

# Modicon Quantum automation platform

## Asynchronous serial link module

### Presentation

The 140 ESI 062 10 asynchronous serial link module is a general-purpose ASCII interface module that can be used to exchange data messages with third-party devices.

This module is particularly suitable for use in applications with printers, bar code readers and scanners, or even devices communicating via a serial link, such as weigh scales, meters or other measurement devices.

This module has been designed for relatively simple point-to-point ASCII communications. A resident command interpreter can be used primarily to specify the formats and baud rate of the communication ports in operational mode, using a serial link management utility such as Microsoft® HyperTerminal. This interpreter can also be used to enter ASCII message formats, which will be stored in this module.

These message formats constitute the base around which communication is organized. Thus, using an appropriate syntax, these formats define for example, for transmissions, the fixed characters which will be sent down the communication line. These transmission message formats can also be used to specify the sending of data that is an image of the card registers, in accordance with a particular representation (binary, integer, ASCII, etc).

For reception, the message formats used are usually limited to specifying a wait for a certain number of values or characters, directed to the module internal data registers. Unlike transmission, the specifiers used on these reception message formats can be used to define the numerical base(s).

The Quantum controller application program communicates with the asynchronous serial link module via the mailbox registers. These registers submit commands to the module and translate the responses. The communication commands are processed by requesting transmission on one port, through the use of a message format. Conversely, it is possible to listen for reception on this port, through the use of a message format.

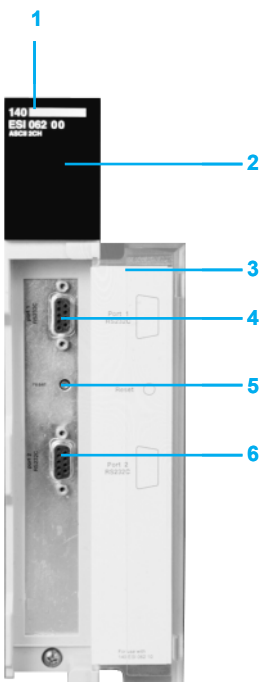
If the exchange mailboxes between the controller and the module are not large enough to carry all the application data required for a transaction, at the same time as the transmission and reception commands, additional commands (Get/Put) will be called on for exchanges between the controller database and the module internal registers.

**Note:** In LL984 programming mode, with Concept and ProWORX programming software, it is possible to call on an additional instruction (ESI), which is intended to simplify the management of data exchange sequences between the controller application and the asynchronous serial link module. This programming software also requires integration of special software (NSUP and ESI) during controller configuration (IEC Concept only uses ESI software). The ESI software is provided on floppy disk, supplied together with the asynchronous serial link module hardware reference guide.

### Description

The 140 ESI 062 10 asynchronous serial link module front panel comprises:

- 1 Module number and color code
- 2 LED array
- 3 A removable, hinged door and customer identification label
- 4 A 9-pin SUB-D connector (RS 232C comm port 1)
- 5 A reset button
- 6 A 9-pin SUB-D connector (RS 232C comm port 2)



Characteristics			
<b>Module type</b>	<b>140 ESI 062 10</b>		
<b>Data interface</b>	Serial ports		2 RS 232C ports, per DIN 66020, non isolated, 9-pin SUB-D connector
	Burst speed	<b>Kbps</b>	19.2 each port
	Continuous speed		Application-dependent
	Cable	<b>m</b>	20 (shielded)
<b>Firmware</b>	Message nesting		8 levels
	Buffer size	<b>bytes</b>	255 I/255 Q
	Number of messages		255
	Message length	<b>bytes</b>	127 characters + 1 checksum max.
	Calendar clock		Hours/Minutes/Seconds Day of week/Month/Day of month/Year
<b>Memory</b>	RAM	<b>Kb</b>	32 (16 384 16-bit registers)
	Flash	<b>Kb</b>	128 (for firmware)
<b>Backup in the event of power outage</b>	Battery holder module 140 XCP 900 00		
<b>Power dissipation</b>		<b>W</b>	2 max.
<b>Bus current required</b>		<b>mA</b>	300
<b>Addressing requirement</b>	12 input words and 12 output words		
<b>Compatibility</b>	Software		Unity Pro version $\geq$ 2.0, ProWORX NxT version $\geq$ 2.0, ProWORX 32 or Concept $\geq$ 2.0
	Quantum CPU		Any type

References				
Description	Characteristic	Reference	Weight	kg
<b>ASCII serial link module with 2 RS 232 C ports</b>	19.2 Kbps	<b>140 ESI 062 10</b>	0.300	
<b>Backup battery holder module</b>	2 C type lithium batteries, 3 V	<b>140 XCP 900 00</b>	–	
<b>Cables for programming terminal with Modbus interface</b>	3.7 m	<b>990 NAA 263 20</b>	0.300	
	15 m	<b>990 NAA 263 50</b>	1.820	
<b>140 ESI 062 10 user manual</b> (including loadable ESI for Concept and ProWORX software)	In English	<b>840 USE 108 00</b>	–	

