

PC CFL Combo-Connect 220-240V 50-60Hz



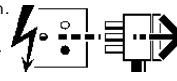
This Product MUST be EARTHED

IS1304

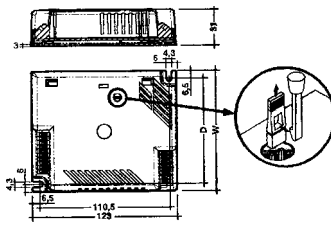
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Installation Instructions
IS500

Disconnect from mains supply before replacing the fuse or the lamp.
Vor dem Einsetzen der Sicherung oder der Lampe Spannungsfreiheit herstellen.
Débrancher le secteur avant de remplacer le fusible ou l'ampoule.
Desconectar del suministro de la red, antes de realizar la sustitución del fusible o de la lámpara.
Voor het vervangen van lamp of zekering, eerst netspanning uitschakelen.
Koppla bort spänningen före byte av en säkring eller en lampa.



Switch Off
Abschalten
Débrancher
Desconectar
Uitschakelen
Stäng av



Description:

Warm start fixed output, combined electronic high frequency ballasts and emergency lighting modules for compact fluorescent lamps. Each unit has options for plugging in an EM CONNECT interface unit to convert to Selftest or DALI automatic test.

Easy to Use

- Lightweight one piece unit
- Small size
- Simplified wiring
- No compatibility issues
- Push wire terminals
- Easy plug in for conversion to Selftest or DALI automatic testing
- Remote battery pack units

Features:

Operation

- Amalgam and non amalgam lamps
- Preheat start in normal operation
- Cathode heating during emergency operation with TC-D/T lamps
- AC operation of all lamps
- 1 hour and 3 hour operation
- 1 hour duration selection by means of removable jumper plug
- Deep discharge protection
- Regulated electronic charging circuit
- Standard brightness and ultra high brightness (UHB) indication LED available
- Ballast switching with DALI command

Safe and Reliable

- Complies with European Standards: EN 55015: 2006 + A1: 2007 (EMC/Emitted RF) EN 61547 (EMC/Immunity) EN 61000.3.2 (EMC/Supply Harmonics) EN 61347-2-7 (Safety) EN 61347-2-3 (Safety) EN 60925 (Performance) EN 60929 (Performance) in accordance with EN 60598-2-22 in accordance with EN 50172 pr IEC 62034
- ENEC approved. CE marked

Lamp	Ballast		article number	width W mm	fixing hole Ø mm	weight kg	circ. temp. W	mains current W	λ A	max. case temperature to °C	emergency BLF	norm. BLF	accu 3h 4.0 Ah NiCd	accu 1h 1.5 Ah NiCd Cs cells	accu 1h 2.0 Ah NiMH Cs cells	
	type	selftest														
TC-DEL/TEL 18	PC 1x18-4 TC COMBO-CONNECT		89899840	102	89.5	0.15	24	18	0.11	0.95	70	0.15/0.18	> 0.95	4 x accu	4 x accu	
TC-DEL/TEL 2x18	PC 2x18-4 TC COMBO-CONNECT		89899843	102	89.5	0.22	44	2x18	0.21	0.95	70	0.15/0.18	> 0.95	4 x accu	4 x accu	
TC-DEL/TEL 28	PC 1x28-3/42-6 TC COMBO-CONNECT		89899841	102	89.5	0.15	32	28	0.15	0.95	70	0.11/0.10	> 0.95	6 x accu	6 x accu	
TC-DEL/TEL 2x28	PC 2x28-5 TC COMBO-CONNECT		89899844	102	89.5	0.22	60	2x28	0.26	0.95	70	0.11/0.14	> 0.95	6 x accu	5 x accu	
TC-TEL 32	PC 1x32/32/42-6 TC COMBO-CONNECT		89899841	102	89.5	0.15	38	32	0.18	0.95	70	0.095	> 0.95	6 x accu	6 x accu	
TC-TEL 2x32	PC 2x32/32/42-6 TC COMBO-CONNECT		89899843	102	89.5	0.22	75	2x32	0.35	0.95	80	0.095	> 0.95	6 x accu	6 x accu	
TC-TEL 42	PC 1x42/32/42-6 TC COMBO-CONNECT		89899841	102	89.5	0.15	50	42	0.24	0.95	70	0.075	> 0.95	6 x accu	6 x accu	
TC-TEL 2x42	PC 2x32/42-6 TC COMBO-CONNECT		89899843	102	89.5	0.22	100	2x42	0.47	0.95	80	0.075	> 0.95	6 x accu	6 x accu	
TC-DO 28	PC 1x28-34 00 COMBO-CONNECT *		89899776	102	89.5	0.15	28	17	0.12	0.95	75	0.120	0.75	4 x accu	NA	
TC-DO 28	PC 1x28-34 00 COMBO-CONNECT *		89899777	102	89.5	0.15	34	25	0.16	0.95	70	0.120	> 0.95	4 x accu	NA	
TC-DO 38	PC 1x38-35 00 COMBO-CONNECT *		89899778	102	89.5	0.15	44	35	0.20	0.95	78	0.090	> 0.95	5 x accu	NA	

Note: remove link and select correct accu for 1 hour operation
* 3 hour only - no 1 hour option

Combined electronic ballasts and emergency modules with plug in Selftest or DALI interface

Technical data:

Ambient temperature range 5 °C to +50 °C
Maximum case temperature (tc) see tables.
Ingress Protection IP20
Vibration test IEC 60068-2-6/64 Fh
Bump test IEC 60068-2-29 Eb
Humidity IEC 60068-2-30
Flash Testing not recommended
High Voltage Insulation Testing (no flashover or breakdown must occur): Up to 500 V DC between the phase and neutral conductors connected together and the earth. Batteries must be disconnected during storage of luminaires. It is also recommended that batteries are only connected after installation is completed.
Restarting after lamp replacement:
Note: Before servicing luminaires the mains supply should always be disconnected.
If faulty lamps are changed with the mains connected they will restart automatically provided an interval of 2 seconds is left after removal.
Lamp starting (normal operation):
Type of start: Pre-heat
Starting time: 2 seconds
Number of starts: circa 20,000

type	article number	
LED EM green	89899605	for non auto test
LED EM green UHB	89899756	for non auto test
LED EM bi-colour	89899720	for selftest or DALI
LED EM bi-colour UHB	89899753	for selftest or DALI

Mechanical details:

Case manufactured from polycarbonate.
LED charge indicator
• Bi-colour for self test and PRO DALI green for standard test
• Mounting hole 6.5 mm dia
• Length of LED lead (Bezel supplied fitted to LED) green: 750 mm
Bi colour: 1000 mm

Battery packs (Pack-NiCd)

- Polycarbonate case
- 1.0 m integral double insulated lead
- 1.0 mm² solid cable

To be connected to suitable strain relieved terminal block in luminaire or suitable polarised plug/socket for connection to luminaire.

Termination

9 mm semi-stripped insulation with protective tape.

Battery NiCd (high temp)	type	number of cells	article number	L x W x H mm	weight g
Pack-NiCd 3D	Remote pack 4.0 Ah	3	89899672	216 x 70 x 35.5	570
Pack-NiCd 4D	Remote pack 4.0 Ah	4	89899673	216 x 70 x 35.5	700
Pack-NiCd 5D	Remote pack 4.0 Ah	5	89899674	216 x 70 x 35.5	840
Pack-NiCd 6D	Remote pack 4.0 Ah	6	89899675	216 x 70 x 35.5	980
Pack-NiCd 3C	Remote pack 1.5 Ah	3	89899676	216 x 70 x 35.5	320
Pack-NiCd 4C	Remote pack 1.5 Ah	4	89899677	216 x 70 x 35.5	370
Pack-NiCd 5C	Remote pack 1.5 Ah	5	89899678	216 x 70 x 35.5	420
Pack-NiCd 6C	Remote pack 1.5 Ah	6	89899679	216 x 70 x 35.5	470

Other batteries are available

See catalogue or separate datasheet for further information

Normal operation:

Rated mains supply voltage 220-240 V
Mains frequency 50/60 Hz
Earth leakage current < 0.5 mA
Minimum lamp starting temperature -15 °C
Lamp operating frequency > 42 kHz
Ballast Lumen Factor (BLF) see table
Light output variation over rated voltage range ± 2 %
Recharge period 24 hours
Nominal charge current NiCd D cell (3 h) 220 mA
Nominal charge current NiCd, NiMH Cs cells (1 h) 110 mA
Can be used with high brightness charge indicators (LEDs)

Emergency operation:

Emergency light output factors (BLF) see table
Battery design voltage 1.2 V per cell
Nominal discharge current (3 h, 1 h) 1.1 A
Minimum lamp starting temperature 5 °C

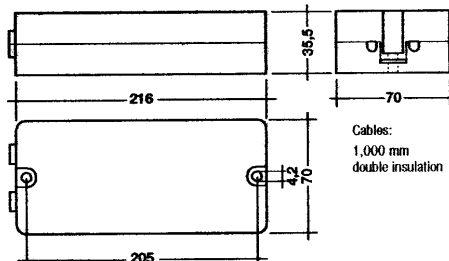
Batteries:

cell case temperature range (to ensure 4 years life) 0 °C → 55 °C
max. case temperature Pack-NiCd (at tc - point) 45 °C
Storage life (in temperate conditions) 4 years

Miniature circuit breakers (MCBs):

The maximum number of these electronic ballasts that may be used with miniature circuit breakers (MCBs). These quantities are based on single pole MCBs. For multi-pole MCBs derate by 20 %.

Type	Number of electronic ballasts					
	Type C MCB rating			Type B MCB rating		
	10 A	16 A	20 A	10 A	16 A	20 A
PC 1x18 ... TC COMBO-CONNECT	80	80	100	40	40	50
PC 2x18 ... TC COMBO-CONNECT	30	80	80	15	40	40
PC 2x28 ... TC COMBO-CONNECT	30	80	80	15	40	40
PC 1x26/32/42 ... TC COMBO-CONNECT	30	80	80	15	40	40
PC 2x32/42 ... TC COMBO-CONNECT	16	30	44	8	15	22
PC 1x28 ... DD COMBO-CONNECT	24	36	44	12	18	22
PC 1x28 ... HO DD COMBO-CONNECT	24	36	44	12	18	22
PC 1x38 ... DD COMBO-CONNECT	20	30	44	10	15	22



Cables: 1,000 mm double insulation

EM CONNECT:

EM CONNECT is available to convert the PC COMBO-CONNECT to either Selftest or PRO DALI operation by simply plugging in the unit and making the relevant connections for the LED and DALI bus to the EM CONNECT module.

Technical data CONNECT-modules:

connection	RJ45
lead length	200 mm
LED Connections	0.5–1.5 mm ² solid conductor
DALI bus connections	0.5–1.5 mm ² solid conductor
max tc temp	70 °C
selftest	
weekly	30 s
yearly	1 h or 3 h duration
DALI	to DALI standard

Selftest CONNECT-modules:

duration (h)	type	article number
3	EM CONNECT 3ST	89899792
1	EM CONNECT 1ST	89899795

Combined electronic ballasts and emergency modules with plug in Selftest or DALI interface

Electrical connections:

A functional earth can be connected for improved EMC performance.

Terminal block type:

Push wire only with release mechanism

Terminal block capacity

0.5 to 1.5 mm² solid conductor

Wire strip length:

8.5 to 9.5 mm

EM CONNECT to be connected via RJ45 socket after plastic gateways have been removed.

Gateways must not be removed unless

EM CONNECT unit is installed.

Green LED indicator should be connected to the

PC CFL COMBO-CONNECT when being used in manual test mode without the plug in EM CONNECT module.

Bi-colour LED should be connected to the EM CONNECT unit when this is used for Selftest or Addressable test applications.

Keep all leads as short as possible, maximum length 0.5 m

Wiring instructions:

The LED and test switch wiring should be routed separately and kept as far away as possible from the high frequency lamp leads to avoid coupling.

Batteries:

Batteries must be disconnected for servicing.

Facility must be provided in the luminaire.

It is recommended that battery leads are not cut as this could result in a hazardous condition due to short circuit batteries.

If shorter leads are required great care should be taken that no shorting occurs.

Batteries should only be connected after installation is complete.

Service life:

Service life at maximum case temperature (see table) measured at designated to point: 50,000 hours.

CE marking:

The combined units are CE marked for compliance with the low voltage directive. Certificates of compliance are available to allow luminaires to be CE marked for compliance with the EMC directive.

Suitable for use indoors

Geeignet für Innenanwendung

Pour un usage interne

Adecuada para uso en interiores

Geschikt voor gebruik binnen

Lämpplig för inomhusbruk



Replace any cracked protective shield.

Dieses symbol bedeutet, dass defekte Schutzgläser sofort ersetzt werden müssen.

Ce symbol indique que vous devez remplacer tout verre de protection fêlé.

Este simbolo indica que hay que reemplazar filtros en caso de rotura o desperfectos.

Dette symbolot indikerer at alle ødelagte (sprukne) sikkerhetsglass må skiftes.

Valaisinta el saa käyttää ilman suojalasia vioittunut suojalasi on vaihdettava uuteen ennen valaisimen käyttöön ottoa.

EM FLT1 filter:

When the PC COMBO-CONNECT and EM CONNECT is used in a remote application, where the lamp leads and LED indicator leads are routed together in close proximity, it is possible to have electrical interference picked up in the indicator leads. Under certain conditions this interference can cause a lock-up of the EM CONNECT micro-controller.

To overcome this problem in such applications it is necessary to fit the filter EM FLT1 between the indicator LED and the EM CONNECT unit. To be effective the filter must be connected close to the EM CONNECT module.

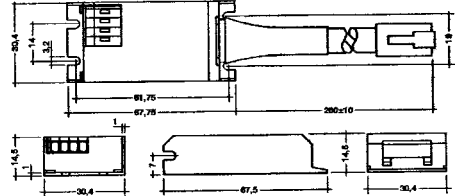
Technical data:

Push wire terminals 0.5–1.5 mm² solid conductor

product	article number
EM FLT1	89899942

For further information please contact TridonicAtco.

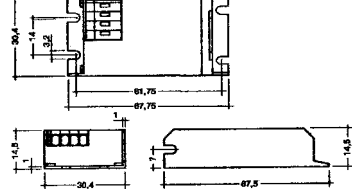
EM CONNECT:



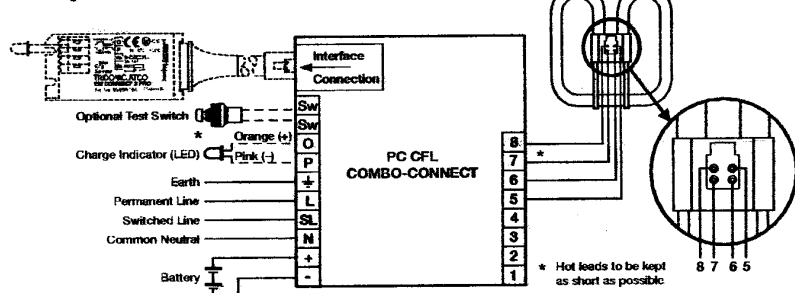
DALI CONNECT-modules:

duration (h)	type	article number
3	EM CONNECT 3PRO	89899794
1	EM CONNECT 1PRO	89899797

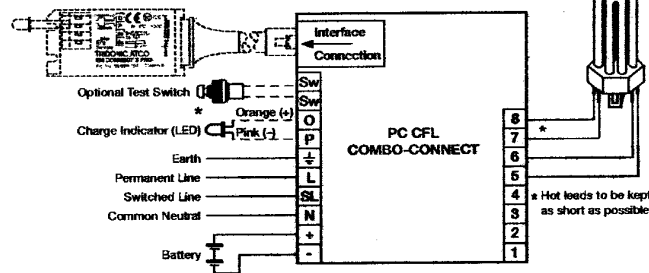
EM FLT1 filter:



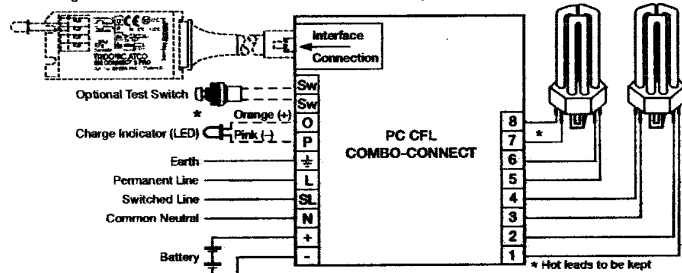
Circuit diagram PC CFL COMBO-CONNECT with single TC-DD lamp



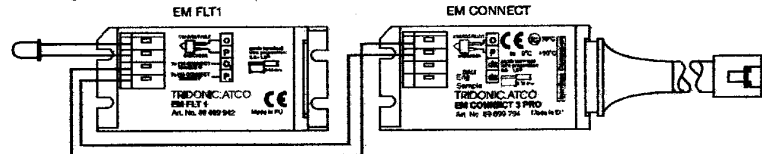
Circuit diagram PC CFL COMBO-CONNECT with single TC-DE/TE lamp



Circuit diagram PC CFL COMBO-CONNECT with twin TC-DE/TE lamps



Circuit diagram EM CONNECT with EM FLT1 filter



* Note: the connection for the LED at the PC CFL COMBO-CONNECT is not used in conjunction with the EM CONNECT module.

Based on Data sheet 03/08-540-3 by

TRIDONIC.ATCO

< Millimetres >



This Electrical Product MUST be recycled.



02.09

Concord

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