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IBBC Types and Technical Information

IBBC: Primary Standard 4 wire CAN ISOBUS Breakaway Receptacle (TQPL Wiring Diagram)

The active (Master) IBBC connector is identified by its black contact insert. In accordance with ISO 11783-2, it is typically installed at the rear of the tractor.

Its key technical characteristic: it features an internal connection between ECU_PWR and TBC_PWR (TBC = Terminating Bias Circuit), thereby ensuring the electrical supply of the terminator circuit. It powers the terminator circuit of all sockets in the bus segment. With this configuration, only one Master socket may be installed on a towing vehicle. In short, it acts as the "network controller": it actively generates and supplies the CAN bus termination.

According to ISO 11783-2, it is recommended to have one Active socket at the rear side of the tractor and one TBC at the front. The Active socket supplies the circuit with TBC_PWR by internal connection to ECU_PWR

IBBC-TP: 2 wire CAN for ISOBUS Breakaway Receptacle (TPPL Wiring Diagram)

The TPPL socket is not divided into Active and Passive. To guarantee the backward compatibility to the TQPL implements, the TPPL socket connects TBC_PWR pin to the ECU_PWR line and TBC_RTN pin to the ECU_GND line.

IBBC-S: Secondary/Passive ISOBUS Breakaway Receptacle commonly used on front of tractor or back of implements.

Here, TBC_PWR must be supplied externally. Only one Active socket should be used within a tractor network, as this supplies the terminating resistors of all sockets. The passive (IBBC-S) connector features a gray contact insert. It is used on implement equipment and optionally at the front of the tractor (optional front socket).

For the IBBC-S, ECU_PWR and TBC_PWR are not internally connected. The TBC supply must therefore be provided externally; otherwise, the TBC circuit cannot function.

Summary

Criteria	IBBC Primary (Active TQPL)	IBBC-S Secondary (Passive)	IBBC-TP Primary (Active TPPL)
Insert color	Black	White	Gray
Role in the network	Master	Slave	Master
Typical location	Rear of tractor	Implement / front of tractor	Rear of tractor
ECU_PWR ↔ TBC_PWR	Internally connected	Not connected	Internally connected
TBC power supply	Self-supplied	External supply required	Self-supplied
Number per tractor	Only one allowed	Multiple allowed	Only one allowed