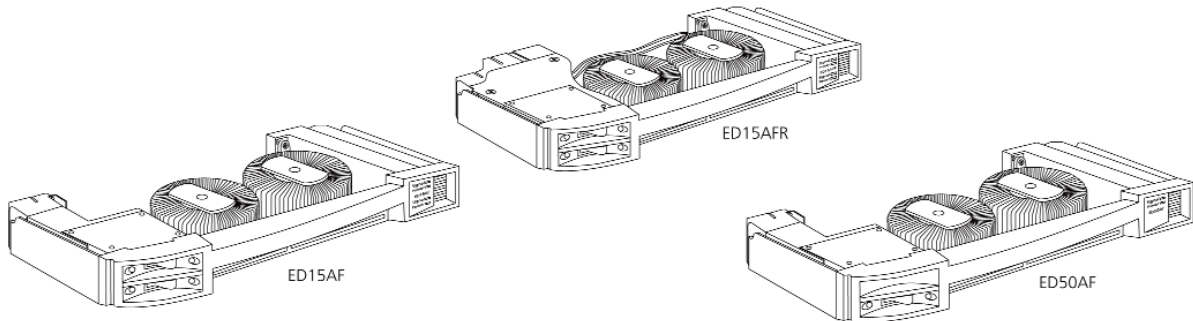


Advanced Dimmer Module

CE 230/240V

Sensor+ CE Advanced Series



GENERAL INFORMATION

Advanced Features (AF) Dimmer Modules are designed for use in Sensor+ ESR Advanced Series modular rack enclosures. AF dimmer modules enable dimmer-specific feedback of load circuit data while performing digital phase angle dimming in AF-capable Sensor+ CE dimmer enclosures. They provide cost-effective digital forward phase angle dimming for loads such as incandescent, low voltage, quartz, neon, cold cathode and two wire fluorescent ballasts. The patented high-density dimmer module design features easy installation and removal, hydraulic magnetic circuit breakers and enhanced risetime toroidal filters.

APPLICATIONS

- Incandescent lighting
- Low voltage lighting
- Quartz lighting
- Neon lighting
- Cold Cathode lighting
- 2-wire Fluorescent ballast

FEATURES

- Voltage, current, and temperature sensors in each dimmer
- ED 6AF, ED10AF, ED15AF and ED25AF modules are dual density
- ED50AF modules are single density
- Dual back-to-back SCRs for each circuit
- 400µS and 350µS risetime toroidal filters
- High-density modular assembly
- Die-cast aluminium chassis
- Hydraulic-magnetic circuit breakers

ORDERING INFORMATION

Sensor+ CE 230V Advanced (AF) Dimmer Modules

PART#	DESCRIPTION
7070A1075	2 x 1.3kW SP 400µS AF Module ED 6AF*
7070A1068	2 x 1.3kW ND 400µS AF Module ED 6AFN
7070A1076	2 x 2.3kW SP 400µS AF Module ED 10AF*
7070A1067	2 x 2.3kW ND 400µS AF Module ED 10AFN
7070A1003	2 x 3kW SP 400µS AF Module ED15AF*
7070A1029	2 x 3kW ND 400µS AF Module ED15AFN
7070A1030	2 x 3kW ND/RCD 400µS AF Module 30mA ED15AFR
7070A1008	2 x 5kW SP 350µS AF Module ED25AF*
7070A1032	2 x 5kW ND 350µS AF Module ED25AFN
7070A1033	2 x 5kW ND/RCD 350µS AF Module 30mA ED25AFR
7070A1013	1 x 10kW SP 350µS AF Module 30mA ED50AF*
7070A1035	1 x 10kW ND/RCD 350µS AF Module 30mA ED50AFR
ACCESSORIES	
7071A3085	*Single Neutral Jumper (One needed per SP module)

* SP = Single pole breaker. ND = Two pole breaker with neutral disconnect.

Compatible Rack Enclosures

PART#	DESCRIPTION
7171A1030	Sensor+ CE ESR48 Advanced (AF) Rack, 48 Modules, Neutral Disconnect (ND)
7171A1034	Sensor+ CE ESR36 Advanced (AF) Rack, 36 Modules, Neutral Disconnect (ND)
7171A1038	Sensor+ CE ESR24 Advanced (AF) Rack, 24 Modules, Neutral Disconnect (ND)
7171A1042	Sensor+ CE ESR12 Advanced (AF) Rack, 12 Modules, Neutral Disconnect (ND)

Advanced Dimmer Module

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SPECIFICATIONS

GENERAL

- Designed for 100% duty cycle operation
- ED6AF – 1.3kW
- ED10AF – 2.3kW
- ED15AF – 3kW
- ED25AF – 5kW
- ED50AF – 10kW

PHYSICAL

- Modular plug-in assemblies
- Cast aluminium chassis, finished with textured epoxy paint
- Keyed to prevent insertion in inappropriately rated rack positions

CIRCUIT BREAKERS

- Hydraulic-magnetic breakers eliminate nuisance tripping
- EN60898 Type C standard trip curve (C6A, C10A, C15A, C25A, and C50A breakers are integrated into removable dimmer modules)
- Modular assembly Rating: 22,000 or 46,000A Icn (TUV tested as an assembly)
- Rated for 100% switching duty applications
- CE compliant

POWER DEVICE

- Sealed, patented assembly
- Two back-to-back SCRs per circuit
- One control LED and one output LED per circuit
- Integral bonded heatsink
- Integral temperature sensor
- Built-in voltage and current sensors

FILTERING

- High quality 400µS and 350µS risetime* toroidal filter
- *Risetime measured at full load, at worst case firing angle (90 degrees), from 10-90% of output wave form

DIMMER RANGE

- Incandescent, low voltage dimming range 100-0%
- Dimming range of 2 and 3-wire fluorescent ballast is dependent on lamp ballast combination. Contact ETC for range verification
- Sizing of Neon transformer used in dimming applications should be 1.5x greater than size used in non-dimming application

ADVANCED FEATURES ERROR MESSAGES**

- Overtemperature
- Load dropped below recorded value
- Load increased over recorded value
- DC on dimmer output
- SCR failed on/off
- Circuit breaker tripped
- Dimmer module removed
- Dimmer load absent

**All AF modules support ETC's Advanced Features (AF) dimmer specific load reporting features when used in AF-equipped racks.

PHYSICAL

Module Dimensions

MODEL	HEIGHT	WIDTH	DEPTH
	mm	mm	mm
All modules	38	300	127

Module Weights

MODEL	WEIGHT	SHIPPING WEIGHT
	kgs	kgs
ED6AF/10AF/15AF	2.3	3.1
ED25AF	2.5	3.1
ED50AF	3.5	4.5

Maximum BTU Production per module

MODEL	BTU	WATTS	EFFICIENCY
ED6AF	99	29	97.8%
ED10AF	223	65	97.1%
ED15AF	474	140	96.1%
ED25AF	810	238	95.0%
ED50AF	808	237	96.1%

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.

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 40°C.

SCR Rating

MODULE	ED6AF-ED10AF-ED15AF-ED25AF	ED50AF
Single cycle peak surge current	625A	1200A
Half cycle peak surge current	1620A	4150A
Transient over voltage	600V	600V

AVAILABLE FROM

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