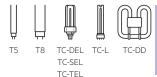
# TRIDONIC



# EM BASIC, 230 - 240 V 50/60 Hz

BASIC version

# Product description

- Emergency lighting supply unit for manual testing
- For linear and compact fluorescent lamps
- Small dimensions (28 x 39 mm cross-section)
- 5-year guarantee

### Properties

- 1or 3 h rated duration
- Compatible with all electronic ballasts (dimmable and non-dimmable)
- Can also be used in combination with conventional magnetic ballasts
- 5-pole technology: 4-pole lamp changeover and delayed power switching for the ballast
- Optimised AC output voltage for TC-DD and TC-L lamps
- Optimised DC output voltage for T8 lamps
- Cathode heating adapted for compact lamps
- Switchover relay with high-current contacts
- IDC (insulation displacement connection)
- Green charge status display LED
- Checking the emergency lighting function by interrupting the unswitched phase
- Optional test switch
- Deep discharge protection
- Battery connection, short-circuit protected (not reversible)
- No polarity reversal protection for battery

#### **Batteries**

- High-temperature cells
- NiCd batteries
- D or Cs cells
- Blade terminals for simple connection
- 4-year design life
- 1-year guarantee
- For battery compatibility refer to chapter "Ballast-Lumen-Factor (BLF)"



Standards, page 12

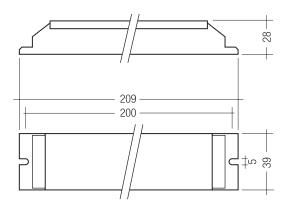
Wiring diagrams and installation examples, page 14



# TRIDONIC

# EM BASIC, 230 - 240 V 50/60 Hz

BASIC version



#### Technical data

Rated supply voltage	230 – 240 V
Mains frequency	50 / 60 Hz
Mains current	0.04 A
Rated power	7 W
Battery charging time	24 h
Discharge current@	see page 11 / 12
Charge current Cs cells®	120 mA
Charge current D cells®	210 mA
Leakage current (PE)	0.5 mA
Ambient temperature ta	0 +50 °C
Max. casing temperature tc	75 ℃
Mains voltage changeover threshold	according to EN 60598-2-22
Min. lamp starting temperature (emergency mode)	0 °C
Type of protection	IP20

# Ordering data

ordering dara					
Туре①	Article number	Number of cells	Packaging, carton	Packaging, pallet	Weight per pc.
Rated operating time	3 h				
EM 33A BASIC	89818556	3	25 pc(s).	750 pc(s).	0.337 kg
EM 33B BASIC	89818655	3	25 pc(s).	750 pc(s).	0.311 kg
EM 33C BASIC	89800000	3	25 pc(s).	750 pc(s).	0.337 kg
EM 34A BASIC	89818557	4	25 pc(s).	750 pc(s).	0.337 kg
EM 34B BASIC	89818662	4	25 pc(s).	750 pc(s).	0.324 kg
EM 34C BASIC	89800107	4	25 pc(s).	750 pc(s).	0.310 kg
EM 34D BASIC	89800175	4	25 pc(s).	750 pc(s).	0.318 kg
EM 35A BASIC	89818581	5	25 pc(s).	750 pc(s).	0.337 kg
EM 35B BASIC	89818667	5	25 pc(s).	750 pc(s).	0.311 kg
EM 35C BASIC	89800001	5	25 pc(s).	750 pc(s).	0.315 kg
EM 35D BASIC	89899621	5	25 pc(s).	750 pc(s).	0.337 kg
EM 36A BASIC	89818654	6	25 pc(s).	750 pc(s).	0.337 kg
EM 36C BASIC	89800108	6	25 pc(s).	750 pc(s).	0.337 kg
EM 36C HO BASIC	89800109	6	25 pc(s).	750 pc(s).	0.337 kg
Rated operating time	1h				
EM 13B BASIC	89895971	3	25 pc(s).	750 pc(s).	0.337 kg
EM 13E BASIC	89899864	3	25 pc(s).	750 pc(s).	0.337 kg
EM 14B BASIC	89899611	4	25 pc(s).	750 pc(s).	0.337 kg
EM 14C BASIC	89800118	4	25 pc(s).	750 pc(s).	0.318 kg
EM 16C BASIC	89800119	6	25 pc(s).	750 pc(s).	0.337 kg
EM 16C HO BASIC	89800120	6	25 pc(s).	750 pc(s).	0.337 kg

 $^{\textcircled{1}}$   $\,$  EM 34B BASIC also available in 110 V AC version

② Tolerance ± 15 % at 230 V



Test switch EM2

# Product description

- For connection to the emergency lighting unit
- For checking the device function



#### Ordering data

Туре	Article number	Packaging, bag	Packaging, carton	Weight per pc.
Test switch EM 2	89805277	25 pc(s).	600 pc(s).	0.011 kg

# ACCESSO-RIES

# Status indication green LED

# Product description

• A green LED indicates that charging current is flowing into the battery



# Ordering data

Туре	Article number	Packaging, bag	Packaging, carton	Weight per pc.
LED EM green	89899605	25 pc(s).	200 pc(s).	0.011 kg
LED EM green, ultra high brightness	89899756	25 pc(s).	800 pc(s).	0.012 kg

EM INVERTER

# Ballast Lumen Factor (BLF) in %

			1h	3 0	ells	4 c	ells	6 0	ells
			Туре	EM 13B BASIC	EM 13E BASIC	EM 14B BASIC	EM 14C BASIC	EM 16C BASIC	EM 16C HC BASIC
			Article no.	89895971	89899864	89899611	89800118	89800119	89800120
		Lamp type	Wattage		BLF in emerge	ncy lighting mod	de in % for rated	operating time	
		Т5	14 W				18.9		
			21 W					14.4	
			24 W				13.5		
			28 W					12.7	
			35 W					12	
			49 W					9.5	
			54 W						6.4
			80 W						4.5
		Т8	18 W	22.5		25			
			36 W	15.5		18.2			
			58 W		8.9	13.9			
Design	Number of cells	Туре	Article no.			Assignabl	e batteries		
Sick	3	Accu-NiCd 3A	89895960	•	•				
side by side	3	Accu-NiCd 3B 55	89800384	•	•				
Stick	4	Accu-NiCd 4A 55	89800089			•			
side by side	4	Accu-NiCd 4B 55	89800385			•			
Stick + Stick	2+2	Accu-NiCd 4C	89895978			•			
Stick + Stick	3 + 3	Accu-NiCd 6C 55	89800388						
Stick	4	Accu-NiCd C4A	89899692				•		
Stick + Stick	2 + 2	Accu-NiCd C4C	89899694				•		
side by side	4	Accu-NiCd C4B	89899693				•		
Stick	6	Accu-NiCd C6A	89899698					•	•
Stick + Stick	3 + 3	Accu-NiCd C6C	89899699					•	

Technology and capacity

NiCd 4 Ah D cells

NiCd 1.6 Ah

Cs cells

# Ballast Lumen Factor (BLF) in %

#### EM BASIC for linear lamps, 3 h

	3 h		3 cells			4 cells				
	Туре	EM 33A BASIC	EM 33B BASIC	EM 33C BASIC	EM 34A BASIC	EM 34B BASIC	EM 34C BASIC			
	Article no.	89818556	89818655	89800000	89818557	89818662	89800107			
Lamp type	Wattage BLF in emergency lighting mode in % for rated operating time									
T5	6 W	21.5			26					
	8 W	23			28					
	13 W	20			26					
	14 W	16			21		18.9			
	21W									
	24 W						13.5			
	28 W									
	35 W									
	49 W									
	54 W									
	80 W									
Г8	18 W		10			12				
	30 W		8.2			11.5				
	36 W		7.4			8.5				
	58 W					7.2				
	70 W									

Technology and capacity	9	Number of cells	Туре	Article no.	o. Assignable batteries					
	Stick	3	Accu-NiCd 3A	89895960	•	•	•			
	side by side	3	Accu-NiCd 3B 55	89800384	•	•	•			
	Stick	4	Accu-NiCd 4A 55	89800089				•	•	•
NiCd 4 Ah	side by side	4	Accu-NiCd 4B 55	89800385				•	•	•
D cells	Stick + Stick	2+2	Accu-NiCd 4C	89895978				•	•	•
	Stick	5	Accu-NiCd 5A	89895973						
	Stick + Stick	3+2	Accu-NiCd 5C 55	89800090						
	Stick + Stick	3+3	Accu-NiCd 6C 55	89800388						

# Ballast Lumen Factor (BLF) in % EM BASIC for linear lamps, 3 h

	3 h	5 c	ells		6 cells					
	Туре	EM 35A BASIC	EM 35B BASIC	EM 36A BASIC	EM 36C BASIC	EM 36C HO BASIC				
	Article no.	89818581	89818667	89818654	89800108	89800109				
Lamp type	Wattage	BLF in emergency lighting mode in % for rated operating time								
Τ5	6 W	34		38.5						
	8 W	37		39.5						
	13 W	35.5		41						
	14 W	28.5								
	21 W				14.4					
	24 W	19								
	28 W				12.7					
	35 W				12					
	49 W				9.5					
	54 W					6.4				
	80 W					4.5				
Т8	18 W	18	13.2							
	30 W	12.5	12.5							
	36 W	15.3	10							
	58 W		7.3							
	70 W		7.5							

Technology and capacity	5	Numbe of cells		Article no.		As	signable batter	ies	
	Stick	3	Accu-NiCd 3A	89895960					
	side by side	3	Accu-NiCd 3B 55	89800384					
	Stick	4	Accu-NiCd 4A 55	89800089					
	side by side	4	Accu-NiCd 4B 55	89800385					
D cells	Stick + Stick	2+2	Accu-NiCd 4C	89895978					
	Stick	5	Accu-NiCd 5A	89895973	•	•			
	Stick + Stick	3+2	Accu-NiCd 5C 55	89800090	•	•			
	Stick + Stick	3+3	Accu-NiCd 6C 55	89800388			•	•	•

# Ballast Lumen Factor (BLF) in % EM BASIC for compact lamps, 3 h

	3 h		3 cells			4 cells	
	Туре	EM 33A BASIC	EM 33B BASIC	EM 33C BASIC	EM 34A BASIC	EM 34B BASIC	EM 34D BASIC
	Article no.	89818556	89818655	89800000	89818557	89818662	89800175
_amp type	Wattage		BLF in emer	gency lighting mod	le in % for rated op	perating time	
TC-DD	16 W	16.3			21		
	21 W	15.3			19		
	28 W				15.4		
	38 W						
	55 W						
TC-SEL	7 W			15			
	9 W			16.5			
	11 W			17.5			
rc-del	13 W			15.4			
	18 W						
	26 W		6.7			8.5	
IC-TEL	13 W			12.3			
	18 W						
	26 W		6.7			7.5	
	32 W						
	42 W						
TC-L	18 W	10.5			13.5		
	24 W				13.2		
	36 W					7.5①	
	40 W						7.3
	55 W						6

Technology and capacity	5	Numbe of cells	er <b>Type</b>	Article no.	b. Assignable batteries					
	Stick	3	Accu-NiCd 3A	89895960	•	•	•			
	side by side	3	Accu-NiCd 3B 55	89800384	•	•	•			
	Stick	4	Accu-NiCd 4A 55	89800089				•	•	•
NiCd 4 Ah	side by side	4	Accu-NiCd 4B 55	89800385				•	•	•
D cells	Stick + Stick	2+2	Accu-NiCd 4C	89895978				•	•	•
	Stick	5	Accu-NiCd 5A	89895973						
	Stick + Stick	3+2	Accu-NiCd 5C 55	89800090						
	Stick + Stick	3+3	Accu-NiCd 6C 55	89800388						

Note: Not for use with TC-D / TC-T compact amalgam lamps.

<sup>®</sup> Used only in maintained mode because mercury migration may occur during emergency operation.

# Ballast Lumen Factor (BLF) in % EM BASIC for compact lamps, 3 h

	3 h		5 cells		6 cells
	Туре	EM 35A BASIC	EM 35C BASIC	EM 35D BASIC	EM 36A BASIC
	Art. Nr.	89818581	89800001	89899621	89818654
Lamp type	Wattage	BLF in emerger	ncy lighting mod	le in % for rated	operating time
TC-DD	16 W	27			31
	21 W	26			28
	28 W	20			24
	38 W	17			19.3
	55 W				13
TC-SEL	7 W				
	9 W				
	11 W				
TC-DEL	13 W		16.2		
	18 W		13.4		
	26 W		11.8		
TC-TEL	13 W		15.5		
	18 W		11.8		
	26 W		11		
	32 W			6.7	
	42 W			5.4	
TC-L	18 W	18			20
	24 W	17.5			19.5
	36 W	16.5			18.5
	40 W				
	55 W				

Technology and capacity	•	Numbe of cells		Article no.		Assignable	e batteries	
	Stick	3	Accu-NiCd 3A	89895960				
NiCd 4 Ah	side by side	3	Accu-NiCd 3B 55	89800384				
	Stick	4	Accu-NiCd 4A 55	89800089				
	side by side	4	Accu-NiCd 4B 55	89800385				
D cells	Stick + Stick	2+2	Accu-NiCd 4C	89895978				
	Stick	5	Accu-NiCd 5A	89895973	•	•	•	
	Stick + Stick	3+2	Accu-NiCd 5C 55	89800090	•	•	•	
	Stick + Stick	3+3	Accu-NiCd 6C 55	89800388				•

Note: Not for use with TC-D / TC-T compact amalgam lamps.

# Emergency Ballast Lumen Factor (EBLF) in %

#### EM BASIC, 1 h

	Duration	1h										
	Cells	3 cells	3 cells	4 cells	4 cells	6 cells	6 cells					
	Туре	EM 13B BASIC	EM 13E BASIC	EM 14B BASIC	EM 14C BASIC	EM 16C BASIC	EM16C HO BASIC					
	Article no.	89895971	89899864	89899611	89800118	89800119	89800120					
Lamp type	Wattage	EBLF ir	emergency	lighting mo	de in % for ra	ated operati	ng time					
T5 FH	14 W				16.6							
	21 W					12.4						
	28 W					11						
	35 W					10.3						
T5 FQ	24 W				12.2							
	49 W					8.2						
	54 W						4					
	80 W						3.8					
Т8	18 W	19.7		22.2								
	36 W											
	58 W		7.6									

# EM BASIC discharge current in Ampere [A]

EM BASIC, 1	h											
	Duration	1h										
	Cells	3 cells	3 cells	4 cells	4 cells	6 cells	6 cells					
	Туре	EM 13B BASIC	EM 13E BASIC	EM 14B BASIC	EM 14C BASIC	EM 16C BASIC	EM16C HO BASIC					
	Article no.	89895971	89899864	89899611	89800118	89800119	89800120					
Lamp type	Wattage	Disc	harge currer	nt in Ampere	e [A] for rate	d operating	time					
T5 FH	14 W				1.1							
	21 W					0.8						
	28 W					1						
	35 W					1.1						
T5 FQ	24 W				1.1							
	49 W					1						
	54 W						1.1					
	80 W						1.1					
Т8	18 W	1.6		1.3								
	36 W											
	58 W		2.2									

# Notes:

• Tolerance ± 15 % at 230 V

• Low battery voltage cut off (LBVCO) = 0.8 V per cell

# Emergency Ballast Lumen Factor (EBLF) in %

#### EM BASIC, 3 h

	Duration							3	h						
	Cells	3 cells	3 cells	3 cells	4 cells	4 cells	4 cells	4 cells	5 cells	5 cells	5 cells	5 cells	6 cells	6 cells	6 cells
	Туре	EM 33A	EM 33B	EM 33C	EM 34A	EM 34B	EM 34C	EM 34D	EM 35A	EM 35B	EM 35C	EM 35D	EM 36A	EM 36C	EM 36C
	Article no.	BASIC 89818556	BASIC 89818655	BASIC 89800000	BASIC 89818557	BASIC 89818662	BASIC 89800107	BASIC 89800175	BASIC 89818581	BASIC 89818667	BASIC 89800001	BASIC 89899621	BASIC 89818654	BASIC 89800108	HO BASIC 89800109
Lamp type	Wattage	07010000	07010000				emergency								
		10 5			27		energency						77 5		
Т5	6 W	18.5 20.5			23 25				30 32.5				33.5 35		
	8 W 13 W	17.5			25				30.5				34		
							14.4		-				54		
T5 FH	14 W	13.3			21		16.6		25.6					12.4	
	21 W 28 W													12.4	
	35 W													10.3	
T5 FQ	24 W						12.2							10.5	
13 FQ	49 W						IZ.Z							8.2	
	54 W													0.2	4
	80 W														3.8
Т8	18 W		9.4			10.9			16.8	11.9					5.0
10	30 W		7.6			10.7			16.7	11.2					-
	36 W		6.9			7.8			13.9	9					
	58 W		0.7			6.1			10.7	6.7					
	70 W		6.3			0.1				6.3					
TC-DD	16 W	14	0.0		18.3				23.1	0.0			27.2		
10 00	21W	13.1			16.3				21				24.5		
	28 W	10.1			13.2				16.2				20.5		
	38 W								14.5				16.5		
	55 W												10.1	-	
TC-SEL	7 W			12.7											
	9 W			14.0											
	11 W			15.0											
TC-DEL	13 W			12.7							13.2				
	18 W										11.9				
	26 W		5.8			6.6					10.4				
TC-TEL	13 W			10.2							13.9				
	18 W										10.4				
	26 W		6.2			6.9					9.9				
	32 W											6.3			
	42 W											4.8			
TC-L	18 W	9.2			12				15.9				17.5		
	24 W				11.3				15.2				17		
	36 W					6.3			14.5				16.7		
	40 W							6.5							
	55 W							5.3							

# Discharge current in Ampere [A]

#### EM BASIC, 3 h

	Duration							3	h						
	Cells	3 cells	3 cells	3 cells	4 cells	4 cells	4 cells	4 cells	5 cells	5 cells	5 cells	5 cells	6 cells	6 cells	6 cells
	Туре	EM 33A	EM 33B	EM 33C	EM 34A	EM 34B	EM 34C	EM 34D	EM 35A	EM 35B	EM 35C	EM 35D	EM 36A	EM 36C	EM 36C
	туре	BASIC	BASIC	BASIC	BASIC	BASIC	BASIC	BASIC	BASIC	BASIC	BASIC	BASIC	BASIC	BASIC	HO BASIC
	Article no.	89818556	89818655	89800000	89818557	89818662	89800107	89800175	89818581	89818667	89800001	89899621	89818654	89800108	89800109
Lamp type	Wattage					Disch	narge curren	t in Ampere	[A] for rate	ed operating	g time				
T5	6 W	0.51			0.49				0.5				0.47		
	8 W	0.74			0.65				0.65				0.6		
	13 W	1			0.93				0.95				0.9		
T5 FH	14 W	1.1			0.8		1.1		1						
	21 W													0.8	
	28 W													1	
	35 W													1.1	
T5 FQ	24 W						1.1								
	49 W													1	
	54 W														1.1
	80 W														1.1
Т8	18 W		0.8			0.7			0.8	0.6					
	30 W		1.1			1			1.1	0.8					
	36 W		0.8			0.7									
	58 W					1.1				1.1					
	70 W		1.06							1.06					
TC-DD	16 W	1.05			0.94				0.94				0.86		
	21W	1.07			0.95				0.97				0.89		
	28 W				1.13				1.14				1.09		
	38 W								1.22				1.14		
	55 W												1.11		
TC-SEL	7 W			0.79											
	9 W			0.9											
	11 W			1.11											
TC-DEL	13 W			1.1							0.74				
	18 W										0.9				
	26 W		0.7			0.7					1.1				
TC-TEL	13 W			1.1							0.7				
	18 W										0.9				
	26 W		0.8			0.7					1.1				
	32 W											1.0			
	42 W											1.3			
TC-L	18 W	0.76			0.69				0.71				0.65		
	24 W	0.91			0.94				0.86						
	36 W					0.82			1.15				1.1		
	40 W							1.1							
	55 W							1.1							

#### Notes:

• Tolerance ± 15 % at 230 V

• Low battery voltage cut off (LBVCO) = 0.8 V per cell

#### Standards

- according to EN 50172
- according to EN 60598-2-22
- EN 61347-2-7
- EN 55015
- EN 61000-3-2
- EN 61000-3-3
- EN 61547
- EN 60068-2-64
- EN 60068-2-29
- EN 60068-2-30



Note:

The EM BASIC is not intended to be used for high risk task area lighting.

#### Isolation and electric strength testing of luminaires

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an isolation test with 500 VDC for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal. The isolation resistance must be at least 2 M $\Omega$ .

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1,500 VAC (or 1,414 x 1,500 VDC). To avoid damage to the electronic devices this test must not be conducted.

Note: Basic insulation between supply and battery circuit.

#### Technical data batteries

#### Accu-NiCd

1.6 Ah	
Battery voltage/cell	1.2 V
Cell type	Cs
Case temperature range	
to ensure 4 years design life	+5 °C to +50 °C
Max. short term temperature (reduced life-time)	70 °C
Max. number discharge cycles	4 cycles per year plus 4 cycles during comissioning
Max. storage time	6 months
<b>4.2 / 4.5 Ah</b> Battery voltage/cell Cell type Case temperature range	1.2 V D
to ensure 4 years design life	+5 °C to +55 °C
Max. short term temperature (reduced life-time)	70 °C
Max. number discharge cycles	4 cycles per year plus 4 cycles during

Max. storage time

For further informations refer to corresponding battery datasheet.

#### Storage, installation and commissioning

Relevant information about storage conditions, installation and commissioning are provided in the battery datasheets.

comissioning

6 months

Connection method: 4.8 x 0.5 mm spade welded to end of cell

For the stick batteries this connection is accessible after the battery end caps have been fitted.

To inhibit inverter operation, only disconnect the batteries by removing the connector from the battery spade tags.

#### **Electrical connections**

An earthed starting aid is recommended. The module should be earthed by the fixings used to attach it to the luminaire.

Terminal block type: Push wire and insulation displacement

Terminal block capacity

- Push wire: 0.5 to 1.5 mm<sup>2</sup> solid conductor
- Insulation displacement: 0.5 mm² solid conductor

Wire strip length: 7.5 to 8.5 mm

Lamp lead length: 2,500 mm max. The longer pair of leads should always be connected to terminals 3 and 8.

#### Life-time

Average life-time 50,000 hours under rated conditions with a failure rate less than 10 %. Average failure rate of 0.2 % per 1,000 operating hours

#### **Mechanical details**

Channel manufactured from 0.4 mm Galvatite galvanised steel. Cover manufactured from 0.4 mm white precoated steel.

- LED status indicator
- Green
- Mounting hole 6.5 mm diametre
- Lead length 750 mm (Bezel supplied fitted to LED)
  Insulation rating: 90 °C
- Insulation rating: 90°C

Test switch

- Mounting hole 7 mm diametre
- Length of test switch lead 550 mm

Battery leads

- Quantity: 1 red and 1 black
- Length: 1000 mm (Accu NiCd 3B, 4B, 4C), 1300 mm (all others)
- Wire type: 0.5 mm<sup>2</sup> solid conductor
- Insulation temperature rating: 90 °C

#### Termination 1

Push on 4.8 mm receptacle to suit battery spade fitted with insulating cover

Termination 2 9 mm stripped insulation

Two-piece batteries are supplied with a 200 mm lead with 4.8 mm receptacle at each end and insulting covers to connect the separate sticks together.

#### Wiring guidelines

To ensure that a luminaire containing high frequency emergency units complies with EN 55015 for radio frequency conducted interference in both normal and emergency mode it is essential to follow good practice in the wiring layout.

Within the luminaire the switched and unswitched 50 Hz supply wiring must be routed as short as possible and be kept as far away as possible from the lamp leads.

This means, for example, in a linear T8 or T5 luminaire the mains wiring should be routed along one side of the luminaire body, while the wires to the emergency lamp from the emergency module are routed along the other side.

The high frequency emergency lamp wiring contains "hot" leads at pins 1 and 6, which have high voltage to earth. These should be kept as short as possible and separated from other wiring to minimize coupling. They also have a restriction on capacitance to other wiring and earth of 100 pF, which must be observed to ensure good lamp starting.

With an earth connection of the metal case of the emergency module the noise suppression can be further improved. The wiring of the earth should be kept as short as possible.

Through wiring may affect the emc performance of the luminaire.

With the use of the fifth pole possible compatibility problems between the products can be prevented. Depending on the luminaire wiring the radio suppression in the emergency mode of operation can be further improved.

Capacitive loading limits of lamp leads must not be exceeded. Note the capacitance of the emergency lamp leads adds to the capacitance of the leads from the ballast to the EM BASIC module when considering ballast loading.

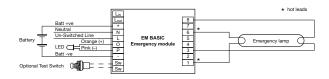
Working voltage (Uout)	
Туре	Uout®
EM 33A BASIC	250 / 250 V
EM 33B BASIC	250 / 250 V
EM 33C BASIC	250 / 250 V
EM 34A BASIC	250 / 250 V
EM 34B BASIC	250 / 250 V
EM 34C BASIC	250 / 250 V
EM 34D BASIC	250 / 250 V
EM 35A BASIC	250 / 250 V
EM 35B BASIC	250 / 250 V
EM 35C BASIC	250 / 250 V
EM 35D BASIC	250 / 250 V
EM 36A BASIC	250 / 250 V
EM 36C BASIC	400 / 400 V
EM 36C HO BASIC	350 / 350 V
EM 13B BASIC	250 / 250 V
EM 13E BASIC	300 / 300 V
EM 14B BASIC	250 / 250 V
EM 14C BASIC	250 / 250 V
EM 16C BASIC	320 / 320 V
EM 16C HO BASIC	350 / 350 V

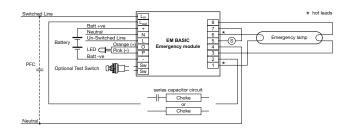
 $^{\scriptscriptstyle (1)}$  Max. voltage between output terminals / Max. voltage between output terminal to earth

**Emergency lighting units** EM INVERTER

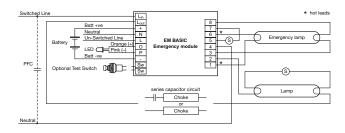
### Circuit diagrams

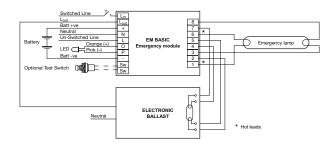
Non maintained





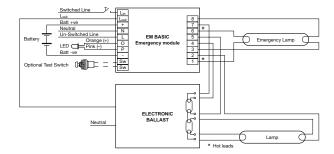
Single lamp switch start circuit with conventional control gear



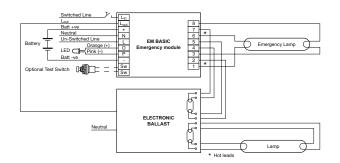


Twin series switch start circuit with conventional control gear

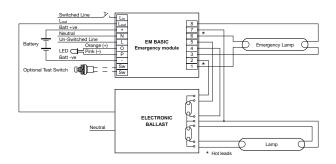
Single lamp high frequency electronic ballast



Twin series switch start circuit with high frequency electronic ballast



Twin lamp high frequency electronic ballast (8 lamp lead connections)



Twin lamp high frequency electronic ballast (7 lamp lead connections)

#### Additional information

Additional technical information at <u>www.tridonic.com</u>  $\rightarrow$  Technical Data

Guarantee conditions at <u>www.tridonic.com</u>  $\rightarrow$  Services

Life-time declarations are informative and represent no warranty claim. No warranty if device was opened.