EC21

Power and Diming Control solutions for your state-of-the-art installation!

Power Thru with two position switch selection for the following modes

1. DIM - Dimmer Mode
2. BP - Bypass (Power Thru) also called Constant

Power Thru Relay with three position switch selection for the following modes

1. DIM - Dimmer Mode
2. N/D - Non Dimmer or Relay Mode
3. BP - Bypass (Power Thru) also called Constant

- Power Through selection is on the face of each module
- Dim and N/D functions are controlled by the console
- BP is always on (Constant)

Plug-in Modular Dimmer System

- IGBT and SSR modules may be mixed in the same rack
- Dual 2.4kW & 5kW SSR modules with optional status reporting dimmer modules at 250µs or 400µs rise times
- Contactor modules provide switched On/Off control for a wide range of loads
- Circuit Breaker design for improved trip indication and a smooth faceplate, eliminating breaker damage in touring applications
- Residual Current Circuit Breaker with Over Current Protection (RCBOs) are standard in all EC21 Power Through Dimming Modules.
- CE listed

EC21 Power Through Dimming Modules

- Future Proofing your Lighting system for both incandescent, LED, or moving lights
- Flexible loading – when the lighting plot is consistently changing due to performance needs allowing for “mixed” circuiting between dimmed or relay controlled circuit
- When using a hybrid lighting plot of traditional fixed and moving lights or LED luminaires that need a relay controlled straight power circuit
- Any application that utilizes both standard forward phase dimming and contact relay straight power

SPECIFICATION SUBMITTAL

CONSULTANT:	PROJECT NAME:	MODEL NUMBER I QUANTITY:
DATE:	PROJECT NUMBER:	APPROVED BY:

The EC21 dimmer rack was developed in response to in depth market research from key customers and consultants. The new dimming system allows users to freely mix dimmers of any type within a single rack. Most dual and single dimmer and contactor modules may be ordered with dimmer status reporting electronics, providing system operators with a wide range of dimmer information.
All dimmer status and rack configuration is available via any Web Browser connected to the lighting network. EC21 Dimmer Systems feature a universal 24 and 48-module rack design that provides support for 90-260 volt operation and are CE marked.
About Power Through Modules...
Power Through EC21 Dimming/Switching modules represent the next step in future proofing your new or existing dimming systems.

Power Through modules offer a dual 250uS/400uS (230 VAC) SSR dimmer (Silicon Controlled Rectifier) in conjunction with a mechanical bypass relay for each dimmer. Each module has two individual recess mounted switches that allow for a manual switch control between Dimmer, Power Through and Non-Dim (Relay) so that there is never a mistake about how your system is set up.
Many solid state lighting instruments do not like power from a dimmed circuit. The manual switches on each module ensure that you have complete control of your rig's power with-out any question regarding remote activation or deactivation of your Power Through Module settings.
In Dimmer (DIM) Mode, the SSR will work exactly the same way that EC21 dimmers have worked for years.

In Power Through (BP-Constant) Mode the circuit will completely bypass the Choke and SSR giving you clean power to your Lighting devices and power supplies that require a constant power feed. In Non-Dim Mode (ND) the delivery of full power to the load is controlled via the Console.

Technical Specifications Standards Compliance:	All Standard EC21 dimmer modules are CE listed	NOTE: As with any SSR phase controlled dimming system, Philips Strand Lighting always recommends the use of K-13 or better transformers (by others) to limit the propagation of triplen harmonics generated by these dimmers. Harmonic-Mitigating Transformers (zig-zag transformers) are acceptable substitutes for the K rating. Harmonic Blocking filters or harmonic suppressing systems are generally not used as they will cause unacceptable dimming performance.
Mechanical Data Construction:	Heavy duty formed aluminum	

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PHILIPS
Strand Lighting

Ordering Information
Cat No. Description

Specialty - Power Through Modules 240VAC - 16A, 3.0kW, Dual SSR Dimmers		**Specialty - Power Through Modules 240VAC - 25A, 5.0kW, Dual SSR Dimmers**	
76603BP	EC21 Dual 3kW Dim/BP module with RCBO 250µs.	**76615BP**	EC21 Dual 5kW Dim/BP module with RCBO 250µs.
76603BPR	EC21 Dual 3kW Dim/ND/BP module with RCBO 250µs.	**76615BPR**	EC21 Dual 5kW Dim/ND/BP module with RCBO 250µs.
76606BP	EC21 Dual 3kW Dim/BP module with RCBO 400µs.	**76618BP**	EC21 Dual 5kW Dim/BP module with RCBO 400µs.
76606BPR	EC21 Dual 3kW Dim/ND/BP module with RCBO 400µs.	**76618BPR**	EC21 Dual 5kW Dim/ND/BP module with RCBO 400µs.
76609BP	EC21 Dual 3kW Dim/BP module with RCBO 250µs with Reporting.	**76621BP**	EC21 Dual 5kW Dim/BP module with RCBO 250µs with Reporting.
76609BPR	EC21 Dual 3kW Dim/ND/BP module with RCBO 250µs with Reporting.	**76621BPR**	EC21 Dual 5kW Dim/ND/BP module with RCBO 250µs with Reporting.
76612BP	EC21 Dual 3kW Dim/BP module with RCBO 400µs with Reporting.	**76624BP**	EC21 Dual 5kW Dim/BP module with RCBO 400µs with Reporting.
76612BPR	EC21 Dual 3kW Dim/ND/BP module with RCBO 400µs with Reporting.	**76624BPR**	EC21 Dual 5kW Dim/ND/BP module with RCBO 400µs with Reporting.

Dimmer Specifications:

Supply:	220 to 264VAC, 3-phase, neutral + earth, 47 to 63 Hz
Maximum output voltage	20-250volts (e.g. set to 220V for extended lamp life)
Storage Temp:	-40°C to 70°C
Operating Temp:	1°C to 40°C ambient
Storage Humidity:	0% to 95%, relative humidity, non-condensing
Operating Humidity:	10% to 95%, relative humidity, non-condensing
RCD:	Residual Current Device with circuit protection.
Circuit protection:	Appropriately sized, fully isolating, RCBO with combined overload/short circuit protection with C class trip characteristic and residual current protection, providing 6kA fault current rating.
Load regulation:	Dimmers will maintain their output within +/- 1% of the set output with load changes from 1kW to the maximum rating of the dimmer.
Line compensation:	The system regulates dimmer outputs to within 1V over operating voltage range. Each dimmer is individually regulated.
Efficiency:	Minimum power efficiency for dimmers is 97% at full load. Maximum full load dimmer loss is 3V RMS. Contactor non-dim power efficiency is 99%.
DC component of output:	Less than 1 volt with tungsten loads from 60W to the maximum rating of the dimmer, at all control levels.
Instructions on mounting and actuating switch	The dimmers are inserted into guide rails and pushed firmly back into the rack connectors.
Earth Ground	An earth ground lug is provided in the rack. The dimmer connectors in the rack are polarized to prevent dimmer modules being plugged into the different ampacity slots.
Class I Equipment	Earth ground is employed as supplementary protection.
Part Numbers	766xx are for 240VAC
Load Type	Inductive Loads are support for all new Specialty - Power Through Modules. Voltage and Current values are noted on each dimmer.
Rated Cycles	1E4 (4,000)
Type of disconnection	Electronic disconnection through SSR and full disconnection through mechanical relay

***Note**: All specifications are correct at the time of going to press. In the interest of continuous product improvement Strand Lighting reserves the right to change specifications without notice.*