Machine **Struxure**™

Communication via modem and router

for Modicon M221, M241, M251 logic controllers

Catalog

March 2017

Schneider Electric

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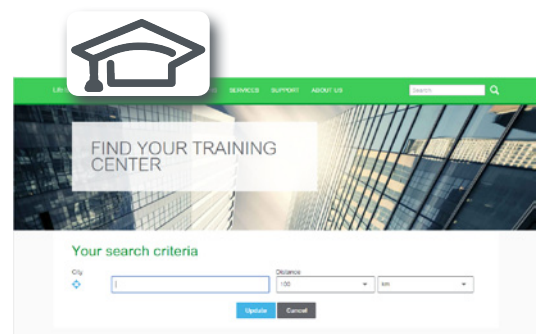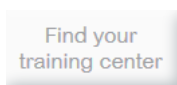– Download Digi-Cat from this address:

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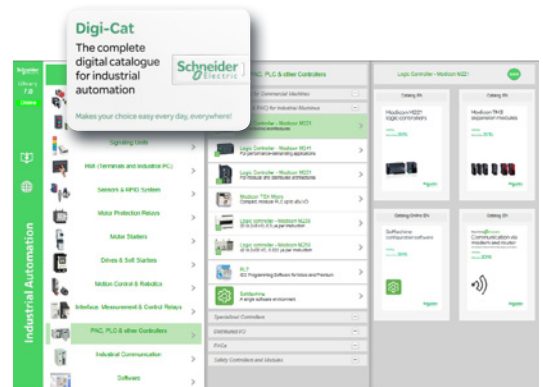
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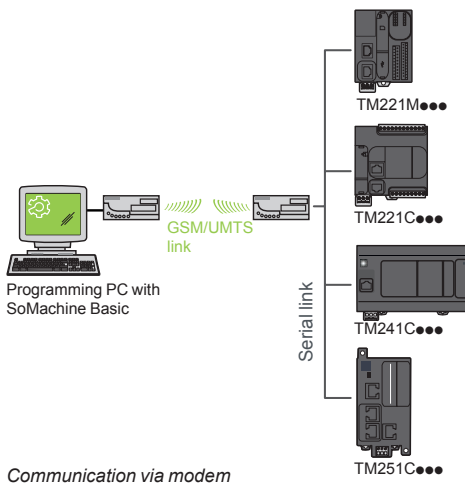
General content

Communication via modem and router
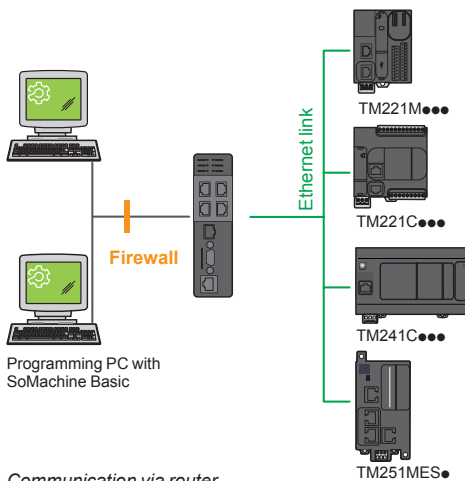**For Modicon M221, Modicon M221 Book, Modicon M241 and Modicon M251 logic controllers**

Communication via modem and router

For Modicon M221, M221 Book, M241 and M251 logic controllers

TM221M●●●

TM221C●●●

TM241C●●●

TM251C●●●

GSM/UMTS link

Serial link

Programming PC with SoMachine Basic

Communication via modem

TM221M●●●

TM221C●●●

TM241C●●●

TM251MES●

Ethernet link

Firewall

Programming PC with SoMachine Basic

Communication via router

Presentation

The communication via modem and router offer is dedicated to the following applications:
■ Synchronization between remote machines; direct data exchange between controllers
■ Remote maintenance; access to the controller via the programming software (SoMachine or SoMachine Basic).
■ Remote control and monitoring of machines; receipt of information and sending commands on GSM/UMTS phone*(1)*

This offer comprises a Schneider Electric GSM/UMTS modem and an Ewon® VPN router.
Setting up this router requires installation of two configuration software programs.

GSM/UMTS modem
This modem can either be used on the machine or connected to the PC if it does not have a modem. On the machine side, it is then connected to the logic controller SL or SL1 serial port *(2)*. On the PC side, it uses a USB port.

VPN router
The eWON Cosy is an industrial VPN router designed to offer easy remote access, via the Internet.
On the machine side, it is connected to the controller Ethernet port. The router establishes a secure VPN connection via the plant LAN. This is an outgoing connection compatible with the firewalls. Remote users can only access the machine's LAN, not the customer's LAN.

(1) Global System Mobile (2G)/Universal Mobile Telecommunications System (3G)
*(2) The modem cannot be connected to either the logic controller SL2 port or the **TMC2SL1** cartridge.*

Applications

		SR2MOD03 modem	Ewon Cosy 141 router
Type of connection between logic controller and modem/router		Serial link	Ethernet
Remote maintenance	Monitoring via the protocol for programming and writing variables *(1)*	**M221, M221 Book**	**M221, M221 Book, M241, M251**
	Application transfer/download	**M221, M221 Book**	**M221, M221 Book, M241, M251**
	Online program modification (writing code)	**M221, M221 Book**	**M221, M221 Book, M241, M251**
Remote data logging	File reading/writing	–	**M241, M251**
Synchronization between machines	Modbus exchanges	**M221, M221 Book M241, M251**	–
Remote control	Receiving/sending SMS	**M221, M221 Book M241, M251** *(2)*	–
	Viewer Web server (HTTP)	–	**M241, M251**
	OPC communication *(3)* (on Modbus protocol)	**M221, M221 Book, M241, M251**	**M221, M221 Book, M241, M251**

Logic controller supporting the application

(1) Including Run/stop, Init.
(2) Function blocks in SoMachine and SoMachine Basic programming software.
(3) The OPC (Object Linking and Embedding for Process Control) standard defines communication between Windows applications and the hardware/software used regularly in the field of process control (e.g. controllers). The OPC standard describes a coherent and universal way of accessing field data in the factory devices.

Schneider Electric

Communication via modem and router

For Modicon M221, M221 Book, M241 and M251 logic controllers

SR2MOD03

Ewon Cosy 141

TSXCUSB232

Modem

Description	■ Composition	Reference	Weight kg/*lb*
GSM/UMTS modem *(1)*	■ Quad band type 900/1800 MHz, 850/1900 MHz ■ Supplied with: □ a power supply cable (1.5 m/4.921 ft long) □ a magnetic GSM 4-band aerial SMA-M with 2.5 m (8.202 ft) long cable ■ Mounted on panel or rail ⌐ ■ Supply voltage: 12…24 V ⎓	**SR2MOD03**	0.335 *0.739*

Connection components for modem link

Description	■ For use ■ Composition	Reference	Weight kg/*lb*
Connecting cables	■ Between modem and M221, M221 Book, M241 and M251 logic controllers ■ Equipped with an RJ 45 connector and a 9-way male SUB-D connector, 3 m (9.843 ft); cable type: 4-wire: RX, TX, RTS, CTS	**TCSMCN3M4M3S2**	0.150 *0.331*
	■ Between Modem and PC ■ Equipped with 2 x 9-way male SUB-D connectors, 1.8 m (5.906 ft)	**SR1CBL03**	0.110 *0.243*
USB-RS232 converter	■ For PC not equipped with a 9-way SUB-D connector ■ Equipped with a USB connector and a 9-way SUB-D connector, cable length: 0.4 m (*1.31 ft*)	**TSXCUSB232**	0.145 *0.320*

Router

Description	■ Composition	Reference
Ewon Cosy 141 (partner offer)	■ VPN internet ■ 4 x Ethernet LAN 10/100 MB switch, 1 x Ethernet WAN 10/100 MB, 1 x RS 232/485 9-way SUB-D ■ Supply voltage: 12…24 V ⎓ ■ Mounted on rail ⌐	**Visit our partner's website** **http://www.ewon.biz/en/home.html**

Connection components for router link

For the connection between the router and the logic controller, use Ethernet cables type 490NTW●●●● and TCSEC●●●●. Please consult the Connexium offer on our website www.schneider-electric.com

Programming software

Description	Compatibility with logic controllers	Reference
SoMachine Basic	M221 and M221 Book	**Please consult our website: www.schneider-electric.com**
SoMachine	M241 and M251	**Please consult our website: www.schneider-electric.com**

(1) Global System Mobile (2G)/Universal Mobile Telecommunications System (3G)

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