# **INSTRUCTION SHEET: LED Lamp Distribution Box** for: 8JE 233 496-001



Deutsch DT series connectors are designed to withstand extreme environmental and industrial conditions due to their silicone seals and thermoplastic housings. DT connectors are ideal for use in automotive and industrial applications that require a connection of the highest quality, providing reliability and performance at a low cost.

DT series connectors are available individually or in a kit form which consist of a plug, receptacle and wedges to suit your choice of solid contacts or stamped and formed contacts.

2 Sealing Plugs (114017)

3 Cables plus Sealing Plug

### **Deutsch DT Connectors to suit LED Lamp Distribution Box**



Pin numbers

2 Pole Plug (DT06-2S)



4 Pole Plug (DT06-4S)



6 Pole Plug (DT06-6S)



12 Pole Plug (DT06-12SA)

## PLUG KITS (not included)





# **INSTRUCTION SHEET: LED Lamp Distribution Box** for: 8JE 233 496-001

# LED LAMP DISTRIBUTION BOX Suitable for 12 and 24 volt systems

## Introduction

Connecting LED lighting to your truck, trailer or vessel has never been easier or more reliable. HELLA's revolutionary LED Lamp Distribution Box makes installing LED lamps quicker and easier. Simple plug in connectivity isolates circuits to protect lamps and facilitates fast fault finding if required, meaning quicker installation and less downtime during service or repair.

Utilising 'state of the art' technology, innovative design and durable materials the HELLA LED Lamp Distribution Box removes the need for complicated junction boxes that are prone to faults. Connections are made easily using proven Deutsch DT plug components. The completely sealed housing protects internal electronics that isolate potential faults or lamp failures to a single circuit, making repair and maintenance guick and easy.

The LED Lamp Distribution Box is supplied with a set of 4 mounting clips for screw or bolt mounting, which can be placed in a variety of positions. If required, this box can also be secured with two cable ties (e.g. 375mm+ x 6mm).

## Compatibility to existing electrical systems

It is important for the installer to ascertain the compatibility of the low power consumption LED lamps with the electrical and/or electronic systems of the complete vehicle, including trailers.

For certain functions some electrical systems rely on a set power consumption for monitoring whether, for example, a trailer is connected. In most cases the reduced power consumption from LED lamps is beneficial by imposing less demands on the entire electrical system.

Note: Not for use with Alternating Current (AC) or with pulse width modulated direct current (PWM DC). Due to the power restrictions of the box it is intended for use with LED lamps, as bulb lamps (e.g. 21W) will trigger the fuse at 12V.

## Electromagnetic Compatibility (EMC)

This Distribution Box is an electronic device, however does not contain any active electronic components meaning it is RFCommSafe<sup>™</sup>.

# **APPLICATION AND MOUNTING INSTRUCTIONS**

### **Product Specifications:**

Housing Material Mounting Plug Connections Voltage Current per output pin

Maximum Input

Protection

Applications

**Operating Temperature** 

Manufacturing Location

ASA Plastic Suitable for 12V and 24V DC

Ambient Temperature (°C) Maximum Output (A)

NB: 1.3A is the recommended maximum to suit Multivolt operation for all vehicle voltages and operating temperatures. 13A -40° to 50° Celsius Resettable fuse on all output pins IP6K7 (Protection against dust and temporary water immersion) IP6K9K (Protection against dust and high pressure/steam jet cleaning) Truck, trailers or marine vessels New Zealand

8



**Pin numbers** 





Pin numbers

NOTE : Pin numbers shown as viewed from rear of plug. Ground Pins (for use with LED Distribution Box) are shaded black.





Horizontal or Vertical, Surface Mount (4x mounting clips provided) Deutsch DT Plugs (not provided - see page 8 for details)

)	-40	-20	0	20	25	40	50
	2.83	2.50	2.20	1.85	1.74	1.53	1.37

1

# Important Notes for Installer and Vehicle Owner



### **Surface Mounting Instructions:**

1) Find a mounting location that allows easy access to the required wiring, and preferably away from heat and water spray. Ideally mount on a flat surface in horizontal or vertical orientation with wiring pointing away from the direction of travel of the vehicle.

2) Use the 4 provided mounting clips and slide them onto the sides of the Distribution Box, a minimum of 3 mounts on opposing sides of the Distribution Box are required. There are 12 possible mounting positions for the mounting feet as shown in the diagram below. Ensure that the box is secured prior to operation.

3)  $\emptyset$  6mm sscrews or bolts are recommended to mount the Distribution Box using washers or mounting bushes (not provided).

4) Wire the Distribution Box referring to the following pages and check the electrical system is functioning normally. Refer to page 6 for advice on fault finding and diagnostics.

5) Unused sockets must be sealed with DT connectors (not provided) with sealing plugs (ref. image 1B). Do not use any oils, lubricants, sealants or chemicals on the DT connectors. Fit the connectors first then push in the white sealing plugs if required.

6) Once the plugs/cables are connected to the mounted Distribution Box, restrain them with cable ties. **Note:** Do not attempt to open box - no serviceable parts inside.

## Mounting Diagram



## Warranty Statement

Congratulations! The product you have selected comes from Hella - one of the world's leading manufacturers of lighting products. The product comes with a 5 year warranty from end user purchase covering faults in materials, components or workmanship.

In the unlikely event that you should experience a confirmed warranty related problem with your purchase, Hella will, at its discretion, either repair, replace or refund the purchase price of the product.

Warranty services may be obtained by returning the product within the warranty period to the Hella Dealer where the product was originally purchased. This warranty is in addition to and does not preclude any other rights or remedies available to the consumer under any local legislation related to the provision of goods or services.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

This warranty does not cover:

1.) Claim/s as a result of normal wear and tear or of any modifications and / or alterations to the product in any shape or form.

2.) Claim/s as a result of non-compliance of the assembly, service and operating instructions and/or any unfit or improper use.

3.) Any expenses incurred in the process of making the claim.

Note: For lamps sold in Australia, warranty services are provided by Hella Australia Pty Ltd., 4 Hargrave Place, Mentone, Victoria, 3194 Australia. Customer Service 1800 061 729 email: custservice@hella.com https://www.hella.com/hella-au/assets/media\_global/IAM\_Statement\_of Warranty.pdf

For general comments about Hella's products please contact us on E-mail at techfeedback@hella.co.nz

INPUT SOCKET	Pin Number	DESCRIPTION	1	
D 12Pin DT INPUT	1	(L) Left Turn Signal		
-	2	(R) Right Turn Signal		
	3	Rear Fog Lamps		
	4	(31) Ground (<13A)		
	5	(58L) LH Tail, Side Marker		
	6	(58R) RH Tail, Side Marker		
	7	(54) Stop Lamps Reverse		
	9	Permanent Voltage / Aux9		
	10	Auxilliary 10		
	10	Auxilliary 11		
	12	Auxilliary 12		
		Connects to CD		
OUTPUT SOCKETS	Pin Number	DESCRIPTION	Input Pin Number	
A) LWR LH STIR (Lower Left-Hand Stop/ Tail/Indicator/Reverse)	1	(58L) LH Tail, Side Marker	5	
Tail/Indicator/Reverse)		(54) Stop Lamp		
	3	(L) Left Turn Signal	1 8	
		Reverse		
	5	(31) Ground	4	
AUX /OUT (Reverse)	6	Auxilliary 10 Reverse	10	
	2	Permanent Voltage / Aux9	9	
	3	Auxilliary 10	10	
	4	Auxilliary 11	11	
	5	(31) Ground	4	
	6	Auxilliary 12	12	
LWR RH STIR (Lower Right-Hand Stop/	1	(58R) RH Tail, Side Marker	6	
<b>LWR RH STIR</b> (Lower Right-Hand Stop/ Tail/Indicator/Reverse)	2	(54) Stop Lamp	7	
,	3	(R) Right Turn Signal	2	
	4	Reverse	8	
	5	(31) Ground	4	
	6	Auxilliary 10	10	
) UPP LH STI (Upper Lower-Hand Stop/	1	(58L) LH Tail, Side Marker	5	
Tail/Indicator	2	(54) Stop Lamp	7	
	3	(L) Left Turn Signal	1	
	4	(31) Ground	4	
TURN SM LH (Left-Hand Tail/ Side	1	(58L) LH Tail, Side Marker	5	
Marker)	2	(L) Left Turn Signal	1	
	3	Auxilliary 11	11	
	4	(31) Ground	4	
<b>TURN SM RH</b> (Right-Hand Tail/ Side	1	(58R) RH Tail, Side Marker	6	
Marker)	2	(R) Right Turn Signal	2	
	4	Auxilliary 11 (31) Ground	4	
UPP RH STI (Upper Right-Hand Stop/	4	(58R) RH Tail, Side Marker	6	
Tail/Indicator)	2	(54) Stop Lamp	7	
	3	(R) Right Turn Signal	2	
	4	(31) Ground	4	
SM LH (Left-Hand Tail/Side Marker)	1	(58L) LH Tail, Side Marker	5	
	2	(31) Ground	4	
M) REVERSE	1	Reverse	8	
	2	(31) Ground	4	
LP (License Plate)	- 1	(58) LH Tail, Side Marker	5	
	2	(31) Ground	4	
D) REAR FOG	1	Rear Fog	3	
	2	(31) Ground	4	
D) AUX12	1	Auxilliary 12	12	
	2	(31) Ground	4	
SM RH (Right-Hand Tail/Side Marker)	- 1	(58R) RH Tail, Side Marker	6	
	2	(31) Ground	4	

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### FAULT DIAGNOSTICS

Should an electrical fault occur to any of the output circuits then the resettable fuse on that circuit only will open to protect the whole electrical system. This makes fault diagnostics easier as the issue will likely be isolated to just the circuit that failed. If multiple circuits have failed then the inputs should be checked as the issue may be related to a failure before the Distribution Box, or maybe a ground cable fault.

To diagnose the fault, determine which circuit has failed and trace it back to the relevant output socket in the LED Distribution Box. Check all wiring and equipment on that circuit to find the fault causing the issue. Once the issue has been resolved, the resettable fuse will be reset by disconnecting and reconnecting the DT plug. If the fault has been resolved successfully, the circuit should function normally.

If the circuit still does not function then check if further issues are present or determine the total current draw on the circuit with reference to the maximum output current table on page 1.









Reverse

Aux 10

Aux 11

Aux 12

Not used

Not used

Not used

Permanent Voltage / Aux 9

8

9

10

11

12

13

14

15

Pink

Grey

Orange

White/Black

White/Blue

White/Red

White/Green

White/Brown



	put Function		Outputs	5
3 2	Left Indicator	A3	G3	H2
ア 〜	Right Indicator	F2	K3	J2
, 入	Earth	AL	L SOCK	ETS
	Left Position Marker	A1	G1 H1 I	_1 N1
	Right Position Marker	F1	J1 K1	Q1
ر ب	Stop	A2	F2 G2	2 K2
` `	Reverse	A4	E1 F4	μ M1
) )	Optional	A6	E3	F6

Output Socket / Pin Number
A3, G3, H2
F3, K3, J2
A5, E5, F5, G4, H4, J4, K4, L2, M2,N2, O2, P2, Q2
A1, G1, H1, L1, N1
F1, J1, K1, Q1
A2, F2, G2, K2
A4, E1, F4, M1
A6, E3, F6

Output Socket / Pin Number
A3, G3, H2
F3, K3, J2
01
A5, E5, F5, G4, H4, J4, K4, L2, M2,N2, O2, P2, Q2
A1, G1, H1, L1, N1
F1, J1, K1, Q1
A2, F2, G2, K2
A4, E1, F4, M1
E2
A6, E3, F6
E4, H3, J3
E6, P1