

SORAA

Electrical compatibility – MR16-GU10 7.5W 230V lamps – International

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General compatibility guidelines

Scope

This document provides the basic guidelines regards electrical compatibility of SORAA 230V MR16 GU10 7.5W lamps and compatibility tables.

Dimmer Compatibility

SORAA 230V MR16 7.5W GU10 lamps are made to work with trailing edge (reverse phase) and leading edge (forward phase) phase cut dimmers. However, the use of leading edge dimmers is not recommended, as the lamps may emit a low level of audible noise when used with some leading edge dimmers. Testing with the intended dimmer is recommended to ensure acceptable audible levels at the application site.

Dimmer compatibility tables are on pages 3-7.

The percentages for each dimmer combination are the percentage of light output that we were able to dim down to without seeing any problems like flicker/shimmer. Anything 30% or above is considered not compatible and you will see a "NC" in a grey cell.

There might be a minimum wattage load on the dimmer. If this minimum load is not met, there might be compatibility issues.

--%	Dims to < 20% (of the measured light output)
--%	Dims to 20-30% (of the measured light output)
NC	Not compatible (or dims to >30%)
Blank cell	Not tested

Maximum number of lamps on a dimmer

The following need to be considered when determining the amount of lamps on a dimmer.

1. SORAA tests have been carried out with 1 lamp unless stated otherwise.
2. There is a repetitive, very brief current spike the LED lamp will see twice per cycle. This current spike has to be provided by the dimmer, and will affect the recommended lamp load on each dimmer.
3. Ultimately the dimmer manufacturer is the only one with authority to rate their product, but SORAA can give an Engineering estimate.
4. We recommend to use a 5.0 de-rating factor for halogen/incandescent dimmers loaded with our 230V lamps.

For example for a 500W dimmer it would mean $500/5 = 100W$ of LED, so an estimated maximum of 13 lamps 7.5W.

Disclaimer

Compatibility tests are conducted by Soraa only as guidance for the user.

All tests are conducted under bench conditions; results may differ from test results depending on conditions at the application site.

Results may vary due to variability in component choices and manufacturing processes by the transformer and dimmer manufacturers.

For more information on the dimmers, please find specs on the manufacturer's website.

SORAA GU10 230V 7.5W - DIMMER COMPATIBILITY - International

Dimmer Manufacturer	Dimmer Brand	Dimmer Model	Dimming mode	Dim (%)	Note
International					
AURORA		AU-DSP400X	L	18%	Please See Footnote
AURORA		AU-DSP651	L	12%	Please See Footnote
Berker		2830 10	L	1 Lamp: N C 2,3 Lamps: 0%	Please See Footnote
Berker		2861-10	T	NC	
Berker		286710	T	1,2 Lamps: 24% 3 Lamps: 20%	
Bticino		NT4411N	T	17%	
Busch		2247 U	L	8%	Please See Footnote
Busch		2250 U	L	1 Lamp: N C 2,3 Lamps: 6%	Please See Footnote
Busch		6513-102	T	NC	
Busch		6523 U102	L	4%	Please See Footnote
CABAC		HNS630DT	T	14%	(*)
Casambi		CBU-TED	T	1 Lamp 7% 2,3 lamps 3%	
Click		MD9042	L	21%	Please See Footnote
Clipsal		32E450UDM	T	NC	
Clipsal		32ELEDM	T	NC	
Clipsal		L5504D2U	Adaptive - T	NC	
DeltaDore	Tyxia	4840	T	1,2,3 lamps: 19-8%	
DeltaDore	Tyxia	4940	T	8%	
DIGINET		DGLCDM400	T	9%	

SORAA GU10 230V 7.5W - DIMMER COMPATIBILITY - International

Dimmer Manufacturer	Dimmer Brand	Dimmer Model	Dimming mode	Dim (%)	Note
International					
Electron		DMR.730	T	0%	
Electron		DMR.731	T	0%	
Elektromeleti		D46	L	NC	Please See Footnote
ELKO		315GLE PH	T	1 Lamp: N C 2,3 Lamps: 13%	
Eltako		EUD12NPN-UC	T	11%	
Eltako		EUD61NPN-UC	T	10%	
FELLER		3314.12.FMI.61	T	NC	
FELLER		40200.LED.FMI.61	T	NC	
FELLER		40300.RC	T	1 Lamp: N C 2,3 Lamps: 13%	
FELLER		40420.RLC	T	NC	
FELLER		40600.RL	L	13%	Please See Footnote
Fibaro	Dimmer 2	FGD-212	Adaptive T	18%	
GIRA		0307 00 102	T	1 Lamp: 23% 2,3 Lamps: 20%	
GIRA		2262 00 / I00	L	9%	Please See Footnote
GIRA	System 2000	2390 00	L	15%	Please See Footnote
Govena		ProLED225	L	16%	Please See Footnote
Govena		PRO-250-LT-LED	T	25%	Need to adjust maximum level.
Hager		EVN002	T	19%	
HAMILTON		H-LEDSTAT	T	1 Lamp: N C 2,3 Lamps: 13%	

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International					
Helvar	Digidim	452 (DALI)	Adaptive T	15%	
Helvar		454 (DALI)	T	16%	
iLight		SCLED	T	Max of 15 per circuit. Audible hum from lamp. No flicker observed	Tested by dimmer manufacturer (*)
iLight		SCA	T	Max of 25 per circuit. Some flicker present	Tested by dimmer manufacturer (*)
iLight		SCi1205	L	20%, max 15pcs. Loud audible hum from lamp.	Tested by dimmer manufacturer (*)
JUNG		1224 LED UDE	T	23%	
JUNG		1271 LED DE	L	20%	Please See Footnote
JUNG		225 NV	L	24%	Please See Footnote
JUNG		225 TDE	T	24%	
JUNG		266 GDE	L	19%	Please See Footnote
Legend Tech		DIMEZE DZ3G450DIAL	T	15%	
Legrand		ref. 572239	T	NC	
Legrand		665114 A 14W3731	L	20%	Please See Footnote
Legrand	HPM	450P	T	NC	(*)
Lumex	Load Smart Gen2	LT1D450LS	T	NC	(*)
Lunatone	DALI PD	86458619	T	2%	
Lunatone	DALI PD	300 86458619-300	T	3%	

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Dimmer Manufacturer	Dimmer Brand	Dimmer Model	Dimming mode	Dim (%)	Note
International					
Lutron	Energy Savr Node QS (for Quantum and QS systems)	QSNE-4A-D	T	17%	
Lutron	Energy Savr Node QS (for Quantum and QS systems)	QSNE-4A-D	L	1,2 Lamps: 15% 3 Lamps: 23%	Please See Footnote
Lutron	Grafik eye QS	QSGR-6PCE	L	NC	Please See Footnote
Lutron	Grafik eye QS	QSGR-6PCE+NGRX-ELVI-CE	T	0%	
Lutron	Homeworks	LQSE-4A-D	T	17%	
Lutron	Homeworks	LQSE-4A-D	L	1,2 Lamps: 15% 3 Lamps: 23%	Please See Footnote
Lutron	LCP128	LP-RPM-4A-230	T	19%	
Lutron	LCP128	LP-RPM-4U-240	L	NC	Please See Footnote
Lutron	LYNEO	LSSI-501	L	1,2 Lamps: 9% 3 Lamps: NC	Please See Footnote
Lutron	RA2 Select	RRK-R25NE-240	T	19%	(*)
Lutron	RANIA	RNDU-252B-FAW-M	T	NC	
Lutron	RANIA	RNSU-452B-FAW-M	T	NC	
Maintronic		DAD1200	T	NC	
MARBO	Crabtree	DV21912	L	16%	Please See Footnote
Merten	SBD400R-1	MEG5131-0000	L	15%	Please See Footnote
Merten	SBD600RL	MEG5133-0000	L	9%	Please See Footnote
Merten	SBD315RC	MEG5136-0000	T	1 Lamp: N C 2,3 Lamps: 13%	

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Dimmer Manufacturer	Dimmer Brand	Dimmer Model	Dimming mode	Dim (%)	Note
International					
MK	K1501 WHILV	47543SL	L	1 Lamp: N C 2,3 Lamps: 20%	Please See Footnote
MK	K1511 WHILV	524675L	L	1 Lamp: N C 2,3 Lamps: 7%	Please See Footnote
MK	K1522 WHILV	43395PL	L	NC	Please See Footnote
MK	K1523WHILV	52470SL	L	19%	Please See Footnote
MK	K1526WHI	50067778	L	27%	Please See Footnote
Mode Lighting	Evolution	EVO-SGP	L	NC	Please See Footnote
Mode Lighting	Mirage	MP-10-01	L	NC	Please See Footnote
Mode Lighting	Mirage / Tiger / Evolution	TRAILING EDGE CARD	T	5%	(*) Tested up to 24 lamps
Osram		HTI DALI 315 DIM	T	16%	
Panasonic		WEG57813	L	6%	Please See Footnote
Philips	Dynalite	DGLM402	L	NC	Please See Footnote
Philips	Dynalite	DGTM402	T	24%	
Philips	Dynalite	DGLED401	T	20%	
Rako		RDT500 with control RCP07-W	T	0%	
Rako		RMT500 with control RCP07-W	T	0%	
RVE		RV5	L	18%	Please See Footnote
RVE		RVLED	T	13%	

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International					
Schneider		GD1G2W4	L	18%	Please See Footnote
Schneider		SBD315RC	T	1 Lamp: N C 2,3 Lamps: 11%	
Schneider		REG-K/2x230/300W	T	NC	
Shuttle		SDIM-T-LED-125W	T	1 lamp: 21% 2,3 lamps: 9%	
Siemens		5TC8 263	L	16%	Please See Footnote
Trader	Dimpala	DIMR	T	5%	(*)
Trader	Dimpala	DIMPR	T	5%	(*)
Tridonic		DALI-PCD 1-300 one4all	Adaptive-T	24%	
VADSBO		LD220	T	2%	
Varilight		HQ7W 120W	L	19%	Please See Footnote
Varilight		IQP401W	L	NC	Please See Footnote
Varilight	V-PRO	JQP401W	T	3%	
Vossloh-Schwabe		Art. No. 553962	T	2%	(*)
Vossloh-Schwabe		Art. No. 554591 (5W to 250W)	T	0%	
Vossloh-Schwabe		Dim One	T	14%	
Yokis		MTV500E	Adaptive T	1 lamp: N C 2,3 lamps 12%	
Zano		WH400	L	17%	Please See Footnote
Zano		ZGRIDLED	T	NC	

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Results may vary due to variability in component choices and manufacturing processes by the dimmer manufacturer

Regards compatibility tests conducted by dimmer manufacturer, please contact the manufacturer for more details and/or reports.

This lamp may emit a low level of audible noise when used with some leading edge dimmers. If using leading edge dimmers, testing with the intended dimmer is recommended to ensure acceptable audible levels at the application site.

(*) Test results with this dimmer added to the compatibility list as of this Revision