SERIES DL221

10/100 ETHERNET TRANSCEIVER

USER MANUAL

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ETHERNET 10/100 TRANSCEIVER SERIES DL221/DL221A

REV B4.3

FOR AC INPUT

FRONT PANEL INDICATORS –

POWER – ON WHEN UNIT HAS POWER
100M – ON WHEN TWISTED PAIR IS WORKING AT 100Mbs
      OFF WHEN TWISTED PAIR IS WORKING AT 10Mbs
LINK FX – ON WHEN FIBER OPTIC LINK PRESENT
TP – ON WHEN TWISTED PAIR LINK PRESENT
FDX – FULL DUPLEX. BOTH ARE LIT WHEN FIBER OPTIC LINK
      AND TWISTED PAIR ARE OPERATING AT FULL DUPLEX.
NOTE- FIBER OPTIC LINK IS ALWAYS OPERATING AT FULL DUPLEX.

POWER • • **100M**
LINK FX • • **TP**
FDX • - •

10/100 BASE – TX
100BASE TX PORT
RJ-45 CONNECTOR
HALF/FULL DUPLEX SUPPORT VIA AUTO-NEGOTIATION OR MANUAL
100m OVER UTP/STP 100ohm CAT.5 CABLE

X   II

MDI-II/MDI-X SELECTION
X – CROSS OVER CABLE
II – STRAIGHT CABLE

MODE SETUP

NOTE - SWITCH 4 MUST BE IN THE ON/UP POSITION FOR UNIT TO OPERATE. AFTER CONFIGURATION OF UNIT POWER MUST BE RESET. THIS CAN BE DONE BY REMOVING POWER TO UNIT OR TOGGLE SWITCH 4 DOWN THEN UP.

SETTINGS-

AUTO-NEGOTIATION - SW 1, SW 2, SW 3 DOWN/OFF
10M HALF DUPLEX   - SW 1 UP/ON, SW 2, SW 3 DOWN/OFF
10M FULL DUPLEX   - SW 1 UP/ON, SW 2 DOWN/OFF, SW 3 UP/ON
100M HALF DUPLEX   - SW 1 UP/ON, SW 2 UP/ON, SW 3 DOWN/OFF
100M FULL DUPLEX   - SW 1 UP/ON, SW 2 UP/ON, SW 3 UP/ON

TROUBLESHOOTING

POWER LED NOT LIT - CHECK POWER SUPPLY CABLE TO MAIN POWER SUPPLY. CHECK AC INPUT SOURCE. CHECK SW 4 – MUST BE UP/ON POSITION.

LINK FX LED NOT LIT – CHECK LIGHT LEVEL IN AND OUT OF UNIT. REFER TO THE SPEC. LABEL FOR PROPER LEVEL.

TP LED NOT LIT - CHECK SETTING FOR STRAIGHT / X-OVER CABLE. RESET POWER.

FOR 5VDC INPUT

FRONT PANEL INDICATORS –

RWR – ON WHEN UNIT HAS POWER
R   – ON WHEN TWISTED PAIR IS WORKING AT 100Mbs
            OFF WHEN TWISTED PAIR IS WORKING AT 10Mbs
L   – ON WHEN FIBER OPTIC LINK PRESENT
A   – ON WHEN TWISTED PAIR LINK PRESENT
FX TX FDX – FULL DUPLEX. LIT WHEN FIBER OPTIC LINK
                AND TWISTED PAIR ARE OPERATING AT FULL DUPLEX.
NOTE- *FIBER OPTIC LINK IS ALWAYS OPERATING AT FULL DUPLEX.*

RWR R
  •   •
  •   • **L/A**
  •   • **FDX**
FX   TX

10/100 BASE – TX
100BASE TX PORT
RJ-45 CONNECTOR
HALF/FULL DUPLEX SUPPORT VIA AUTO-NEGOTIATION OR MANUAL
100m OVER UTP/STP 100ohm CAT.5 CABLE

NODE   HUB   MDI-II/MDI-X SELECTION
NODE - CROSS OVER CABLE
HUB - STRAIGHT CABLE

SETTINGS-

AUTO-NEGOTIATION - SW 1, SW 2, SW 3 DOWN/OFF
10M HALF DUPLEX   - SW 1 UP/ON, SW 2, SW 3 DOWN/OFF
10M FULL DUPLEX   - SW 1 UP/ON, SW 2 DOWN/OFF, SW 3 UP/ON
100M HALF DUPLEX   - SW 1 UP/ON, SW 2 UP/ON, SW 3 DOWN/OFF
100M FULL DUPLEX   - SW 1 UP/ON, SW 2 UP/ON, SW 3 UP/ON

NOTE- AFTER CONFIGURATION OF UNIT POWER MUST BE RECYCLED.

TROUBLESHOOTING

RWR LED NOT LIT - CHECK POWER SUPPLY. ENSURE OUTPUT 5VDC.

L LED NOT LIT - CHECK LIGHT LEVEL IN AND OUT OF UNIT. REFER TO THE SPEC. LABEL FOR PROPER LEVEL.

A LED NOT LIT – CHECK TWISTED PAIR CONNECTIONS.

SPECIFICATIONS
Standard Compliance:
 IEEE802.3u, 100BaseTx, 100BaseFx, 10BaseT
100BaseTx Port:
 RJ-45 connector
 Half/full duplex support via auto-negotiation or manual
 100m over UTP/STP 100 ohm cat.5 cable
 Auto-polarity correction
 MDI-II/MDI-X selection
 10BaseT (switch selected)
100BaseFx Port:
 1300nm SC connectors. Optional Single Fiber (DL221A)
 Distance:
  > 100 km (DL221/SMSP)
 Full/half duplex switch selected
Diagnostics:
 Per Channel:
  Full duplex, Link, Activity - 100BaseFx side
 Per System:
  Power (dual, if redundant PS present)
Controls:
 Fiber side:
  FDX/HDX
Copper side:
 10/100 Mbps, FDX/HDX, Auto sensing disable/enable
Environmental/Physical:
 Power supply:
  100/240 VAC.50/60 Hz
  5VDC wall
 Power consumption:
  5 W max.
 Operating temperature:
  0˚-45˚C (32˚-113˚F)
 Storage temperature:
  -30˚- 65˚C (22˚ - 149˚F)
Humidity:
  10-90% non-condensing

NOTE - *Specifications subject to change without prior notice.*

PART NUMBER	DESCRIPTION	ATTEN.	MAX. DISTANCE
DL221-XYZ	Transceiver, Multimode, 2 fibers	9dB	6km
DL221/SM-XYZ	Transceiver, Singlemode, 2 fibers	9dB	25km
DL221/SMHP-XYZ	Transceiver, Singlemode , 2 fibers	18dB	50km
DL221/SMSP-XYZ	Transceiver, Singlemode, 2 fibers	28db	80km
DL221/SMUP-XY5	Transceiver, Singlemode, 2 fibers	28db	110km
DL221A-XYZ	Transceiver, Multimode, 1 fiber	6db	2km
DL221A/SM-XYZ	Transceiver, Singlemode, 1 fiber	9db	25km
DL221A/SM2-XA3	Transceiver, Singlemode, 1 fiber	18db	50km
DL221A/SMHP-XYZ	Transceiver, Singlemode, 1 fiber	18db	50km
DL221A/SMSP-XYZ	Transceiver, Singlemode, 1 fiber	28db	80km

Note:
Specify **X** - packaging of the unit: U-1U rack mount, M-modular, R-card cage rack mount
Specify **Y**- connector type: A-SC/APC, E-SC, B-FC, Z-FC/APC, D- ST
Specify **Z**- wavelength: Multimode 8-850nm, 2-1300nm Singlemode 3-1310nm, 5- 1550nm

 Add -M for SNMP management
 Add -48 for 48VDC power
 For higher optical budgets and distances, CWDM and DWDM systems, contact factory

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