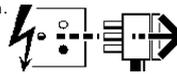


2647510 4167467
2647511 4167468
2647515
2647732



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:

Low profile emergency lighting modules with eDALI interface and self testing facility to cover 1 hour and 3 hour duration from NiCd and NiMh batteries. All modules incorporate five pole technology and use preheat starting and permanent cathode heating during the emergency operation. Boost starting for 55 seconds at higher power levels is provided for all lamps to ensure rapid warm up, optimised lamp life and improved initial visibility during an emergency operation. Power control technology ensures maximum emergency ballast lumen factors for all lamps on a given module. eDALI interface terminals are provided to allow control and data logging via a separate controller. With no eDALI bus connected the unit operates as an EM... SELFTEST module with testing being conducted on a weekly functional and annual duration basis with adaptive duration testing feature to minimise risk.

Features:

- Module**
eDALI interface for controlled testing and reporting.
Low profile section (21mm x 30mm)
5 pole technology
NiCd or NiMh battery options
10-15hour accu recharge time
3 hour and 1 hour operation
High and standard BLF for 1 hour versions
Bi-colour LED to indicate status
AC operation of lamps
Pre-heating of cathodes during emergency operation
Permanent cathode heating during emergency operation
Boost starting facility for all lamps
Deep discharge protection
Regulated electronic charging circuit
Testing
- Battery condition
- Lamp condition
- Charge condition

EM ... INTERFACE 3 hour

NiCd D cells			NiMh cells		
type	article number	number of cells	type	article number	number of cells
EM 34 NiCd D IF	89899734	4	In preparation		
EM 35 NiCd D IF	89899737	5	In preparation		
EM 36 NiCd D IF	89899740	6	In preparation		

EM ... INTERFACE 1 hour standard BLF

NiCd C cells			NiMh C cells		
type	article number	number of cells	type	article number	number of cells
EM 14 NiCd C IF	89899735	4	EM 14 NiMh C ST	89899736	4
EM 15 NiCd C IF	89899738	5	EM 15 NiMh C ST	89899739	5
EM 16 NiCd C IF	89899741	6	EM 16 NiMh C ST	89899742	6

EM ... INTERFACE 1 hour high BLF

NiCd D cells			NiMh cells		
type	article number	number of cells	type	article number	number of cells
EM 14 NiCd D IF	In preparation	4	In preparation		
EM 15 NiCd D IF	In preparation	5	In preparation		
EM 16 NiCd D IF	In preparation	6	In preparation		

Battery packs NiCd 1.4 Ah C cells				Battery packs NiMh 2.0 Ah C cells				
type	cells	article number	type	cells	article number	type	cells	article number
Accu-NiCd C 4A	stick	4	89899692	Accu-NiMh C 4A	stick	4	89899700	
Accu-NiCd C 4B	side by side	4	89899693	Accu-NiMh C 4B	side by side	4	89899701	
Accu-NiCd C 4C	stick+stick	2+2	89899694	Accu-NiMh C 4C	stick+stick	2+2	89899702	
Accu-NiCd C 5A	stick	5	89899695	Accu-NiMh C 5A	stick	5	89899703	
Accu-NiCd C 5B	side by side	5	89899696	Accu-NiMh C 5B	side by side	5	89899704	
Accu-NiCd C 5C	stick+stick	3+2	89899697	Accu-NiMh C 5C	stick+stick	3+2	89899705	
Accu-NiCd C 6A	stick	6	89899698	Accu-NiMh C 6A	stick	6	89899706	
Accu-NiCd C 6C	stick+stick	3+3	89899699	Accu-NiMh C 6C	stick+stick	3+3	89899707	
type		article number			article number			article number
LED bi-colour		89899720	test switch EM 2		89899727			

Type	3 hours			1 hour		
	EM 34 ... D IF	EM 35 ... D IF	EM 36 ... D IF	EM 14 ... C IF	EM 15 ... C IF	EM 16 ... C IF
TC-DO	10	37		37		
	16	25		25		
	21	19		19		
	28	14		14		
	38		10			10
	55		4			4
TC-SEL	5	40		40		
	7	38		38		
	8	38		38		
	11	34		34		
TC-DEL	10	31		31		
	13	26		26		
	18	21		21		
	26	14		14		
TC-TEL	18	21		21		
	26	14		14		
	32		11		11	
	42		7		7	
	57		5		5	
TC-F	18	16		18		
	24		12		12	
	36		11		11	
TC-L	18	16		18		
	24		12		12	
	36		11		11	
	40		5		5	
	50		6		6	
TS FH	14	24		24		
	21		16		16	
	28					14
	38		12		12	
TS FQ	24	18		18		
	39		8		8	
	49		6		6	
	54		8		8	
	60		6		6	
TS C	22	14		14		
	40		7		7	
	50		7		7	
TS	4	38		38		
	6	43		43		
	8	40		40		
	13	27		27		
TS	16	20		20		
	18	18		18		
	30	12		12		
	36	10		10		
	38		10		10	
	58		8		8	
	70		6		6	

Technical data:

EM INTERFACE	3 hour	1 hour
Rated mains supply voltage	220-240 V	220-240 V
Mains frequency	50/60 Hz	50/60 Hz
Mains supply current	60 mA max	60 mA max
Mains supply power	< 10.0 W	< 10.0 W
Overvoltage protection	320V for 1 hour	320V for 1 hour
Recharge period	15 hours	10 hours
Discharge current	1.1 A	1.1 A
Charge current NiCd: initial	300 mA	130 mA
	130 mA	50 mA
Charge current NiMh	Trickle	Trickle
Earth leakage current	pulsed charging < 0.5 mA	pulsed charging < 0.5 mA
Ambient temperature range	-5 °C to +60 °C	-5 °C to +60 °C
Maximum case temperature to Mains change over voltage	70 °C	70 °C
Min. lamp starting temperature (emergency mode)	-5 °C	-5 °C
Ingress protection	IP20	IP20
Safety class	class I must be earthed	class I must be earthed
Function test	30 seconds via eDALI command	30 seconds via eDALI command
Duration test	3 hr via eDALI command	3 hr via eDALI command
Timer	crystal controlled	crystal controlled
Boost starting time	55 seconds	55 seconds

Batteries

- NiCd or NiMh options
D or C cells
High temperature cells
Spade terminals for easy connection

Certified

- EN55015 EN61000-3-2
EN55022 EN61547
EN601347-2-7 IEC68-2-6
EN60925 IEC68-2-9
pr IEC62034 IEC68-2-30
Allows compliance with EN60598-2-22

Battery packs

NiCd 4.0 Ah D cells	type	cells	article number
Accu-NiCd 4A	stick	4	89895961
Accu-NiCd 4B	side by side	4	89895977
Accu-NiCd 4C	stick + stick	2+2	89895978
Accu-NiCd 5A	stick	5	89895973
Accu-NiCd 5B	stick + stick	3+2	89895962
Accu-NiCd 6A	stick + stick	3+3	89895963

Accu-NiCd	case temperature range to ensure 4 years design life storage life in temperate conditions	battery voltage	capacity D	capacity Cs
Accu-NiCd 4A	0 °C to +55 °C	4 years	1.2 V	4.0 Ah
Accu-NiCd 4B	0 °C to +55 °C	4 years	1.2 V	2.0 Ah
Accu-NiCd 4C	0 °C to +55 °C	4 years	1.2 V	2.0 Ah

Testing:

eDALI Control

An eDALI command from a suitable control unit can be used to initiate function and duration tests at individually selected times. Status flags are set for report back and data logging or results.

When an eDALI bus is not connected or when a command has not been received the EM...IF will operate in the self testing mode and will conduct tests in accordance with the default times stored in the EEPROM. Upon receiving the first eDALI test command the unit will ignore all default values and will only test via the eDALI bus.

Functional Test

The time of day and frequency of the 30 seconds function test can be set by the eDALI controller. If the EM...IF unit is not connected to an eDALI bus or has not received an eDALI command the test will default to 30 seconds duration on a weekly basis.

Duration Test

Test times can be set by the eDALI controller. If the EM...IF unit is not connected to an eDALI bus or has not received an eDALI command the test will be conducted annually.

Test switch

An optional test switch can be wired to the EM...INTERFACE. This can be used to:
- Initiate a 30 second function test < 1 second press.
- adjust local timing > 10 second press
For a full description of the test switch function refer to application notes.

Status indication

System status is indicated by a bi-colour LED and by eDALI status flag.

LED

- Permanent green System OK
- Fast flashing green Function test underway
- Slow flashing green Duration test underway
- Permanent red Lamp fault
- Fast flashing red Charging fault
- Slow flashing red Battery fault
- Double pulsing green Rest mode

Service life

Average service life 50,000 hours under rated conditions with a failure rate of less than 10%. Average failure rate of 0.2% per 1000 operating hours.

Mechanical details:

Channel manufactured from galvanised steel. Cover manufactured from white pre-coated steel.

LED bi-colour status indicator

- Green/red
- Mounting hole 6.5mm dia.
- Lead length: 750mm

Test switch

- Mounting hole 7.0mm dia.
- Lead length: 550mm

Battery leads

- Quantity: 1 red and 1 black
- Length: 1300mm
- Wire type: 0.5mm² solid conductor
- Insulation rating: 90C

Battery end termination

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

Module end termination

8.0mm stripped insulation.

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

Batteries:

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

eDALI Controller:

Refer to Luxmate controls.

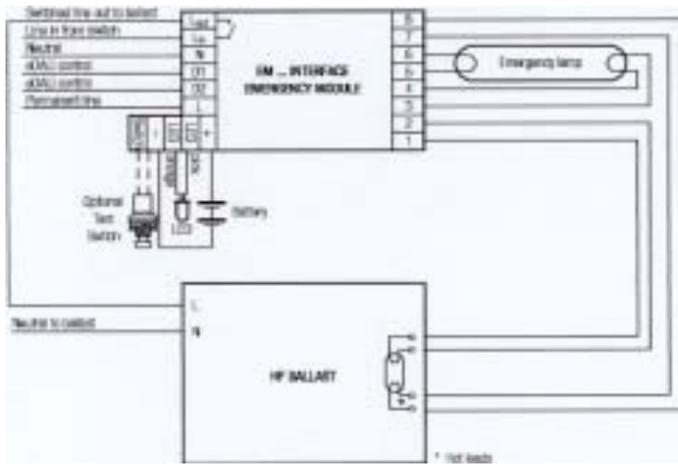
For stick packs this connection is accessible after the battery caps have been fitted.

To inhibit inverter operation disconnect the batteries by removing the connector from the battery spade tag. For battery data see separate data sheet.

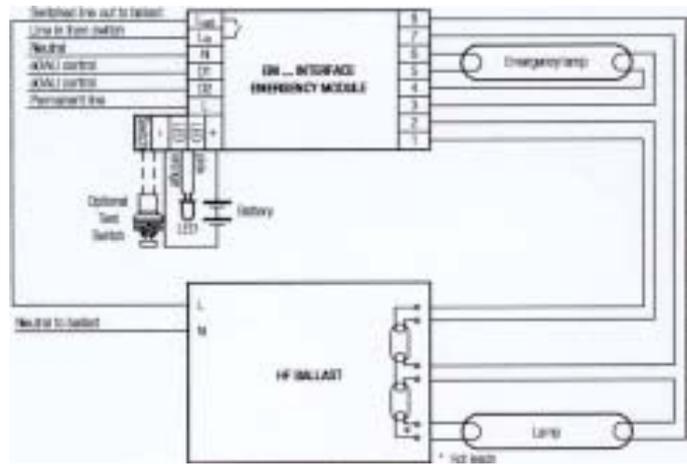
Electrical connections:

An earthed starting aid is required. The module must be earthed by the fixings used to attach it to the luminaire.
Lamp/control gear/supply - Push wire and insulation displacement (IDC)
Batteries/LED/Test switch - Push wire with cable release.
Push wire - 0.5 to 1.5mm²
Insulation displacement - 0.5mm²
Wire strip length - 7.5mm to 8.5mm
Maximum lamp lead length - 2500mm max.

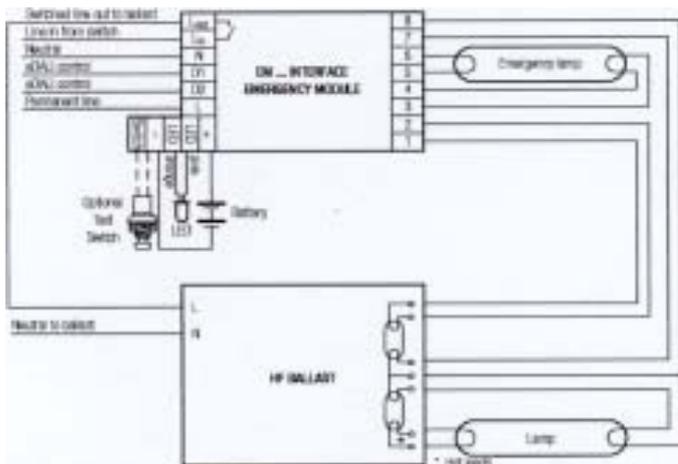
EM...INTERFACE emergency module wiring diagrams



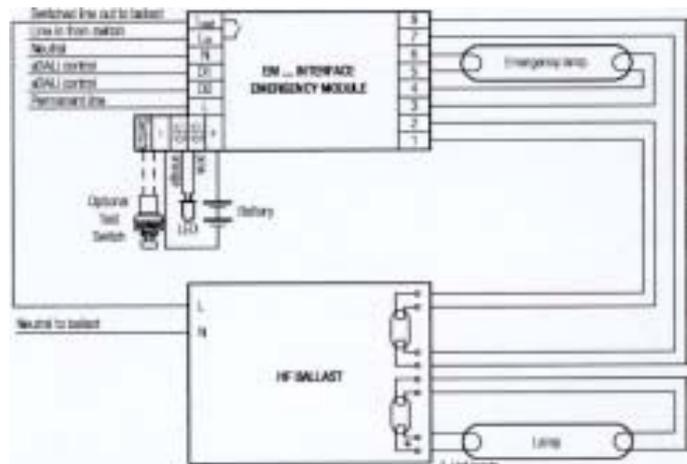
Wiring diagram for single lamp high frequency ballasts



Wiring diagram for twin lamp high frequency ballasts with 6 terminals

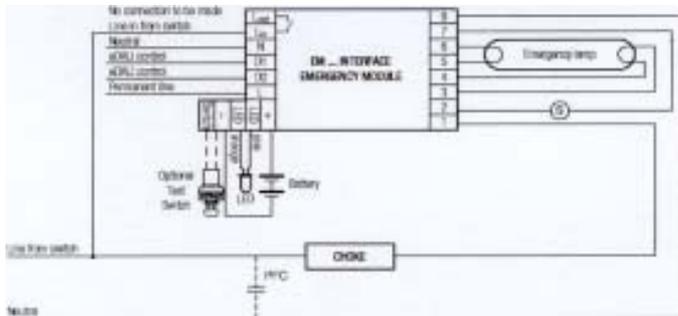


Wiring diagram for twin lamp high frequency ballasts with 7 terminals

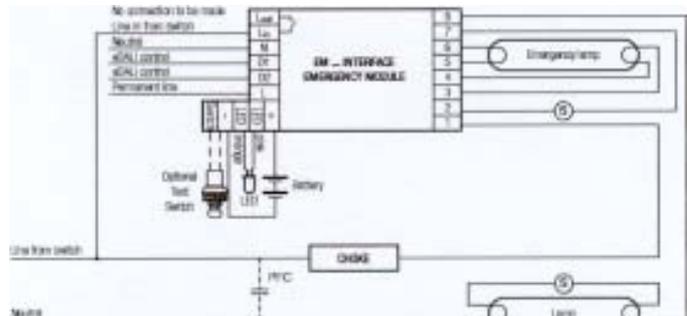


Wiring diagram for twin lamp high frequency ballasts with 8 terminals

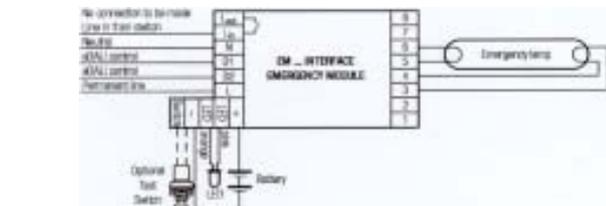
Note: All hot leads from the ballast normally marked with an * should be kept as short as possible. Leads to terminals 5, 6, 7 and 8 must be kept as short as possible. For comprehensive wiring diagrams and instructions consult the TridonicAtco website www.tridonicatco.com



Wiring diagram for single lamp switch start circuit



Wiring diagram for twin lamp switch start circuit



Wiring diagram for non-maintained operation

Suitable for use indoors
Geeignet für Innenanwendung
Pour un usage interne
Adecuada para uso en interiores
Geschikt voor gebruik binnen
Lämplig för inomhusbruk



Replace any cracked protective shield.
Dieses Symbol bedeutet, dass defekte Schutzgläser sofort ersetzt werden müssen.
Ce symbole indique que vous devez remplacer tout verre de protection fêlé.
Este símbolo indica que hay que reemplazar filtros en caso de rotura o desperfectos.
Dette symbolet indikerer at alle ødelagte (sprukne) sikkerhetsglass må skiftes.
Valaisinta el saa käyttää ilman suojalasia vioittunut suojalasi on vaihdettava uuteen ennen valaisimen käyttöön ottoa.

< Millimetres >



This Electrical Product
MUST be recycled.



07.09

Concord

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Based on Data sheet 08/03-272-0 TRIDONIC.ATCO