

MiVoice MX-ONE Transmission

DESCRIPTION



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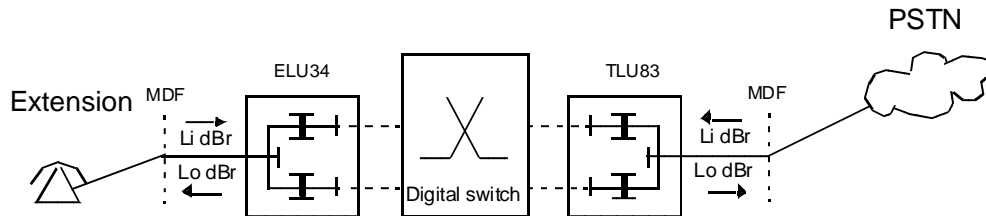
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1 MX-ONE TRANSMISSION

This description includes the transmission parameters for the Multimedia Communication System MX-ONE. Included interfaces are:

Analog 2-wire extension line (ELU34)

Analog 2-wire PSTN line (TLU83), See figure below.



1.1 ANALOG EXTENSION LINE

The relative levels (Li and Lo) together with input and balance impedances are market dependent. The following values apply for the analog extension line interface (ELU34).

1.1.1 MARKET ADAPTATIONS OF IMPEDANCES, LEVELS AND RING CADENCES FOR ANALOG EXTENSION

Market	Lo dBr	Li dBr	Input impedance ohm+(ohm//nF)	TBRL test network ohm+(ohm//nF)	Ring frequency Hz
Standard (Mitel/Aastra)	-6	0	600	600	25
Australia	-6	0	220 + (820 // 120)	220 + (820 // 120)	25
Austria	-10	3	220 + (820 // 115)	600	25
Belgium	-7	0	150 + (830 // 72)	600	25
Brazil	-7	0	900	0 + (800 // 50)	25
Canada	-3,1	3,1	600	600	25
China DRX	-7	0	200 + (680 // 100)	200 + (680 // 100)	25
China PABX	-3,5	0	200 + (560 // 100)	200 + (560 // 100)	25
Denmark	-6	0	300 + (1000 // 220)	400 + (500 // 330)	25
Finland	-7	0	270 + (910 // 120)	270 + (1200 // 120)	25
France	-8,9	-1,9	215 + (1000 // 137)	600	50

Germany	-7	0	220 + (820 // 115)	220 + (820 // 115)	25
Hong Kong A-law	-6	0	600	600	25
Hong Kong My-law	-3,1	3,1	600	600	25
Indonesia	-6	0	600	600	25
Ireland	-6	0	600	600	25
Italy	-7	0	180 + (630 // 60)	0 + (750 // 18)	25
Korea	-6	0	600	600	25
Malaysia	-6	0	600	600	23
Market Group 2	-6	0	600	600	25
Mexico	-6	0	600	600	25
New Zealand	-8,5	3	370 + (620 // 310)	220 + (820 // 120)	25
North America	-3,1	3,1	600	600	20
Norway	-5	2	120 + (820 // 110)	120 + (820 // 110)	25
Saudi Arabia	-6	0	600	600	25
Singapore	-6	0	600	600	25
South Africa	-7	0	220 + (820 // 115)	220 + (820 // 115)	25
Spain	-7	0	220 + (820 // 120)	220 + (820 // 120)	25
Sweden	-5	0	270 + (750 // 150)	270 + (750 // 150)	25
Switzerland	-6,5	0	220 + (820 // 115)	220 + (820 // 115)	25
The Netherlands	-7	0	600	340 + (422 // 100)	25
United Kingdom	-3,9	3,1	275 + (1200 // 200)	370 + (620 // 310)	25

1.1.2 AC TRANSMISSION DATA FOR ANALOG EXTENSION LINE

Return Loss 14 dB @ 310 Hz 18 dB @ 1014 Hz 14 dB @ 3310 Hz	with balance impedance 220+(820 // 115)
Frequency response A → D -0,3..1,0 dB @ 310 Hz -0,3..1,5 dB @ 3400 Hz Frequency response D → A -0,3..1,0 dB @ 310 Hz -0,3..1,5 dB @ 3400 Hz	
Impedance unbalance about earth (LCL) 45 dB @ 310 Hz 52 dB @ 3400 Hz	
Signal to noise ratio (including quantizing distortion) 33 dB (A → D) 29 dB (D → A)	with input signal of -30 dBm0 @ 1020 Hz
Weighted noise -63,5dBm0p (A → D) -60,0 dBm0p (D → A)	

1.2 ANALOG PSTN TRUNK LINE

1.2.1 MARKET ADAPTATIONS OF IMPEDANCES AND LEVELS FOR ANALOG PSTN LINE

Market	Short line		Long line		Input impedance ohm+(ohm//nF)	Balance impedance ohm+(ohm//nF)
	Lo dBr	Li dBr	Lo dBr	Li dBr		
Australia	0,0	-6,0	3,0	-9,0	220 + (820 // 120)	220 + (820 // 120)
Belgium	-3,0	-4,0	-1,0	-6,0	270 + (750 // 150)	270 + (750 // 150)
Brazil	-1,0	-6,0	-	-	900	800 // 50
China	-4,0	-3,0	-6,0	-1,0	200 + (680 // 100)	200 + (680 // 100)
Denmark	-3,0	-3,0	0,0	-6,0	270 + (750 // 150)	270 + (750 // 150)

Finland	-2,5	-4,5	-2,5	-4,5	270 + (750 // 150)	270 + (750 // 150)
Germany	-2,0	-5,0	0,0	-7,0	270 + (750 // 150)	270 + (750 // 150)
Hong Kong	2,88	- 2,88	-	-	600	600
Italy	-1,0	-6,0	-	-	220 + (820 // 120)	270 + (750 // 150)
Mexico	-3,0	-3,0	-1,0	-5,0	600	600
New Zealand	-1,0	-3,0	-1,0	-3,0	370 + (620 // 310)	370 + (620 // 310)
Norway	-1,0	-2,0	1,0	-4,0	270 + (750 // 150)	270 + (750 // 150)
Spain	-3,0	-4,0	-1,0	-6,0	270 + (750 // 150)	270 + (750 // 150)
Sweden	-3,0	-2,0	-	-	270 + (750 // 150)	270 + (750 // 150)
The Netherlands	-3,0	-4,0	-1,0	-6,0	270 + (750 // 150)	270 + (750 // 150)
UK	0,1	-4,1	2,2	-6,7	270 + (750 // 150)	270 + (750 // 150)
USA	+2,88	- 2,88	-	-	600	600

1.2.1 AC TRANSMISSION DATA FOR ANALOG PSTN TRUNK LINE

Return Loss 14 dB @ 200 Hz 22 dB @ 1000 Hz 14 dB @ 3400 Hz	with balance impedance 600 ohm
Frequency response A → D -0,3..0,5 dB @ 290Hz -0,3..0,5 dB @ 3010 Hz Frequency response D → A -0,3..0,5 dB @ 290 Hz -0,3..0,5 dB @ 3010 Hz	
Impedance unbalance about earth (LCL) 58dB @ 200 Hz 52 dB @ 3000 Hz	

Signal to noise ratio (including quantizing distortion) 35dB (A → D) 33dB (D → A) 35dB (A → D) 33dB (D → A)	 with input signal of 0 dBm0 with input signal of -30 dBm0
Weighted noise -64,5dBm0p (A → D) -68,8 dBm0p (D → A) -71,0 dBm0p (A → D) -77,0 dBm0p (→A)	 Markets: UK, HongKong and New Zealand US market

1.3 STANDARDS

Referred standards are:

- ES 201168 (EU)
- EIA/TIA 464-C (US)
- AS/CA S003.1:2010 (AU)
- AS/ACIF S004-2008 (AU) Voice frequency performance requirements for Customer Equipment
- PTC220: 2008 (NZ)

1.4 ABBREVIATIONS

- ELU - Extension Line Unit
- LCL - Longitudinal Conversion Loss
- MDF - Main Distribution Frame
- PSTN - Public Switched Telephony Network
- TLU - Trunk Line Unit