

Declaration of Design and Performance

DDP No.: 120-00002

Issue No.: 1.0

Approving authority: n/a

DDP Change Control Ref: JIRA No. BT-315

Note: Before specifying equipment, check with Flightcell International that this declaration is the currently valid version

MANUFACTURER

Flightcell International Ltd

Address: 98 Vickerman St, Nelson, New Zealand 7010

DECLARATION OF DESIGN AND PERFORMANCE

System Name: Flightcell DZMx Remote Head/Flightcell DZMx Plus Control Head

Type number: DZP_05-XXX (-XXX represents the dash number, see DZP_05 Dash Number Register for details)

Description: A compact and lightweight secondary control head for the Flightcell DZMx

Rev 7.3

Weight & Overall Dimensions: 250g

System Wiring Diagrams	
Diagram No.	Description
WRL_DZ4_001	DZMx GA ICD
WRL_DZ4_002	DZMx Military ICD
WRL_DZ7_001	DZMx Plus Interconnect Drawing

Overall Dimensions <i>for more specific data, refer to the assembly diagrams and definition specification below</i>		
Part Description	DZUS mounted	Panel mounted
Faceplate width	146.0mm	158.0mm
Faceplate height	57.2mm	60.0mm
Rear enclosure height	54.1mm	54.1mm
Depth (from front face to rear face)	22.2mm	22.2mm

Performance:

The Flightcell DZMx Remote Head meets all the specifications and requirements as outlined in this document. The main performance specifications are listed below.

Item	Detail
Display	160 x 80 Mono Graphics LCD
Backlighting	LED NVIS-B (standard) LED NVIS-A (option)
Keypad	16 keys (4x4 matrix)
Interface	RS-485, RS-232
DC Power Source	+12V - +32VDC (28V nominal) Max current: ~0.2A @ 28VDC
Connector	Main connector: DA-15 Plug, Mating connector: M24308/2-2F (or equivalent) RF Connectors: SMA Jack x2, Female Socket Male Pin 500hm (-002 Only)

Test Report References: (See Appendix 1 - RTCA DO-160 Test Categories)

Test facility	Test report number	Date issued
National Technical Systems	TR-PR030054-14D, Rev 1	22 August 2014
National Technical Systems	TR-PR021690-13D, Rev 2	16 March 2015
CKC Laboratories, Inc.	101055-1	14 December 2018
Cevians	TR-075431-01, Rev A	19 October 2019

Fault analysis reports: n/a

Installation and Operation References:

Manual No.	Description
117-00008	DZMx Installation Manual
117-00007	DZMx Plus Installation Manual
117-00009	DZMx & DZMx Plus Operator Manual

Declarations:

The limits of declared performance and those implied by the declarations below are not intended to be absolute, but are intended to indicate performance which has been shown by tests.

The following declarations to the relevant sections of the standards stated, relating to environmental and operating conditions on the aircraft apply:

RTCA DO-160G

The declarations required by the Radio Technical Commission for Aeronautics RTCA DO-160G are summarised in Appendix 1 - RTCA DO-160 Test Categories.

Test Facility

National Technical Systems
1146 Massachusetts Avenue
Boxborough, MA 01719

Cooling Requirements

No special cooling required.

Ingress of fluids, sand and dust

The unit is designed to be protected against the fluids, sand and dust to a rating of IP54.

A rating of IP54 means that the unit is protected against ingress of dust in sufficient quantities to interfere with satisfactory operation of the unit and against harmful ingress of water when subjected to water splashing against the enclosure from any direction).

Storage

The unit should be stored at a temperature of not less than -55°C and not more than +85°C.

Operating temperature

The ambient operating temperature range for the unit is -40°C to +70°C.

Storage Life

The shelf storage life is not less than 5 years under controlled storage conditions.

CERTIFICATION

The declaration in this document is made under the authority of Flightcell International Ltd.

Flightcell International Ltd cannot accept responsibility for equipment used outside the limiting conditions stated above without their agreement.

Signed:



Authorised Signature: John Wyllie

Position: Accountable Manager

Effective Date: 19 December 2022

APPENDIX 1 - RTCA DO-160 Test Categories

System Name: Flightcell DZM Remote Head

Part No.: DZP_05-XXX

Revision No.: DO-160G

Conditions	DO-160G Section No.	Description of Tests
Temperature & Altitude	4.0	Equipment tested to categories A2, B2, F1
Low Temperature	4.5.1	No Forced cooling required
High Temperature	4.5.2 & 4.5.3	
In-Flight Loss of Cooling	4.5.4	
Altitude	4.6.1	Equipment identified as category X, no test performed.
Decompression	4.6.2	
Overpressure	4.6.3	
Temperature Variation	5.0	Equipment tested to category B.
Humidity	6.0	Equipment tested to category A.
Operational Shocks	7.2	Equipment tested to category A, aircraft type 5, test type 5.
Crash Safety	7.3	Equipment tested to category B, aircraft type 5, test type 5.
Vibration	8.0	Equipment tested to category U, Aircraft zone 2, Test curve G.
Explosive Atmosphere	9.0	Equipment tested to category H.
Waterproofness	10.0	Equipment identified as category X, no test performed.
Fluids Susceptibility	11.0	Equipment identified as category X, no test performed.
Sand and Dust	12.0	Equipment identified as category X, no test performed.
Fungus	13.0	Equipment identified as category X, no test performed.
Salt Fog	14.0	Equipment identified as category X, no test performed.

Magnetic Effect	15.0	Equipment identified as category X, no test performed.
Power Input	16.0	Equipment identified as category X, no test performed.
Voltage Spike	17.0	Equipment identified as category X, no test performed.
Audio Frequency Susceptibility	18.0	Equipment identified as category X, no test performed.
Induced Signal Susceptibility	19.0	Equipment identified as category X, no test performed.
Radio Frequency Susceptibility	20.0	Equipment tested for conducted susceptibility to category S and for radiated susceptibility to category S.
Radio Frequency Emissions	21.0	Equipment tested to category M.
Lightning Induced Transient Effects	22.0	Equipment identified as category X, no test performed.
Lightning Direct Effects	23.0	Equipment identified as category X, no test performed.
Icing	24.0	Equipment identified as category X, no test performed.
Electrostatic Discharge	25.0	Equipment identified as category X, no test performed.
Fire, Flammability	26.0	Equipment identified as category X, no test performed.
Other Tests	N/A	N/A

REMARKS

Nameplate marking: DO-160G Env.Cat [(A2)(B2)(F1)]BAB[UG]HXXXXXZZXXX[SS]MXXXXXXXXXX

Section 21.0 RF Emissions - Radiated only