



SLC[®]-2000 Access System

SPQ[®] 300 (COT) Quad POTS Channel Unit — SAC1ACF

Features/Functions

- compatible with *CLASS*^{*} services
- unique keying to prevent erroneous insertion in shelf
- compatible with calling number delivery (CND) and calling name delivery (CNAM) services
- faceplate test access to tip and ring for four channels
- faceplate BUSY LED indicators
- no option switches
- inventory information (for example, *CLEI*[†] code, date of manufacture, etc.)
- conforms to appropriate industry standards

Description

The *SPQ*[®] 300 channel unit (CU) (COMCODE 107049660) is designed for 2-wire, loop-start POTS service. This unit provides four channels of service and is usually located at the central office terminal (COT). The *SPQ* 300 CU furnishes a current sink interface to the central office (CO) and supports a fast-forward disconnect feature [the remote terminal (RT) disconnects when the CO open battery interval is longer than 50 ms].

^{*} Service mark of Bell Communications Research, Inc.

[†] COMMON LANGUAGE is a registered trademark and CLEI, CLLI, CLCI, and CLFI are trademarks of Bell Communications Research, Inc.

The *SPQ300* CU stores in nonvolatile memory an inventory record (including the 10-character *CLEI* code) available for reading by a compatible operations support system (OSS).

Compatibility

The *SPQ300* CU is compatible with all current and planned releases of the *SLC*[®]-2000 Access System. The far-end termination can be a *SPQ400*, *SPQ440*, *SPQ450*, or *SPQ478* CU.

Specifications

Table 1 lists the applicable electrical and transmission specifications and Table 2 lists the environmental specifications for the *SPQ300* CU.

Table 1. *SPQ*[®] 300 CU Applicable Electrical and Transmission Specifications (Note)

Parameter	Value
VF loss, off-hook, between CO and network interface (NIF) at customer location	4 to 8 dB
Nominal 1000 Hz loss	0 dB
VF loss, on-hook, between CO and NIF at customer location	9 to 13 dB
Nominal loss, on-hook	1.5 dB
Return loss at COT (reference Z of $900\ \Omega + 2.16\ \mu\text{F}$, terminated with $900\ \Omega + 2.16\ \mu\text{F}$)	ERL > 18 dB SRL > 10 dB
Return loss at RT (reference Z of $900\ \Omega + 2.16\ \mu\text{F}$, CO terminated with $900\ \Omega + 2.16\ \mu\text{F}$)	ERL > 18 dB SRL > 10 dB

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Table 1. SPQ® 300 CU Applicable Electrical and Transmission Specifications (Note) — Continued

Parameter	Value
Output impedance (structural impedance, hybrid impedance)	900 Ω +2.16 μ F
Minimum longitudinal balance (measured by IEEE Method 455-1976)	200 to 1000 Hz: ≥ 58 dB 3000 Hz: ≥ 53 dB
Idle channel noise, end-to-end	≤ 20 dBnC
Frequency response (loss relative to 1004 Hz) End to end	300 to 3000 Hz: -0.5 to $+1$ dB 3200 Hz: -0.5 to $+1.5$ dB
SPQ® 300 only	300 to 3000 Hz: -0.25 to $+0.5$ dB 3200 Hz: -0.25 to $+0.75$ dB
60-Hz rejection	> 20 dB
Crosstalk (0 dBm0 input, 200 to 3400 Hz)	≤ -65 dBm0
Impulse noise at a threshold of 47 dBnC0 for 15 minutes	≤ 15 counts
Data pulse distortion (PAR) End to end	> 90
SPQ300 only	≥ 94
Single frequency distortion with input of: 0 Hz to 12 kHz, 0dBm0 1004 Hz to 1020 kHz, 0dBm0	< -28 dBm0 at 0 Hz to 12 kHz < -40 dBm0 at 0 Hz to 4 kHz
Signal to distortion with input of: 0 to -30 dBm0 -30 to -40 dBm0 -40 to -45 dBm0	> 33 dB > 27 dB > 22 dB
System generated tones 0 Hz $< f < 16$ kHz	< -50 dBm0
Gain tracking at 1004 Hz, relative to 0 dBm0 -37 to $+3$ dBm0 -50 to -37 dBm0	± 0.5 dB max (± 0.25 dB average) ± 1.5 dB max (± 0.5 dB average)

Note: Off hook unless specified. End-to-end performance with a SPQ400 in the RT.

Table 2. SPQ® 300 CU Environmental Specifications

Temperature Range (Ambient)

Operating −40° to 85°C (−40° to 185°F)
Storage −40° to 85°C (−40° to 185°F)

Relative Humidity, Noncondensing

5 to 95 %

Installation and Testing

There are no switches to set on this unit. Procedures for testing the unit are given in AT&T 363-208-001, *SLC-2000 Access System, User/Service Manual*.

The SPQ 300 CU is compatible with mechanized loop testing (MLT), the pair gain test controller (PGTC), and extended test controller (XTC) test systems.

The faceplate jack provides easy test access to the tip (T) and ring (R) of all channels (A, B, C, and D) through the ITT RTG16L2H15A channel unit faceplate test cord (COMCODE 405755208).

Faceplate Features

Figure 1 shows the SPQ 300 CU faceplate. The edge connections are listed in Table 3. Faceplate features include the following busy LED indicators.

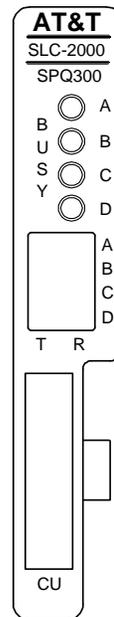
BUSY A (Red LED indicator). When lighted, the A channel (channel 1) is busy.

BUSY B (Red LED indicator). When lighted, the B channel (channel 2) is busy.

BUSY C (Red LED indicator). When lighted, the C channel (channel 3) is busy.

BUSY D (Red LED indicator). When lighted, the D channel (channel 4) is busy.

Also, the faceplate features test jack access to tip and ring through the ITT RTG16L2H15A channel unit faceplate test cord (COMCODE 405755208).



tpaSPQ300-01

Figure 1. *SPQ 300* CU FaceplateTable 3. *SPQ 300* CU Edge Connections

Finger #	Function
1	Frame ground
2	Ringling ground
3	T (channel 3)
4	R (channel 3)
5	T (channel 4)
6	R (channel 4)
17, 20, 21	Circuit ground
22, 23, 25, 50	+5 volts DC
26	Office battery
27	Ringling
29	T (channel 2)
30	R (channel 2)
31	T (channel 1)
32	R (channel 1)
49	-5 volts DC

References

Use the following documents to obtain additional information about the SLC-2000 Access System.

AT&T 363-208-000 *SLC-2000 Access System, Applications, Planning, and Ordering Guide.*

AT&T 363-208-001 *SLC-2000 Access System, User/Service Manual.*

AT&T 363-208-003 *SLC-2000 Access System, Command and Message Manual.*

Technical Assistance

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergency out-of-hours help for the SLC-2000 Access System. Call the AT&T Regional Technical Assistance Center at **1-800-225-RTAC**.

Ordering Information

Call the Customer Information Center at 1-800-432-6600 to get additional copies of this document (AT&T 363-005-380).

Comments

Send comments about this document to:

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