



# Dimming the next step in energy saving

## HF-Regulator Intelligent Touch DALI for TL5/TL-D/PL-L lamps

This intelligent high-frequency electronic dimming ballast utilizes the DALI or Touch and Dim push-button protocol for fluorescent lamps. It meets A1BAT requirements, thereby pre-empting upcoming legislation. With a special command you can retrieve the system's mains power consumption, and with another you can find out which lamp wattage is connected. Combined with controls, additional energy savings can be achieved. The ballast is primarily designed for Indoor application. For outdoor application, the luminaire should be minimum Classland need to be sufficiently protected against water & dust. The installation should also be guard against any lightening surge or any other necessary electrical protection as deemed in such typical installation & application.

### Benefits

- Extremely low stand-by losses, controlled cut-off for dim levels above 80%, hybrid control dimming (current control at 100% and power control at 1%) – combined with MASTER TL5 Eco the most energy-efficient solution
- HF operation improves light quality and lamp lifetime.
- Compliant with European and Asian norms and suitable for emergency lighting systems

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## Features

- HF-R Intelligent recognizes what type of lamp (T5 HE, HO, ECO, TL-D, PL-L) is connected and drives it accordingly
- Programmed start: flicker-free ignition < 1.0 second and striation-free operation, no stroboscopic effects. Preheating the lamp electrodes enables the lamps to be switched on and off without reducing life
- Smart power ensures constant light, independent of mains fluctuations and dimming from 1 to 100%
- Stop circuit is activated within 5 seconds in the event of lamp failure (safety stop), and ballast resets automatically after lamp replacement
- Programmable for intelligent functionalities via Philips MultiOne: Corridor mode, Emergency DC dim level, Burn-in time

## Application

- Indoor, general and task lighting applications in combination with lighting control systems (personal control, daylight linking and/or movement detection)

## Versions



HF-Ri TD 280 TL5/PL-L E+  
220-240V



MLD14/24.3FR-04/220-240/DALI



MLD14/24.4FR-04/220-240/DALI



HF-Ri TD 1 28/35/49/54 TL5 E+  
195-240V



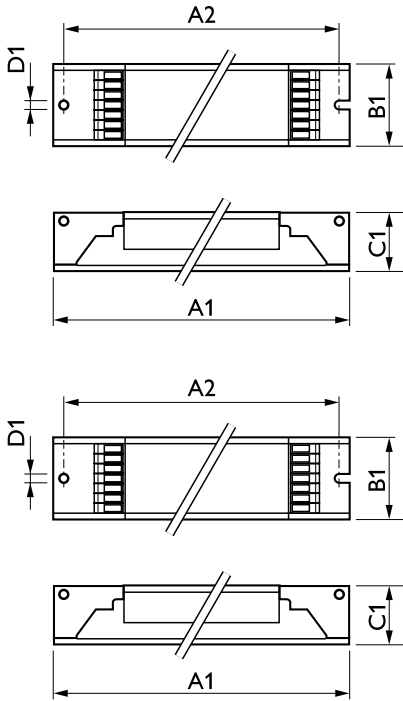
HF-Ri TD 1 35/49/80 TL5 E+  
195-240V



HF-Ri TD 2 28/35/49/54 TL5 E+  
195-240V

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## Dimensional drawing



Product	D1	C1	A1	A2	B1
HF-Ri TD 280 TL5/PL-L E+ 220-240V	4.2 mm	22 mm	424 mm	415 mm	30 mm

Product	D1	C1	A1	A2	B1
HF-Ri TD 3 14/24 TL5 E+ 195-240V	4.2 mm	22.0 mm	360.0 mm	350.0 mm	39.0 mm
HF-Ri TD 4 14/24 TL5 E+ 195-240V	4.2 mm	22.0 mm	360.0 mm	350.0 mm	39.0 mm
HF-Ri TD 1 28/35/49/54 TL5 E+ 195-240V	4.1 mm	22.0 mm	360.0 mm	350.0 mm	30.0 mm
HF-Ri TD 1 35/49/80 TL5 E+ 195-240V	4.1 mm	22.0 mm	360.0 mm	350.0 mm	30.0 mm
HF-Ri TD 2 28/35/49/54 TL5 E+ 195-240V	4.1 mm	22.0 mm	360.0 mm	350.0 mm	30.0 mm
HF-Ri TD 1 14/21/24/39 E+ 195-240V	4.1 mm	21.0 mm	360.0 mm	350.0 mm	30.0 mm
HF-Ri TD 2 14/21/24/39 E+ 195-240V	4.1 mm	21.0 mm	360.0 mm	350.0 mm	30.0 mm

## Operating and Electrical

Input Frequency	50 to 60 Hz
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## Approval and Application

Order Code	Full Product Name	Energy Efficiency Index
913700609666	HF-Ri TD 280 TL5/PL-L E+ 220-240V	A1
913700679066	HF-Ri TD 3 14/24 TL5 E+ 195-240V	A1 BAT
913700679166	HF-Ri TD 4 14/24 TL5 E+ 195-240V	A1 BAT
913700695666	HF-Ri TD 1 28/35/49/54 TL5 E+ 195-240V	A1 BAT

Order Code	Full Product Name	Energy Efficiency Index
913700698366	HF-Ri TD 1 14/21/24/39 E+	A1 BAT
913700695766	HF-Ri TD 1 35/49/80 TL5 E+ 195-240V	A1 BAT
913700695866	HF-Ri TD 2 28/35/49/54 TL5 E+ 195-240V	A1 BAT
913700698466	HF-Ri TD 2 14/21/24/39 E+	A1 BAT

## Operating and Electrical

Order Code	Full Product Name	Input Voltage
913700609666	HF-Ri TD 280 TL5/PL-L E+ 220-240V	220 to 240 V
913700679066	HF-Ri TD 3 14/24 TL5 E+ 195-240V	195-240 V
913700679166	HF-Ri TD 4 14/24 TL5 E+ 195-240V	195-240 V
913700695666	HF-Ri TD 1 28/35/49/54 TL5 E+ 195-240V	195-240 V

Order Code	Full Product Name	Input Voltage
913700698366	HF-Ri TD 1 14/21/24/39 E+	195-240 V
913700695766	HF-Ri TD 1 35/49/80 TL5 E+ 195-240V	195-240 V
913700695866	HF-Ri TD 2 28/35/49/54 TL5 E+ 195-240V	195-240 V
913700698466	HF-Ri TD 2 14/21/24/39 E+	195-240 V

## General Information

## HF-Regulator Intelligent Touch DALI for TL5/TL-D/PL-L lamps

Order Code	Full Product Name	Number Of Products On MCB (16A)		
		Type B) (Nom)	Number Of Lamps	Lamp Type
913700609666	HF-Ri TD 280 TL5/PL-L E+ 220-240V	9	2 piece/unit	TL5/PL-L
913700679066	HF-Ri TD 3 14/24 TL5 E+ 195-240V	16	3 piece/unit	TL5
913700679166	HF-Ri TD 4 14/24 TL5 E+ 195-240V	16	4 piece/unit	TL5
913700695666	HF-Ri TD 1 28/35/49/54 TL5 E+ 195-240V	39	1 piece/unit	TL5

Order Code	Full Product Name	Number Of Products On MCB (16A)		
		Type B) (Nom)	Number Of Lamps	Lamp Type
913700698366	HF-Ri TD 1 14/21/24/39 E+	30	1 piece/unit	TL5
913700695766	HF-Ri TD 1 35/49/80 TL5 E+ 195-240V	18	1 piece/unit	TL5
913700695866	HF-Ri TD 2 28/35/49/54 TL5 E+ 195-240V	18	2 piece/unit	TL5
913700698466	HF-Ri TD 2 14/21/24/39 E+	16	2 piece/unit	TL5

### Mechanical and Housing

Order Code	Full Product Name	Housing
913700609666	HF-Ri TD 280 TL5/PL-L E+ 220-240V	L 425x30x21
913700679066	HF-Ri TD 3 14/24 TL5 E+ 195-240V	L 360x39x22
913700679166	HF-Ri TD 4 14/24 TL5 E+ 195-240V	L 360x39x22
913700695666	HF-Ri TD 1 28/35/49/54 TL5 E+ 195-240V	L 359x30x21

Order Code	Full Product Name	Housing
913700698366	HF-Ri TD 1 14/21/24/39 E+	L 360x30x21
913700695766	HF-Ri TD 1 35/49/80 TL5 E+ 195-240V	L 359x30x21
913700695866	HF-Ri TD 2 28/35/49/54 TL5 E+ 195-240V	L 359x30x21
913700698466	HF-Ri TD 2 14/21/24/39 E+	L 360x30x21

### System characteristics

Order Code	Full Product Name	Lamp Power On PL-L	Lamp Power On TL5	Lamp Power On TL5 ECO	Lamp Power		
					On TL-D	On TL-D ECO	Rated Ballast-Lamp Power
913700609666	HF-Ri TD 280 TL5/PL-L E+ 220-240V	-	-	-	-	-	80 W
913700679066	HF-Ri TD 3 14/24 TL5 E+ 195-240V	15/22.9 W	15/23.3 W	13.6/20.1 W	17 W	13.7 W	14/24 W
913700679166	HF-Ri TD 4 14/24 TL5 E+ 195-240V	15.8/22.9 W	14.5/23.4 W	12.9/19.7 W	16.6 W	14.2 W	14/24 W
913700695666	HF-Ri TD 1 28/35/49/54 TL5 E+ 195-240V	51.2 W	29.4/36.4/51.6/54.8 W	26.3/30.2/45.7/50.4 W	52.2 W	42.7 W	28-35-49-54 W
913700698366	HF-Ri TD 1 14/21/24/39 E+	22.5/30.0/38.0 W	13.7/20.7/23.0/36.5 W	12.5/19.1/20.0/33.0 W	32 W	-	14/21/24/39 W
913700695766	HF-Ri TD 1 35/49/80 TL5 E+ 195-240V	76.3 W	35.9/51/75.6 W	32.8/45.2/73.6 W	-	-	-
913700695866	HF-Ri TD 2 28/35/49/54 TL5 E+ 195-240V	101.6 W	58.9/73.6/107.2/113.4 W	50.8/66.5/95.6/102.7 W	101.1 W	89.8 W	28-35-49-54 W
913700698466	HF-Ri TD 2 14/21/24/39 E+	45.0/60.0/76.0 W	27.4/41.4/46.0/73.0 W	25.0/38.2/40.0/66.0 W	64.0 W	-	14/21/24/39 W

