



# KGC-261-DP/I



## IEC 61850-3 IEEE 1613 Media Converter with PoE++ PSE support

### Product Highlights:

- IEC 61850-3 & IEEE 1613 rated
- Tri-speed copper to dual-speed fiber conversion
- Advanced LFPT, OPA, ALS features
- PoE PSE functionality
- Support PoE++ 90W PD
- Web & SNMP management

### DC Input:



### Key Features:

- IEC 61850-3 and IEEE 1613 industrial rated for power substation
- Tri-speed 10/100M/1Gbps copper to dual-speed 100M/1Gbps fiber conversion
- Comply with IEEE 802.3, 802.3u, 802.3ab, 802.3z, 802.3af, 802.3at standard
- Support full wire speed conversion for Gigabit copper to Gigabit fiber
- Provide dual-speed SFP on fiber port for mounting variety of fiber options
- Provide important LFPT (Link Fault Pass Through) media converter function
- Support Jumbo frame conversion
- Energy Efficient Ethernet (EEE) support
- Alarm events relay output
- Optical Power Alarm (OPA) function
- Auto Laser Shutdown (ALS) function
- Fiber support for multimode, short reach up to long reach single mode fiber, Bi-Di applications
- Web-based configuration management support
- Support SNMP management
- PoE PSE capability to support 802.3af PDs, 802.3at PDs and proprietary PoE++ 90W PDs
- PoE shutdown protection for non-compliant PD, disconnection, over-current and short-circuit

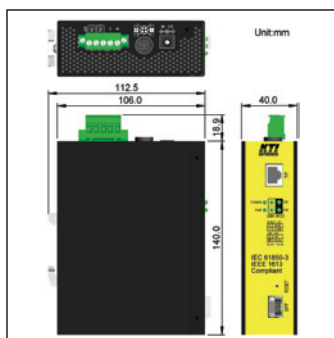
### Specifications:

Standard	IEEE 802.3u, 802.3ab, 802.3z, 802.1ad, 802.3az, 802.1Q, 802.3af, 802.3at
Copper Port	Shielded RJ-45, 10/100/1000Mbps, Full/Half duplex Auto-negotiation, Auto-MDI/MDI-X
Fiber Port	SFP connector with pre-configured SFP fiber transceiver 100Mbps/1Gbps Full duplex, Auto-negotiation Far End Fault support
Network Cables	Copper port: Cat.5e recommended or higher up to 100m Fiber port: MMF 50/125µm, 62.5/125µm, SMF 9/125µm
LED Indication	Unit: power status, PoE status Per port: 1G/Link/Activity, 10-100/Link/Activity
Jumbo Frame size	Up to 9.6K bytes
DC TB Input	Flange terminal block: DC+/ DC-/ 3 Relay contacts Rated voltage range: +12 ~ +57VDC
Relay Output	3 dry contacts for NC & NO pairs on DC TB Contact rating: 30VDC/1A or 120VAC/0.5A Alarm events: power failure, configured port link fault, OPA
DC Jack Input	Power jack (Contacts: -D6.3mm, +D2.0mm) Rated voltage range: +12 ~ +48VDC

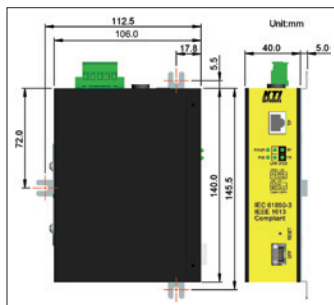


## Approval:

FCC Class A, VCCI Class A  
 CE mark Class A  
 LVD IEC60950-1 safety  
 EN 55032 emission  
 EN 55024 immunity  
 IEC 61850-3 EMC & environment  
 IEC 60068-2-64 vibration  
 IEC 60068-2-27 shock 30G test  
 IEEE 1613 for power substation



DIN-Rail Dimension



Panel Dimension



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DC DIN Input	Power DIN, Mini-DIN-4 socket Contact rating: 2.7A 48V Rated voltage range: +12 ~ +48VDC
DC Power	General: +12 ~ +57VDC PoE: +45 ~ +57VDC Polarity reversal protection
Power Consumption	Non PoE: 4W , PoE: 5W
Housing	Enclosed metal with no fan
Environment	Operating Temperature: -40°C ~ 75°C Storage Temperature: -40°C ~ 85°C Relative Humidity: 5% ~ 95% non-condensing
Dimension	40 x 106 x 140 mm (WxDxH)
Mounting Support	DIN-Rail, Panel (optional)
MTBF	250K hours min

### Management:

Management	Web-based browser interface, SNMP manager Port Control Operating mode, Flow control, LLDP, PoE control
Packet Filtering	802.1Q tagged packet filtering, Untagged packet filtering
802.1Q VLAN	Ingress 802.1Q tag stripping, Egress 802.1Q tagging (tag insertion) S-tag tagging (802.1ad double tagging)
Maintenance	Restore factory default, reboot, firmware update
SNMP	Trap events: Bootup, Login failure, Port link changes, OPA SNMP Private MIB: DDM, Remote boot, OPA, PoE

## PSE Support:

PSE Output vs. PD Input

PD Type	Class	DC IN min.	PSE OUT	PD IN min.*2
1	0	45V	15.4W	12.95W
1	1	45V	4W	3.84W
1	2	45V	7W	6.49W
1	3	45V	15.4W	12.95W
2	4	51V	32W	25.5W
3*1	5	55V	50W	38.7W
3*1	6	55V	74W	52.7W
4*1	7	55V	90W	70W
4*1	8	55V	128W	90W

\*1: PD Types & associated classes are proprietary PoE++ std.  
 \*2: The power received at PD in worst case

## Fiber Optical Specifications:

1Gbps	Fiber Port	Wavelength	Tx Power*	Rx Sens.	Rx Max.	Distance*
-SX	LC 62.5/125 MMF 50/125 MMF	850nm	-9.5 ~ -4dBm	-18dBm	0Bm	220m 500m
-LX	LC MMF	1310nm	-8 ~ -2dBm	-23dBm	-1dBm	20km
-LX70	LC SMF	1550nm	0 ~ +5dBm	-24dBm	-3dBm	70km
-W3510	Bi-Di LC SMF	Tx 1310nm Rx 1550nm	-9 ~ -3dBm	-21dBm	-1dBm	10km
-W5310	Bi-Di LC SMF	Tx 1550nm Rx 1310nm	-9 ~ -3dBm	-21dBm	-1dBm	10km
100Mbps	Fiber Port	Wavelength	Tx Power*	Rx Sens.	Rx Max.	Distance*
-FM	LC MMF	1310nm	-20 ~ -14dBm	-31dBm	0dBm	2km
-FS30	LC SMF	1310nm	-15 ~ -8dBm	-34dBm	0dBm	30km

\* Tx Power data for 62.5/125µm MMF, 9/125µm SMF  
 Distance: reference connection distance