BC101 Controller – Wiring Reference

Generator monitor/controller panel — terminal connection guide

1. Connector Overview

The controller uses two multi-pin connectors:

Connector	Pins	Terminals	Function
Small	6	A-1 – A-6	Power, E-stop input, sensor signals
Large	8	B-1 – B-8	Sensor grounds, AC sensing, alarm/solenoid output

IMPORTANT — "AIR FILTER" LABEL: this front-panel icon does NOT indicate an air filter sensor. Per the OEM manual: "Indicator light 'AIR FILTER' lights up when genset's scram button switch on." It is the Emergency Stop (Scram) indicator. Wire terminal A-5 accordingly.

2. Terminal Wiring Table

Grp	Pin	Connects To	Notes
A	A-1	Battery (+)	Via 5A fuse. DC supply, 8–30V.
A	A-2	Battery (−) / Ground	DC negative / chassis reference.
A	A-5	Emergency Stop (Scram)	To DC negative via scram push-button. Leave open if no scram switch fitted — do not ground directly.
A	A-6	Fuel Level – signal (WK)	Pairs with B-1.
A	A-3	Water Temp – signal (WK)	Pairs with B-2.
A	A-4	Oil Pressure – signal (WK)	Pairs with B-3.
B	B-1	Fuel Level – ground (G)	Pairs with A-6.
B	B-2	Water Temp – ground (G)	Pairs with A-3.
B	B-3	Oil Pressure – ground (G)	Pairs with A-4.
B	B-4	Chassis / earth ground	Tied to ground on OEM diagram. Spare reference, no sensor.
B	B-5	AC Alternator sensing – L1	Via 2A fuse. Single-phase, 15–360VAC.
B	B-6	AC Alternator sensing – N	Direct, no fuse.
B	B-7	Alarm/Solenoid output – 1	Dry relay contact. Series with buzzer or fuel shut-off solenoid.
B	B-8	Alarm/Solenoid output – 2	Second leg of same contact pair as B-7.

Highlighted row (A-5): Emergency-Stop input – verify a genuine scram switch is fitted before wiring live.

3. Sensor Calibration Reference

Sensor	Point	Resistance (Ω)	Reading
Oil Pressure	1/2/3/4/5	10 / 52 / 106 / 155 / 185	0/200/500/800/1000 kPa
Water Temperature	1/2/3/4/5	23 / 44 / 69 / 200 / 815	120/95/80/50/20 °C
Fuel Level	1/2/3/4/5	6 / 20 / 30 / 54 / 107	100/80/70/40/0 %

4. Key Electrical Parameters

Parameter	Value
DC supply voltage range	8.0 – 30.0 V DC (continuous)
AC alternator sensing input	15 – 360 VAC, single phase (Ph–N)
Rated AC frequency	50 Hz
Over-speed alarm threshold	114% of rated frequency
Battery alarm thresholds	Above 30V DC or below 8V DC
DC supply fuse (A-1 line)	5A
AC sensing fuse (B-5 line)	2A
Overall dimensions	203 × 149 × 48.8 mm
Panel cutout size	189 × 135 mm

5. Original Wiring Diagram (OEM datasheet, Section 7)

