Compact and accurate substation clock.

TSC 100

The TSC 100 is a compact & accurate substation clock with submicrosecond timing that is used to synchronize Intelligent Electronic Devices in the power industry.

KEY FEATURES

- Wide range, isolated power supply
- High power line drivers
- Low noise characteristics due to balanced pair distribution
- UTC & LST with user defined DST options
- Remote configuration
- Security including password protection, user authentication & data encryption
- Complies with IEC 61850-3

SUPPORTS

- DC IRIG-B (Un-modulated, DCLS - C37.118)
- User defined pulses
- Modified Manchester
- SNMP v1, v2c & v3
- DCF-77
- NTP/SNTP (IEC 61850)

PHYSICAL

Metal DIN rail mountable case with IP30 rating
155mm (L) x 110mm (W) x 45mm (H) 0.42 Kg

LED INDICATORS

Three LEDs indicating multiple statuses:
- Sync
- Alarm
- Power

GPS RECEIVER

L1, C/A code, 14 Channel Parallel-tracking receiver
Frequency: 1575.42 Mhz
Pulse accuracy: 50 ns
Sensitivity: Acquisition -142 dBm
                        Tracking -160 dBm

INPUTS

1 x RJ45 UTP connector: 10/100 Mbps
1 x USB2.0   Type B

OUTPUTS

1 x Sync indication output: 200 V, 150 mA (Max)
2 x TTL Outputs: - Time codes or pulses
                               or user defined
                             - Electrical specification:
                               TTL/CMOS compatible
                             - 0-5 V 150 mA
                               sink/source
                             - Timing accuracy:
                               ≤100 ns UTC

INPUT AND OUTPUT OPTIONS

TTL
Programmable Pulses
- From 1,000 per second to 1 per day with
  programmable offset & duration

DCF-77
- DC level Shift
- Local or universal time

IRIG-B
- DC Level Shift or Modified Manchester
- IEEE 1344 Extensions (C37.118)
- AFNOR NF S87-500 Extensions
- Local or universal time

Networking
DHCP - auto-configuration with fallback to
          ARP tested link-local address
VLAN - packet tagging

NTP
- Stratum-1 NTP & SNTP time server
- Multicast & Broad cast server capability
- Optional MDS authentication

SNMP
- v1, v2c & v3 support can be independently enabled
- Configurable v1, v2c community names &
  security groups
- Fully configurable via SNMP
- v3 User-based Security Module (USM) support
- USM MIB support

USM authentication methods
- MD5, SHA
USM privacy methods
- DES, AES

Notifications
- SNMP trap generation v1, v2c & v3
- SNMPv3 traps can be authenticated &
  privatised via USM
- Syslog (RFC-3164 & 5424 verified)

UPGRADES

Remote upgrade via Ethernet.
Firmware is cryptographically signed, &
authenticated prior to permitting an upgrade.

CONFIGURATION SOFTWARE

Windows based configuration software is available to be downloaded from the Tekron website.

User adjustable features include:
- Multi-level access control
- Privacy & authentication methods equivalent to SNMP USM
- "Supervisor-mode" prevents non-approved changes

Timing & Synchronization
Worldwide daylight savings & local time configuration using either rule based or fixed date methods.

Options that allow equipment checks prior to full installation and adjustable hold-over times to increase reliability in the case of poor GPS coverage.

Adjustments to compensate for installation parameters such as delay of GPS signal through antenna cable.

TSC 100 Top View

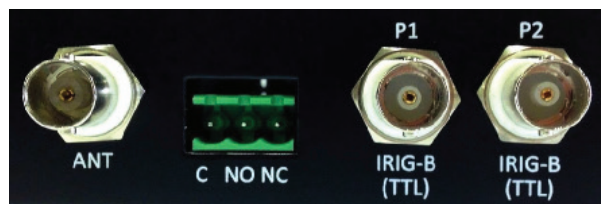TSC 100 Bottom View

OPTIONAL ACCESSORIES

Physical
- GNSS antenna
- Antenna cable
- Adjustable antenna mount
- Lightning protection kit

Refer to tekron.com for full techinical specifications.

ENVIRONMENTAL AND ELECTRICAL

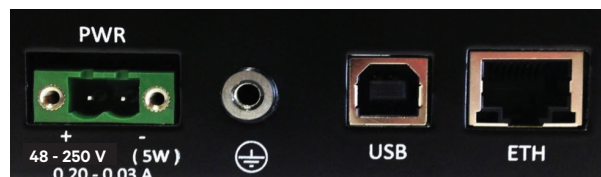|	
Power supply:	48-250 Vdc
Power Drain:	5 W max
Operating temperature:	-40 to +85°C
Humidity:	To 95% non-condensing
Isolation	
Power to Antenna:	3.75 kV
Power to I/O:	3.75 kV

COMPLIANCE

The TSC 100 passes the following tests:

Applicable council directive according to:
- CE Compliance Low voltage directive EN60950-1
- EMC Directive EN61000-6-2, EN61000-6-4
- North America cULus UL60950-1
- C22.2 No. 60950-1

ABOUT TEKRON

Tekron is a leading developer of accurate GPS/GLONASS clocks and time synchronisation solutions for use in industrial applications.

WORLD WIDE WARRANTY
10 YEARS

CONTACT US

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Note:
The quickest and most effective method to request a quote is through the online quote request form on the Tekron website.

TEKRON
because timing is everything