spectrum light. Navigation arrows and a series of three dots are positioned below the image. The page has a clean, modern design with a light grey background. Below the main product image, a breadcrumb trail reads: Home > Products > Architectural Lighting > LED Strip > Orion 48V. A 'Copy Link' icon is visible in the top right corner of the product section. The main heading for the product description is 'A more efficient take on colour changing LED Strip.', followed by a sub-headline: 'An architectural essential, intelligently re-imagined to solve a number of key challenges. 48V Flexible LED module for professional application.' The 'Key Features' section lists the following specifications:

- Flexible PCB, adhesive backed
- High density pitch for uniform light distribution
- 655 lumens
- 48V
- 10.5 (W/m) Input power
- RGBW 3000K
- 90CRI
- 120° beam angle
- 130 LEDs/m
- IP20
- 5 Year Warranty
- 10000mm x 12mm x 1.2mm

2.4. Sicherheitsleuchten (Leuchtentyp 5)



TURIA L

672414.002.89

Deckeneinbauleuchten, weiß
256,00 €

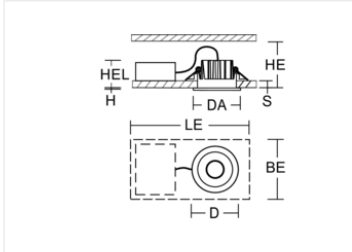


[Technische Daten](#) [Downloads](#)

Runde Sicherheitsleuchte zur Rettungswegbeleuchtung. Mit Kunststofflinsen zur Rettungswegbeleuchtung. Zum Anschluss an Sicherheitsstromversorgung. Mit Überwachungsbaustein AC-Control für Luxifair Zentralbatterie-Anlagen. Mit beiliegendem separaten Deckeneinbauring auch für Deckenausschnitte von Ø 68 mm geeignet.

Technische Daten

Art der Sicherheitsbeleuchtung	Zentrale Notstromversorgung
Überwachung	Luxifair AC-Control
Akku	ohne
Schaltungsart	NL Bereitschaftsschaltung
Durchmesser D	62 mm
Höhe H	3 mm
Einbaudurchmesser DA	54-68 mm
Einbauhöhe HE	76-162 mm
Einbauhöhe Leuchte HEL	42 mm
Deckenstärke S	1-35 mm



3. Elektronik


3.1. Zentrale Steuereinheit


Card Frames

Centralised • Drive Systems

- Rack-mountable enclosure
- System wide reporting
- Intelligent cooling
- Easy maintenance design
- Optional touch screen display




 > [Products](#) > [Drive Hub](#) > [Centralised](#) > [Drive Hub](#) > [Card Frames](#)

 [Copy Link](#)

The central component for drive system management

Enclosed in a 2U 19" rack-mountable chassis, the structure of the Card Frames provide slots for a Processor Card, and 12 hot-swappable Driver Cards. It's intelligent cooling system autonomously manages temperature for safe and efficient operation. DMX and DALI connectivity comes as standard on all Processor Cards providing a link between multiple Card Frames for system-wide monitoring. Designed with a quick-release intake filter for ease of maintenance and a system override button for operational testing and emergencies. An optional 3.5" touchscreen display allows quick access to system configuration, monitoring, and status.

Order code
DHCFUI



12 Slot With User Interface

19" rack mounted chassis, 3.5" touch panel display, 12 slots for hot-plug drive cards, intelligent cooling and system-wide monitoring

Key Features

- ▶ 3.5" Touch panel display
- ▶ 19" Rack mount enclosure
- ▶ 12 Hot plug drive card slots
- ▶ 1 Hot plug processor card slot
- ▶ Override button
- ▶ Easy-clean intake filter

3.2. Hochleistungsnetzteil inkl. Netzteileinschübe


Power Frames

Centralised · Drive Systems

- 2U Rack-mountable enclosure
- Stable low voltage, high current output feeds
- Reactive power management
- Dedicated system reporting



 > Products > Drive Hub > Centralised > Drive Hub > Power Frames

 Copy Link

The modular, high-efficiency power supply system

Enclosed in a 2U 19" rack-mountable chassis, the structure of the Power Frame provides slots for 4 hot-swappable Power Blocks. It outputs a stable low voltage, high current feeds to multiple Card Frames.

Power conversion is handled in Power Blocks, which are arranged in a redundant array to ensure continuity of supply in the event of any hardware failure, and reactively manage system demand raising overall efficiency, saving power.

Designed with installation and maintenance in mind, it can accept single and three-phase supply configurations, and user-replaceable fuses are accessible.

Using the PF link, Power Frames can communicate directly with a Card Frame, which enhances the system-wide reporting experience.

Order code
DHPP12



4 Output (Up to 12kW)

Up to 12kW of high-efficiency rectified power



Key Features

- ▶ 4 slots for hot-swappable Power Blocks
- ▶ 4 user-replaceable fuses

3.3. Treiberkarten

Drive Hub

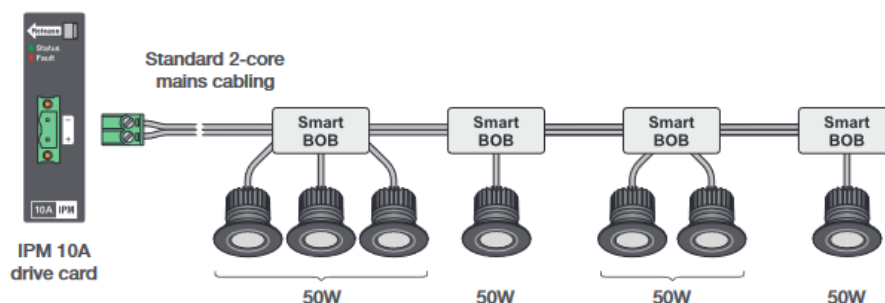
Drive Card: IPM 10A



SPECIFICATION SHEET

This drive card is designed to serve installations where multiple LED fixtures have been retrofitted and legacy cabling must be re-purposed to deliver low voltage supplies.

The IPM drive card encodes the control signal for a single channel onto a single 2-core legacy cable, together with a 10A DC supply current, to provide a 500W combined feed. Multiple Smart BOBs can then be attached along the common 2-core cable, each of which can drive an LED fixture (or group of fixtures) up to 50W. Any number of Smart BOBs can be used on a cable, providing the overall power draw does not exceed 500W.



Each Smart BOB module allows 1, 2 or 3 fixtures to be connected to its output, providing the total power draw does not exceed 50W. The total power draw from all connected Smart BOB modules must not exceed 500W. See Smart BOB manual for connection details.

Up to twelve drive cards, of the same or different types, can be fitted within a single Drive Hub Card Frame chassis or up to six drive cards within a Mini Pack chassis.

Key features

- Designed to supply a number of low-voltage constant current LED fixtures with control and power via 2-wire legacy cabling.
- Eco Mode: Shuts down power to connected smart BOBs when control is at 0% for longer than 10 seconds. This reduces system standby power by up to 1W per connected Smart BOB. The system will resume from Eco Mode immediately when the control input is raised above 0%.
- Short-Circuit and Over-Current Protection: The drive card is protected from cable faults and overload by automatically disabling the output should a fault or overload condition occur. It will auto recover once the fault has been removed.
- Hot-pluggable within the Card Frame chassis.

Layout Overview



Drive Hub

Drive Card: 1ch 10A CV



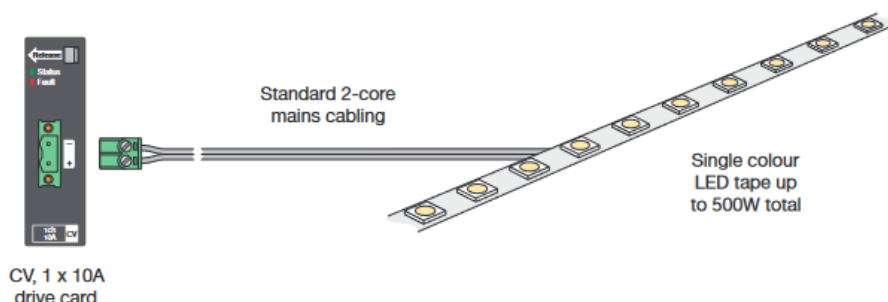
SPECIFICATION SHEET

This drive card provides a single output with a regulated current of up to 10A for use with constant voltage (CV) fixtures, such as single channel LED tapes.

The maximum output current is selectable using the rotary dial located on the card, which offers a range from 1 to 10A, in 1A steps.

The output voltage is determined by the supply from the Card Frame backplane, nominally 48VDC (the possible range is 24 to 72VDC).

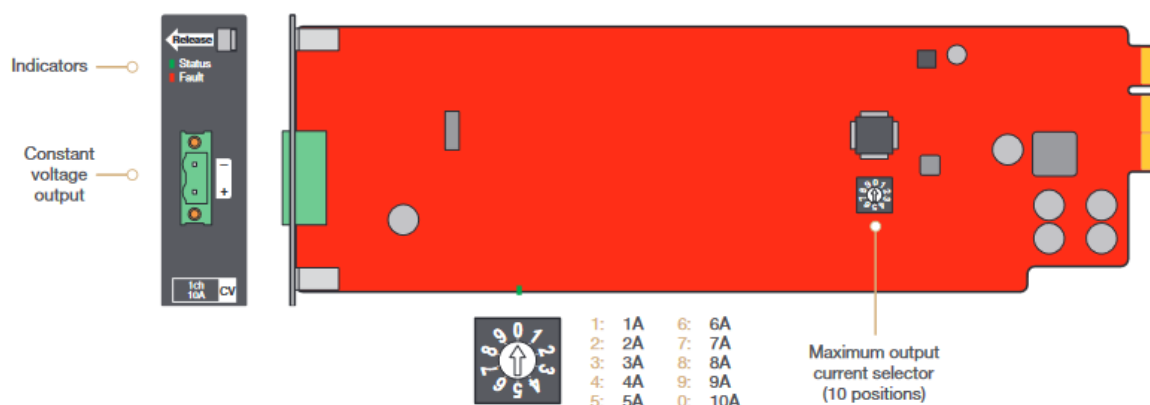
Up to twelve drive cards, of the same or different types, can be fitted within a single Drive Hub Card Frame chassis or up to six drive cards within a Mini Pack chassis.



Key features

- Designed to supply constant voltage fixtures up to 10A (500W) in total.
- Short-Circuit and Over-Current Protection: The drive card is protected from cable faults and overload by automatically disabling the output should a fault or overload condition occur. It will auto recover once the fault has been removed.
- Hot-pluggable within the Card Frame chassis.
- Status and fault indications on the rear panel.

Layout Overview



Indicators

Drive Hub Drive Card: 4ch 3A CV

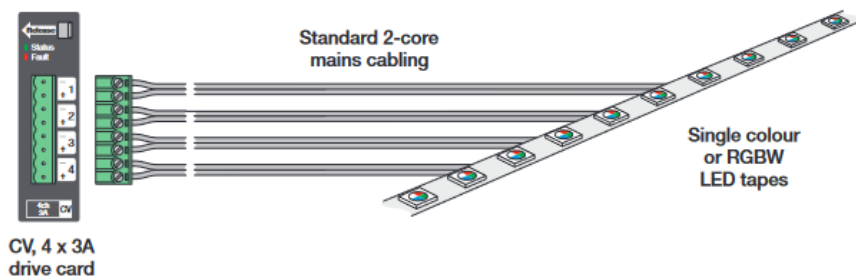


SPECIFICATION SHEET

This drive card provides four separately controlled outputs with a regulated current of up to 3A for use with constant voltage (CV) fixtures, such as RGBW LED tapes.

The output voltage is determined by the supply from the Card Frame backplane, nominally 48VDC (the possible range is 24 to 72VDC).

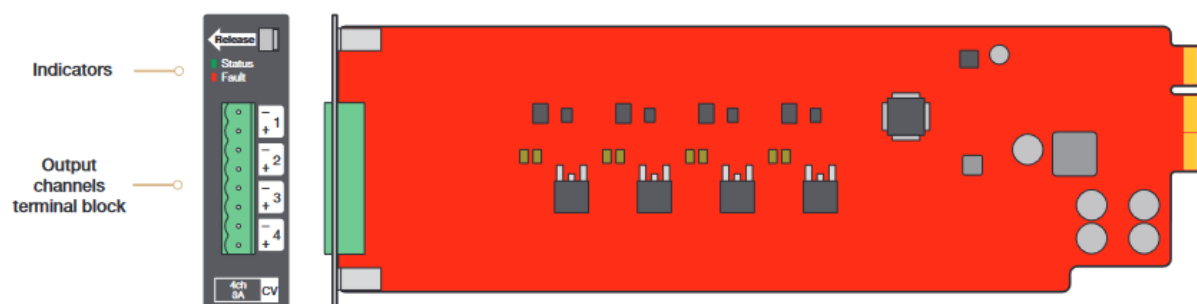
Up to twelve drive cards, of the same or different types, can be fitted within a single Drive Hub Card Frame chassis or up to six drive cards within a Mini Pack chassis.



Key features

- Designed to supply constant voltage fixtures up to 3A (144W) in total.
- Short-Circuit and Over-Current Protection: The drive card is protected from cable faults and overload by automatically disabling the output should a fault or overload condition occur. It will auto recover once the fault has been removed.
- Hot-pluggable within the Card Frame chassis.
- Status and fault indications on the rear panel.

Layout Overview



Indicators

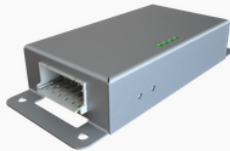
3.4. Unterverteiler

Order code
DHBSM1CHCC1.0



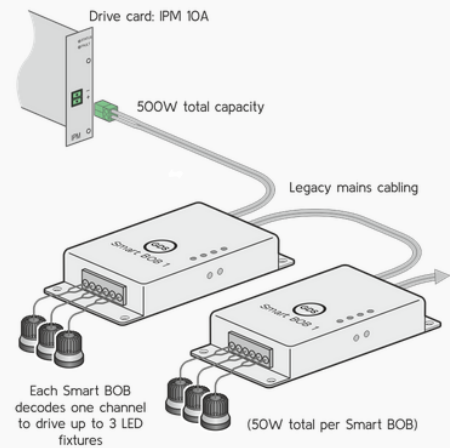
Smart BOB

Re-use old mains cabling for multi-channel control



Key Features

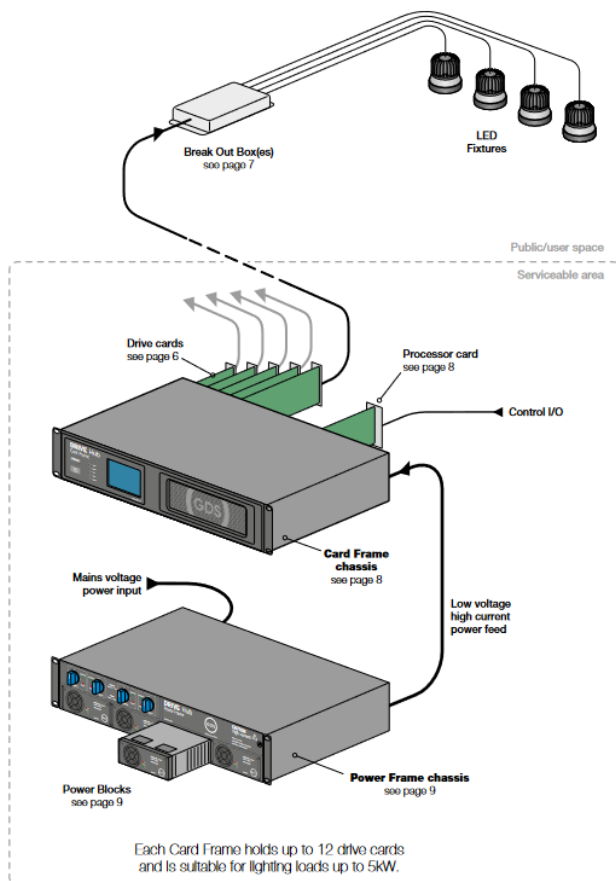
- ▶ Best suited for installations where a re-wire is too costly or disruptive
- ▶ Standard mains cable infrastructure can be repurposed
- ▶ Breaks out a single channel of up to 50W
- ▶ Supplies up to 500W across all attached Smart BOBs



4. Funktionsprinzip GDS IPM

Drive Hub system

Drive Hub is a high capacity modular system, created to serve widely distributed LED fixtures from a central location.

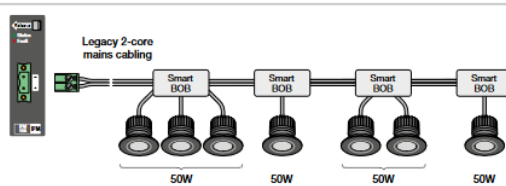


Fixtures on legacy wiring

- Drive card: IPM 10A
- Total load: Up to 500W
- Cabling: 2-core mains
- Outlet: Smart BOB 1

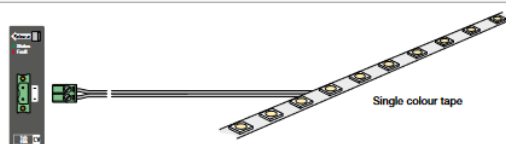
Note:

Four separate channels provided on common 2-way legacy cable using encoded dimming signals.



LED strip fixtures (single colour)

- Drive card: 1ch 10A CV
- Total load: Up to 10A
- Cabling: Standard cable
- Outlet: Direct to fixture



LED strip fixtures (RGB/W or multiple single colour)

- Drive card: 4ch 3A CV
- Total load: Up to 3A (x4)
- Cabling: Standard cable
- Outlet: Direct to fixture

