BECKER AVIONICS

DVCS6100
Digital Voice Communication System

ICS   DIGITAL   NVIS

Overview

The Becker Digital Voice Communication System DVCS6100 is a fully ETSO and TSO certified, proven airborne digital audio selector and intercom system. Designed for fixed and rotary wing aircraft, the DVCS6100 delivers crystal-clear voice communication quality, a simple Human Machine Interface (HMI), unsurpassed reliability, and remarkable scalability and flexibility through its fully configurable software platform.

A DVCS6100 system is comprised of one Remote Electronic Unit (REU6100) as the central element and up to six Audio Control Units (ACU6100 and/or ACU6101).

Each of the connected ACUs transmits the status of the selected switches and rotary controls via a dual redundant and rugged serial CANbus to the REU6100. Impedance matching and audio digital signal processing takes place within the REU6100.

Certified in 2005, as digital audio system achieving Technical Standards Order (TSO), as well as European Technical Standards Order (ETSO) certification, the DVCS6100 has set the standard for the industry and has clearly proven itself in over 5000 installations currently flying.

REU6100

ACU6100

ACU6101

Features

- Maintenance-free
- Outstanding crystal clear audio quality
- Easy system scalability
- Software based configuration
- Mission-orientated Human Machine Interface (HMI)
- Back-up Mode, Slaved Mode
- Monitoring and individual volume control of up to 8 transceivers (or 7 transceivers plus one public address amplifier)
- Monitoring and individual volume control of up to 8 receivers
- 6 direct audio channels

- Integrated alert tone generator for up to 10 different signals
- Amplifier for 2 cockpit speakers
- Interfaces for 2 Cockpit Voice Recorders (CVR)
- Intercom Function
  - Subdivision into 3 IC-circuits possible
  - VOX control
  - HOT MIKE activation
- Special Mission features:
  - Winchman application
  - Simulcast application
  - Relay Mode

LIGHT&SPORT AVIATION   **BUSINESS&COMMERCIAL AVIATION**   **SPECIAL MISSIONS**   AIR TRAFFIC MANAGEMENT

Technical Data

	Specification
Nominal voltage	27.5 VDC
Emergency voltage	18 VDC
Current consumption (REU6100 with 6 ACU's)	4.5 A peak 1.5 A average
Current consumption	ACU6100: ≤ 150 mA inclusive illumination ACU6101: ≤ 150 mA inclusive illumination
Microphones	4 or 6 depends on variant Standard carbon mike: 100...250 mV$_{RMS}$ into 150 Ω Dynamic mike: 0.5...4 mV$_{RMS}$ into 20 Ω balanced / floating
Headphones	4 or 6 depends on variant 250 mW (8.66 V) into 300 Ω or 500 mW (typical) into 8 Ω
Speaker	2 12 W (6.93 V) into 4 Ω
Aural alert tones	8 (+2 CALL tones)
Mike-line	8 (0.070 V...1.5 V$_{RMS}$ into 150 Ω, adjustable
Receiver-line	8 2.5...20 V$_{RMS}$ into 600 Ω, balanced , adjustable
Fixed inputs	6 3x 5...40 V$_{RMS}$ adjustable 3x 2.5...20 V$_{RMS}$ adjustable (under control of main volume)
Keylines	PTT out: 8 (one for each transmitter)
Discrete in/outputs	8 (alert tone activations) 6 (Winchman, CALL, E-Call,...) 4 (DF-blanking, CALL indication,...)
Distortion	≤ 2.5% at 1 kHz
Dimming input ACU	Control input1: max. 27.5 VDC (panel illumination) Control input2: max. 27.5 VDC (LED brightness)
Altitude	50 000 ft
Operating temperature	-40...+70 °C
Humidity	Cat. B
Vibration	Cat. S, curve M Cat. U, curve G
Certifications	
DVCS6100 system	EASA.210.443
	ETSO-C50c, TSO-C139 Audio ED-18/DO-21, DO-160E Software ED-12B/DO-178B, Level C
Dimensions HxWxD	REU6100: 195 x 57 x 338.50 mm (379 mm depth with EM6100), compartment installation ACU6100: 75.8 x 145.8 x 91.5 mm, DZUS fastener ACU6101: 47.6 x 145.8 x 93 mm, DZUS fastener
Weight	REU6100: ≤ 3000 g (mounting tray + ≤ 500 g) ACU6100: ≤ 800 g ACU6101: ≤ 600 g
Options	NVIS compatible
Accessories	Configuration Software Set (CSW6100-2), External Memory (EM6100) Customized panel labels

VHF1	VHF2	HF1	HF2	VHF3	SAT	SERV	PA
NAV1	NAV2	ADF1	ADF2	MKR1	MKR2	DME1	DME2

Customized panel labels for
ACU6100 & ACU6101

EM6100
External Memory Modul