

Light is OSRAM

OSRAM

INOTEC – Conformity certificate with central battery systems

1. OTi DALI Linear non isolated
 - 1.1 OTi DALI 35/220-240/400 LT2 L
 - 1.2 OTi DALI 60/220-240/550 LT2 L
 - 1.3 OTi DALI 90/220-240/700 LT2 L
 - 1.4 OTi DALI 90/220-240/1A0 LT2 L


2. OTi DALI Linear SELV
 - 2.1 OTi DALI 35 /220-240/700 LT2 L
 - 2.2 OTi DALI 50/220-240/1A4 LT2 L
 - 2.3 OTi DALI 80/220-240/2A1 LT2 L

3. OTi DALI Ultraflat
 - 3.1 OTi DALI 35/220-240/400 D LT2 UF L
 - 3.2 OTi DALI 75/220-240/700 D LT2 UF L

4. OTi DALI Compact SELV
 - 4.1 OTi DALI 15/220-240/1A0 LT2
 - 4.2 OTi DALI 25/220-240/700 LT2
 - 4.3 OTi DALI 35/220-240/1A0 LT2
 - 4.4 OTi DALI 50/220-240/1A4 LT2 FAN

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 35/220-240/400 LT2 L (ident code: AM00139)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 22.06.2017

Features	Techn. data / INOTEC requirements	Explanation	Fullfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	YES
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	YES
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	YES
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	YES
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	YES
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	YES
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	YES
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	YES
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	(*3) YES
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207	Control gear must have the DALI Logo	(*1) YES

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description: Luminaire:
	EVG: Oti DALI 35/220-240/400 LT2 L (ident code: AM00139)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 22.06.2017

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See Table1
15 Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	(*4) locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	(*4) 15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	17A / 183 µs (*2)

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)

Notes:

(*1): Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.

(*2): For calculation the inrush current of the monitoring module must be taken into consideration!

(*3): Not to be used in high risk areas, special release required

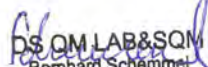
(*4): The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:

Munich, 22.06.2017


Place, Date


DS DSST
Dr. Kay Schmidtman
Signature


DS QM LAB&SQM
Bernhard Schämmer

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: Oti DALI 35/220-240/400 LT2 L	
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LED controller type	Values for load range	In in AC-operation (230V) / mA (trms)	In in AC-operation (240V) / mA (trms)	In in DC-operation (186V) / mA (trms)	In in DC-operation (216V) / mA (trms)	In in DC-operation (240V) / mA (trms)	In in DC-operation (260V) / mA (trms)
Oti DALI 35/220-240/400 LT2 L	Umin, Imin	44,09	44,26	10,03	8,74	8,20	7,88
	Umin, Imax	123,13	112,08	24,43	20,61	18,63	17,31
	Umax, Imin	102,03	99,37	25,12	21,73	19,68	18,20
	Umax, Imax	113,60	110,54	39,25	33,78	30,52	28,47
	Open Load	25,02	31,37	2,30	2,21	2,17	2,14
	Short Load	25,02	31,38	2,29	2,22	2,17	2,15

Maximum inrush current for ECG in AC Operation

$I_{peak} = 17 \text{ A}$
 $T_H = 183 \mu\text{s}$

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 60/220-240/550 LT2 L (ident code: AM00138)
	LED:
Project / Place / Project ID:	Specified by:
	Name: D. Graser Company: OSRAM GmbH
	Date: 22.06.2017

Features	Techn. data / INOTEC requirements	Explanation	Fulfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	YES
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	YES
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	YES
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	YES
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	YES
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	YES
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13; Particular requirements for DC or AC supplied electronic control gear for LED modules	YES
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	YES
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	(*3) YES
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 / -102 / -207	Control gear must have the DALI Logo	(*1) YES

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description: Luminaire:
	EVG: Oti DALI 60/220-240/550 LT2 L (ident code: AM00138)
Project / Place / Project ID:	LED:
	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 22.06.2017

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See Table 1
15 Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table 1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	(*4) locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	(*4) 15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	23A / 193 µs (*2)
Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)			

Notes:

(*1): Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.

(*2): For calculation the inrush current of the monitoring module must be taken into consideration!

(*3): Not to be used in high risk areas, special release required

(*4): The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:

Munich, 22.06.2017


Place, Date

DS D SST
Dr. Kay Schmidtman
Signature

DS QM LAB&S
Bernhard Schmitt
Signature

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: Oti DALI 60/220-240/550 LT2 L	
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LED controller type	Values for load range	In in AC-operation (230V) / mA (trms)	In in AC-operation (240V) / mA (trms)	In in DC-operation (186V) / mA (trms)	In in DC-operation (216V) / mA (trms)	In in DC-operation (240V) / mA (trms)	In in DC-operation (260V) / mA (trms)
Oti DALI 60/220-240/550 LT2 L	Umin, Imin	55,24	55,02	13,78	11,75	10,77	9,66
	Umin, Imax	162,98	145,63	31,61	27,01	24,22	22,37
	Umax, Imin	149,36	144,12	36,39	31,09	27,88	25,73
	Umax, Imax	299,57	286,26	60,68	52,15	46,62	42,95
	Open Load	25,25	31,65	1,11	2,21	2,16	2,14
	Short Load	24,68	31,66	1,11	2,21	2,16	2,14

Maximum inrush current for ECG in AC Operation

I_{peak}= 23 A
TH= 193 μs

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire:
	EVG: Oti DALI 90/220-240/700 LT2 L (ident code: AM00140)
Project / Place / Project ID:	LED:
	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 22.06.2017

Features	Techn. data / INOTEC requirements	Explanation	Fullfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	YES
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	YES
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	YES
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	YES
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	YES
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	YES
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	YES
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	YES
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	(*3) YES
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 / -102 / -207	Control gear must have the DALI Logo	(*1) YES

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 90/220-240/700 LT2 L (ident code: AM00140)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 22.06.2017

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See Table1
15 Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	(*4) locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	(*4) 15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	27A / 193 µs (*2)

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)

Notes:

(*1): Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.

(*2): For calculation the inrush current of the monitoring module must be taken into consideration!

(*3): Not to be used in high risk areas, special release required

(*4): The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:

Munich, 22.06.2017


Place, Date

D&D SST
Dr. Kay Schmittmann
Kay Schmittmann
Signature

DS QM LAB&SQM
Bernhard Schimmel
Bernhard Schimmel

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Table1:


Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: Oti DALI 90/220-240/700 LT2 L	
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LED controller type	Values for load range	In in AC-operation (230V) / mA (trms)	In in AC-operation (240V) / mA (trms)	In in DC-operation (186V) / mA (trms)	In in DC-operation (216V) / mA (trms)	In in DC-operation (240V) / mA (trms)	In in DC-operation (260V) / mA (trms)
Oti DALI 90/220-240/700 LT2 L	Umin, Imin	91,97	90,62	20,81	17,71	15,88	15,04
	Umin, Imax	198,93	177,43	41,00	34,96	31,30	28,89
	Umax, Imin	300,20	287,10	63,29	54,41	48,55	44,78
	Umax, Imax	453,47	431,25	85,51	73,26	65,96	60,48
	Open Load	25,38	32,04	2,28	2,19	2,14	2,13
	Short Load	25,53	32,04	1,50	2,18	2,15	2,12

Maximum inrush current for ECG in AC Operation

I_{peak}= 27 A
TH= 193 µs

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 90/220-240/1A0 LT2 L (ident code: AM00141) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 22.06.2017

Features	Techn. data / INOTEC requirements	Explanation	Fulfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	YES
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	YES
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	YES
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	YES
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	YES
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	YES
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	YES
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	YES
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	(*3) YES
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207	Control gear must have the DALI Logo	(*1) YES

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 90/220-240/1A0 LT2 L (ident code: AM00141)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 22.06.2017

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See Table1
15 Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table1
16 Behavier control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	(*4) locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	(*4) 15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	27A / 193 µs (*2)
Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)			

Notes:

(*1): Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.

(*2): For calculation the inrush current of the monitoring module must be taken into consideration!

(*3): Not to be used in high risk areas, special release required

(*4): The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:

Munich, 22.06.2017


Place, Date

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Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: Oti DALI 90/220-240/1A0 LT2 L	
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LED controller type	Values for load range	I_N in AC-operation (230V) / mA (trms)	I_N in AC-operation (240V) / mA (trms)	I_N in DC-operation (186V) / mA (trms)	I_N in DC-operation (216V) / mA (trms)	I_N in DC-operation (240V) / mA (trms)	I_N in DC-operation (260V) / mA (trms)
Oti DALI 90/220-240/1A0 LT2 L	Umin, Imin	87,22	86,13	19,24	16,45	15,08	13,84
	Umin, Imax	280,59	245,61	48,13	41,07	37,00	34,13
	Umax, Imin	298,93	285,87	62,24	53,51	47,77	44,22
	Umax, Imax	446,08	424,50	83,72	71,80	64,67	59,28
	Open Load	25,62	32,97	2,27	2,19	2,15	2,12
	Short Load	25,62	32,97	1,54	2,19	2,15	2,13

Maximum inrush current for ECG in AC Operation

$I_{peak} = 27 \text{ A}$
 $T_H = 193 \mu\text{s}$

**Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED**

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description:
	Luminaire: EVG: OTi DALI 35 220-240 700 LT2 L
	LED:
Project / Place / Project ID:	Specified by:
	Name: Daniel Graser
	Company: OSRAM GmbH
	Date: 05.08.2016

	Features	Techn. data / INOTEC requirements	Explanation	Fullfilled (Yes / No)
1	Voltage range AC	230V ± 10%	Voltage range in normal mains operation	Yes
2	Voltage range DC	186V - 260V	Possible voltage range in emergency operation	Yes
3	Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	Yes
4	Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	Yes
5	Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	Yes
6	Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7	Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8	Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	Yes
9	Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	Yes
10	Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	Yes
11	Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	Yes
12	Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	Yes
13	Control gear complies with the DALI-standards:	DIN EN 62386-101 / -102 / -207 *1	Control gear must have the DALI Logo	Yes

Note: VDE 0108 is not a standard for ECG, marking is not applicable

**Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED**



Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire:
	EVG: OTi DALI 35 220-240 700 LT2 L
Project / Place / Project ID:	LED:
	Specified by: Name: Daniel Graser
	Company: OSRAM GmbH
	Date: 05.08.2016

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC-operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	191 mA
15 Nominal current of the control gear with connected illuminant in DC-operation (216V)		Selection guide for the calculation of the necessary battery capacity	44 mA
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	15 %
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	Yes
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit (*2)	32 A / µs

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)

*1: Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.

*2: For calculation the inrush current of the monitoring module must be considered!

Notes:


***) The light output level is blocked in DC Operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC operation. For this the Tuner4Tronic and Dali magic is needed.

For the correctness:

Gardung, 12.8.16
Place, Date

Signature

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description:
	Luminaire: EVG: OSRAM OTi DALI 50/220-240/1A4 LT2 L
	LED:
Project / Place / Project ID:	Specified by:
	Name: Lucie Sniegon
	Company: OSRAM GmbH
	Date: 05.04.2016

Features	Techn. data / INOTEC requirements	Explanation	Fullfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	Yes
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	Yes
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	Yes
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	Yes
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	Yes
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	Not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	Not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	Yes
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED Modules	Yes
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	Yes
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	Yes
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	Yes
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207 *1	Control gear must have the DALI Logo	Yes

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description:
	Luminaire: EVG: OSRAM OTI DALI 50/220-240/1A4 LT2 L LED:
Project / Place / Project ID:	Specified by:
	Name: L.Sniegon Company: OSRAM GmbH
	Date: 05.04.2016

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC-operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See table 1
15 Nominal current of the control gear with connected illuminant in DC-operation (216V)		Selection guide for the calculation of the necessary battery capacity	See table 1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	blocked dim level
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	Yes
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit (*2)	24A / 190 µs

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)


*1: Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 / -102, so the DALI driver must sign with the DALI logo.

*2: For calculation the inrush current of the monitoring module must be considered!

Notes:

For the correctness:


Garding, 7.4.2016
Place, Date


Signature

ECG type	Lamp type	I_N in AC-operation	I_N in DC-operation
OTi DALI 50/220-240/1A4 LT2 L	Maximum load Minimum load [Iout 600mA]	164mA 83mA (240V)	154mA 71mA (240V)
	Maximum load Minimum load [Iout 1400mA]	262mA 158mA (240V)	252mA 147mA (240V)

Table 1

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description:
	Luminaire: EVG: OSRAM OTi DALI 80/220-240/2A1 LT2 L
	LED:
Project / Place / Project ID:	Specified by:
	Name: Lucie Sniegon
	Company: OSRAM GmbH
	Date: 05.04.2016

Features	Techn. data / INOTEC requirements	Explanation	Fulfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	Yes
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	Yes
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	Yes
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	Yes
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	Yes
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	Not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	Not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	Yes
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED Modules	Yes
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	Yes
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	Yes
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	Yes
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207 *1	Control gear must have the DALI Logo	Yes

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description:
	Luminaire:
	EVG: OSRAM OTI DALI 80/220-240/2A1 LT2 L
Project / Place / Project ID:	LED:
	Specified by:
	Name: L.Sniegon
	Company: OSRAM GmbH
	Date: 05.04.2016

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC-operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See table 1
15 Nominal current of the control gear with connected illuminant in DC-operation (216V)		Selection guide for the calculation of the necessary battery capacity	See table 1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	blocked dim level
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	Yes
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit (*2)	53 A / 200 µs

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)

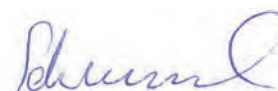
*1: Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101/-102, so the DALI driver must sign with the DALI logo.

*2: For calculation the inrush current of the monitoring module must be considered!

Notes:

For the correctness:

Garching, 3.4.2016
Place, Date



Signature

ECG type	Lamp type	I_N in AC-operation	I_N in DC-operation
OTi DALI 80/220-240/2A1 LT2 L	Maximum load Minimum load [Iout 1000mA]	261mA 119mA (240V)	248mA 105mA (240V)
	Maximum load Minimum load [Iout 2100mA]	393mA 225mA (240V)	381mA 214mA (240V)

Table 1

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 35/220-240/400 D LT2 UF L(ident code: AB47614) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 18.01.2017

Features	Techn. data / INOTEC requirements	Explanation	Fulfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	YES
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	YES
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	YES
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	YES
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	YES
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	YES
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	YES
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	YES
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	YES
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207 *1	Control gear must have the DALI Logo	YES

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED



Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 35/220-240/400 D LT2 UF L(ident code: AB47614)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 18.01.2017

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See Table1
15 Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	**) locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	**) 15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit (*2)	17A / 126 µs

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)

*1: Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.

*2: For calculation the inrush current of the monitoring module must be considered!

Notes:

**) The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:

Munich, 18.01.2017

Place, Date

DS D SST
Dr. Kay Schmidtman
Signature
DS QM LAB&SQM
Bernhard Scherfmeier

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: Oti DALI 35/220-240/400 D LT2 UF L	OSRAM
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LED controller type	Values for load range	I _n in AC-operation (230V) / mA (trms)	I _n in AC-operation (240V) / mA (trms)	I _n in DC-operation (186V) / mA (trms)	I _n in DC-operation (216V) / mA (trms)	I _n in DC-operation (240V) / mA (trms)	I _n in DC-operation (280V) / mA (trms)
Oti DALI 35/220-240/400 D LT2 UF L	U _{min} , I _{min}	63,86	65,23	34,21	29,82	26,47	24,38
	U _{min} , I _{max}	125,95	118,29	137,60	118,11	105,70	97,17
	U _{max} , I _{min}	110,58	98,29	99,78	90,74	76,61	85,52
	U _{max} , I _{max}	200,91	175,38	207,19	181,40	162,67	149,51
	Open Load	32,01	40,26	5,56	5,89	3,75	6,45
	Short Load	32,08	40,36	3,75	5,84	6,23	6,23

Maximum inrush current for ECG in AC Operation

I_{peak}= 17 A
TH= 126 µs

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 75/220-240/700 D LT2 UF L(ident code: AB47615)
	LED:
Project / Place / Project ID:	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 18.01.2017

Features	Techn. data / INOTEC requirements	Explanation	Fulfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	YES
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	YES
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	YES
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	YES
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	YES
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	YES
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	YES
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	YES
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	YES
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207 *1	Control gear must have the DALI Logo	YES

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 75/220-240/700 D LT2 UF L(ident code: AB47615)
	LED:
Project / Place / Project ID:	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 18.01.2017

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See Table1
15 Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	**) locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	**) 15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit (*2)	18A / 171 µs

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)

*1: Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.

*2: For calculation the inrush current of the monitoring module must be considered!

Notes:

**) The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:

Munich, 18.01.2017

Place, Date

DS D SST
Dr. Kay Schmidtman
Signature

DS QM LAB & SQM
Bernhard Schemmel

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: Oti DALI 75/220-240/700 D LT2 UF L	OSRAM
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LED controller type	Values for load range	I_{in} in AC-operation (230V) / mA (trms)	I_{in} in AC-operation (240V) / mA (trms)	I_{in} in DC-operation (186V) / mA (trms)	I_{in} in DC-operation (216V) / mA (trms)	I_{in} in DC-operation (240V) / mA (trms)	I_{in} in DC-operation (260V) / mA (trms)
Oti DALI 75/220-240/700 D LT2 UF L	Umin, Imin	66,73	65,76	16,84	13,50	11,59	10,49
	Umin, Imax	203,67	181,69	38,73	34,78	31,12	27,09
	Umax, Imin	176,01	159,91	41,44	37,01	33,18	28,99
	Umax, Imax	360,35	346,15	78,50	67,47	61,90	57,25
	Open Load	31,69	39,83	5,16	5,44	5,74	5,96
	Short Load	31,32	39,86	5,16	5,47	5,75	6,05

Maximum inrush current for ECG in AC Operation

I_{peak} - 18 A
 T_H - 171 μ s

Technical requirements for dimmable DALI control gears for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: ---
	EVG: OTi DALI 15/220-240/1A0 LT2
	LED: ---
Project / Place / Project ID:	Specified by:
	Name: Buenyamin Ocak
	Company: OSRAM GmbH
	Date: 2016-02-29

Features	Techn. data / INOTEC requirements	Explanation	Fulfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	Yes
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	Yes
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	Yes
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	Yes
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	Yes
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	Yes
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	Yes
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	Yes
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	Yes
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	Yes
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207 *1	Control gear must have the DALI Logo	Yes

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: ---
	EVG: OTi DALI 15/220-240/1A0 LT2
Project / Place / Project ID:	LED: ---
	Specified by:
	Name: Buenyamin Ocak
	Company: OSRAM GmbH
	Date: 2016-02-29

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC-operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	117,88 mA
15 Nominal current of the control gear with connected illuminant in DC-operation (216V)		Selection guide for the calculation of the necessary battery capacity	48,12 mA
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	15 *) %
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	Yes
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit (*2)	5A / 45µs A / µs

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)

*1: Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.

*2: For calculation the inrush current of the monitoring module must be considered!

Notes:

*) The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation. For this the software DALI magic is needed.

For the correctness:

2016-02-29


Place, Date



Signature

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 25/220-240/700 LT2 (ident code: AB42877)
	LED:
Project / Place / Project ID:	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 21.03.2017

Features	Techn. data / INOTEC requirements	Explanation	Fullfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	YES
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	YES
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	YES
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	YES
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	YES
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (ind. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	YES
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	YES
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	YES
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	(*3)YES
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207	Control gear must have the DALI Logo(*1)	YES

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED



Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire:
	EVG: Oti DALI 25/220-240/700 LT2 (ident code: AB42877)
Project / Place / Project ID:	LED:
	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 21.03.2017

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC-operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See Table 1
15 Nominal current of the control gear with connected illuminant in DC-operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table 1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	*4) locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	*4) 15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit (*2)	10,2A / 38 µs

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)

Notes:

- *1: Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.
- *2: For calculation the inrush current of the monitoring module must be considered!
- *3: Not to be used in high risk areas, special release required
- *4: The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:

Munich, 21.03.2017


Place, Date

DS D SST
Dr. Kay Schmidt
Signature

DS QM LAB&SQM
Bernhard Schemmel

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: Oti DALI 25/220-240/700 LT2	
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LED controller type	Values for load range	I _n in AC-operation (230V) / mA (trms)	I _n in AC-operation (240V) / mA (trms)	I _n in DC-operation (186V) / mA (trms)	I _n in DC-operation (216V) / mA (trms)	I _n in DC-operation (240V) / mA (trms)	I _n in DC-operation (260V) / mA (trms)
Oti DALI 25/220-240/700 LT2	U _{min} , I _{min}	53,57	55,04	9,15	9,68	9,54	9,20
	U _{min} , I _{max}	65,49	69,47	13,29	11,88	12,00	12,04
	U _{max} , I _{min}	65,40	66,14	13,82	12,16	12,17	12,22
	U _{max} , I _{max}	133,81	130,29	36,14	31,83	29,23	27,51
	Open Load	34,54	42,92	11,08	10,97	10,85	10,81
	Short Load	34,51	42,90	11,05	10,96	10,83	10,77

Maximum inrush current for ECG in AC Operation

I_{peak}= 10,2 A
TH= 38 μs

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 35/220-240/1A0 LT2 (ident code: AB42876)
	LED:
Project / Place / Project ID:	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 21.03.2017

Features	Techn. data / INOTEC requirements	Explanation	Fulfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	YES
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	YES
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	YES
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	YES
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	YES
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (ind. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	YES
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	YES
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	YES
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	(*3)YES
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207	Control gear must have the DALI Logo(*1)	YES

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 35/220-240/1A0 LT2 (ident code: AB42876)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 21.03.2017

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC-operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See Table 1
15 Nominal current of the control gear with connected illuminant in DC-operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table 1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	*4) locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	*4) 15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit (*2)	10,4A / 54 µs
Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)			

Notes:

- *1: Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.
- *2: For calculation the inrush current of the monitoring module must be considered!
- *3: Not to be used in high risk areas, special release required
- *4: The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:

Munich, 07.03.2017

Place, Date

DS D SST
Dr. Kay Schmidtmann
Signature

DS QM LAB&SQM
Reinhard Gohennig

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: Oti DALI 35/220-240/1A0 LT2	OSRAM
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LED controller type	Values for load range	I _n in AC-operation (230V) / mA (trms)	I _n in AC-operation (240V) / mA (trms)	I _n in DC-operation (186V) / mA (trms)	I _n in DC-operation (216V) / mA (trms)	I _n in DC-operation (240V) / mA (trms)	I _n in DC-operation (260V) / mA (trms)
Oti DALI 35/220-240/1A0 LT2	U _{min} , I _{min}	59,70	61,05	11,08	11,09	10,61	10,22
	U _{min} , I _{max}	98,09	91,20	20,96	18,14	16,25	15,74
	U _{max} , I _{min}	98,44	95,94	21,91	19,04	17,14	16,14
	U _{max} , I _{max}	149,22	145,12	52,19	45,62	41,55	38,86
	Open Load	34,00	42,24	10,93	10,78	10,66	10,59
	Short Load	34,00	42,24	10,86	10,77	10,66	10,59

Maximum inrush current for ECG in AC Operation

I_{peak}= 10,4 A
TH= 54 μs

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG: Oti DALI 50/220-240/1A4 LT2 FAN L(ident code: AB42878)
	LED:
Project / Place / Project ID:	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 07.03.2017

Features	Techn. data / INOTEC requirements	Explanation	Fulfilled (Yes / No)
1 Voltage range AC	230V ± 10%	Voltage range in normal mains operation	YES
2 Voltage range DC	186V - 260V	Possible voltage range in emergency operation	YES
3 Control gear suitable for "Joker-Voltage" ?	B2-rectification of the AC voltage (without smoothing)	Pulsating DC voltage 	YES
4 Control gear compatible with change-over time of the system?	Change-over time: 150 - 1000ms	Typical change-over time of INOTEC systems between mains- and battery operation	YES
5 Starting behavior of the control gear in DC operation	Stable current consumption within 1,6s	Necessary for individual lamp monitoring (SV)	YES
6 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 60929	AC and/or DC-supplied electronic control gear for tubular fluorescent lamps - Performance requirements	not relevant
7 Control gear complies with the standard: (only for fluorescent lamps)	DIN EN 61347-2-3 (incl. Attachment J)	Particular requirements for AC and/or DC supplied electronic control gear for fluorescent lamps	not relevant
8 Control gear complies with the standard: (only for LED)	DIN EN 62384	DC or AC supplied electronic control gear for LED modules - Performance requirements	YES
9 Control gear complies with the standard: (only for LED)	DIN EN 61347-2-13	Lamp control gear - Part 2-13: Particular requirements for DC or AC supplied electronic control gear for LED modules	YES
10 Control gear complies with the standard:	DIN EN 55015 (Measurement on AC and DC)	Limits and methods of measurement of radio interference	YES
11 Control gear complies with the standard:	DIN EN 61000-3-2	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	YES
12 Control gear complies with the standard:	DIN EN 61547	Equipment for general lighting purposes — EMC immunity requirements	(*3)YES
13 Control gear complies with the DALI-standards:	DIN EN 62386-101 /-102 / -207	Control gear must have the DALI Logo(*1)	YES

Note: VDE 0108 is not a standard for ECG, marking is not applicable

Technical requirements for dimmable DALI control gears
for fluorescent lamps and LED

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 Munich	Type / Description:
	Luminaire: EVG EVG: Oti DALI 50/220-240/1A4 LT2 FAN L(Ident code: AB42878)
	LED:
Project / Place / Project ID:	Specified by:
	Name: D. Graser
	Company: OSRAM GmbH
	Date: 07.03.2017

Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
14 Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminaires per circuit	See Table1
15 Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See Table1
16 Behavior control gear in DC operation: - Unlocked light output level - Locked light output level (Dimming on DC)	The DC-light output settings on the DALI-SV-Module is only active if control gear is unlocked	In case of locked DC light output level, the DC level of the DALI-SV-Module is not active!	*4) locked
17 Light output level in DC operation with locked light output level (Dimming on DC)	No control of light output level from DALI-SV-Module in DC operation possible	Locked light output level in %. Important for lighting design.	*4) 15%
18 Using the DALI command 146 (Query Lamp Failure) acc. IEC 62386 Part 102	According to IEC 62386 Part 102	Important for function test: To detect a lamp failure, the DALI-SV-Module send the DALI command query 146 to the DALI driver Attention: The query is made after 2 / 2,5 / 3 seconds	YES
19 Max. inrush current of the control gear with connected illuminant in AC operation (230V)	Max. permitted inrush current per circuit: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit (*2)	20A / 194 µs

Luminaires, which should work as emergency lighting, have to be in accordance with DIN EN 60598-2-22. (Particular requirements - Luminaires for emergency lighting)

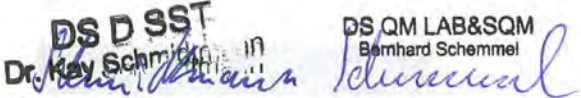
Notes:

- *1: Control of DALI-SV-Module to the DALI driver is 100% done via DALI-commands according to IEC 62386-101 /-102, so the DALI driver must sign with the DALI logo.
- *2: For calculation the inrush current of the monitoring module must be considered!
- *3: Not to be used in high risk areas, special release required
- *4: The light input level is locked in DC-operation. Factory setting is 15% of the maximum level. It is possible to change the behavior of the controlgear in DC-operation.

For the correctness:


Munich, 07.03.2017

Place, Date



Signature

Table1:

Manufacturer: OSRAM GmbH Marcel-Brauer Str. 6 D-80807 München	Product: Oti DALI 50/220-240/1A4 LT2 FAN	
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LED controller type	Values for load range	I _i in AC-operation (230V) / mA (trms)	I _i in AC-operation (240V) / mA (trms)	I _i in DC-operation (186V) / mA (trms)	I _i in DC-operation (216V) / mA (trms)	I _i in DC-operation (240V) / mA (trms)	I _i in DC-operation (260V) / mA (trms)
Oti DALI 50/220-240/1A4 LT2 FAN	U _{min} , I _{min}	97,43	96,10	19,11	16,57	15,28	14,24
	U _{min} , I _{max}	136,96	125,50	26,81	23,13	21,28	20,14
	U _{max} , I _{min}	212,14	204,29	40,38	35,03	31,89	29,97
	U _{max} , I _{max}	273,06	262,16	65,27	56,14	50,84	47,37
	Open Load	57,57	59,78	47,88	45,19	42,94	40,98
	Short Load	57,62	59,80	47,89	45,20	42,95	40,99

Maximum inrush current for ECG in AC Operation

I_{peak}= 20 A
T_H= 194 μs