Operation Manual

iS Control Panel

Version: 1.02

Contents

1. Preface

Thank you for purchasing an iS Control Panel from RS Flight Systems. We are pleased that you have chosen our product and are confident that it will meet all your expectations. In case of questions or problems with the unit, feel free to contact us:

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2. System Description

The iS Control Panel (iSCP) can operate BRP Rotax engines of the iS series. Commonly it is used for first operation and trouble shooting. The iSCP replaces the complete airframe wiring and gets connected to the engine with three connectors and three terminal clamps. Thus, an engine drive independent of the aircraft wiring is possible.

- Integrated switches for: LANE A and LANE B, Fuel Pump Main and Fuel Pump Aux, Start Power and Backup Power, Starter
- Harness for HIC A, HIC B and X3 (Fuse Box)
- Terminal clamps for BAT+, BAT- and Regulator A (EMS ground)
- Robust transport box

Figure 2-1: iS Control Panel

3. Technical Specifications

	iS Control Panel
Mechanical Dimensions (width, height, depth)	300 x 190 x 90 mm 11.81 x 7.48 x 3.54 in
Total Mass	2.8 kg 6.17 lbs
Housing	Aluminum, machined and laser-engraved
Supply Voltage	9 to 36 Volts DC, according to EN2282 Automatic circuit breaker 30 A
Inputs	HIC A, HIC B, X3, BAT+, BAT-, REG A
Outputs	CANaerospace Display Port A and B CANaerospace Maintenance Port A and B
Electronics	Integrated power PCB
Operating Temperature Range	-20 to +70 °C -4 to +158 °F
Humidity	< 95 %, non-condensing

Table 3-1: Technical Specification iS Control Panel

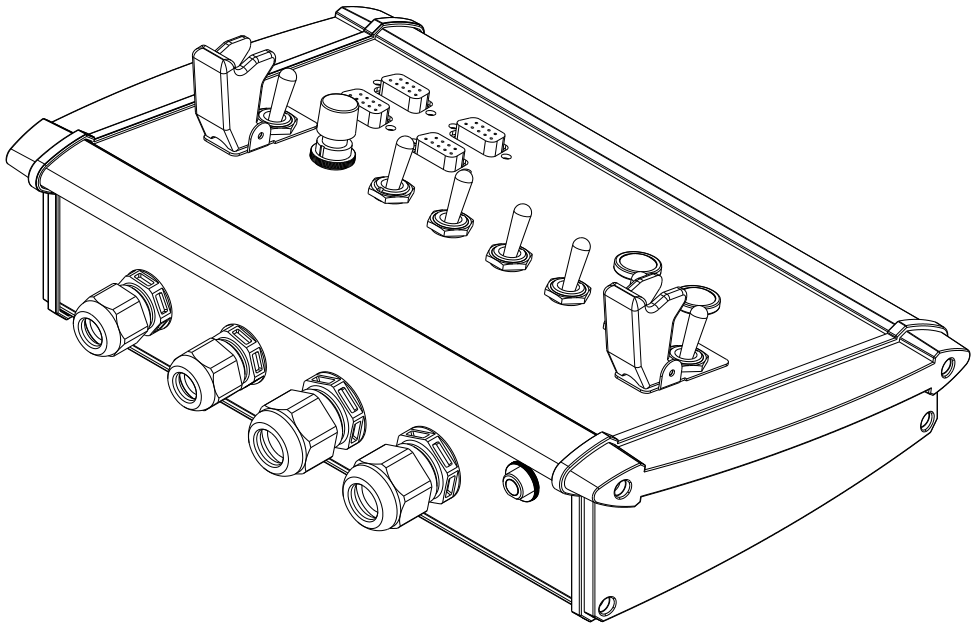

Figure 3-1: iS Control Panel (isometric view)

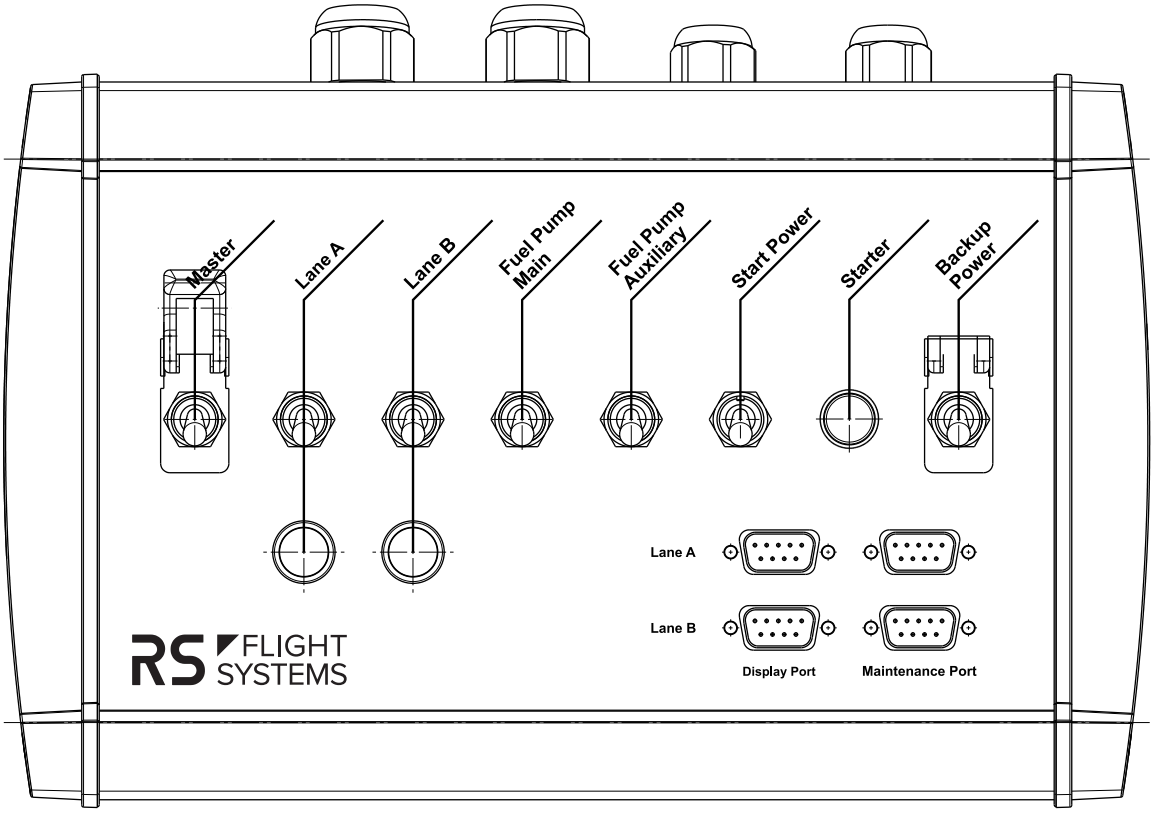

Figure 3-2: iS Control Panel (top view)

4. Electrical Installation

The iSCP comprises an aluminum housing and 4 input harnesses:

- HIC A
- HIC B
- X3
- Power

HIC A, HIC B and X3 are mating connectors for the BRP Rotax engine harness. The Power input is equipped with 3 terminal clamps. The wiring output is shown in Figure 4-1.

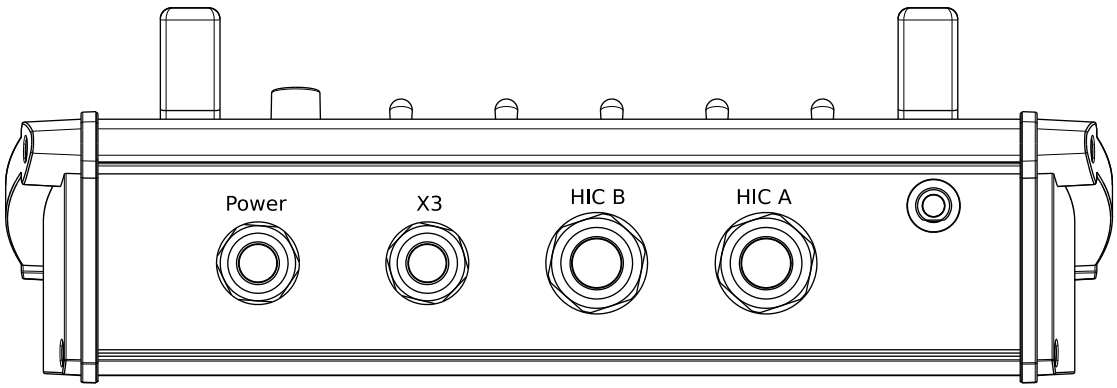

Figure 4-1: iS Control Panel (back view)

The pinout of the HIC A, HIC B and X3 connector is described in the following tables.

Pin	Signal Name	Signal Description
1	LANE_SEL_SW_A_1	Lane A Supply
2	SUPP_WARN_LAMP_A	Lane A Warning Light Supply
3	SIG_FUEL_PUMP_1	Fuel Pump Main Supply
4	-	-
5	CAN_LOW_1_A	CAN A Display Port LOW
6	CAN_HIGH_1_A	CAN A Display Port HIGH
7	LANE_SEL_SW_A_2	Lane A GND
8	WARN_LAMP_A	Lane A Warning Light GND
9	GND_FUEL_PUMP_1	Fuel Pump Main GND
10	-	-
11	CAN_LOW_2_A	CAN A Maintenance Port LOW
12	CAN_HIGH_2_A	CAN A Maintenance Port HIGH

Table 4-1: HIC A Connector pinout

Pin	Signal Name	Signal Description
1	LANE_SEL_SW_B_1	Lane B Supply
2	SUPP_WARN_LAMP_B	Lane B Warning Light Supply
3	SIG_FUEL_PUMP_2	Fuel Pump AUX Supply
4	CONN_STARTER_REL_SW	Starter Supply
5	-	-
6	-	-
7	CAN_LOW_1_B	CAN B Display Port LOW
8	CAN_HIGH_1_B	CAN B Display Port HIGH
9	LANE_SEL_SW_B_2	Lane B GND
10	WARN_LAMP_B	Lane B Warning Light GND
11	GND_FUEL_PUMP_2	Fuel Pump AUX GND
12	SUPP_START_SWITCH	Starter GND
13	-	-
14	-	-
15	CAN_LOW_2_B	CAN B Maintenance Port LOW
16	CAN_HIGH_2_B	CAN B Maintenance Port HIGH

Table 4-2: HIC B Connector pinout

Pin	Signal Name	Signal Description
1	X3_1	Backup Battery Power Supply
2	X3_2	Start Power Supply
3	X3_3	12 VDC Power Supply

Table 4-3: X3 Connector pinout

The pinout of the 3 terminal clamps is described in Table 3-1.

Wire	Signal Name	Signal Description
RED	Airframe PWR	Aircraft Battery Supply
BLACK	Airframe GND	Aircraft Battery GND
BROWN	Engine GND	EMS Ground (Regulator A)

Table 4-4: Terminal Clamps out

The pinout of the 4 DSUB connectors is described in Table 4-5.

Pin	Display A	Display B	Maintenance A	Maintenance B
1	Airframe PWR	-	-	-
2	CAN LOW	CAN LOW	CAN LOW	CAN LOW
3	-	-	-	-
4	-	-	-	-
5	Airframe GND	-	-	-
6	-	-	-	-
7	CAN HIGH	CAN HIGH	CAN HIGH	CAN HIGH
8	-	-	-	-
9	-	-	-	-

Table 4-5: CAN DSUB pinout

The power output on the Display Port A is rated up to 0.6 A. It is secured with a poly fuse.

The complete wiring diagram of the electrical installation of the Rotax 912iS is shown in Figure 4-2. All functions which are sketched outside the scope certification line (double-dotted line) are integrated in the iSCP.

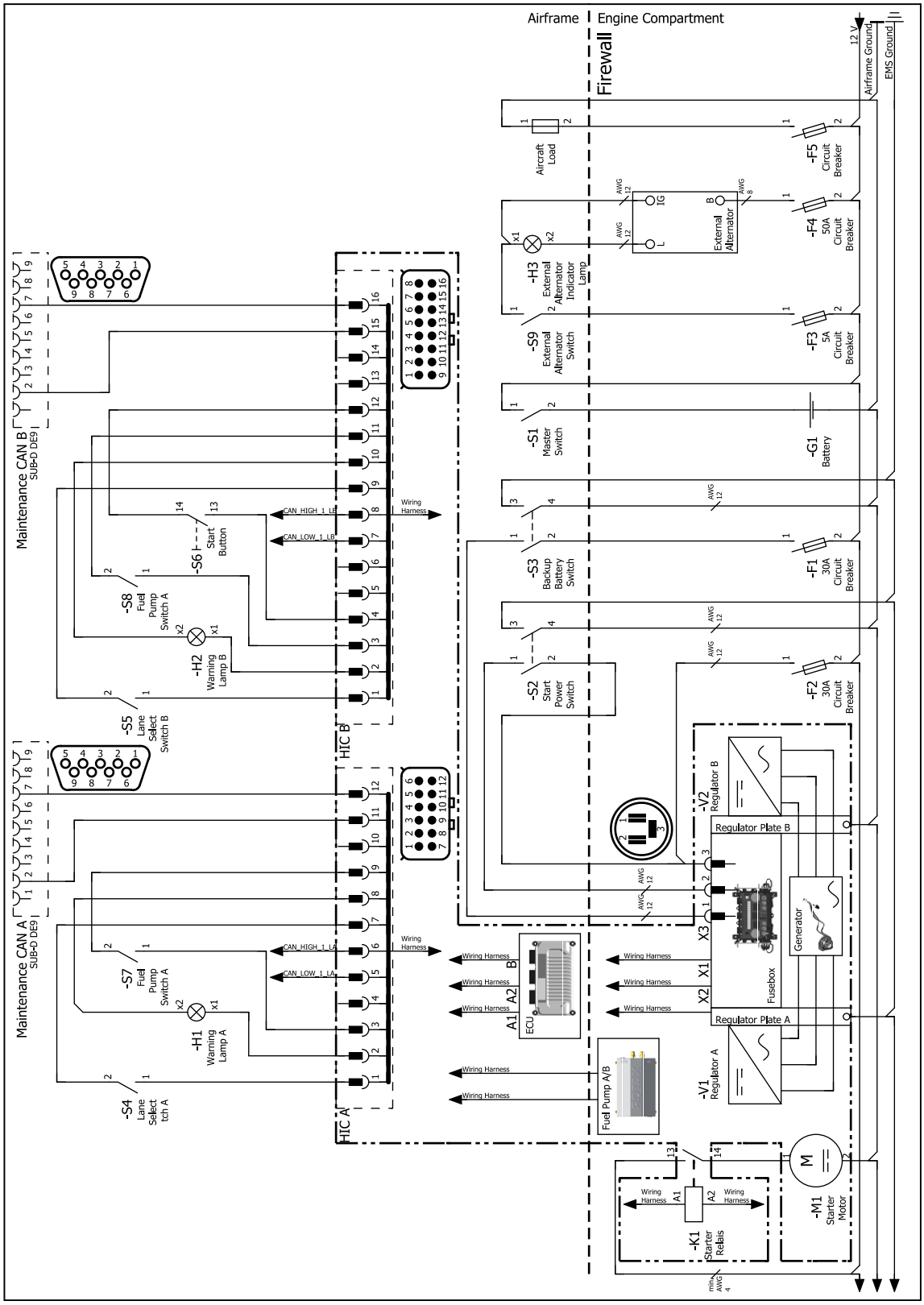

Figure 4-2: Wiring diagram Rotax 912iS

5. Operation

This chapter describes the regular operation of the iSCP.

- Connect the terminal clamp Airframe GND to the minus pole of the aircraft battery
- Connect the terminal clamp Engine GND to the regulator board A of the Fuse Box
- Connect the terminal clamp Airframe PWR to the plus pole of the aircraft battery
- Activate the master switch of the iSCP. If you have connected an EMU to the Display Port, this device will be powered up now.

For starting the engine with the iSCP, please refer to the Operators Manual of the BRP Rotax 912iS and 915iS.

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