

BECKER COM

COMMUNICATION



Remote controlled solid state Transponder ATC 5401-1R-(01)

■ This small, lightweight air traffic control transponder is well suited for installation where instrument panel space is limited. The CU 5401 control unit is designed to be mounted into a standard 2 ¼" (57 mm) round instrument panel cut-out, and is only 2 ½" deep.

The mode A/C receiver and solid state high power transmitter, are housed in a separate unit, which may be installed at any convenient place in the aircraft.

The control unit offers a clear, high contrast, double line LCD, which is readable under all lighting conditions, even in bright sunlight. When an altitude encoder is connected, the reported flight level is displayed below the transponder code, to verify correct operation of the entire system.

Any of the standard 4096 identification codes can easily be chosen by the rotary selector switches. Two preset identification codes, for VFR flight or for other purposes, can be entered from the front panel, and stored in the non-volatile memory, for instant recall by a single key stroke.

The transponder remote receiver/transmitter unit may be controlled by other types of CDU or FMS devices and is ideally suited for use as an essential sensor in flight management systems, Interface type RS 422.

The transponder is suitable for all types of fixed wing and rotary wing aircraft, operates from 14 and 28 volt input power, and is certified for both VFR and IFR operations. It complies with requirements of ETSO-C74d, class 1A, and can report altitudes up to 62700 feet.

Low power consumption, small size and weight, and high altitude reporting capability make it an ideal selection as a standby transponder for larger aircraft operating at flight levels where interruptions in transponder operation can not be tolerated.

For truly compact installations, the transponder can be combined with other Becker equipment, such as the VHF-COM, ADF, and the NAV-VOR/ILS receiver, which have similar control units and therefore providing a clear and pleasant presentation in the panel layout. ■

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Technical data

Remote Transponder ATC 5401-1R-(01) :

v Supply voltage	+ 9 V to 32 V DC
v Current consumption	≤ 1.1 A at 13.75 V ≤ 0.6 A at 27.5 V
v Operating temperature range	- 40°C to + 55°C (short-time + 70° C)
v Ground survival temperature range	- 55° C to + 85° C
v Altitude	≤ 50000 ft.
v Control interface	RS 422, serial line
v Blind encoder	Parallel (Gray-Code)
v Dimensions (incl. mounting)	135 x 44.5 x 250mm (H x W x D)
v Weight (incl. mounting)	≤ 0.9 kg
v Operating modes	Mode A and C
v Reply code (Mode A)	ICAO coding system with capacity for 4096 reply code combinations
v Altitude code (Mode C)	ICAO coding system with 100 ft increments reporting from - 1000 to 62700 ft
v Antenna impedance	50 Ω

Receiver data :

v Receiver frequency	1030 MHz ± 0.2 MHz
v Sensitivity (MTL)	- 78 dBm . . . - 72 dBm
v Selectivity	± 15 MHz ≥ 40 dB ± 25 MHz ≥ 60 dB
v Bandwidth	± 3 MHz
v Side lobe suppression	3-pulse method

Transmitter data:

v Transmit frequency	1090 MHz ± 3 MHz
v Output power	≥ 250 W
v Reply limit	1200 replies / sec.
v Nominal output	50 Ω impedance

Control Unit CU 5401-(1)-101

v Supply voltage	+ 10 V to 32 V DC
v Current consumption without panel lighting	≤ 60 mA
v Panel lighting	≤ 160 mA at 13.75 V DC ≤ 80 mA at 27.5 V DC
v Operating temperature range	- 20°C to + 55°C
v Storage temperature range	- 55°C to + 85°C
v Altitude	≤ 50000 ft.
v Interface	RS 422, serial line
v Dimensions	61.3 x 61.3 x 62 mm ³ (H x W x D)
v Weight	approx. 0.26 kg

Applicable documents :

v EASA	ETSO-C 74d, class 1A RTCA DO-150, Cat. B
v Environment	ED-14D/DO-160D
v Software	ED-12B/DO-178B, Level C
v ETSO Certification No.	EASA.210.056

Recommended connector kits :

v for ATC 5401-1R-(01)	P/N CK 4401-S
v for CU 5401-(1)-101	P/N CK 5000-S