

## POWERTRONIC INTELLIGENT PTi S

ECG for HID lamps, for installation in luminaires



### Areas of application

- Shop lighting
- Health and fitness areas (in dry, corrosion-protected place)
- Effect and accent lighting

### Product benefits

- Long reliable life at maximum permitted temperatures
- Compact dimensions and low weight for small luminaire designs
- Excellent thermal behavior for very high limit temperatures  $t_c$  and  $t_a$
- Automatic safety shutdown of lamps in the event of a defect or at end of life (EoL)

### Product features

- Energy Efficiency Index EEI: A2
- Supply voltage: 220...240 V
- Line frequency: 50...60 Hz
- RI suppression: to EN 55015/CISPR 15
- Safety: to EN 61347-2-12
- Line harmonics according to EN 61000-3-2
- Immunity according to EN 61547

# Product family datasheet

## Technical data

### Electrical data

Product description	Lamp wattage	Line current	Ignition voltage	Operating frequency	System wattage	ECG efficiency
PTi 20/220...240 S	20 W	0.11 A <sup>1)</sup>	3.0 kVp	0.100...0.120 kHz	23.00 W	87 %
PTi 35/220...240 S	39 W	0.19 A <sup>1)</sup>	4.5 kVp	0.200...0.240 kHz	43.00 W	91 %
PTi 35/220...240 S MINI	39 W	0.19 A <sup>1)</sup>	3.0 kVp	0.100...0.120 kHz	43.00 W	90 %
PTi 50/220...240 S	50 W	0.24 A <sup>1)</sup>	4.5 kVp	0.200...0.240 kHz	54.50 W	92 %
PTi 70/220...240 S	73 W	0.36 A <sup>1)</sup>	4.5 kVp	0.200...0.240 kHz	79.00 W	92 %
PTi 100/220...240 S	100 W	0.49 A <sup>1)</sup>	4.5 kVp	0.165 kHz	109.00 W	92 %
PTi 150/220...240 S	147 W	0.72 A <sup>1)</sup>	4.5 kVp	0.165 kHz	160.00 W	92 %

Product description	Input voltage AC	Nominal voltage	Mains frequency	Power factor $\lambda$	Inrush current	Max. ECG no. on circuit breaker 10 A (B)
PTi 20/220...240 S	198...264 V	220...240 V	50...60 Hz	0.95 <sup>2)</sup>	12 A <sup>3)</sup>	22 <sup>4)</sup>
PTi 35/220...240 S	198...264 V	220...240 V	50...60 Hz	0.95 <sup>2)</sup>	30 A <sup>5)</sup>	15 <sup>4)</sup>
PTi 35/220...240 S MINI	198...264 V	220...240 V	50...60 Hz	0.95 <sup>2)</sup>	20 A <sup>6)</sup>	17 <sup>4)</sup>
PTi 50/220...240 S	198...264 V	220...240 V	50...60 Hz	0.95 <sup>2)</sup>	45 A <sup>7)</sup>	7 <sup>4)</sup>
PTi 70/220...240 S	198...264 V	220...240 V	50...60 Hz	0.95 <sup>2)</sup>	45 A <sup>7)</sup>	7 <sup>4)</sup>
PTi 100/220...240 S	198...254 V	220...240 V	50...60 Hz	0.95 <sup>2)</sup>	60 A <sup>7)</sup>	5 <sup>4)</sup>
PTi 150/220...240 S	198...254 V	220...240 V	50...60 Hz	0.95 <sup>2)</sup>	70 A <sup>7)</sup>	4 <sup>4)</sup>

Product description	Max. ECG no. on circuit breaker 16 A (B)	Max. no. of ECGs on 16A MCB with EBN-OS	U-OUT (working voltage)	Max. working voltage between LH and LL	Max. working voltage betw. LL/LH & earth	Max. capacitance of wire ECG/lamp
PTi 20/220...240 S	33 <sup>4)</sup>	82 <sup>4)</sup>	250 V	250 V	250 V	40 pF
PTi 35/220...240 S	26 <sup>4)</sup>	65 <sup>4)</sup>	250 V	250 V	250 V	120 pF
PTi 35/220...240 S MINI	28 <sup>4)</sup>	70 <sup>4)</sup>	250 V	250 V	250 V	40 pF
PTi 50/220...240 S	13 <sup>4)</sup>	32 <sup>4)</sup>	250 V	250 V	250 V	120 pF
PTi 70/220...240 S	13 <sup>4)</sup>	32 <sup>4)</sup>	250 V	250 V	250 V	120 pF
PTi 100/220...240 S	8 <sup>4)</sup>	20 <sup>4)</sup>	250 V	250 V	250 V	120 pF
PTi 150/220...240 S	7 <sup>4)</sup>	17 <sup>4)</sup>	250 V	250 V	250 V	120 pF

<sup>1)</sup> At 230 V<sub>AC</sub>

<sup>2)</sup> Minimum

<sup>3)</sup>  $t_{width} = 210 \mu s$  (measured at 50 %  $I_{peak}$ )

<sup>4)</sup> Type B

<sup>5)</sup>  $t_{width} = 150 \mu s$  (measured at 50 %  $I_{peak}$ )

<sup>6)</sup>  $t_{width} = 170 \mu s$  (measured at 50 %  $I_{peak}$ )

<sup>7)</sup>  $t_{width} = 250 \mu s$  (measured at 50 %  $I_{peak}$ )

## Product family datasheet

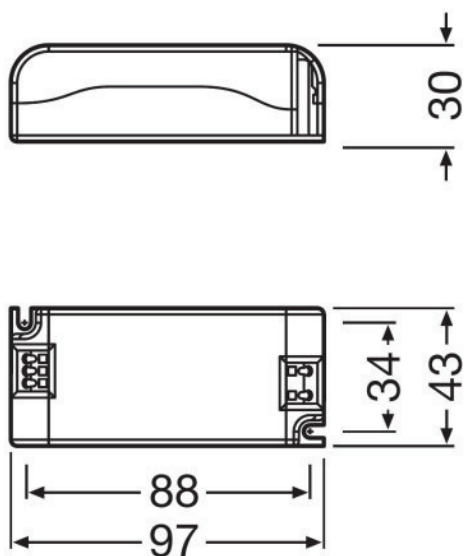
### Dimensions & weight

Product description	Length	Width	Height	Mounting hole spacing, length	Mounting hole spacing, width	Cable cross-section, input side
PTi 20/220...240 S	97.0 mm	43.0 mm	30.0 mm	88.0 mm	34.0 mm	0.5...1.5 mm <sup>2</sup>
PTi 35/220...240 S	110.0 mm	75.0 mm	30.0 mm	99.0 mm	64.0 mm	0.5...2.5 mm <sup>2</sup>
PTi 35/220...240 S MINI	97.0 mm	43.0 mm	30.0 mm	88.0 mm	34.0 mm	0.5...1.5 mm <sup>2</sup>
PTi 50/220...240 S	110.0 mm	75.0 mm	30.0 mm	99.0 mm	64.0 mm	0.5...2.5 mm <sup>2</sup>
PTi 70/220...240 S	110.0 mm	75.0 mm	30.0 mm	99.0 mm	64.0 mm	0.5...2.5 mm <sup>2</sup>
PTi 100/220...240 S	150.0 mm	85.0 mm	31.0 mm	139.0 mm	74.0 mm	0.5...2.5 mm <sup>2</sup>
PTi 150/220...240 S	150.0 mm	85.0 mm	31.0 mm	139.0 mm	74.0 mm	0.5...2.5 mm <sup>2</sup>

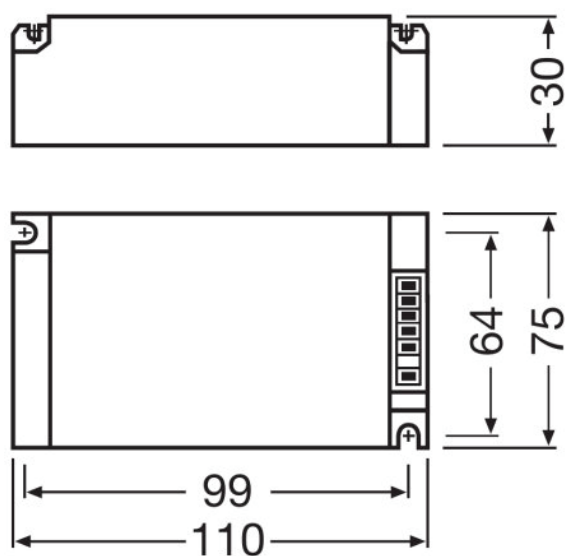
Product description	Cable cross-section, output side	Wire preparation length, input side	Wire preparation length, output side	Product weight
PTi 20/220...240 S	0.5...1.5 mm <sup>2</sup>	8.5...9.5 mm	8.5...9.5 mm	105.00 g
PTi 35/220...240 S	0.5...2.5 mm <sup>2</sup>	10...11 mm	10...11 mm	250.00 g
PTi 35/220...240 S MINI	0.5...1.5 mm <sup>2</sup>	8.5...9.5 mm	8.5...9.5 mm	105.00 g
PTi 50/220...240 S	0.5...2.5 mm <sup>2</sup>	10...11 mm	10...11 mm	255.00 g
PTi 70/220...240 S	0.5...2.5 mm <sup>2</sup>	10...11 mm	10...11 mm	255.00 g
PTi 100/220...240 S	0.5...2.5 mm <sup>2</sup>	10...11 mm	10...11 mm	350.00 g
PTi 150/220...240 S	0.5...2.5 mm <sup>2</sup>	10...11 mm	10...11 mm	370.00 g

## Product family datasheet

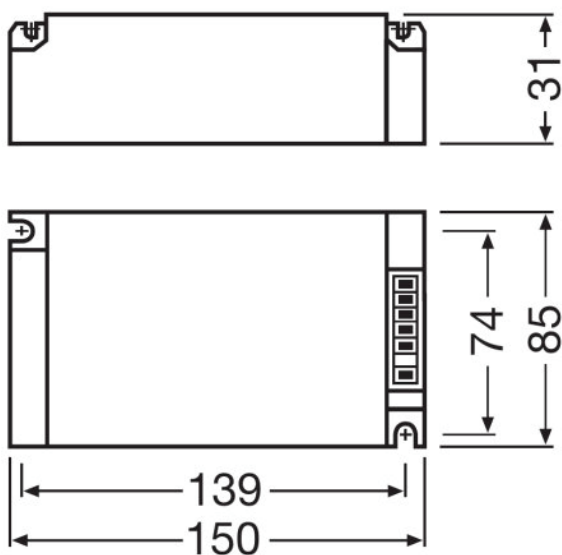
### Product line drawing



PTi 20/220...240 S, PTi 35/220...240 S MINI



PTi 35/220...240 S, PTi 50/220...240 S, PTi 70/220...240 S



PTi 100/220...240 S, PTi 150/220...240 S

## Product family datasheet

### Colors & materials

Product description	Casing material
PTi 20/220...240 S	Plastic
PTi 35/220...240 S	Metal
PTi 35/220...240 S MINI	Plastic
PTi 50/220...240 S	Metal
PTi 70/220...240 S	Metal
PTi 100/220...240 S	Metal
PTi 150/220...240 S	Metal

### Temperatures & operating conditions

Product description	Ambient temperature range	Maximum temperature at tc test point
PTi 20/220...240 S	-25...+60 °C	80 °C
PTi 35/220...240 S	-25...+65 °C	85 °C
PTi 35/220...240 S MINI	-25...+50 °C	80 °C
PTi 50/220...240 S	-25...+60 °C	85 °C
PTi 70/220...240 S	-25...+55 °C	85 °C
PTi 100/220...240 S	-25...+55 °C	80 °C
PTi 150/220...240 S	-25...+55 °C	85 °C

### Lifespan

Product description	ECG lifetime
PTi 20/220...240 S	50000 h <sup>1)</sup>
PTi 35/220...240 S	50000 h <sup>1)</sup>
PTi 35/220...240 S MINI	50000 h <sup>1)</sup>
PTi 50/220...240 S	50000 h <sup>1)</sup>
PTi 70/220...240 S	50000 h <sup>1)</sup>
PTi 100/220...240 S	50000 h <sup>1)</sup>
PTi 150/220...240 S	40000 h <sup>1)</sup>

<sup>1)</sup> At maximum T<sub>c</sub> / 10% failure rate

## Product family datasheet

### Additional product data

Product description	Design / version
PTi 20/220...240 S	Built-in unit
PTi 35/220...240 S	Built-in unit
PTi 35/220...240 S MINI	Built-in unit
PTi 50/220...240 S	Built-in unit
PTi 70/220...240 S	Built-in unit
PTi 100/220...240 S	Built-in unit
PTi 150/220...240 S	Built-in unit

### Capabilities

Product description	Max. cable length to lamp/LED module	Overheating protection	ECG reset time	Dimmable	Restriction on ignition time
PTi 20/220...240 S	0.5 m	Switch off at T > 80 °C at the tc point	> 0.5 s	No	20 min
PTi 35/220...240 S	1.5 m	Power reduction and switch off at T > 85 °C at the tc point	> 0.5 s	No	20 min
PTi 35/220...240 S MINI	0.5 m	Power reduction and switch off at T > 80 °C at the tc point	> 0.5 s	No	20 min
PTi 50/220...240 S	1.5 m	Power reduction and switch off at T > 85 °C at the tc point	> 0.5 s	No	20 min
PTi 70/220...240 S	1.5 m	Power reduction and switch off at T > 85 °C at the tc point	> 0.5 s	No	20 min
PTi 100/220...240 S	1.5 m	Power reduction and switch off at T > 80 °C at the tc point	> 0.5 s	No	20 min
PTi 150/220...240 S	1.5 m	Power reduction and switch off at T > 85 °C at the tc point	> 0.5 s	No	20 min

Product description	Suitable for fixtures with prot. class	Overvoltage protection at 275...300 V	Overvoltage protection at 300...320 V
PTi 20/220...240 S	I / II		
PTi 35/220...240 S	I	48 h <sup>1)</sup>	2 h <sup>1)</sup>
PTi 35/220...240 S MINI	I / II		
PTi 50/220...240 S	I	48 h <sup>1)</sup>	2 h <sup>1)</sup>
PTi 70/220...240 S	I	48 h <sup>1)</sup>	2 h <sup>1)</sup>
PTi 100/220...240 S	I		
PTi 150/220...240 S	I		

Product description	Overvoltage protection at 320...350 V
PTi 20/220...240 S	

## Product family datasheet

Product description	Overvoltage protection at 320...350 V
PTi 35/220...240 S	5 min <sup>2)</sup>
PTi 35/220...240 S MINI	
PTi 50/220...240 S	5 min <sup>2)</sup>
PTi 70/220...240 S	5 min <sup>2)</sup>
PTi 100/220...240 S	
PTi 150/220...240 S	

<sup>1)</sup> Control gear switches off after 40 s

<sup>2)</sup> Control gear switches off or does not start

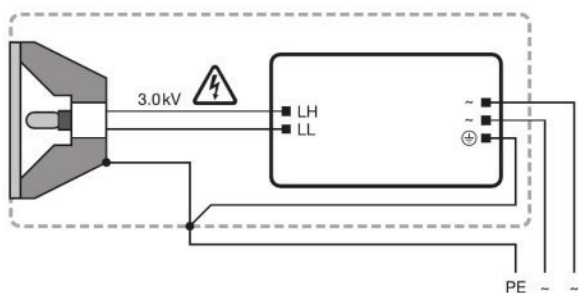
### Certificates & standards

Product description	Approval marks – approval	Type of protection	EEL – Energy Label
PTi 20/220...240 S	ENEC 10 / VDE / VDE-EMC / EAC / C-Tick	IP20	A2
PTi 35/220...240 S	ENEC 10 / VDE / VDE-EMC / EAC / C-Tick	IP20	A2
PTi 35/220...240 S MINI	ENEC 10 / VDE / VDE-EMC / EAC / C-Tick	IP20	A2
PTi 50/220...240 S	ENEC 10 / VDE / VDE-EMC / EAC / C-Tick	IP20	A2
PTi 70/220...240 S	ENEC 10 / VDE / VDE-EMC / EAC / C-Tick	IP20	A2
PTi 100/220...240 S	ENEC 10 / VDE / VDE-EMC / EAC / C-Tick	IP20	A2
PTi 150/220...240 S	ENEC 10 / VDE / VDE-EMC / EAC / C-Tick	IP20	A2

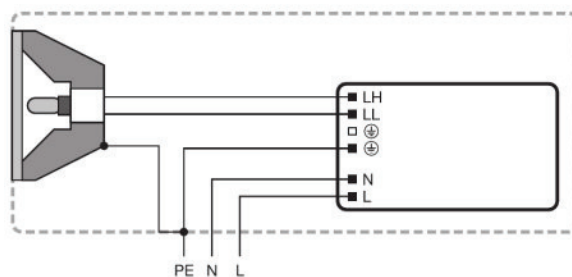
Product description	Standards
PTi 20/220...240 S	Acc. to EN 61347-2-12/Acc. to EN 55015/Acc. to EN 61000-3-2/Acc. to EN 61547
PTi 35/220...240 S	Acc. to EN 61347-2-12/Acc. to EN 55015/Acc. to EN 61000-3-2/Acc. to EN 61547
PTi 35/220...240 S MINI	Acc. to EN 61347-2-12/Acc. to EN 55015/Acc. to EN 61000-3-2/Acc. to EN 61547
PTi 50/220...240 S	Acc. to EN 61347-2-12/Acc. to EN 55015/Acc. to EN 61000-3-2/Acc. to EN 61547
PTi 70/220...240 S	Acc. to EN 61347-2-12/Acc. to EN 55015/Acc. to EN 61000-3-2/Acc. to EN 61547
PTi 100/220...240 S	Acc. to EN 61347-2-12/Acc. to EN 55015/Acc. to EN 61000-3-2/Acc. to EN 61547
PTi 150/220...240 S	Acc. to EN 61347-2-12/Acc. to EN 55015/Acc. to EN 61000-3-2/Acc. to EN 61547

## Product family datasheet

### Wiring Diagram



PTi 20/220...240 S, PTi 35/220...240 S MINI



PTi 35/220...240 S, PTi 50/220...240 S, PTi 70/220...240 S,  
PTi 100/220...240 S, PTi 150/220...240 S

### Safety advice

Ballast losses and lamp heat radiation can lead to heat accumulation in a completely closed case. Therefore it is necessary to ensure that the temperature at the measuring point  $t$  of the ECG does not exceed the maximum value.

### Attention!

For safety reasons disconnect the device before replacing the lamp!  
Any conductive material must have a minimum distance of 4 mm to the front of the terminal block.  
Installation by qualified electrician only.  
Terminals for protective earth not suitable for any through connection.

### Application advice

For more detailed application information and graphics please see product datasheet.

### Sales and Technical Support
















Sales and Technical Support [www.osram.com](http://www.osram.com)

## Product family datasheet













### Country specific information

Product description	Product code	METEL code	SEG-No.	STK number	UK Org
PTi 20/220...240 S	4008321353290	OSRPTI20S	-	4030085	-
PTi 35/220...240 S	4008321073112	OSRPTI35S	-	4030182	-
PTi 35/220...240 S MINI	4008321955906	OSRPTI35SM	-	4030087	-
PTi 70/220...240 S	4008321049629	OSRPTI70S	-	4030139	-
PTi 100/220...240 S	4008321926630	OSRPTI100S	-	4031300	-
PTi 150/220...240 S	4008321188090	OSRPTI150S	-	4030190	-

### Download Data

File
 Tender documents Tender Document for POWERTRONIC EVG.eng
 Certificates EMC-Marks approval
 Certificates PTi - PTo - PTg VDE-ENEC-Cert
 Certificates 554891_EAC PT family
 Declarations of conformity Declaration of conformity PTi 20
 Declarations of conformity VDE Declaration of conformity
 Installation/Operation notice Technical guide - POWERTRONIC for HID-lamps (GB)
 Operating instructions EAC - PTi S PT-FIT S
 CAD data 3-dim PTm 20 S 9900046
 CAD data 3-dim PTm 20 S 9900046
 CAD data 3-dim PTm 20 S 9900046
 CAD data PDF PTm 20 S 9900046
 Addon Technical Information ADDON TECHNICAL INFORMATION PTi 35 S, PTi 70 S (GB)
 Declarations of conformity Declaration of conformity PTi 35, PTi 70
 Declarations of conformity VDE Declaration

## Product family datasheet

	CAD data 3-dim 110x75x30 9900004
	CAD data 3-dim 110x75x30 9900004
	CAD data 3-dim 110x75x30 9900004
	CAD data PDF 110x75x30 9900004
	Declarations of conformity Declaration of conformity PTi MINI
	Declarations of conformity EC-Declartion of Conformity
	Addon Technical Information ADDON TECHNICAL INFORMATION POWERTRONIC PTi 70 S (GB)
	Declarations of conformity DECLARATION OF CONFORMITY_2012PTi_150-100_03 (GB)
	CAD data 3-dim PTi 100150 S ASSEMBLY 9900047
	CAD data 3-dim PTi 100150 S ASSEMBLY 9900047
	CAD data 3-dim PTi 100150 S ASSEMBLY 9900047
	CAD data PDF PTi 100150 S ASSEMBLY 9900047

## Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4008321353290	PTi 20/220...240 S	Shipping carton box 20	228 mm x 78 mm x 208 mm	3.70 dm <sup>3</sup>	2106.00 g
4008321073112	PTi 35/220...240 S	Shipping carton box 20	412 mm x 136 mm x 186 mm	10.42 dm <sup>3</sup>	5169.89 g
4008321955906	PTi 35/220...240 S MINI	Shipping carton box 20	228 mm x 78 mm x 208 mm	3.70 dm <sup>3</sup>	2106.00 g
4008321955852	PTi 50/220...240 S	Shipping carton box 20	412 mm x 152 mm x 136 mm	8.52 dm <sup>3</sup>	5270.00 g
4008321049629	PTi 70/220...240 S	Shipping carton box 20	412 mm x 136 mm x 194 mm	10.87 dm <sup>3</sup>	5169.89 g
4008321926630	PTi 100/220...240 S	Shipping carton box 20	403 mm x 191 mm x 245 mm	18.86 dm <sup>3</sup>	7611.00 g
4008321188090	PTi 150/220...240 S	Shipping carton box 20	403 mm x 191 mm x 205 mm	15.78 dm <sup>3</sup>	8011.00 g

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

## Product family datasheet

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### Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.