

1.0

General

1.1

Introduction

The 1MRS119000 modem board is a multifunctional plug-in modem board which can be used together with several distribution automation products of ABB Transmit Oy. Via the local public telephone network or leased lines the modem provides data communication at up to 14400 bps. Furthermore, the modem can be connected to several types of radios for communication via a radio-operated network.

This optional modem board is used for communication between a remotely controlled unit or a protection relay and a host computer. It is only delivered as part of such systems. The modem board takes care of the data communication from station-level equipment to the host computer via a public telephone network, leased lines or a conventional radio network.

The modem is designed according to the following international ITU-T recommendations for data signalling rates up to 14400 bps:

ITU-T V.21	300 bps
ITU-T V.22	1200 bps
ITU-T V.22bis	2400 bps
ITU-T V.23	1200/75 bps
ITU-T V.32	4800/9600 bps
ITU-T V.32bis	14400 bps

The line interface fulfils the NET 4 (ETS 300 001, second edition, April 1994) specification for the agreed countries: "Attachments to Public Switched Telephone Network (PSTN); General technical requirements for equipment connected to an analog subscriber interface in the PSTN".

The AT command set is used for configuration of both the telephone modem and the radio modem. Configuration is done via the RS 232 serial interface with help of a PC/Terminal (DTE).

The remote configuration of the modem offers users network management capabilities. The user can configure the modem at remote sites from local modems, without having to visit the local stations or rely on the service personnel to follow instructions.

1.2

Type marking

The type marking of the modem consists of a type number, a temperature range code and a country code. The type number is 1MRS119000-___. The one-letter temperature range code and the two-letter country code specify the service temperature range and the destination country where the modem is to be installed. The country code is needed to make sure that the public line part of the modem has been approved for use in the destination country. The status of approval per country can be inquired from ABB Transmit Oy or ABB's local customer centre.

Example of the type marking:

1MRS119000 -AFI

		Country code
		FI = Finland
		Temperature range
		A = +5...+50°C
		B = -20...+60°C
		Type number

Country codes are:

AR = Argentina	AT = Austria	AU = Australia	BE = Belgium
BR = Brazil	CA = Canada	CH = Switzerland	CO = Colombia
CZ = Czech republic	DE = Germany	DK = Denmark	EE = Estonia
EG = Egypt	ES = Spain	FI = Finland	GB = Great Britain
GR = Greece	HK = Hong Kong	HU = Hungary	ID = Indonesia
IE = Ireland	IL = Israel	ID = Indonesia	IT = Italy
MX = Mexico	MY = Malaysia	NL = Netherlands	NO = Norway
NZ = New Zealand	PH = Philippines	PL = Poland	PT = Portugal
SA = Saudi Arabia	SE = Sweden	SG = Singapore	SI = Slovenia
TR = Turkey	TW = Taiwan	RU = Russia	VE = Venezuela
ZA = South Africa			

1.3

Features

DTE Interface: an RS232 serial interface with hardware handshaking, connected to two 9-pin female D-connectors.

Line interface: a transformer-coupled telephone line interface with tone and pulse dialling. The line interface can be used in both 2-wire and 4-wire dial-up and leased line connections.

Radio interface: a combined interface for connecting either a leased line, or a radio transceiver.

Both the Line interface and Radio interface can be used for communication over leased lines.

Indication LEDs: The seven LEDs show the operation status of the modem.

Designed for operation in distribution automation environment.