



SMART POWER BOX

Modulo distribuzione potenza

SMART POWER BOX

Power distribution module



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La Smart Power Box riunisce i segnali di potenza e dispositivi di controllo e protezione in un unico box.

La soluzione facilita la gestione dei moderni motori TIER IV FINAL e oltre.

PLUS

- PCB personalizzabile con relais & fusibili (tecnologia "Press Fit")
- Versioni motori Mercedes e FPT già disponibili
- FTP completo di relais temporizzato (180") per spegnimento ECU motore
- Opzione con terminali di potenza a tenuta ed innesto rapido "SurLok™"
- Disponibile modulo CAN per diagnostica
- Design robusto
- Architettura impianto elettrico semplificata
- Ridotti costi di connessione

The Smart Power Box groups power, control, protection devices and signals in a single unit.

This solution facilitates the management of modern TIER IV FINAL engines and beyond.

PLUS

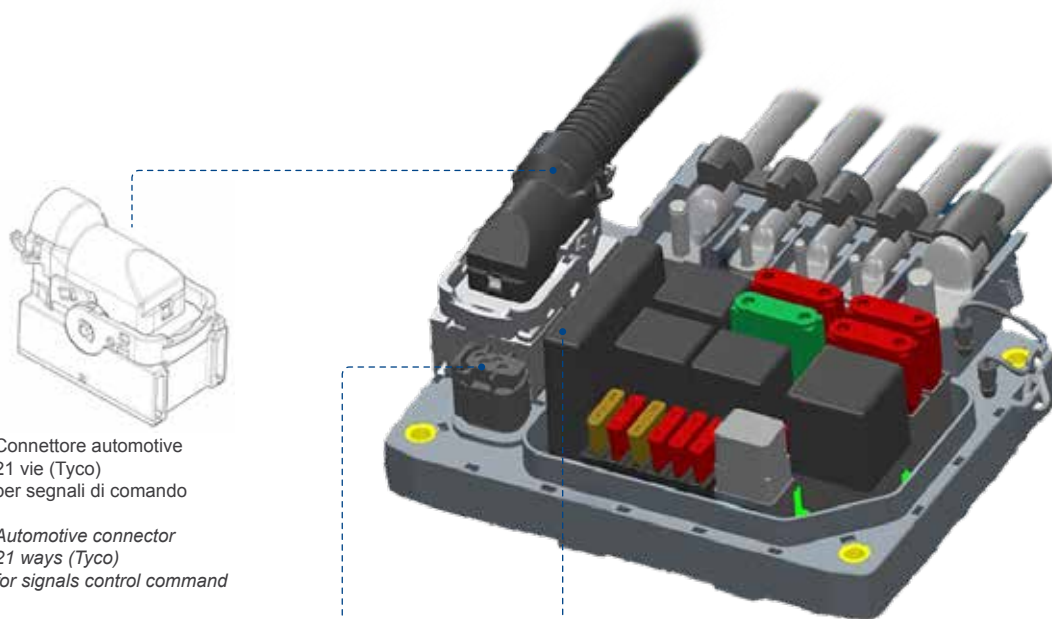
- PCB relays & fuses with "Press Fit" technology
- Mercedes and FPT engines versions are already available
- FTP version with timer relays (180") for ECU engine shutdown
- Available option water proof power terminals and "SurLok™" quick coupling
- Available CAN module for diagnostics
- Robust design
- Simplified electric system architecture
- Less connection costs

SPECIFICHE TECNICHE

Technical specifications

- Alimentazione: 12V o 24V
- Alimentazione max: 16V (12V); 30V (24V)
- Minima alimentazione utile: 8V (12V); 18V (24V)
- Picco di amperaggio: 190A @105°C (12V); 115A @105°C (24V)
- Connettore principale controparte: Tyco 21 vie 1534127
- Connettore CAN controparte: Tyco 4 vie 174257
- Grado di protezione: IP66
- Resistente ai fluidi minerali
- Resistente al Diesel e alla benzina
- Fori di fissaggio meccanici: N° 4 (Ø 7mm)
- Temperatura di funzionamento: -40° C ÷ +85° C
- Autoestinguenza: UL 94V-0
- Conformità CE: ISO 14982; EN 13309;
- Conformità radiodisturbo: CISPR 25
- Prestazioni elettriche: ISO 7637
- Prove ambientali: EN 60068-2-1; EN 60068-2-2; EN 60068-2-6; EN 60068-2-27; EN 60068-2-32;

- Power supply: 12V or 24V
- Max power supply: 16V (12V); 30V (24V)
- Usable min voltage supply: 8V (12V); 18V (24V)
- Total peak amperage: 190A @105°C (12V); 115A @105°C (24V)
- Mating main Connector: 21 ways Tyco 1534127
- Mating CAN connector: 4 ways Tyco 174257
- Sealing degree: IP66
- Mineral fluid resistant
- Diesel and Gasoline resistant
- Mechanical fixing holes: N° 4 (Ø 7mm)
- Operating temperature: -40° C ÷ +85° C
- Self-extinguishing: UL 94V-0
- CE compliance: ISO 14982; EN 13309;
- Radio Disturbance Conformity: CISPR 25
- Electrical performance: ISO 7637
- Enviromental test: EN 60068-2-1; EN 60068-2-2; EN 60068-2-6; EN 60068-2-27; EN 60068-2-32;



Connettore automotive
21 vie (Tyco)
per segnali di comando

*Automotive connector
21 ways (Tyco)
for signals control command*

Connettore 4 vie MQLS
per monitoraggio dei dati CAN

*MQLS 4 ways connector
for CAN data monitoring*

Dispositivo per monitoraggio (optional)

- tensione della batteria
- stato dei fusibili
- stato del relè

Device for monitoring (optional)

- battery voltage
- status of fuses
- status of relays

Valvola Gore-Tex
Gore-Tex valve

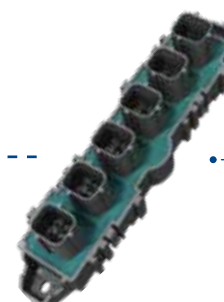


- Le valvole di sfiato equalizzano la pressione consentendo all'aria di passare attraverso la membrana ePTFE
 - prevengono la contaminazione perché bloccano efficacemente l'ingresso di liquidi e particolato
 - riducono la condensa permettendo alle molecole di vapore acqueo di uscire attraverso la membrana ePTFE

- Protective vents valves equalize pressure by enabling air through the ePTFE membrane
 - prevent contamination by effectively block of liquids and particulates
 - reduce condensation by exit water vapor molecules through the ePTFE membrane

OPTIONAL:
Dispositivo Multilink collegamento rapido
CAN BUS di sensori e dispositivi elettronici

OPTIONAL:
Multilink hub to easily connect CAN BUS
sensors and electronic devices



Terminali di potenza SURLOK

SURLOK power terminals

- Max amperaggio totale circuito principale + 30, (connettore Surlok 8 mm): 140A @ 105°C (12V); 65A @ 105°C (24V)
 - Max amperaggio totale circuito + 30 con timer BDR, (connettore SurLok 5.7 mm): 50A @ 105°C (12V); 50A @105°C (24V)
 - Terminale principale di alimentazione dimensioni perno: SurLok 8 mm
 - Terminale secondario di alimentazione dimensioni perno: SurLok 5.7 mm
 - Terminali di uscita dimensioni Stud: SurLok 5.7 mm
-
- *Max total amperage main circuit +30, (SurLok connector 8 mm): 140A @ 105°C (12V); 65A @ 105°C (24V)*
 - *Max total amperage circuit +30 with timer BDR, (SurLok connector 5.7 mm): 50A @ 105°C (12V); 50A @105°C (24V)*
 - *Main supply terminal stud size: SurLok 8 mm*
 - *Secondary supply terminal stud size: SurLok 5.7 mm*
 - *Output Terminals stud size: SurLok 5.7 mm*

P/N	Pkg Q.ty
1080802 24.0275.0000	1

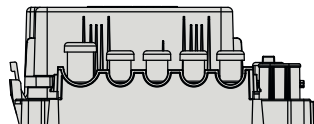


Amphenol's SurLok Plus™ è una versione a tenuta dell'originale SurLok™ e dispone di un blocco rapido e di un design Press-to-release. Incorporando l'ultima tecnologia R4 RADSOK®, SurLok Plus™ è una linea di prodotti compatta, robusta e ad innesto rapido.

La soluzione SurLok è un'evoluzione del contatto tecnologico RADSOK, sviluppato per il mercato automotive e Heavy Truck.

I connettori SurLock garantiscono:

- Bassa forza di inserzione
- Grande superficie conduttiva di contatto
- Alta conduttività
- IP67 nominale



Connettore SurLok
SurLok connector
8 mm



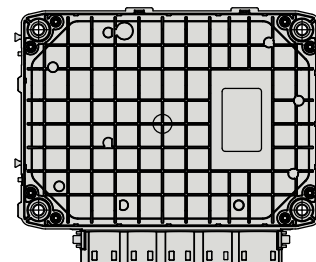
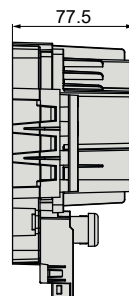
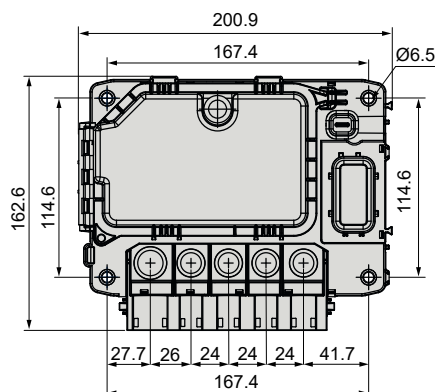
Connettore SurLok
SurLok connector
5.7 mm

Amphenol's SurLok Plus™ is an environmentally sealed version of original SurLok™, and features a quick lock and press-to-release design. Incorporating the latest R4 RADSOK® Technology, SurLok Plus™ is a compact, quick mating, and robust product line.

The SurLok solution is an evolution of Radsok technology contact, developed for the automotive and heavy truck market.

The SurLok connectors ensure a:

- Low insertion force
- Large conductive surface area of contact
- High conductivity
- IP67 rated

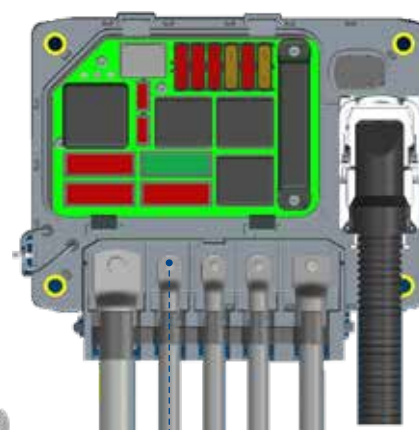


Terminali di potenza a VITE

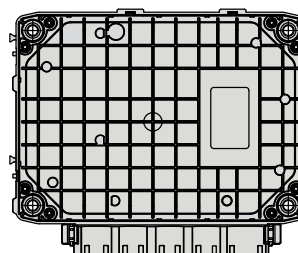
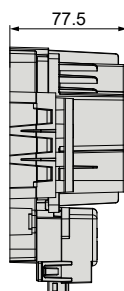
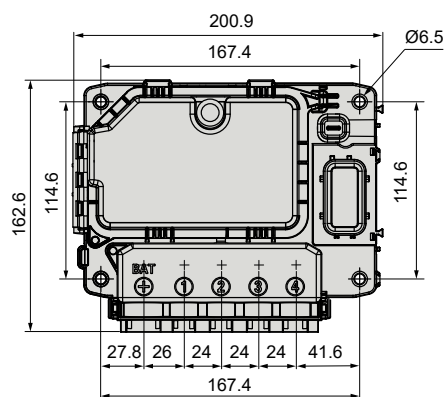
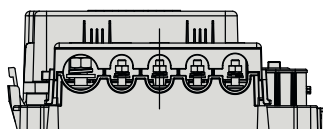
SCREW power terminals

- Max amperaggio totale circuito principale + 30, (terminali M8): 140A @ 105°C (12V); 65A @ 105°C (24V)
 - Max amperaggio totale circuito + 30 con timer BDR, (terminali M5): 50A @ 105°C (12V); 50A @ 105°C (24V)
 - Terminale principale di alimentazione dimensioni perno: Vite M8
 - Terminale secondario di alimentazione dimensioni perno: Vite M5
 - Terminali di uscita dimensioni Stud: Vite M5
-
- Max total amperage main circuit +30, (M8 terminal): 140A @ 105°C (12V); 65A @ 105°C (24V)
 - Max total amperage circuit +30 (M5 terminal): 50A @ 105°C (12V); 50A @ 105°C (24V)
 - Main supply terminal stud size: Screw M8
 - Secondary supply terminal stud size: Screw M5
 - Output Terminals stud size: Screw M5

P/N	Pkg Q.ty
1080803 24.0276.0000	1



Connessione a VITE
SCREW connection

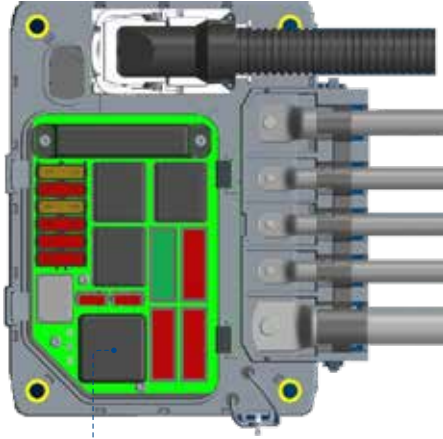


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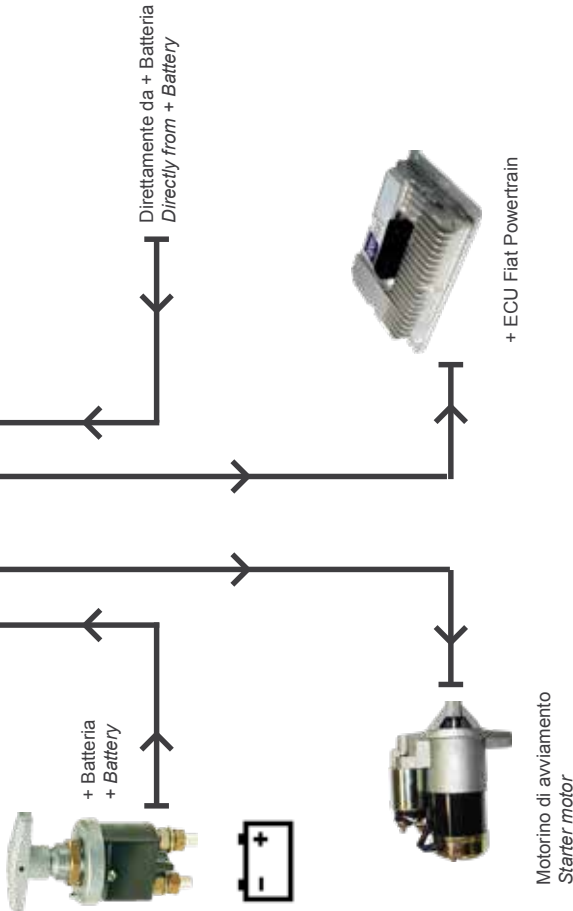
Versione per motore FPT FPT engine version



Relè timer
Ritardo off 180s
Conforme alla richiesta FPT
Timer Relay
Delay Off 180s
Compliant to FPT request
cod. 1077892



P/N	Pkg Q.ty	Descrizione Description
1080804 24.0277.0000	1	Terminali di potenza SURLOK SURLOK power terminals
1083419 24.0277.0000	27	Terminali di potenza SURLOK SURLOK power terminals
1080805 24.0278.0000	1	Terminali di potenza a VITE SCREW power terminals
1083420 24.0278.0000	27	Terminali di potenza a VITE SCREW power terminals
1087625 24.0275.0140	1	Kit antivibrante power box Power box anti-vibration kit



Direttamente da + Batteria
Directly from + Battery

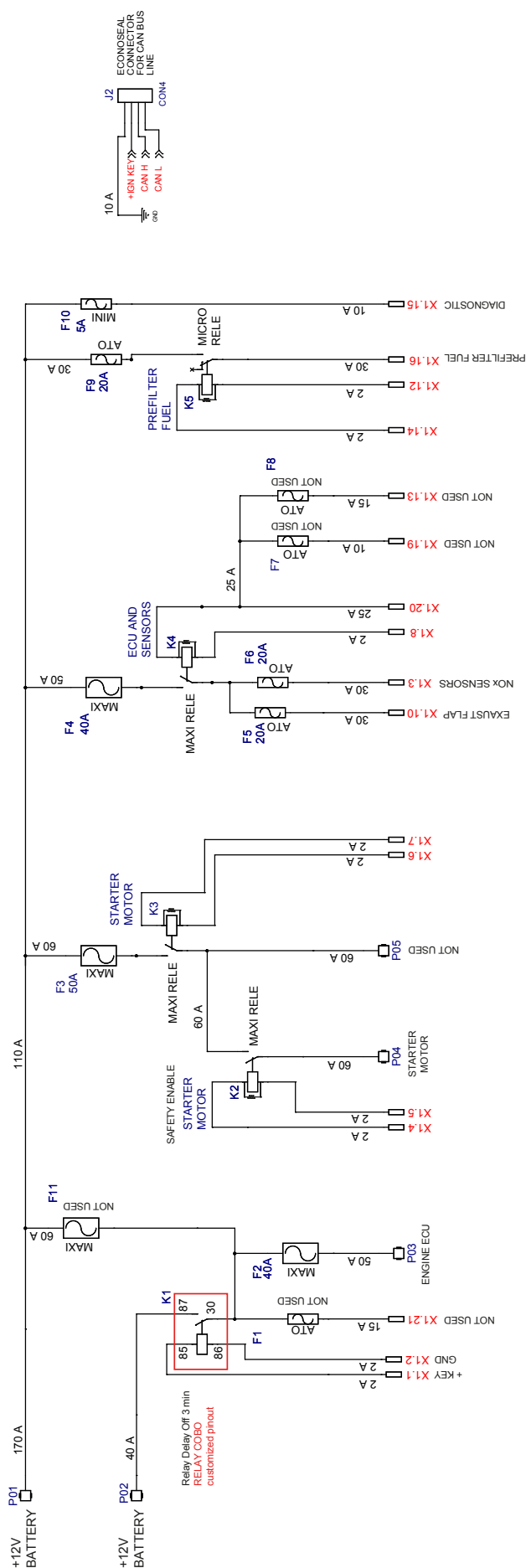
+ Batteria
+ Battery

Motorino di avviamento
Starter motor

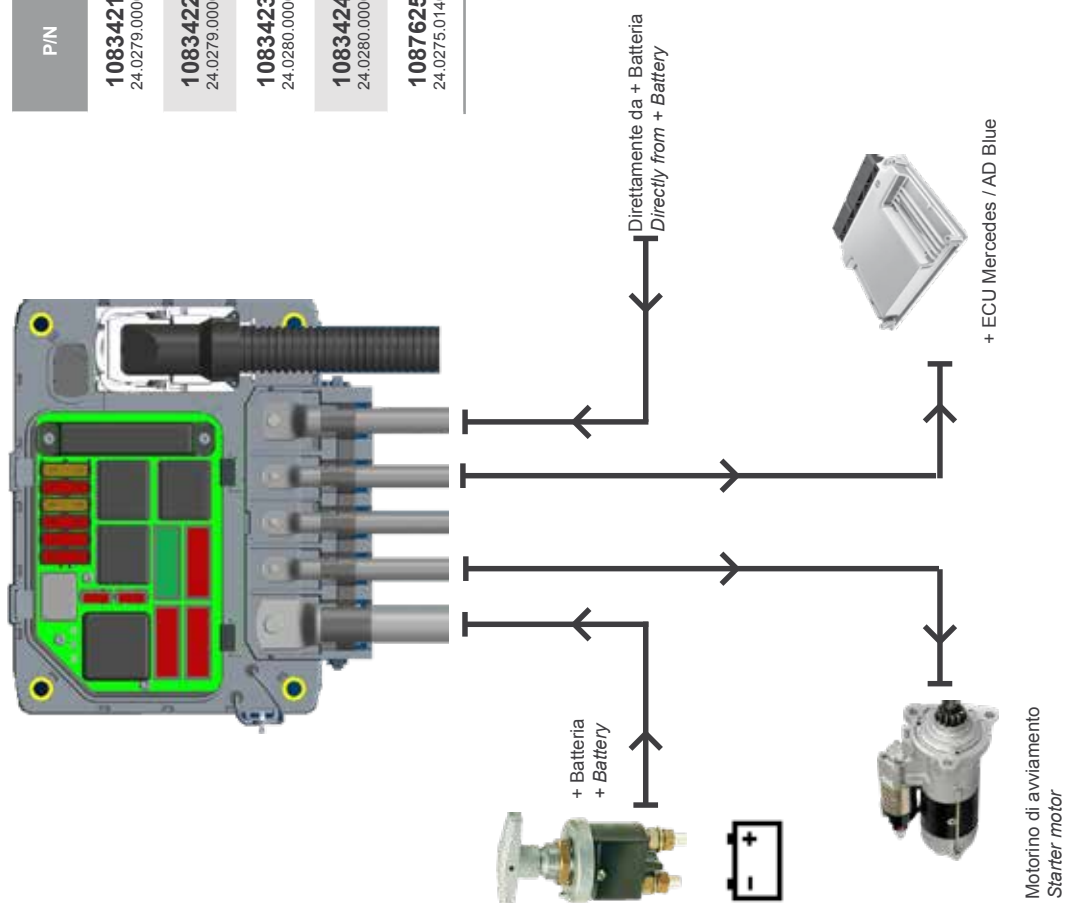
+ ECU Fiat Powertrain

Connectors

P/N COBO 3024562 (XE0
P/N TYCO 1-1534127-1



**Versione per motore MERCEDES
MERCEDES engine version**



P/N	Pkg Q.ty	Descrizione <i>Description</i>
1083421 24.0279.0000	1	Terminali di potenza SURLOK <i>SURLOK power terminals</i>
1083422 24.0279.0000	27	Terminali di potenza SURLOK <i>SURLOK power terminals</i>
1083423 24.0280.0000	1	Terminali di potenza a VITE <i>SCREW power terminals</i>
1083424 24.0280.0000	27	Terminali di potenza a VITE <i>SCREW power terminals</i>
1087625 24.0275.0140	1	Kit antivibrante power box <i>Power box anti-vibration kit</i>

CONNETTORI

Connectors

J2

TYCO 4 vie / ways:
Connettore controparte CAN
CAN mating connector
P/N COBO **3009118** (XE0800334)
P/N TYCO 174257-2



OPTIONAL KIT

Connettore controparte
Mating connector
P/N COBO **1028547** (27.0938.0000)

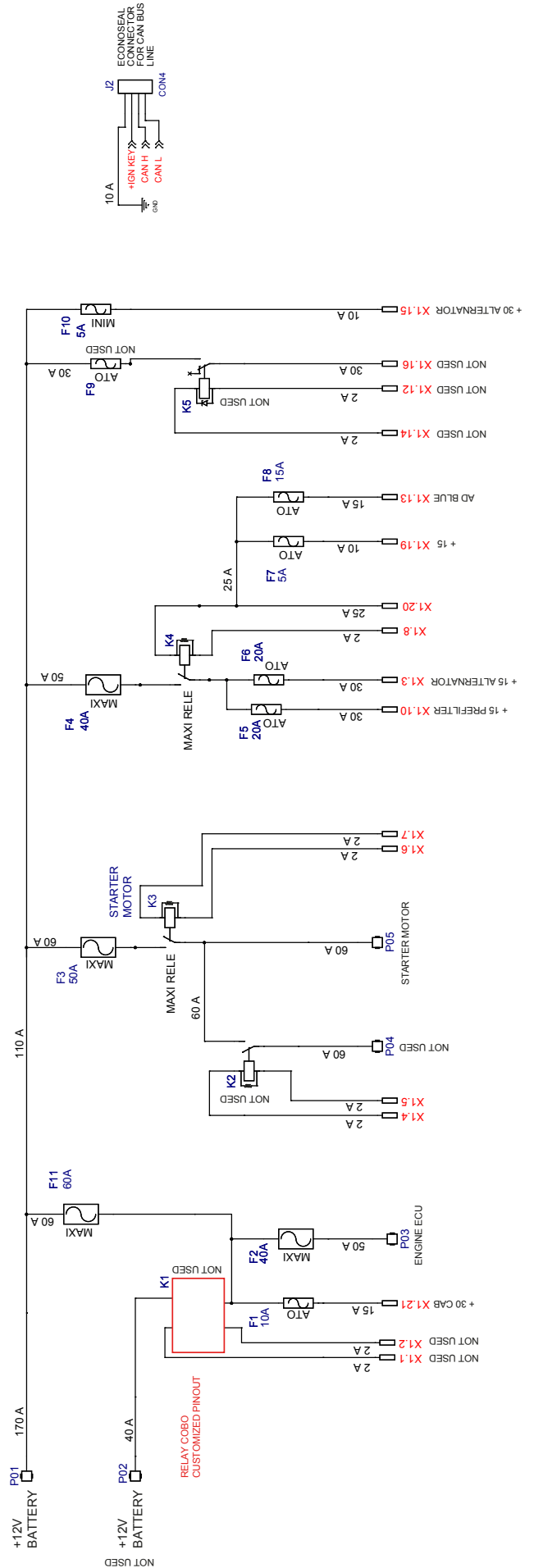
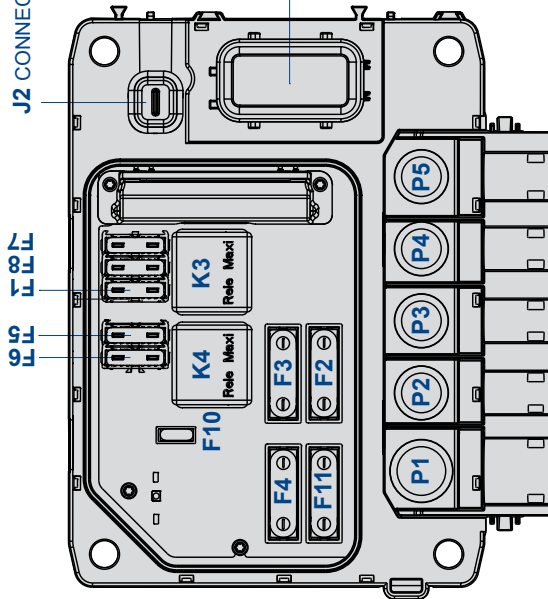
X1

TYCO 21 vie / ways:
Connettore controparte CAN
CAN mating connector
P/N COBO **3024562** (XE0805445)
P/N TYCO 1-1534127-1



J2 CONNECTOR

X1 CONNECTOR



SMART POWER BOX

APPLICAZIONI

Applications

Veicoli industriali, macchine agricole e forestali, macchine speciali, macchine per la movimentazione.
Industrial vehicles, agricultural and forestry machines, specials machines, handling machines.



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