MultiPlus-II System with External Transfer Switch

IMPORTANT INFORMATION !
The Cerbo tank level ports can be configured to work with either European (0 - 180 Ohm), or US tank senders (240 - 30 Ohm) standards. Or one can configure a custom Ohm resistance range between 0 Ohm and 300 Ohm. This requires firmware v2.80 or higher.

The GX Touch 70, the CERBO GX and the GX LTE 4G-SA are enlarged visible in this drawing.

GX LTE 4G-SA

GX LTE 4G

ANTENNA

TO CERBO USB

GX TOUCH 70

Generator
0W
L1: 0W
L2: 0W
L3: 0W

Inverting

AC Loads
2851W
L1: 950W
L2: 950W
L3: 950W

75%

CERBO GX

Cerbo GX

BMS CAN to CERBO
TERMINATOR
USB from GX LTE
USB from MultiPlus-II L1M

GX TOUCH 70
VE.Bus from MultiPlus-II L1M

TANK LEVEL
SENSOR GENERATOR

GENERATOR START/STOP

GX LTE Power +
CERBO Power +

CERBO fuse and
GX LTE-4G Fuse
both 3.15A

Drawing BJE-356A

CERBO Power -

CERBO Power +

MultiPlus-II 15kVA/48V/230V AC INVERTER/CHARGER L1 MASTER

MultiPlus-II 15kVA/48V/230V AC INVERTER/CHARGER L1 SLAVE

MultiPlus-II 15kVA/48V/230V AC INVERTER/CHARGER L2 MASTER

MultiPlus-II 15kVA/48V/230V AC INVERTER/CHARGER L2 SLAVE

MultiPlus-II 15kVA/48V/230V AC INVERTER/CHARGER L3 MASTER

MultiPlus-II 15kVA/48V/230V AC INVERTER/CHARGER L3 SLAVE

MultiPlus-II charger inverter

EXT GND RELAY L1M
VE.Bus link
AC IN L1M
AC OUT-1 L1M
AC OUT-1 L1S
AC OUT-1 L2S
AUX RLY L1M

EXT GND RELAY
VE.Bus link
AC OUT-1 L2M
AC OUT-1 L1S
AC IN L2M
AC IN L3M

EXT GND RELAY L3M
VE.Bus link
AC OUT-1 L3M

VE.Bus link
VE.Bus Spare

VE.Bus Spare

IMPORTANT INFORMATION !
Recommended AC Out-1 cable/breaker size MultiPlus-II
The 15kVA output from each MultiPlus-II translates into 65A per single phase. An Earth leakage device with breaker or a combination MCCB/MCB/RCD must be installed on each 3 phase output for 3 x Master devices L1-L2-L3 and 3 x Slave devices L1-L2-L3.
Cable size must be adjusted accordingly.

IMPORTANT INFORMATION !
Recommended DC cable/fuse size MultiPlus-II
0-5 m cable length:4 x 95SQmm. 5-10 m cable length:4 x 150SQmm. Fuse size should be 600A per MultiPlus-II.

KEEP POSITIVE MULTIPLUS-II CABLES ALL AT THE SAME LENGTH !

POSITIVE BUSBAR

POSITIVE BUSBAR

POSITIVE BUSBAR

NEGATIVE BUSBAR

NEGATIVE BUSBAR

NEGATIVE BUSBAR

CURRENT TRANSFORMER L1M
CURRENT TRANSFORMER L3M

KEEP NEGATIVE MULTIPLUS-II CABLES ALL AT THE SAME LENGTH !

PE
L3
L2
L1
N

GND/PE

PE
L3
L2
L1
N

PE
L3
L2
L1
N

LOADS

GENERATOR 160KVA

WARNING
FOR A PROPER FUNCTION OF THE 3 PHASE MultiPlus-II CONFIGURATION, THE PHASE ROTATION FOR GRID POWER AND/OR GENERATOR POWER HAS TO BE CONNECTED CORRECTLY FOLLOWING L1-L2-L3 !

N L1 L2 L3

L3 L2 L1 N

Hager

K1

K3 EXTERNAL GND RELAY

N L1 L2 L3

EXT GND RELAY L1M

GND/PE

IMPORTANT INFORMATION !
In a fixed installation like in this drawing, an uninterruptible grounding can be secured with the grounding wire of the AC inputs. It will however be good practice to ground each MultiPlus-II casing to the Main ground Busbar as is visible in this drawing.
Be aware that local rules may require alternative AC Ground configurations !

IMPORTANT INFORMATION !
Use twisted pair cables for each current transformer to prevent signal interference. Avoid routing the twisted pair cables next to AC power cables as much as possible. Connect each S1 orange wire to its dedicated Master phase EXT. connection and each black S2 connection to each dedicated Master phase COM connection.