



GENERAL INFORMATION

The digitally controlled dimmer module DP90 from the proven FDX series impresses due to its classic robust design with high quality components.

A specially encapsulated choke ensures low-noise operation.

Two thyristors ensure a stable firing sequence without flickering even with difficult loads (e.g. fluorescent tubes).

The individual dimmer philosophy of the FDX series stands for the highest reliability.

The modules have current and voltage monitoring so that any faults can be quickly located.

A built-in electronic base load makes it possible to also dim small loads and fluorescent tubes.

The version DP90S is a special dimmer/ switching module that offers, along with all the dimmer features described above, also a switching function with which the line input voltage can be connected through directly (e.g. for LEDs, electronic ballasts, contactors and HMI lamps)

Applications

- Thunsten lamps
- Low voltage lamps
- Neon lights
- Fluorescent lamps, a large number of electronic power supplies, VIP90
- Dimmable LED luminaires
- All 230VAC 2,5 or 5kVA loads that can be switched (only with DP90S)
- HMI with daylight lamps (only DP90S)

Features

- Voltage and current monitoring per dimmer
- Electronic base load for dimming small loads
- Load variants 2.5kVA, 5kVA, 10kVA
- Two thyristors per circuit, continuous firing per half wave
- Switching function for connecting through the line input voltage (only DP90S)
- High quality toroidal choke with 220µs rise time
- Digital single channel dimmer
- LED operating indicator on the front panel

ORDERING INFORMATION

FDX series dimmer modules

ARTICLE NUMBER	DESCRIPTION
7266A1006-1	DP 90 2,5kVA 220µs with current and voltage monitoring
7266A1007-2	DP 90 5kVA 220µs with current and voltage monitoring
7266A1012	DP 90 10kVA 220µs with current and voltage monitoring
7266A1020	DP 90S 2,5kVA 220µs with current and voltage monitoring, switching function
7266A1022	DP 90S 5kVA 220µs with current and voltage control, switch function

Accessories

ARTICLE NUMBER	DESCRIPTION
7266A3002	DP 90 2,5kVA blanking plate for covering unused channels
7266A3007	DP 90 5kVA blanking plate for covering unused channels
7266A1017	DP 90 2,5kVA loop measuring module
7266A1018	DP 90 5kVA loop measuring module

SPECIFICATIONS

General

- Designed for 100% continuous operation
- DP90 2,5kVA Ohmic load 2,5kW, inductive 1,25kVA
- DP90 5kVA Ohmic load 5kW, inductive 2,5kVA
- DP90 10kVA Ohmic load 10kW, inductive 5kVA
- DP90S 2,5kVA Ohmic load 2,5kW, inductive 1,25kVA, Switching function 2,5kVA Ohmic and inductive load
- DP90S 5kVA Ohmic load, inductive 2,5kVA, Switching function 5kVA Ohmic and inductive load

Mechanical layout

- Modular individual plug-in assembly
- Powder coated front panel
- Installation in 19" rack panel

Electrical Construction

- Thyristor output stage with symmetrical firing.
- Independent calculation of the firing timing for positive and negative half wave.
- Phase-control dimmer
- Solid-state relay technology (DP90S)
- In the non-dim mode direct connecting through of the full input voltage (with choke, on DP90S without choke), e.g. for switching electronic ballasts. Switch on and switch off points independently adjustable (hysteresis simulation)
- Power input 207...265V AC
- Line input frequency range 48-63 Hz

Specifications

- Minimum load not necessary (current feedback from 150W)
- DC-element on the output 0V (symmetrical control)
- Power factor $\geq 0,4$
- Cold lamps can be connected to fully driven output stages.
- Ambient temperature 0...35°C
- Atmospheric humidity 0...90%, not condensing

Filter

- High quality toroidal choke with 220 μ s rise time measured at nominal load and 50% effective drive, between 10-90% of the rising edge and the output voltage

Application range

- Tungsten and low voltage lamps, dimming range 0-100%
- Dimming range for fluorescent tube loads depends on the type and number of the loads. Please consult ETC on the specific case
- The ballasts used in dimmed applications should be dimensioned 1.5 times larger than in undimmed applications
- In the case of DP90S modules: it is also possible to switch all types of loads

DIMENSIONS AND WEIGHTS

Dimensions

MODEL	HEIGHT	WIDTH	DEPTH
	mm	mm	mm
DP90 2,5kVA	132	40	220
DP90S 2,5kVA	132	40	220
DP90 5kVA	132	80	220
DP90S 5kVA	132	80	220
DP90 10kVA	132	160	220

Weights of modules

MODEL	WEIGHT (including filter)
	kg
DP90 2,5kVA	0,9
DP90S 2,5kVA	0,9
DP90 5kVA	1,5
DP90S 5kVA	1,5
DP90 10kVA	1,9

Maximum power dissipation at 100% Nominal Load

MODEL	WATT	EFFICIENCY
DP90 2,5kVA	< 40	98,4%
DP90S 2,5kVA	< 40	98,4%
DP90 5kVA	< 70	98,6%
DP90S 5kVA	< 70	98,6%
DP90 10kVA	< 140	98,6%

These values should be provided to a qualified HVAC design engineer, along with dimmer quantities, types and dimmer room dimensions, to calculate dimmer room air handling requirements.

In this case diversity factor has to be considered to avoid to oversize the cooling system.

Dimmer room HVAC systems must at all times maintain the specified ambient temperature **at the dimmer rack**. Dimming systems operating within 10°C of the upper or lower temperature limits must strictly follow installation and operation guidelines to operate reliably. Dimmer room must at all time have an ambient temperature between 0°C and 35°C.



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