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MCGS1 Series

10/100/1000 Ethernet Media Converter with PoE+

Product Description

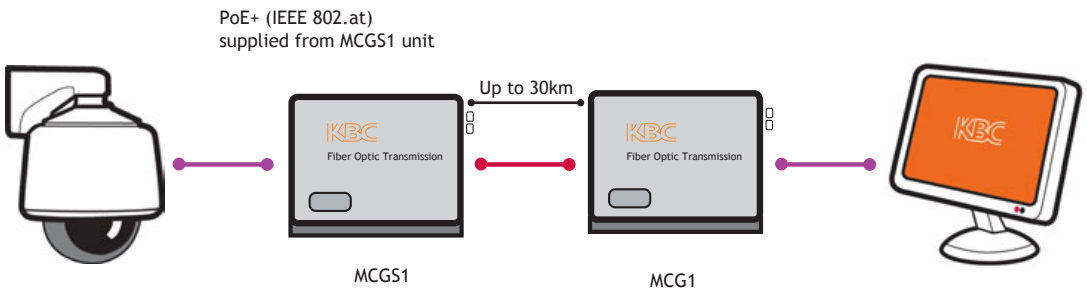
The KBC MCGS1 series is a fully ruggedized 10/100/1000 Ethernet media converter with PoE (Power over Ethernet). The unit acts as a PSE (Power Sourcing Equipment) providing 25.5W @ 48Vdc and is fully compliant with the IEEE802.3at specification. It supports transmission of an Ethernet channel over either one or two, multimode or singlemode optical fibers. Full duplex operation enables distances in excess of 30km on singlemode fiber. The plug-and-play design ensures ease of installation with no electrical or optical adjustment needed. LED indicators are provided to show the operational status of the unit clearly. The series is available in wall-mount configuration.

KBC Gigabit media converters are designed for transmission distances up to 2km for multimode fiber and 30km on singlemode fiber (for distances up to 80km, please contact us). If the media converter is to be connected to an SFP port, please contact us for advice about the appropriate optical output since SFPs can vary in the level at which they saturate.

Product Features

- IEEE802.3at high power PoE+
- IEEE802.3ab compliant
- 10/100/1000 auto-sensing
- MDI/MDIX
- Multimode and singlemode interfaces
- Single and dual fiber
- Up to 30km on singlemode fiber
- Wide operational temperature range

Typical System Configuration



RJ45 patch lead (depends on attached device)
Multimode or singlemode fiber

Specifications

Standards
IEEE Standard — IEEE 802.3 10BASE-T
IEEE 802.3u 100BASE-TX & 100BASE-FX
IEEE 802.3ab 1000BASE-T
IEEE 802.3x Full duplex

Data
Data Formats — Ethernet
Two Way Channels — 1
Data Rate — 10/100/1000Mbps auto-sensing half & full duplex

Standards
IEEE Standard — IEEE 802.3at
Power Supplied — +48Vdc @25.5W

Optical
Wavelength — 1310nm / 1550nm
Fiber — Multimode or Singlemode
Number of Fibers — 1 or 2

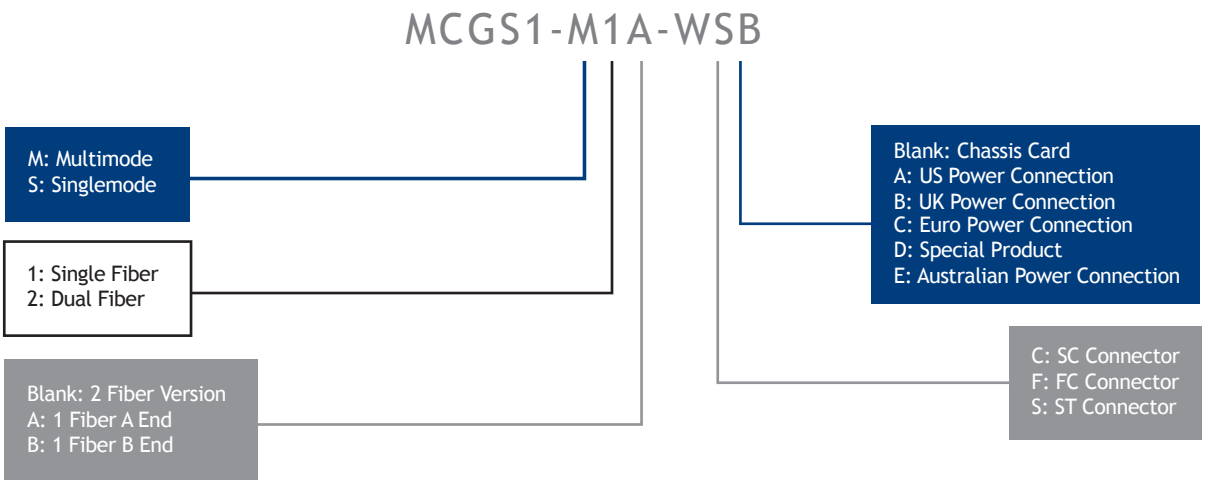
Power
Power Input — +48Vdc
Power Supply[1] — Input: 100 ~ 240Vac; Output: +48Vdc

Environmental
Operating Temperature — -40° ~ +74°C / -40° ~ +165°F
Storage Temperature — -40° ~ +74°C / -40° ~ +165°F
Operating Humidity — 0 to 95% non-condensing
Mean Time Between Failure (MTBF) — >100,000 Hours

Mechanical
Dimensions (W x H x D) Compact & DIN rail — 135mm × 115mm × 42mm (5.31" x 4.53" x 1.65")

Connectors
Ethernet — 1 x RJ45
Fiber — ST, SC or FC (ST fitted as standard)
Power[2] Compact & DIN Rail — Screw block terminal

Part Number Configurator



Optical Budget

Part Code	Fiber Type	No.	Optical Budget 50µm	62.5µm	9µm	Wavelength nm	Approximate Transmission Distance[3]
MCGS1-M2*	Multimode	2	6dB			1310	0~1.5km
MCGS1-M2*	Multimode	2		10dB		1310	0~2km
MCGS1-M1*	Multimode	1	6dB			1310/1550	0~1.5km
MCGS1-M1*	Multimode	1		10dB		1310/1550	0~2km
MCGS1-S2*	Singlemode	2			17dB	1310	0~30km
MCGS1-S1*	Singlemode	1			17dB	1310/1550	0~30km

Transmission distances up to 80km are available please contact KBC Networks for details. All KBC Networks optical transmitters are LASER based. SFPs can vary in the level at which they saturate, so if the media converter is to be connected directly to an SFP port, please contact us for advice.

1. Please select the power plug from US Standard, Euro 2 Circular or UK 3 Pin square when placing order
2. Power lines are crimped and fitted to screw block connector in factory.
3. Transmission distance is limited by optical loss of the fiber and loss introduced by connectors, splices and patch panels. Fiber bandwidth also limits the transmission distance.