# OB
## T R A F F I C

# Intelligent CyberLock Series

**Featuring: CalTrans, NEMA TS-2, IPv6,
IP40 Enclosure, Military Grade, Class 1 Div 2
Fiber Optic Diagnostics & Measurements
ElectroMagneticPulse (EMP) Certified
Cyber Secure Video (CSV)
Clean Code Technology
DOS / DDOS Detection
Easy Configuration / Small Form Factor
Low Power Consumption
Easy IP Security with Cyber Locks**

*KY-3120DM - 20 Port
Managed, Din Rail, CyberLock,
High Security Ethernet Switch
SCADA - Military Grade*

**The KY-3120DM Managed Ethernet switch is a
purpose built CyberLock- High Security Ethernet
Industrial Switch. This Industrial Ethernet switch is
designed for use in industrial and outside
environments.**

Introducing the KY-3120DM, an industrial grade, high
performance, low power, Managed Ethernet switch
designed exclusively for Traffic, Industrial & Railway use.
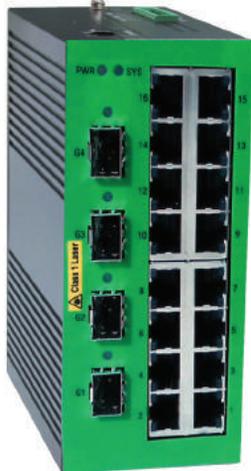
**Power:**
12 - 36 Volts DC

**Temperature Rating**
-40C to +85C

## DYMEC KY-3120DM Features:

### ⌧ Highly Efficient Integrated Design

**KY-3120DM** supports multiple protocols, built-in Web Server,
embedded DHCP Server & Client, IP Cyber Locks, Cyber
Secure Video, DOS & DDOS Detection and Low Power
consumption - smallest carbon footprint in its class.

### ⌧ Fiber Optic Diagnostics & Measurements

Advanced Fiber Optic Diganostics & Measurements - version 3.
Measure continuous optical performance combined with
network notifications.

### ⌧ Integrated & Automatic Security Features

Based on powerful silicon enhanced security detection
and monitoring. Continuous security protection without
operator intervention. Detection of DOS / DDOS attacks,
fiber tampering, and intrusion detection

### ⌧ Intelligent Network Features

In order to ensure the maximum video experience across
challenging and disparate customer network environments,
the **KY-3120DM** can auto-dynamically adapt to network
conditions using features such as MVR, and QOS which
guarantees the best quality video and audio even up to 10%
packet loss.

**KY-3120DM** *Configuration:
16 X 10/100 Base(T)X RJ45 & 4 X 100/1000 SFP Slots*

# IP 40 Class 1 Div 2

**EMAIL:** Sales@trafficOB.com
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# KY-3120DM

| Physical Ports | |
|---|---|
| **10/100Base-T(X) Ports in RJ45 Auto MDI/MDIX** | 16 |
| **100/1000Base-X  SFP Port** | 4 |

| Technology | |
|---|---|
| **Ethernet Standards** | IEEE 802.3 for 10Base-T<br>IEEE 802.3u for 100Base-TX and 100Base-FX<br>IEEE 802.3z for 1000Base-X<br>IEEE 802.3x for Flow control<br>IEEE 802.3ad for LACP (Link Aggregation Control Protocol)<br>IEEE 802.1D for STP (Spanning Tree Protocol)<br>IEEE 802.1p for COS (Class of Service)<br>IEEE 802.1Q for VLAN Tagging<br>IEEE 802.1w for RSTP (Rapid Spanning Tree Protocol)<br>IEEE 802.1s for MSTP (Multiple Spanning Tree Protocol)<br>IEEE 802.1X for Authentication<br>IEEE 802.1AB for LLDP (Link Layer Discovery Protocol) |
| **MAC Table** | 8192 MAC addresses |
| **Priority Queues / Security Queues** | 4 / 4 |
| **Processing** | Store-and-Forward |
| **Switch Properties** | Switching latency : 6 µs<br>Switching bandwidth : 5.6Gbps<br>Max. Number of Available VLANs : 4096<br>IGMP multicast groups : 1024<br>Port rate limiting : User Defined |
| **Security Features** | Enable/disable ports, MAC based port security // CYBER-SECURE Video<br>Port based network access control (802.1x) & CyberLocks<br>VLAN (802.1Q ) to segregate and secure network traffic<br>Supports Q-in-Q VLAN for performance & security to expand the VLAN space<br>Radius centralized password management<br>SNMP v1/v2c/v3 encrypted authentication and access security |
| **Software Features** | STP/RSTP/MSTP (IEEE 802.1D/w/s)<br>Redundant Ring with recovery time less than 10ms over 300 switches<br>TOS/Diffserv supported<br>Quality of Service (802.1p) for real-time traffic<br>VLAN (802.1Q) with VLAN tagging and GVRP supported<br>IGMP v2/v3 (IGMP snooping support) for multicast filtering<br>Port configuration, status, statistics, monitoring, security<br>SNTP for synchronizing of clocks over network<br>Supports PTP Client   (Precision Time Protocol) clock synchronization<br>DHCP Server / Client support<br>Port Trunk support<br>MVR (Multicast VLAN Registration support), Protocol 41 (IPv6 and IPv6 Secure) |
| **Network Redundancy** | FRP Ring  (Fast Ring Protection)<br>Open-Ring<br>RSTPe<br>STP<br>RSTP<br>MSTP |
| **Warning / Monitoring System** | Relay output for fault event alarming / Fiber Diagnostic Monitoring // DDMI version 3<br>Syslog server / client to record and view events<br>Include SMTP for event warning notification via email<br>Event selection support |
| **RS-232 Serial Console Port** | RS-232 in RJ45 connector with console cable.  Baud rate setting: 9600bps, 8, N, 1 |

| LED Indicators | |
|---|---|
| **Power Indicator** | Green : Power LED x 3 |
| **R.M. Indicator** | Green : Indicates that the system is operating in Ring Master mode |
| **Ring Indicator** | Green : Indicates that the system is operating in Ring mode |
| **Fault Indicator** | Amber : Indicates unexpected events occurred |
| **10/100Base-T(X) RJ45 Port Indicator** | Green for port Link/Activity  Amber for Duplex/Collision |
| **100/1000Base-X SFP Port Indicator** | Green for port Link/Activity |

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# KY-3120DM

**OB**
**TRAFFIC**

| Fault Contact | |
|---|---|
| **Relay** | 2.0 Amp @ 36 Volts DC |
| **Power** | |
| **Input Power** | 12~36 Volts DC |
| **Power Consumption (Typical)** | 14 Watts |
| **Overload Current Protection** | YES |
| **Reverse Polarity Protection** | YES |
| **Physical Characteristics** | |
| **Enclosure** | IP-40 / Military Grade, Class 1 Div 2 |
| **Dimensions (W x D x H)** | 60.2 X 115.5 X 138.5 mm (Miniature Size) |
| **Weight (g)** | 760 g |
| **Environmental** | |
| **Storage Temperature** | -40 to 85°C (-40 to 185°F) |
| **Operating Temperature** | -40 to 85°C (-40 to 185°F) |
| **Operating Humidity** | 5% to 97% Non-condensing |
| **Regulatory Approvals** | |
| **EMI and EMP (NNEMP)** | FCC Part 15, CISPR (EN55022) class A and Oak Ridge National Laboratory |
| **EMS** | EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-11. EN61000-4-6 (CS), EN61000-4-8 |
| **Shock** | IEC60068-2-27 |
| **Free Fall** | IEC60068-2-32 |
| **Vibration** | IEC60068-2-6 |
| **Safety** | UL 60950-1 |
| **MTBF (Hours ) MIL-HDBK-217F2, GB, GC, 25°C** | 297,689 (HOURS) |
| | |
| **Fiber Optic / DDMI Optical Diagnostics** | |
| **DDMI version 3** | Digital Diagnostic & Monitoring Interface / with Silicon Security Enhancements |
| **Cryptologic** | |
| **Cyber-Secure Video with Clean Code Technology** | NSA / CSS Coding Guidelines / with Silicon Enhancements |
| **Exceeds NEMA TS-2 for Traffic Control Equipment** | |



| **ORDER Model** | **P R O D U C T** | **D E S C R I P T I O N** |
|---|---|---|
| | **KY-3120DM** | Industrial 20-Port Managed Ethernet Switch with 16 x 10/100Base-T(X) RJ45 and 4 x 100/1000Base-X, SFP Sockets, DDMI / PTP / DHCP CYBER-SECURE Video, Clean Code Technology D = Din Rail // M = Managed |

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