Light is OSRAM

INOTEC – Conformity certificate with central battery systems

1. OT FIT SELV
   - 1.1 OT FIT 35/220-240/700 CS L
   - 1.2 OT FIT 50/220-240/ 1A0 CS L
   - 1.3 OT FIT 80/220-240/ 1A6 CS L
   - 1.4 OT FIT 35/220-240/700 CS L (G2)
   - 1.5 OT FIT 55/220-240/1A0 CS L (G2)
   - 1.6 OT FIT 75/220-240/1A4 CS L (G2)

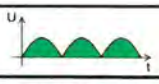
2. OT FIT non-isolated
   - 2.1 OT FIT 35/220-240/350 D LT2 L
   - 2.2 OT FIT 120/220-240/750 D LT2 L
   - 2.3 OT FIT 30/220-240/125 D L
   - 2.4 OT FIT 50/220-240/250 D L
   - 2.5 OT FIT 50/220-240/ 350 D L

3. OT FIT Compact SELV
   - 3.1 OT FIT 15/220-240/350 CS
   - 3.2 OT FIT 25/220-240 500 CS
   - 3.3 OT FIT 35/220-240 700 CS
   - 3.4 OT FIT 50/220-240/ 1A0 CS

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 35/220-240/ 700 CS L LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 26.10.2016

	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 3s	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
/	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire: EVG: OT FIT 35/220-240/ 700 CS L LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 26.10.2016

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	100%
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	20 A / 150 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

For the correctness:

Garching, 27.10.2016

Place, Date

DS D SST
Dr. Kay Schmidtmann

DS QM LAB&SQM
Bernhard Schemmel

Signature

Table 1:

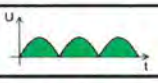
LED controller type	Values for load range	IN in AC-operation (240V) / mA (trms)	IN in DC-operation (240V)/ mA (trms)
OTi FIT 35 220-240 700 CS L	Maximum Uout= 54V	193,96	187,37
	Iout= 700mA		
	Minimum Uout= 27V	103,50	71,49
	Iout= 500mA		
	No Load	71,86	11,43

Maximum inrush current for ECG in AC Operation : 20A; TH=150µs

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 50/220-240/ 1A0 CS L LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 26.10.2016

	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 3s	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
/	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire:
	EVG: OT FIT 50/220-240/ 1A0 CS L
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 26.10.2016

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	100%
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	20 A / 150 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

For the correctness:

Garching, 27.10.2016

Place, Date

DS D SST
Dr. Kay Schmidtmann
DS QM LAB&SQM
Bernhard Schemmel

Signature

Table 1:

Manufacturer:	Product	
OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	**Ot FIT 50/220-240/1A0 CS L**	OSRAM

LED controller type	Values for load range	IN in AC-operation (240V) / mA (trms)	IN in DC-operation (240V)/ mA (trms)
Ot FIT 50/220-240/1A0 CS L	Maximum Load /mA Uout= 54V	276,68	264,32
	Iout= 1050mA		
	Minimum Load /mA Uout= 27V	140,44	116,16
	Iout= 800mA		
	No Load	78,87	17,96

Maximum inrush current for ECG in AC Operation : 20A; TH=150µs

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 80/220-240/ 1A6 CS L LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 26.10.2016

	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 3s	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
/	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 80/220-240/ 1A6 CS L LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 26.10.2016

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	100%
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	32 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

For the correctness:

Freiburg, 27.10.2016

Place, Date

DS D SST
Dr. Kay Schmidtmann

DS QM LAB&SQM
Bernhard Schemmel

Signature

Table 1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: **Ot FIT 80/220-240/1A6 CS L**	OSRAM

LED controller type	Values for load range		IN in AC-operation (240V) / mA (trms)	IN in DC-operation (240V)/ mA (trms)
Ot FIT 80/220-240/1A6 CS L	Maximum Load /mA	Uout= 54V	404,75	400,33
		Iout= 1550mA		
	Minimum Load /mA	Uout= 27V	166,74	156,31
		Iout= 1200mA		
	No Load		58,27	22,99

Maximum inrush current for ECG in AC Operation : 32A; TH=200µs

Note: I_{OUT} is not reduced when ECG is DC operated. I_{OUT} is limited to 820 mA in case of Ta < T <= 70°C

Note: 100 percent @ Ta = 25°C and more than 50 percent when operated 1 hour @ T = 70°C

Information in this document is subject to change without notice

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH **Marcel-Breuer-Str. 6** **D-80807 München**	Luminaire: EVG: OT FIT 35/220-240 700 CS L EL (ident code: AM04351) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 30.06.2017

	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 3s	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**
/	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	**(*2)Yes**

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH **Marcel-Breuer-Str. 6** **D-80807 München**	Luminaire: EVG: OT FIT 35/220-240 700 CS L EL (ident code: AM04351) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 30.06.2017

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	**100%**
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V)	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1 **(*1)**
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	**Ipeak=25A TH=200 µs (*3)**

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): The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

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

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

Notes:

For the correctness:

Jandelsbrunn, 13.02.2017

Place, Date

DS D/SST Dr. Kay Schmidtmann

DS QM LAB&SQM Bernhard Schemmel

Signature

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: **OT FIT 35 220-240 700 CS L EL**	OSRAM

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)
OT FIT 35 220-240 700 CS L EL	Maximum Load /m Uout= 54V Iout= 1050mA	192,90	185,04	229,85	195,02	174,65	159,82
	Minimum Load /m Uout= 27V Iout= 800mA		83,54			70,45	
	No Load		29,06	0,62		0,62	0,67
	Short Load		29,06	0,46		0,62	0,67

Maximum inrush current for ECG in AC Operation: I_{peak}=25A T_H=200µs

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 55/220-240 1A0 CS L EL (ident code: AM04352) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 30.06.2017

	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 3s	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**
/	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	**(*2)Yes**

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: **OSRAM GmbH** **Marcel-Breuer-Str. 6** **D-80807 München**	Type / Description: Luminaire:
	EVG: OT FIT 55/220-240 1A0 CS L EL (ident code: AM04352)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 30.06.2017

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	**100%**
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V)	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1 **(*1)**
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	**Ipeak=25A TH=200 µs (*3)**
	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): The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

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

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

Notes:

For the correctness:

Penzberg, 13.07.2017

Place, Date

DS D SST
Dr. Kay Schmidtmann
DS OML AE&SQM
Bernhard Schemmel

Signature

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: **OT FIT 55 220-240 1A0 CS L EL**	OSRAM

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)
OT FIT 55 220-240 1A0 CS L EL	Maximum Load /m	Uout= 54V Iout= 1050mA	283,66	272,90	335,56	291,36	264,65	244,26
	Minimum Load /m.	Uout= 27V Iout= 800mA		124,48			110,91	
	No Load			40,96	0,09		0,09	0,24
	Short Load			41,10	0,08		0,10	0,24

Maximum inrush current for ECG in AC Operation: I_{peak}=25A T_H=200µs

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 75/220-240 1A4 CS L EL (ident code: AM04353) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 29.06.2017

	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 3s	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**
/	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	**(*2)Yes**

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 75/220-240 1A4 CS L EL (ident code: AM04353) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 29.06.2017

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	100%
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V)	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1 (*1)
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	Ipeak=32A TH=193 µs (*3)
	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): The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

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

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

Notes:

For the correctness:

Garching, 13.07.2017
Place, Date

DS D SST Dr. Kay Schmidtmann
DS QM LAB&SCM Bernhard Schemmel
Signature

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Table1:

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: **OT FIT 75/220-240 1A4 CS L EL**	OSRAM

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)
OT FIT 75/220-240 1A4 CS L EL	Maximum Load /m Uout/V= 51 Iout/mA= 1400	356,73	342,36	442,27	377,61	338,89	310,73
	Minimum Load /m. Uout/V= 27 Iout/mA= 1100		168,14			161,16	
	No Load		50,75	21,22		21,22	19,31
	Short Load		50,63	27,82		21,11	19,21

Maximum inrush current for ECG in AC Operation: I_{peak}= 32A T_H= 193µs

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 35/220-240/ 350 D LT2 L (ident code: AM02960) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 09.01.2017

	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 3s	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
/	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire: EVG: OT FIT 35/220-240/ 350 D LT2 L (ident code: AM02960) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 09.01.2017

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See attachment converter list
14	Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See attachment converter list
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See attachment converter list See attachment converter list
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design *	100%
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See attachment converter list
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	Ipeak=13A TH=93 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

For the correctness:

Lüdenscheid, 23.01.2017
Place, Date

DS D/SST
Dr. Kay Schmidtmann
Signature

DS QM LAB&SQM
Bernhard Schemmel

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Table1:

Manufacturer:	Product:	OSRAM
OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	**OT FIT 35/220-240/350 D LT2 L**	

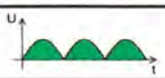
LED controller type	Values for load range			I_N in AC-operation (230V) / mA (trms)	I_N in AC-operation (240V) / mA (trms)	I_N in DC-operation (186V) / mA (trms)	I_N in DC-operation (216V) / mA (trms)	I_N in DC-operation (240V) / mA (trms)	I_N in DC-operation (260V) / mA (trms)
OT FIT 35/220-240/350 D LT2 L	Maximum Load /mA	Uout=	216V 350mA	161,37	155,97	189,74	162,85	0,27	135,80
		Iout=							
	Minimum Load /mA	Uout=	54V 75mA		48,03			23,29	
		Iout=							
	No Load				28,68	0,38		0,38	0,55

Maximum inrush current for ECG in AC Operation: I_{peak}=13A T_H=93µs

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 120/220-240/ 750 D LT2 L (ident code: AM05489) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 02.05.2017

	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 3s	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
/	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	(*2)Yes

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 120/220-240/ 750 D LT2 L (ident code: AM05489) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 02.05.2017

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See attachment Table 1
14	Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See attachment Table 1
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See attachment Table 1 See attachment Table 1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	100%
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See attachment Table 1
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	Ipeak=15,6A TH=35 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

*2: Not to be used in high risk areas, special release required

Notes:

For the correctness:

Garching, 16.05.2017

Place, Date

DS D SST
Dr. Kay Schmidtmann

DS QM LAB&SQM
Bernhard Schemmel

Signature

Table1:

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)
OT FIT 120 220-240 750 D LT2 L	Maximum Load /mA Uout/V= 216	593.59	568.03	734.46	627.62	563.55	518.65
	Iout/mA= 750						
	Minimum Load /mA Uout/V= 54		93.65			72.68	
	Iout/mA= 250						
	No Load		36.42	0.30		0.30	0.33
	Short Load		54.76	29.41		21.70	18.96

Maximum inrush current for ECG in AC Operation: I_{peak}= 15,6A T_H= 35µs

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire:
	EVG: OT FIT 30/220-240/125 D L (Ident Code: AA73165)
	LED:
Project / Place / Project ID:	Specified by: Name: Daniel Graser
	Company: Osram GmbH
	Date: 29.09.2016

	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 3s	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire:
	EVG: OT FIT 30/220-240/125 D L (Ident Code: AA 73165)
	LED:
Project / Place / Project ID:	Specified by: Name: Daniel Graser
	Company: Osram GmbH
	Date:28.10.2016

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	100 %
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	I_{pk}=20A T_{HW}=100µs
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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

For the correctness:

Jaroslau, 07.11.2016
Place, Date

DS D SST
Dr. Kay Schmidtmann
Signature

DS QM LAB&SQM
Bernhard Schemmel

Table1:

Manufacturer:	Product:	
OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	**OT FIT 30 220-240 125 D L**	OSRAM

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)
OT FIT 30 220-240 125 D L	Maximum Load /m Uout= 216V		133,64			126,60	
	Iout= 125mA						
	Minimum Load /m Uout= 54V	56,75	57,22	43,17	37,74	34,63	32,51
	Iout= 125mA						
	No Load		26,50	3,51		1,88	1,90

Maximum inrush current for ECG in AC Operation : 20A; TH=100µs

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 50 220-240 250 D L LED:
Project / Place / Project ID:	Specified by: Name: Daniel Graser Company: OSRAM GmbH Date: 12.08.2016

	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 3s**	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire: EVG: OT FIT 50 220-240 250 D L LED:
Project / Place / Project ID: sdv	Specified by: Name: Daniel Graser Company: OSRAM GmbH Date: 12.08.2016

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in **AC- operation (230V)**		Selection guide for the calculation of the max. number of luminairs per circuit	265 mA
14	Nominal current of the control gear with connected illuminant in **DC- operation (216V)**		Selection guide for the calculation of the necessary battery capacity	287 mA
15	Nominal current of the control gear with connected illuminant in **DC- operation (186V und 260V) and pre-set luminous flux**	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	321 mA (186V) 233 mA (260V)
16	Luminous flux in DC- operation **(186V)**		Important for the safety lighting design	100 %
17	Standby current of the control gear with no illuminant connected or with defective illuminant in **DC-operation (186V and 260V) *1**	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	27.6 mA (186V) 25 mA (260V)
18	Max. inrush current of the control gear with connected lamp in **AC operation (230V)**	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	20 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

**) Messurement with universal LED Load

For the correctness:

Garching, 12.8.16
Place, Date

Schmuck
Signature

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

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Product:	
OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	**OTi FIT 50 220-240 250 D L**	OSRAM

LED controller type	Values for load range	IN in AC-operation (240V)	IN in DC-operation (240V)
OTi FIT 50 220-240 250 D L	Maximum Load /mA Minimum Load /mA [Iout= 250 mA]	253,18 169,92	252,31 160,36
OTi DALI 35 220-240 700 LT2 L	No Load /mA	43,19	27,33

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 50/220-240/ 350 D L LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 28.10.2016

	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 3s	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
/	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire:
	EVG: OT FIT 50/220-240/ 350 D L
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 28.10.2016

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	100%
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	20 A / 100 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

For the correctness:

Jandelsbrunn, 28.10.2016
Place, Date

Dr. Schmidtmann
DS QM LAB&SQM Bernhard Schemmel
Signature

Table 1:

Manufacturer:	Product:	
OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	**OT FIT 50 220-240 350 D L**	OSRAM

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)
OT FIT 50 220-240 350 D L	Maximum Load /m Uout= 150V		242,54			239,07	
	Iout= 350mA						
	Minimum Load /m Uout= 54V	106,90	104,37	113,25	97,91	88,87	82,66
	Iout= 350mA						
	No Load		36,09	1,83		1,90	1,91

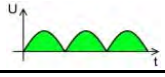
Maximum inrush current for ECG in AC Operation : 20A; TH=100µs

Note: IOUT is not reduced when ECG is DC operated.
Note: POUT is 100 percent @ Ta = 25°C and more than 50 percent when operated 1 hour @ T = 70°C
Information in this document is subject to change without notice

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire:
	EVG: OT FIT 15/220-240/ 350 CS
	LED:
Project / Place / Project ID:	Specified by:
	Name: Buenyamin Ocak
	Company: OSRAM GmbH
	Date: 24.02.2016

	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 3s	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 15/220-240/ 350 CS LED:
Project / Place / Project ID:	Specified by: Name: Buenyamin Ocak Company: OSRAM GmbH Date: 2016-02-25

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See attachment converter list
14	Nominal current of the control gear with connected illuminant in DC- operation (216V)		Selection guide for the calculation of the necessary battery capacity	See attachment converter list
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See attachment converter list See attachment converter list
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	>50 %
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See attachment converter list
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	15 A / 275 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

Iout is not reduced when ECG is DC operated. Iout is limited to 250 mA in case of Ta < T <= 70°C. 100 percent @Ta =25°C and more than 50 percent when operated 1 hour @ T=70°C. The powerfactor is << 0.9 if ECG has no load. The AC current is different from DC current then. Information in this document is subject to change without notice.

For the correctness:

Munich, 2016-02-25

Place, Date

Signature

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

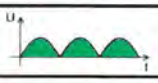
Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	OT FIT 15/220-240/350 CS	OSRAM

LED controlgear type	Values for load range	I_N in AC-operation (230 V)	I_N in DC-operation (216 V)	I_N in DC-operation (186 V and 260 V)	$I_{NO\ LOAD}$ in DC-operation (186 V and 260 V)
OT FIT 15/220-240/350 CS	Maximum load Minimum load [Iout 250 mA]	82,02 mA 56,68 mA	80,83 mA 50,68 mA	92,27 mA [186V] and 69,18 mA [260V] 56,91 mA[186V] and 44,11 mA [260V]	15,52 mA [186V] 13,74 mA [260V]
OT FIT 15/220-240/350 CS	Maximum load Minimum load [Iout 300 mA]	95,84 mA 61,28 mA	96,53 mA 56,43 mA	110,72 mA [186V] and 81,9 mA [260V] 63,62 mA [186V] and 48,96 mA [260V]	18,63 mA [186V] 14,98 mA [260V]
OT FIT 15/220-240/350 CS	Maximum load Minimum load [Iout 350 mA]	112,43 mA 69,1 mA	114,78 mA 65,87 mA	131,93 mA [186V] and 96,88 mA [260V] 74,59 mA [186V] and 56,75 mA [260V]	20,37 mA [186V] 16,55 mA [260V]

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire: EVG: OT FIT 25 220-240 500 CS LED:
Project / Place / Project ID:	Specified by: Name: Daniel Graser Company: OSRAM GmbH Date: 01.09.2016

	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 3s**	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire: EVG: OT FIT 25 220-240 500 CS LED:
Project / Place / Project ID: sdv	Specified by: Name: Daniel Graser Company: OSRAM GmbH Date: 01.09.2016

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in **AC- operation (230V)**		Selection guide for the calculation of the max. number of luminairs per circuit	144 mA
14	Nominal current of the control gear with connected illuminant in **DC- operation (216V)**		Selection guide for the calculation of the necessary battery capacity	139 mA
15	Nominal current of the control gear with connected illuminant in **DC- operation (186V und 260V) and pre-set luminous flux**	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	137 mA (186V) 98 mA (260V)
16	Luminous flux in DC- operation **(186V)**		Important for the safety lighting design	100 %
17	Standby current of the control gear with no illuminant connected or with defective illuminant in **DC-operation (186V and 260V) *1**	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	33 mA (186V) 28 mA (260V)
18	Max. inrush current of the control gear with connected lamp in **AC operation (230V)**	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	15 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

**) Messurement with universal LED Load

For the correctness:

Garching, 02.09.2016
Place, Date

Signature

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

INOTEC Sicherheitstechnik GmbH

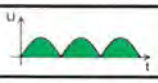
Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: **OT FIT 25 220-240 500 CS**	OSRAM

LED controller type	Values for load range	IN in AC-operation (240V)	IN in DC-operation (240V)
OT FIT 25 220-240 500 CS	Maximum Load /mA Minimum Load /mA [Iout= 500 mA]	144,09 72,41	138,83 61,67
OTi DALI 35 220-240 700 LT2 L	No Load /mA	43,76	29,78

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire:
	EVG: OT FIT 35/220-240/ 700 CS (Ident Code: AA58748)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 03.11.2016

	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 3s	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
/	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire:
	EVG: OT FIT 35/220-240/ 700 CS (Ident Code: AA58748)
	LED:
Project / Place / Project ID:	Specified by: Name: D. Graser
	Company: OSRAM GmbH
	Date: 03.11.2016

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	100%
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	**25 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

For the correctness:

Jandelsbrunn, 14.11.2016

Place, Date

DS D SST Dr. Kay Schmidtmann DS QM LAB&SQM Bernhard Schemmel

Signature

Manufacturer:	Product	
OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	**OT FIT 35 220-240 700 CS**	OSRAM

Table 1:

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)
OT FIT 35 220-240 700 CS	Maximum Load /mA	Uout= 54V		175,72			168,95	
		Iout= 700mA						
	Minimum Load /mA	Uout= 27V	94,93	92,81	103,57	88,80	79,90	73,47
		Iout= 550mA						
	No Load			46,14	21,24		17,44	15,59

Maximum inrush current for ECG in AC Operation: 25A, TH=200µs

Note: I_{OUT} is not reduced when ECG is DC operated. IOUT is limited to 400 mA (FIT 25) / 550 mA (FIT 35) in case of Ta < T <= 70°C
Note: 100 percent @ Ta = 25°C and more than 50 percent when operated 1 hour @ T = 70°C
Note: 100 percent @ Ta = 25°C and more than 50 percent when operated 1 hour @ T = 70°C
Information in this document is subject to change without notice

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

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	Product: **OTi FIT 35 220-240 700 CS**	OSRAM

LED controller type	Values for load range	IN in AC-operation (240V)	IN in DC-operation (240V)
OTi FIT 35 220-240 700 CS	Maximum Load /mA Minimum Load /mA [Iout= 700 mA]	188,62 169,27	182,65 162,58
OTi DALI 35 220-240 700 LT2 L	No Load /mA	71,43	45,44

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer:	Type / Description:
OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Luminaire: EVG: OT FIT 50/220-240/ 1A0 CS (identcode: AA67920) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 14.11.2016

	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 3s	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
/	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

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

Technical requirements for electronic control gears for LED- / fluorescent- luminaires for connection at INOTEC central battery systems

INOTEC Sicherheitstechnik GmbH

Manufacturer: OSRAM GmbH Marcel-Breuer-Str. 6 D-80807 München	Type / Description: Luminaire: EVG: OT FIT 50/220-240/ 1A0 CS (identcode: AA67920) LED:
Project / Place / Project ID:	Specified by: Name: D. Graser Company: OSRAM GmbH Date: 14.11.2016

	Features	Techn. data / INOTEC requirements	Explanation	Manufacturer information
13	Nominal current of the control gear with connected illuminant in AC- operation (230V)		Selection guide for the calculation of the max. number of luminairs per circuit	See Table1
14	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
15	Nominal current of the control gear with connected illuminant in DC- operation (186V und 260V) and pre-set luminous flux	J-SV-Modul/S (5-120W): > 20mA = OK J-SV-Modul.2/S (20-300W): > 70mA = OK J-SV-Modul.3/S (2-30W): > 12mA = OK J-SV-Modul.4/S (18-120W): > 70mA = OK J-SV-Modul.L/S (20-120W): > 20mA = OK J-SV-Modul T/S (20-100W): > 60mA = OK	Selection guide for determination of the monitoring module: The values are not to be undercut within the voltage range 186VDC - 260VDC to recognise a normal working lamp correctly.	See Table1 See Table1
16	Luminous flux in DC- operation (186V)		Important for the safety lighting design	100%
17	Standby current of the control gear with no illuminant connected or with defective illuminant in DC-operation (186V and 260V) *1	J-SV-Modul/S (5-120W): < 10mA = n.OK J-SV-Modul.2/S (20-300W): < 45mA = n.OK J-SV-Modul.3/S (2-30W): < 8mA = n.OK J-SV-Modul.4/S (18-120W): < 45mA = n.OK J-SV-Modul.L/S (20-120W): < 10mA = n.OK J-SV-Modul T/S (20-100W): < 50mA = n.OK	Selection guide for determination of the monitoring module: The values are not to be exceeded within the voltage range 186VDC - 260VDC to recognise a lamp failure correctly.	See Table1
18	Max. inrush current of the control gear with connected lamp in AC operation (230V)	Max. permitted inrush current per circuit / monitoring module: SK 4x2A: 250A / 500µs SK 2x4A: 250A / 500µs SK 2x3A: 250A / 500µs SK 1x6A: 250A / 500µs J-SV-Modul T/S: 40A / 500µs all other J-SV-modules: 80A / 500µs	Describes the max. inrush current of all ballasts in a circuit, to calculate the maximum contact rating of the circuit	25 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: The J-SV-monitoring modules monitor the current consumption on the primary side of the control gear for LED modules within the specified limits. Failures of individual LEDs (low-impedance) on the secondary side do not inevitably lead to a modification of current consumption on the primary side, and in such cases cannot be detected as a failure.

Notes:

For the correctness:

Freiburg, 14.11.2016

Place, Date

DS D SST Dr. Kay Schmidtmann

DS QM LAB&SQM Bernhard Schemmel

Signature

Table 1:

Manufacturer:	Product	
OSRAM GmbH Marcel-Breuer Str. 6 D-80807 München	**OT FIT 50 220-240 1A0 CS (identcode: AA67920)**	OSRAM

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)
OT FIT 50 220-240 1A0 CS (identcode: AA67920)	Maximum Load /mA Uout=	54V	251,18	247,51	320,77	274,47	0,25	226,27
	Iout=	1050mA						
	Minimum Load /mA Uout=	27V		119,60			109,38	
	Iout=	800mA						
	No Load			45,91	15,44		15,44	14,06

Maximum inrush current for ECG in AC Operation I_{peak}=25A T_H=200µs