



BRIEF INFORMATION

LED flasher unit

- For controlling direction indicators in accordance with ISO 13207-1
- For vehicles with 12 V and 24 V vehicle electrical system voltage
- Any combination of bulbs and ISO LED lamps possible
- Suitable for additional operation of trailer direction indicators
- Connector configuration compatible with ISO 7588-2

PRODUCT FEATURES

Application

Control function: The failure of a direction indicator in a motor vehicle or trailer has to be shown to the driver either acoustically or by means of warning indicator lamps. HELLA flasher units ensure such control by means of the following:

1. Doubling of the flashing frequency (e-controller) or
2. Control lamp switch-off system (p-control).

Design and function

LED direction indicators conforming to ISO 13207 can "communicate" with the flasher unit. The flasher unit checks a firmly defined energy requirement at a firmly defined time: Exactly 21 W at the time of 100 – 130 ms after each switching on of the direction indicator. The energy requirement or "pulse" corresponds to that of a bulb in this case, meaning that the flasher unit notices no difference between a bulb and an LED lamp that conforms to ISO 13207.

The advantage: Bulbs and ISO LED lamps can be operated in any combination on a flasher unit that conforms to ISO 13207. This is relevant both for vehicles that are frequently operated with different trailers and also for manufacturers who wish to offer several variants of the lighting system without having to modify the underlying electronics.

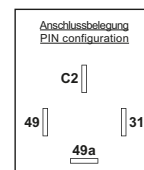
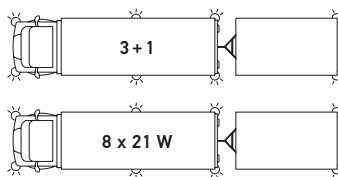
TECHNICAL DETAILS

Technical data

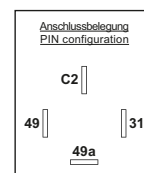
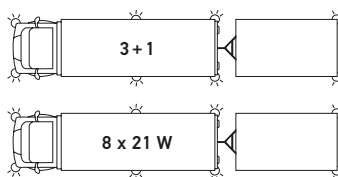
Rated voltage	12 V	24 V
Operating voltage	10,5 – 15 V	18 – 32 V
Rated load	4DN 009 492-101: 2+1+1 x 21 W (84 W)	4DM 009 492-001: 2+1 x 21 W (63 W)
	4DW 009 492-111: 3+1 x 21 W (84 W)	4DW 009 492-011: 3+1 x 21 W (84 W)
Failure control	EP / EPP	EP
Flashing frequency	75 – 110 Hz	70 – 110 Hz
Bright-light time	40 – 60 %	
Protection class	IP 54	
Operating temperature	-40 °C to +85 °C	
Storage temperature	-40 °C to +85 °C	
Connection	Flat connector DIN 46244 A6: 6.3 x 0.8 mm	

Dimensional sketch

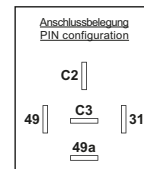
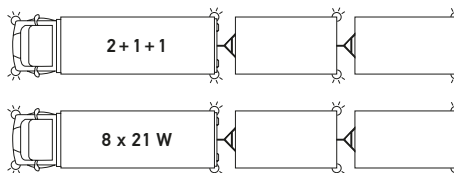
12 V, LED flasher unit 3+1



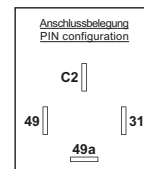
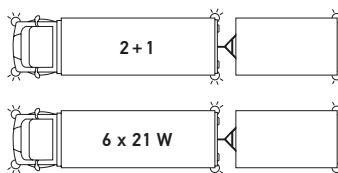
24 V, LED flasher unit 3+1



12 V, LED flasher unit 2+1+1



24 V, LED flasher unit 2+1



PROGRAMME OVERVIEW

Description	Lamp failure indication	Load	C2	C3	Frequency (49a)	Part number
12 V, LED flasher unit 3+1	Lamp failure control tractor: High frequency Lamp failure control C2: 1. Trailer C2 lamp off	1 x 21 W	Off	-	F2	4DW 009 492-111
		2 x 21 W	Off	-	F2	
		3 x 21 W	Off	-	F1	
		(3+1) x 21 W	F1	-	F1	
24 V, LED flasher unit 3+1	Lamp failure control tractor: High frequency Lamp failure control C2: 1. Trailer C2 lamp off	1 x 21 W	Off	-	F2	4DW 009 492-011
		2 x 21 W	Off	-	F2	
		3 x 21 W	Off	-	F1	
		(3+1) x 21 W	F1	-	F1	
12 V, LED flasher unit 2+1+1	Lamp failure control tractor: High frequency Lamp failure control C2: 1. Trailer C2 lamp off Lamp failure control C3: 2. Trailer C3 lamp off	1 x 21 W	Off	Off	F2	4DN 009 492-101
		2 x 21 W	Off	Off	F1	
		(2+1) x 21 W	F1	Off	F1	
		(2+1+1) x 21 W	F1	F1	F1	
24 V, LED flasher unit 2+1	Lamp failure control tractor: High frequency Lamp failure control C2: 1. Trailer C2 lamp off	1 x 21 W	Off	-	F2	4DM 009 492-001
		2 x 21 W	Off	-	F1	
		(2+1) x 21 W	F1	-	F1	

F1: normal flashing frequency, F2: increased flashing frequency