

Triconex 4351A Manual

Brand	Triconex
Product Series	Triconex
Product Type	and the address of the

Description

Tricon Communication

Module 4351A

The Tricon Communication Module (TCM), which is compatible with only Tricon v10.0 and later systems, allows the Tricon to communicate with TriStation, other Tricon or Trident controllers, Modbus master and slave devices, and external hosts over Ethernet networks. Each TCM contains four serial ports, two network ports, and one debug port (for Triconex use).

Each serial port is uniquely addressed and can be configured as a Modbus master or slave. Serial port #1 supports either the Modbus or the Trimble GPS interface. Serial port #4 supports either the Modbus or the TriStation interface. Each TCM supports an aggregate data rate of 460.8 kilobits per second, for all four serial ports.

Programs for the Tricon use variable names as identifiers but Modbus devices use numeric addresses called aliases. Therefore, an alias must be assigned to each Tricon variable name that will be read by or written to a Modbus device. An alias is a five-digit number which represents the Modbus message type and the address of the variable in the Tricon. An alias number is assigned in TriStation.

Any standard Modbus device can communicate with the Tricon through the TCM, provided that aliases are assigned to the Tricon variables. Alias numbers must also be used when host computers access the Tricon through other communication modules. See "Communication Capabilities" on

www.AutoDCSTech.com

page 59 for more information.

Each TCM contains two network ports—NET 1 and NET 2. Models 4351A and 4353 have two copper Ethernet (802.3) ports and Models 4352A and 4354 have two fiber-optic Ethernet ports. NET 1 and NET 2 support the TCP/IP, Modbus TCP/IP Slave/Master, TSAA, TriStation, SNTP, and Jet Direct (for network printing) protocols. NET 1 also supports the Peer-to-Peer and Peer-to-Peer Time Synchronization protocols. A single Tricon system supports a maximum of four TCMs, which must reside in two logical slots. Different TCM models cannot be mixed in one logical slot. Each Tricon system supports a total of 32 Modbus masters or slaves—this total includes network and serial ports. The hot-spare feature is not available for the TCM, though you can replace a faulty TCM while the controller is online.

Model Number 4351A, 4352A, 4353, 4354

Serial ports 4, RS-232/RS-485, RS-485, RS-485 connectors

Network ports 2, 10/100BaseT Ethernet ports, RJ-45 connectors (model 4351A and 4353)

2, fiber-optic mode Ethernet ports, MTRJ connectors with 62.5/125 um fiber cables (model 4352A and 4354)

Port isolation 500 VDC

Protocols TriStation, Modbus, TCP/IP, ICMP, SNTP, TSAA, Trimble GPS, Peer-to-Peer, Peer-to-Peer Time Synchronization, Jet Direct (network printing)

Modbus functions

supported

01 — Read Coil Status 06 — Modify Register Content

02 — Read Input Status 07 — Read Exception Status

03 — Read Holding Registers 08 — Loopback Diagnostic Test

04 — Read Input Registers 15 — Force Multiple Coils

05 — Modify Coil Status 16 — Preset Multiple Registers

Communication speed Copper Ethernet ports: 10/100 Mbps

Fiber Ethernet ports: 100 Mbps

Serial ports: up to 115.2 Kbps per port

Status Indicators PASS, FAULT, ACTIVE, FIRM

LINK— 1 per network port, TX (Transmit) — 1 per port,

RX (Receive) — 1 per port