

# AMG255 SERIES INDUSTRIAL MAINS POWERED MEDIA CONVERTERS WITH OPTIONAL 30W POE



## Industrial Ethernet Solutions

AMG's media converters provide a multirate 100Mb/Gigabit Ethernet uplink across fibre via the SFP port with optional 30W PoE. Available with an integrated mains PSU in both single and dual channel models along with a single channel model with dual RJ45 ports provides for maximum flexibility.



[ AMG255 Series ]

10/100 up to x2	Gigabit up to x2	100/1000 up to x2	Temp -40~+70°C	Mounting DIN/Surface	PSU AC & DC

### OVERVIEW

Designed in a compact DIN rail or wall mount housing, the AMG255 series mains powered media converters are ideally suited for connecting equipment to Ethernet networks over long distances using all types of fibre through the integrated SFP port(s). Fibre connectivity is determined by separate SFP device selection, providing application and site flexibility.

Available in both non-PoE models as well as PoE models for IEEE802.3at 30W they are suitable for powering the latest PoE devices over a wide industrial operating temperature range.

Fitted with an integrated fully industrial mains power supply along with a redundant DC power input and power failure alarm relay ensures maximum operating reliability and the highest levels of performance. The integrated mains power supply can also provide any remaining power as a standard DC voltage output to power 3rd party external devices.

A wide range of models are available to suit all design requirements.

SFPs need to be ordered separately.

### FEATURES

- Compact size – ideal for confined spaces, including camera poles and roadside cabinets
- -40°C to +70°C temperature maintains performance in extreme conditions
- Plug & Play – no need for any user configuration
- DIN rail mountable – quick to install and remove for maintenance
- All SFP ports are multirate 100Mb/Gigabit – support single and multimode, single or dual fibre options up to 120Km
- Integrated mains power supply with 12V<sub>DC</sub> @ 20W or 48V<sub>DC</sub> @ 60W output and a 2nd DC power input for redundancy
- Fault relay for dual power input failure notification
- Supports optional 15W and 30W PoE
- Manufactured in the United Kingdom
- AMG Lifetime Support Warranty

# Specifications.

## Standards.

IEEE802.3i	10Base-T
IEEE802.3u	100Base-TX & 100Base-FX
IEEE802.3ab	1000Base-T
IEEE802.3z	1000Base-X
IEEE802.3af	15W PoE
IEEE802.3at	30W PoE+
IEEE802.3x	Flow Control

Jumbo Frames	9.2Kbytes
Address Table	2K MAC Entries

## Interface.

LED Indicators	2x Power DC Power Output SFP Link/Activity RJ45 Link/Activity PoE (PoE Models Only)
RJ45 Ports	1 or 2x 10/100TX RJ45 or 1 or 2x 10/100/1000T(X) RJ45 with Auto MDI/MDI-X and 1.5 kV Isolation Protection
SFP Slot	1 or 2x 100/1000FX SFP
Mains Power	1x IEC C14 Socket or 1x 3-Way Barrier Screw Terminal
DC Power/Relay	1x 6 pin removable terminal block with locking screws

## Power.

Power Inputs	2
Input 1 Voltage	85-264V <sub>AC</sub> or 100-370V <sub>DC</sub>
Input 1 Frequency	47-63 Hz
Input 1 Current:	
Non-PoE Models	0.44A (115V <sub>AC</sub> ) / 0.26A (230V <sub>AC</sub> )
PoE Models	1.8A (115V <sub>AC</sub> ) / 1.0A (230V <sub>AC</sub> )
Input 1 Fuse	3.15A/250V Slow-Blow
Input 2 Voltage:	
Non-PoE Models	10-36V <sub>DC</sub>
PoE Models	48-56V <sub>DC</sub>
Power Consumption:	
Single Channel	2W Max (without PoE Load)
Dual Channel	4W Max (without PoE Load)
Integrated PSU Type:	
Non-PoE Models	12V <sub>DC</sub> @ 20W (Refer to derating chart)
PoE Models	48V <sub>DC</sub> @ 60W (Refer to derating chart)
PSE Mode	Mode A
Protection	Reverse Polarity (DC Input Only), Overload Current
Fault Relay	Form A, 60V @ 2A Max

## Packaging.

Shipping Weight	1.2kg / 2.65lb
Dimensions	(W x D x H) 175 × 160 × 100 mm 6.89 × 6.3 × 3.94 in

## Mechanical.

Housing	Anodised Aluminium
Dimensions:	(W x D x H) 68 × 96 × 108 mm 2.68 × 3.78 × 4.25 in
Excluding DIN & Wall Mounts	
Including DIN & Wall Mounts	68 × 104 × 132 mm 2.68 × 4.09 × 5.20 in
IP Rating	IP30
Installation	Wall Mount or DIN-Rail
Weight	0.8kg / 1.76lb

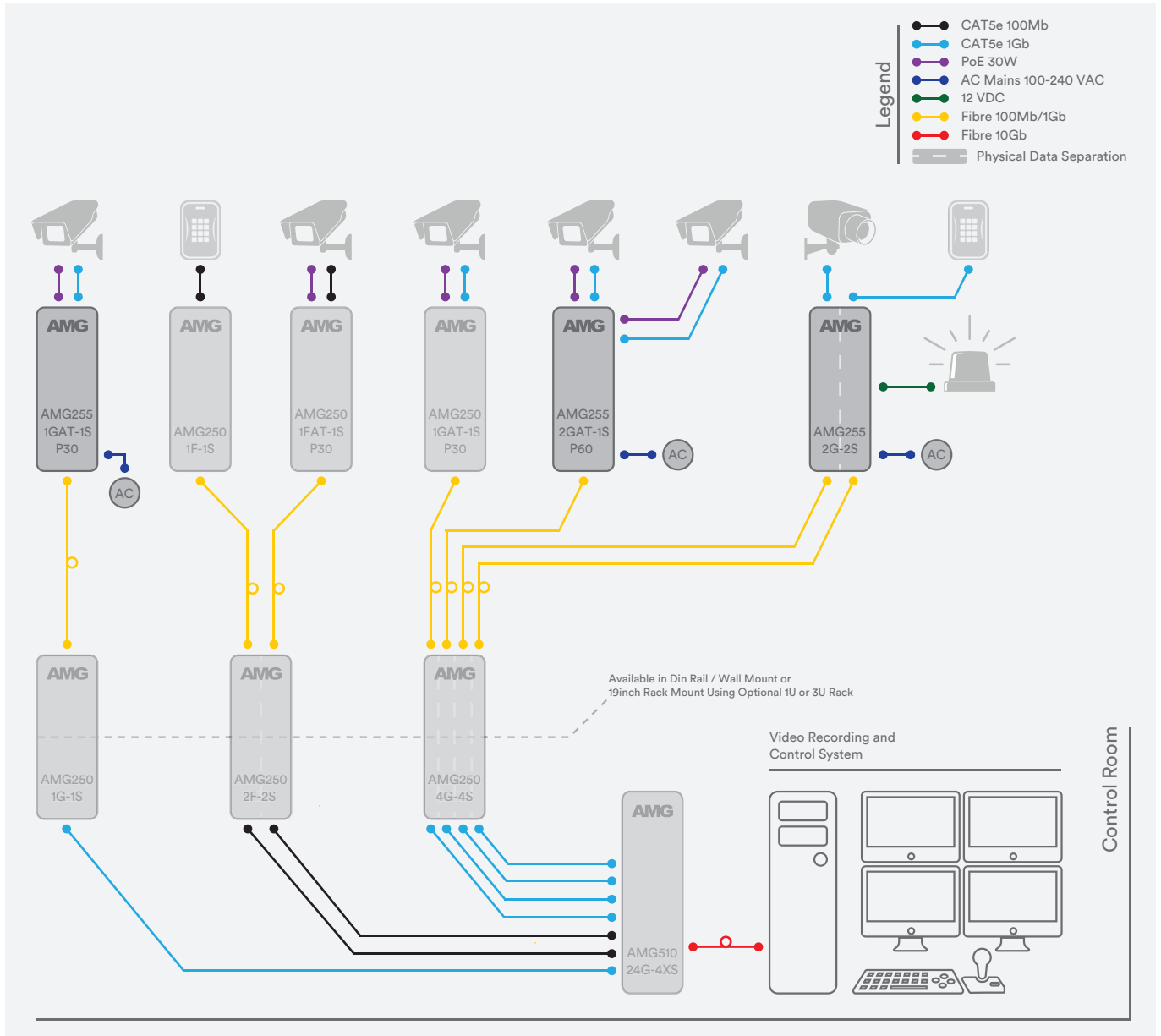
## Environmental.

Operating Temp.	-40°C to +70°C
Storage Temp.	-40°C to +85°C
Humidity	5% to 95% (non-condensing)
MTBF	>300,000 hours
MTBF Standard	MIL-HDBK-217F GB 25°C
Heat Dissipation	7 BTU/h (1Ch Non-PoE, No Ext. Load) 14 BTU/h (2Ch Non-PoE, No Ext. Load) 109 BTU/h (1Ch 30W PoE, No Ext. Load) 218 BTU/h (2Ch 30W PoE, No Ext. Load)
Cooling	Passive Cooling
Noise Level	0 dBA

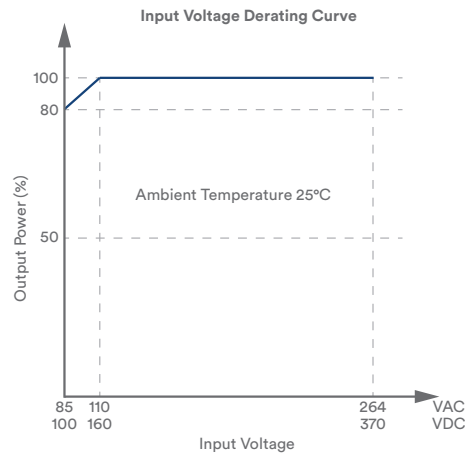
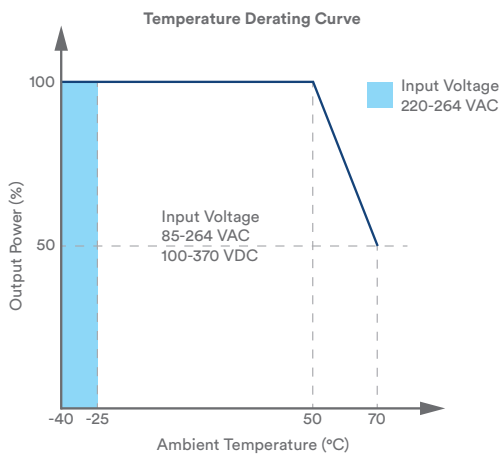
## Regulatory.

Safety	IEC/EN 62368-1 Class II
EMI	EN 55032 Class B CISPR 32
	FCC Part 15B Class B
EMS	EN 61000-4-2 (ESD) EN 61000-4-3 (RS) EN 61000-4-4 (EFT) EN 61000-4-5 (Surge) EN 61000-4-6 (CS) EN 61000-4-11 (Dips)
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Environmental	Reach RoHS WEEE

# Application Diagram.



# Product Characteristic Curves.



# Part Numbers.

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## Single Channel Mains Powered Media Converters (1+1)

AMG255-1F-1S	1 × 10/100BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-1FAT-1S-P30	1 × 10/100BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Integrated 60W PSU
AMG255-1G-1S	1 × 10/100/1000BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-1GAT-1S-P30	1 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Integrated 60W PSU

## Single Channel Mains Powered Dual Port Media Converters (2+1)

AMG255-2F-1S	2 × 10/100BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-2FAT-1S-P60	2 × 10/100BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Integrated 60W PSU
AMG255-2G-1S	2 × 10/100/1000BaseT(x) RJ45, 1 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-2GAT-1S-P60	2 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 1 × 100/1000BaseFx SFP, Integrated 60W PSU

## Dual Channel Mains Powered Media Converters (2+2)

AMG255-2F-2S	2 × 10/100BaseT(x) RJ45, 2 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-2FAT-2S-P60	2 × 10/100BaseT(x) RJ45 with 30W PoE+, 2 × 100/1000BaseFx SFP, Integrated 60W PSU
AMG255-2G-2S	2 × 10/100/1000BaseT(x) RJ45, 2 × 100/1000BaseFx SFP, Integrated 20W PSU
AMG255-2GAT-2S-P60	2 × 10/100/1000BaseT(x) RJ45 with 30W PoE+, 2 × 100/1000BaseFx SFP, Integrated 60W PSU

All of the above model numbers ship with an IEC C14 mains connector on the product as standard.  
For the optional Barrier Terminal Block mains connector add -T to the end of the part code. Example: **AMG255-1F-1S-T**

# Recommended Redundant PSUs.

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### Non-PoE Models

AMGPSU-I12-P24      DIN-Rail Mounting Industrial Grade PSU, 12VDC, 24W


### PoE Models

AMGPSU-I48-P60      DIN-Rail Mounting Industrial Grade PSU, 48-56VDC, 60W

# Notes.

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Included Accessories:      Left Angle Region Specific IEC Line Cord (For Barrier Terminal Block Models No Line Cord Is Included)  
Optional Accessories:      SFP modules - Optical/Copper see separate list, need to be ordered separately

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Manufacturer 

In a continuing effort to improve and advance technology, product specifications are subject to change without notice. Please visit [www.amgsystems.com](http://www.amgsystems.com) for the latest product specifications.