Time Sync

User Manual

A-TSM

A-TSM/B

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aparian

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7.2. ELECTRICAL

Specification	Rating
Power requirements	Input: 10 – 32V DC, (80 mA @ 24 VDC)
Power consumption	1.9 W
Connector	3-way terminal
Conductors	24 – 18 AWG
Enclosure rating	IP20, NEMA/UL Open Type
Temperature	-20 – 70 °C
Earth connection	Yes, terminal based
Emissions	IEC61000-6-4
ESD Immunity	EN 61000-4-2
Radiated RF Immunity	IEC 61000-4-3
EFT/B Immunity	EFT: IEC 61000-4-4
Surge Immunity	Surge: IEC 61000-4-5
Conducted RF Immunity	IEC 61000-4-6

Table 7.1. - Electrical specification.

7.3. ETHERNET

Specification	Rating
Connector	RJ45
Conductors	CAT5 STP/UTP
ARP connections	Max 100
TCP connections	Max 20
CIP connections	Max 10
Communication rate	10/100Mbps
Duplex mode	Full/Half
Auto-MDIX support	Yes

Table 7.2. - Ethernet specification.

7.4. GPS

Specification	Rating
Antenna Port	SMA-Female
Supported Constellations	GPS / QZSS, GLONASS, SBAS, BeiDou
Velocity accuracy	0.05 m/s
Heading accuracy	0.3 degrees
Horizontal position accuracy	2.5m (Autonomous) 2.0m (SBAS)
Accuracy of time pulse signal	60ns
Altitude limit	50,000m
Velocity limit	500 m/s
Odometer support	Yes
Relative Position support	Yes
Isolated	Yes*

* Series B only.

Table 7.3. - GPS specification.

7.5. GPS ANTENNA

Specification	Rating
Antenna Connector	SMA-Male
Cable Length	3m
Cable Type	RG174
Antenna Type	Active
Active Gain	27dB (typical)
Noise figure	1.5 (maximum)
Voltage	2.7 – 5.5 VDC
Temperature	-35°C to +85 °C
Enclosure description	Rugged low profile, UV resistant.

Table 7.4. - GPS Antenna specification.

7.6. 1588 PTP / NTP

Specification	Rating
NTP support (PC time synchronization)	Yes
NTP Time Source supported	Yes
1588 PTP Grandmaster support	Yes
1588 PTP Management Support	Yes
1588 PTP End-to-End (E2E) Delay Mechanism Support	Yes
1588 PTP Peer-to-Peer (P2P) Delay Mechanism Support	Yes
1588 PTP / NTP GPS clock source support	Yes
1588 PTP Holdover reporting support	Yes
1588 PTP Network Transport	IPv4 UDP IEEE802.3

Table 7.5. – 1588 PTP / NTP specification.

7.7. LEGACY DEVICE TIME SYNCHRONIZATION

Specification	Rating
Allen-Bradley PLC5 time synchronization	Yes
Allen-Bradley SLC time synchronization	Yes
Modbus Device register updating	Yes
Legacy Device Auto Time Zone support	Yes

Table 7.6. – Legacy Device Time Synchronization specification.

7.8. CERTIFICATIONS

Certification	Mark
CE Mark	CE