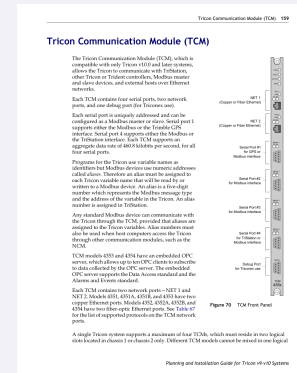


FIELD INSTALLATION QUICK GUIDE

Installation Instructions

Invensys Triconex 4351B

Tricon Communication Module



PRODUCT	4351B
FAMILY	Tricon v9-v10
FUNCTION	Tricon Communication Module
STATUS	Verify exact configuration

Prepared by Amikon Limited from Invensys 9700077-012, February 2009. This guide does not replace the complete manufacturer manual, site procedure, hazardous-area drawing, or approval document.

01 CONFIRM THE ORDERED CONFIGURATION

Controller release compatibility	Tricon v10.3 or later
Serial interfaces	4 RS-232/RS-485 ports; DB-9
Ethernet interfaces	2 copper 10/100BaseT ports; RJ-45
Port isolation	500 VDC
Maximum serial rate	115.2 Kbps per port
Combined serial throughput	460.8 Kbps across four ports
Modbus serial operation	Master RTU; slave ASCII or RTU

02 MOUNTING AND CONNECTION

- Verify Tricon v10.3 or later and the installed TCM model combination.
- Label and disconnect every communication cable before removing the faulty TCM.
- Plan for loss of all communication through the removed module.
- Seat the replacement firmly and tighten fasteners to 10 inch-pounds.
- Expect Pass in about 1 minute and Active in 1-2 minutes.

Tricon Communication Module (TCM)

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, such as the NCM.

TCM models 4353 and 4354 have an embedded OPC server, which allows up to ten OPC clients to subscribe to data collected by the OPC server. The embedded OPC server supports the Data Access standard and the Alarms and Events standard.

Each TCM contains two network ports — NET 1 and NET 2. Models 4351, 4351A, 4351B, and 4353 have two copper Ethernet ports. Models 4352, 4352A, 4352B, and 4354 have two fiber-optic Ethernet ports. See [Table 67](#) for the list of supported protocols on the TCM network ports.

A single Tricon system supports a maximum of four TCMs, which must reside in two logical slots located in chassis 1 or chassis 2 only. Different TCM models cannot be mixed in one logical

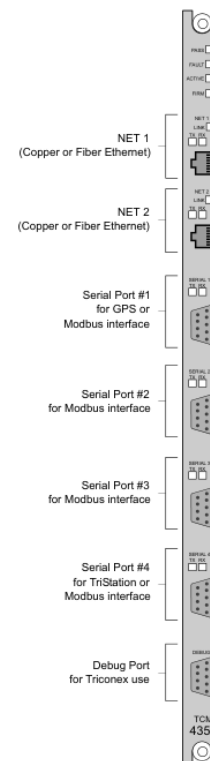


Figure 70 TCM Front Panel

04

CABLE ROUTING AND CONNECTION

- Label and disconnect every communication cable before removing the faulty TCM.
- Plan for loss of all communication through the removed module.
- Seat the replacement firmly and tighten fasteners to 10 inch-pounds.
- Expect Pass in about 1 minute and Active in 1-2 minutes.
- Reconnect labelled cables and verify each configured communication service.

05

INITIAL SYSTEM CHECKS

- Confirm model identity and compatible system components before energizing.
- Verify wiring, grounding, enclosure, and applicable hazardous-area requirements.
- Confirm normal indications and fault-contact state after commissioning.
- Record the installed order number and baseline operating condition.

06

CONTROLLED DOCUMENTS

Official source	Invensys 9700077-012, February 2009
Product record	4351B
Manufacturer	Invensys Triconex
Support	INFO@AMIKON.CN