KGS-086x Series

IP65/67 Managed Gigabit Ethernet and Fast Ethernet L2 Switches with PoE+ Options

KTI's KGS-0860 IP65/67 switch series offers a diverse range of managed Ethernet switches with the ruggedized hardware design for protection against strong jets of water and temporary immersion in water. The series includes a variety of 8-ports switches featured with different configurations composed of Fast Ethernet ports and Gigabit Ethernet ports. The available port types are copper port, fiber optical port and combo port with dual-media support (copper and fiber optical).

In addition to standard direct power input, the series provides optional solution that the switch can be powered over network cable instead of direct power input. This way called "Power over Ethernet" allows the switch receives electric power along with data from the connected network cable and the switch can be installed in place where power is not present. Not only PoE powered switch solutions the series also offers PoE power sourcing switches which can deliver power to other switches over the connected cables. It provides a complete and diversified solutions for PoE deployment with the IP65/67 switches.

Designed to operate reliably in harsh industrial environments the series provides a high level of immunity to electromagnetic interference and heavy electrical surges usually found in industrial environments. An operating temperature range of -40°C to +70°C coupled with IP65/67 rated waterproof design allows the switches to be installed in any locations virtually.

To meet requirements for advanced applications, the switch series provides advanced layer 2 network functions, a variety of management interfaces enhanced with security features, and a full array of useful functions for high network availability and manageability. Featured with the ruggedized hardware design, the KGS-0860 series provides ideal solutions for any harsh environments, such as strong vibrations, extreme temperatures and wet or dusty conditions.

Key Features:

- Diverse range of 8-port managed switches for selection
- Full wire speed forwarding and filtering
- Provide optional fiber ports to support variety of fiber connections
- Provide 802.1Q VLAN, 802.1p QoS, DSCP QoS functions
- Provide LACP port link aggregation function
- Provide port mirroring function
- Support jumbo frame up to 9.6K bytes
- Provide packet storm control function
- Support console, web, SNMP management interfaces
- Support DHCP for IP configuration
- Provide password authentication for management access
- Provide 802.1x authentication for port access
- Support 802.1w RSTP and 802.1D STP for preventing loop connection
- Support redundant ring applications with enhanced industrial RSTP
- Support IGMP snooping function
- Waterproof enclosure design, LAN port connectors and power connector
- IP67 rated for protection against temporary immersion in water
- IP65 rated for protection against strong jets of water
- Support either direct DC input or PoE over network cable
- Offer optional high power PoE PSE switch models

Product Highlights:

- IP65/67 rated
- Fast Ethernet Support
- Gigabit Ethernet Support
- Powered via PoE
- High Power PoE PSE solution
- Variety of fiber options
- Network management support
- Outdoor patch cables available

Compliance:

- EN 50155 EMC & Environments: Railway Applications on Rolling Stock
- EN 61000-6-4: Emission for Industrial Environments
- EN 61000-6-2: Immunity for Industrial Environments
- EN 50121-1: Railway Applications - General EMC
- EN 50121-3-2: Railway Applications - Rolling Stock Apparatus
- EN 50121-4: Railway Applications - Signalling and Telecommunications Apparatus
- NEMA TS2 Environments: Traffic control equipment

KGS-0860-WP

KGS-0861-WP

KGS-0862-WP

Specifications:

Standard	IEEE 802.3, 802.3ab, 802.3z, 802.3x, 802.3af, 802.1x, 802.1w, 802.1D, 802.1Q
Network Ports	Total 8 switched ports
Copper Interface	Fast Ethernet (FE) port: 10/100BASE-TX interface Gigabit Ethernet (GbE) port: 10/100/1000BASE-T interface Duplex: half & full, Auto-negotiation, auto-MDI/MDI-X support FE port connector: M12 D-coded (Std. IEC 61076-2-101) GbE port connector: M12 A-coded Network cable: Cat.5 up to 100m
Fiber Interface	Fast Ethernet (FE) port: 100BASE-FX interface Gigabit Ethernet (GbE) port: 1000BASE-X interface Full duplex, Auto-negotiation, LC connector (IP67 rated) Digital Diagnostic & Monitoring (DDM) support Network cable: 62.5/125, 50/125μm MMF, 9/125μm SMF
Combo Port	Dual media with auto sense for active media FE combo port: FE copper & FE fiber interface GbE combo port: GbE copper & GbE fiber interface
Console Port	RS-232 interface, M12 connector (IP67 rated)
MAC Addresses	Table with 8K entries
Buffer Memory	176K bytes
Power Input	Direct DC via power connector, PoE power over Cat.5 (model options)
Direct DC Input	M23 connector (IP67 rated) Working voltage range: +6.5 ~ 60VDC Voltage range for PoE PSE: +45 ~ 57VDC Voltage range for high power PoE PSE: +51 ~ 57VDC
PoE PD Port	IEEE 802.3af compliant PD on Port 4 (model options) Working voltage range: +36 ~ 57VDC PD classification: Class 3
PoE PSE Ports	IEEE 802.3at compliant (model options) Support PoE and PoE+ PD connection PoE voltage range: +44 ~ 56VDC (dependent on DC IN)
LED Indication	Unit: Power, Mngt, FE port: speed/link/activity status GbE port: speed/link/activity status Fiber optic featured port: Fx fiber selected PoE PD featured port: PoE power received status PoE PSE featured port: PoE power delivered status
Power Consumption	11.5W (not including PoE power)
Mechanical	Aluminum molded housing with no fan IP65/67 protection
Dimensions	163 x 60.5 x 195 mm (WxDxH)
Mounting Support	Enclosure panel, flat mouting, wall mounting
Environment	Operating Temperature: -40°C ~ 70°C Storage Temperature: -40°C ~ 85°C Relative Humidity: 5% ~ 95% RH
Approval	FCC Class A, VCCI Class A, CE mark, CISPR 11 Class A EN 61000-6-4 emission, EN 61000-3-2, 61000-3-3 EN 61000-6-2 immunity for industrial environment, IEC 60950-1 safety,

EN 50121-1, EN 50121-3-2, EN 50121-4 ,
IEC 60068-2-1 cold temperature test, IEC 60068-2-2 dry heat test,
IEC 60068-2-30 damp heat test, IEC 60068-2-48 storage temperature test,
IEC 60529 IPX5: water jets test, IEC 60529 IPX7: water immersion test,
IEC 60529 IP6X: ingress of dust test, EN 61373 Vibration and Shock test
E-Mark E13 Certification, EN50155 EMC & Environments,
NEMA TS2 Environment test

KGS-0863-WP

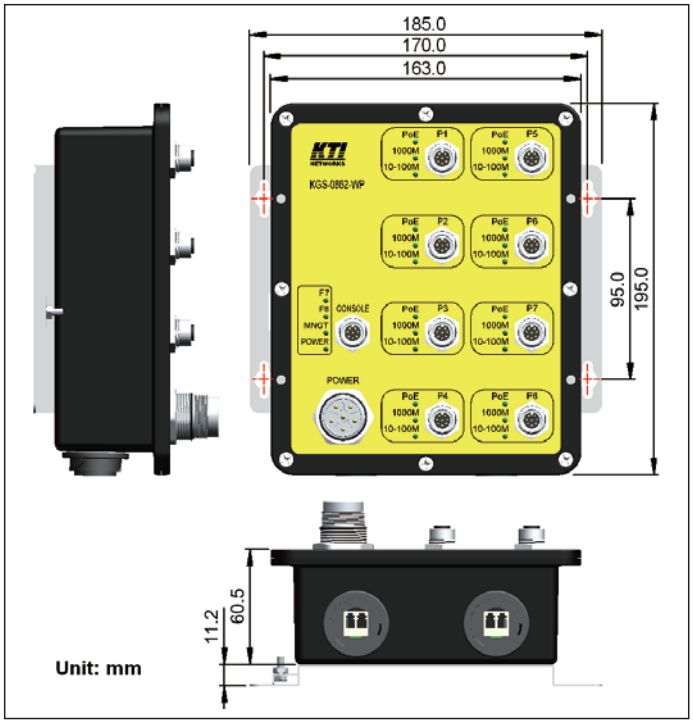
Series Ordering Information:

Model	Managed	Copper Ports		Fiber Option		PoE
		FE	GbE	FE	GbE	
KGS-0841-W	-	8				-
KGS-0860-WP-x	v	6		1,2		PD P4
KGS-0861-WP-x	v		6		1,2	PD P4
KGS-0862-WP-x	v		6		1,2	PSE P1-P8
KGS-0863-WP-x	v	6			1,2	PSE P1-P8

* x: Fiber code specified fiber options

Fiber Ordering Information:

Fiber code	Ports	Rate	Fiber	LC	Ref. Distance
-FM	1	100Mbps	MMF	1310nm Duplex	2km
-2FM	2	100Mbps	MMF	1310nm Duplex	2km
-FS30	1	100Mbps	SMF	1310nm Duplex	30km
-2FS30	2	100Mbps	SMF	1310nm Duplex	30km
-FW3520	1	100Mbps	SMF	BiDi T1310/R1550nm	20km
-2FW3520	2	100Mbps	SMF	BiDi T1310/R1550nm	20km
-SX	1	1000Mbps	MMF	850nm Duplex	550m
-2SX	2	1000Mbps	MMF	850nm Duplex	550m
-LX	1	1000Mbps	SMF	1310nm Duplex	10km
-W3510	1	1000Mbps	SMF	BiDi T1310/R1550nm	10km



Dimensions

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