AUTOMOTIVE SOLUTIONS

Our Experience, Your Advantage

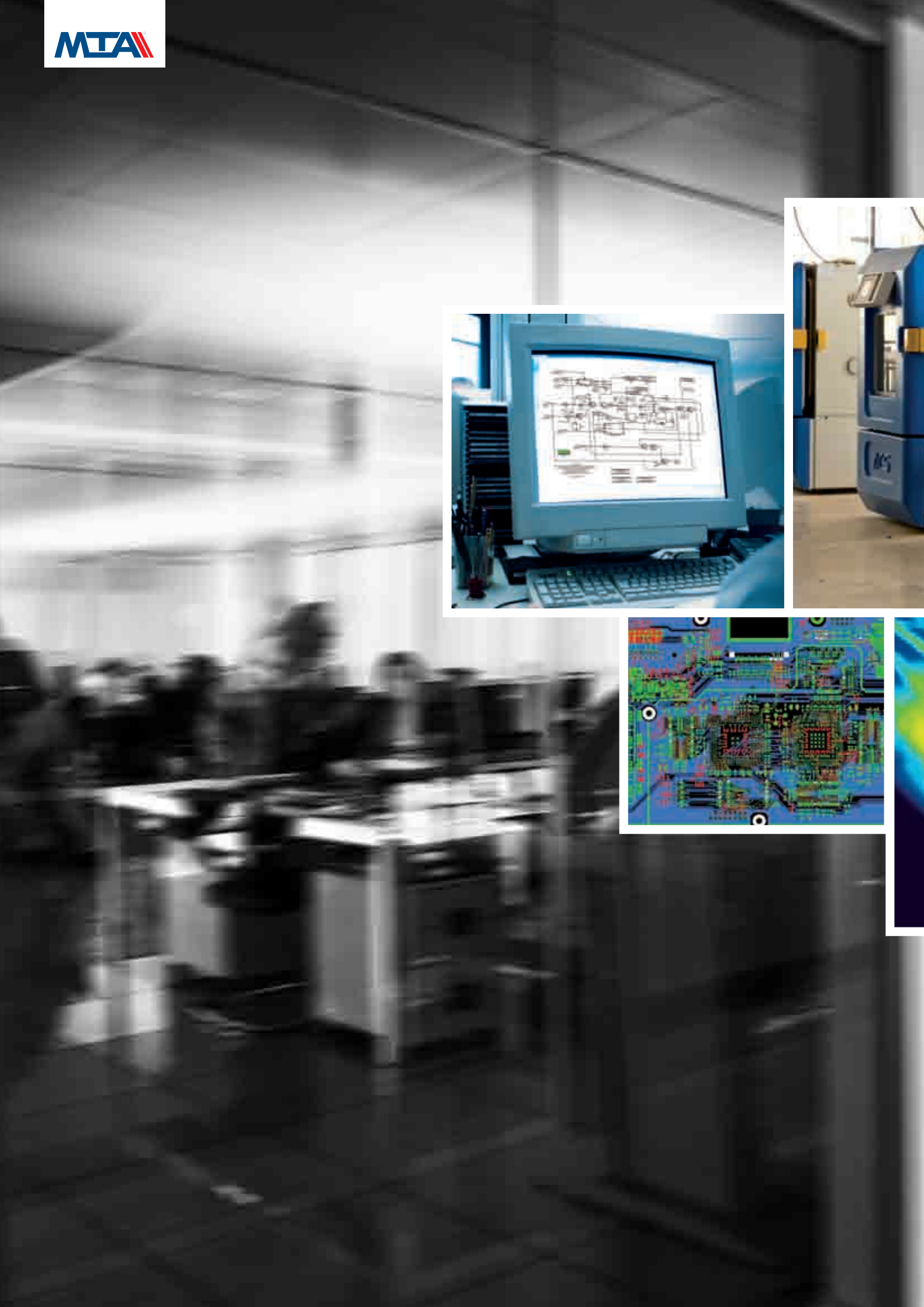
2009

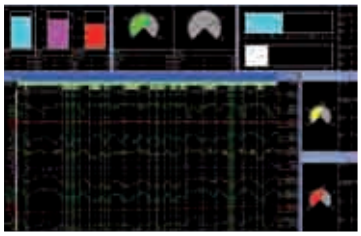
MTA SpA has been engaged in the design and manufacture of a broad range of hi-tech electrical and electronic components for automotive applications for over five decades.
It has grown into a major global player with five subsidiaries in:
BRAZIL, POLAND, SLOVAKIA, USA and **INDIA**

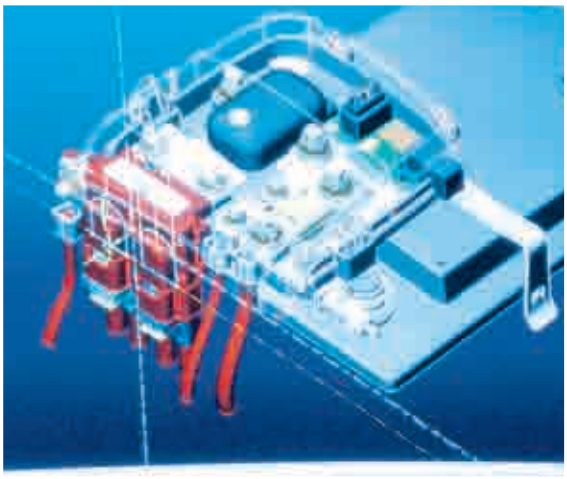
Modern and efficient, MTA's subsidiaries operate in close connection with the Italian Headquarters to support leading automotive manufacturers in all key strategic markets world-wide. An integrated manufacturing process including **plastic moulding, metal blanking, SMD printed circuit board manufacture** and **assembly lines** enables MTA to always respond to customer needs at best.

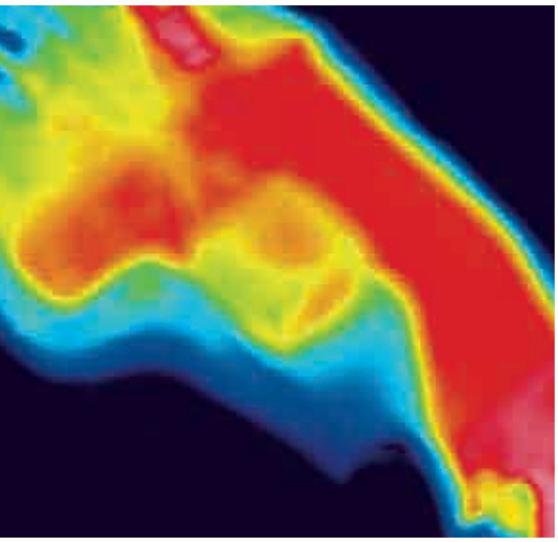
MTA's range of **electrical/electronic** components presently includes:

- Displays & Instrument Clusters
- Power Distribution Boxes
- Electronic Control Units
- Armrests
- Keypads
- Fuses & Fuse Holders
- Terminals & Connectors
- Battery Terminals
- Level Sensors
- Oil & Radiator caps









At MTA, Research and Innovation are at the core of each and every product. At the cutting-edge Research Center of the MTA Group, skilled personnel spends over 80,000 hours a year testing every project using innovative equipment.

Each component part manufactured by MTA stems from extensive research work on **new materials, new technology** and **innovative approaches** to the manufacturing process. This research effort extends to the different quality tests each product undergoes to ensure customers' specifications and requirements are fully met.

Now a well-established global manufacturer, MTA has earned a reputation as a reliable partner offering production capacity and capabilities in line with the demands of the automotive market. The reliability of MTA components is the key to guaranteed success now and in the future.

IPC REV

Full configurable TFT Instrument cluster realized with two 7” and one 3,8” TFTs with 2 graphic controllers displaying 2D and 3D images.
On board of high performance luxury cars.

TECHNICAL FEATURES:
- Hardware designed to drive up to 4 TFTs with a max resolution of SXGA: 1280x1024 colour 24bit RGB
- 2 video inputs for front and rear camera; video streaming and navigation system
- Easy updating graphics for new design; new instrument functionality could be added with software upgrade
- Integrated 3 axis acceleration measurement and visualization
- 1 CAN Line
- 5 g Vibration certified

IPC 409

Instrument cluster with negative dot matrix LCD and 3D dialplates.
Available in 5 versions according to different market requests. On board of premium cars.

TECHNICAL FEATURES:
- 200x32 pixel LCD (100x16 mm) divided into 2 areas with 2 different backlight colours
- 5 Gauges for Speed, RPM, Temperature, Fuel level and Turbo
- 22 Telltales
- Ambient light sensor for day and night backlight regulation
- Chime to generate complex warning sounds
- 1 CAN Line

IPC SBK

Digital instrument cluster available in 4 versions, 2 for series and 2 for race applications.
Compact and stylish.
On board of MOTOGP and SBK Championship motorbikes.

TECHNICAL FEATURES:
- High contrast 272 segments LCD (155x80 mm)
- 12 Telltales, high intensity over-rev indication lamp
- White backlight
- Lap and split time displayed on race versions
- Integrated immobilizer function
- Ambient light sensor
- Atmospheric pressure sensor
- 10 analog/digital inputs and 5 outputs for special functions
- 1 CAN Line
- IP 66 proof
- 10 g Vibration certified

IPC MATRIX 2

Instrument cluster with dot matrix LCD and one gauge.
Compact design.
Special configurations on board of competition motorbikes.

TECHNICAL FEATURES:
- 128 x 112 pixel LCD (62x55 mm) with different colours backlight
- 1 Gauge for Speed or RPM
- 9 Telltales
- Up to 17 analog/digital inputs
- Integrated immobilizer function
- Air pressure measurement
- Exhaust valve management
- Direct driving of traffic indicators
- Automatic on/off headlights
- 1 CAN Line; 1 Configurable Serial Line
- IP 65 proof
- 7 g Vibration certified

IPC SATURN

Instrument cluster with dot matrix LCD and three gauges.
On board of touring motorcycles.

TECHNICAL FEATURES:
- 128x112 pixel LCD (62x55 mm) with different colour backlight
- 3 Gauges for Speed, RPM and Fuel Level
- 11 Telltales
- Up to 16 analog/digital inputs
- Integrated immobilizer function
- Air pressure measurement
- Direct driving of traffic indicators
- Automatic on/off headlights
- 1 CAN Line; 1 Configurable Serial Line
- IP 65 proof
- 7 g Vibration certified

IPC B09

Instrument cluster with segment LCD and one gauge.
On board of off-road motorbikes.

TECHNICAL FEATURES:
- 128 segment high contrast LCD (87x35 mm) for Speed, Fuel Level, Trip Information
- 1 Gauge for RPM
- 6 Telltales
- Up to 11 analog/digital inputs
- 2 Menu Buttons
- 1 Serial Line
- IP 65 proof
- 10 g Vibration certified

IPC UT3

**Instrument Cluster with one dot matrix display and two segment displays, two led bars and one gauge.
Easily adaptable to different vehicles configuration.**

TECHNICAL FEATURES:
- 64x64 pixel LCD (42x48 mm)
- 78 segment LCD (105x22 mm)
- 1 Gauge for RPM
- 32 Telltales
- 2 LED Bars for Temperature and Fuel Level
- Up to 43 analog/digital inputs
- 1 output
- 1 CAN Line
- IP 65 proof
- 10 g Vibration certified

IPC ICU3

Instrument Cluster with two dot matrix LCDs, telltales, gauges and keypad. On board of agriculture vehicles having a new cabin concept.

TECHNICAL FEATURES:
- Two 128x180 pixel LCDs (59x83 mm each) for vehicle parameters visualization
- 2 Gauges for Fuel Level and Temperature Indication
- 34 Telltales
- 15 button keypad with backlight
- Up to 47 analog/digital inputs
- 6 outputs for special functions
- 4 ISO 11786 outputs
- 2 CAN Lines; 1 Serial Line
- IP 65 proof
- 10 g Vibration certified

IPC SGB

Instrument Cluster with 3 segment LCDs and 3 gauges. The internal memory stores main configuration parameters related to several vehicle applications, permitting quick adaptation of the cluster to any tractor during production, avoiding the need of a specific cluster for each model. On board of several tractor models.

TECHNICAL FEATURES:
- Central 129 segment LCD (63x63 mm)
- Lateral 96 segment LCDs (23x60 mm each)
- 3 Gauges for Temperature, RPM and Fuel Level
- 35 Telltales
- 2 Push-Buttons
- Up to 38 analog/digital inputs
- 2 general purpose outputs
- 1 Buzzer
- 1 CAN Line; 1 Serial Line
- IP 65 proof
- 7 g Vibration certified

IPC L MEDIUM

Instrument Cluster with 3 segment LCDs and 3 gauges. The internal memory stores main configuration parameters related to several vehicle applications, permitting quick adaptation of the cluster to any tractor during production, avoiding the need of a specific cluster for each model.

TECHNICAL FEATURES:
- 1 central 84 segment LCD (18x50 mm)
- 2 lateral 78 segments LCDs (14x50 mm each)
- 3 Gauges for Temperature, Fuel Level and RPM
- 31 Telltales
- 2 Push-Buttons
- Up to 40 analog/digital inputs
- 1 CAN Line; 1 Serial Line
- IP 65 proof
- 5 g Vibration certified

MCD 500

Multifunctional monitoring system which permits acquisition and graphic displaying of technical parameters on automotive/marine applications. Optional modules connected on CAN Line permit to read several sensor types for flexible adaptation to any needs.

TECHNICAL FEATURES:
- 8,4 inches high contrast sunlight readable TFT display (800x600 pixels)
- 1 gigabytes flash memory for data storage
- Internal battery for watch/calendar supply
- 6 buttons, 1 "joystick" keyboard
- Ambient light sensor to dim display back light
- 1 Buzzer
- 1 CAN Line; 1 Ethernet Line
- IP 65 proof

Dimensions: 237x201x63 mm (35 mm if recessed)

NVO 141

Steering Wheel Node for luxury cars with vehicle setting functions as in F1 cars.

TECHNICAL FEATURES:
- High brightness Led Bar displaying optimal up shift "Engine Start" Button
- ESP Functions Management through a 5-position selector
- Infotainment instructions transmission to the body computer
- 1 CAN Line
- 10 g Vibration certified

8C KEYPAD

8 Keys Carbon Fiber Cover.

TECHNICAL FEATURES:
Commands for:
- Engine Start
- Reverse
- Automatic Gear
- Launch control
- Emergency button
- Drive control at low temperatures
- ABS/ESP System turn off
- Parking Brake

CLOCK 145

Digital clock with analogical indication in a chrome-plated cast aluminium box.
On board of high performance luxury cars.

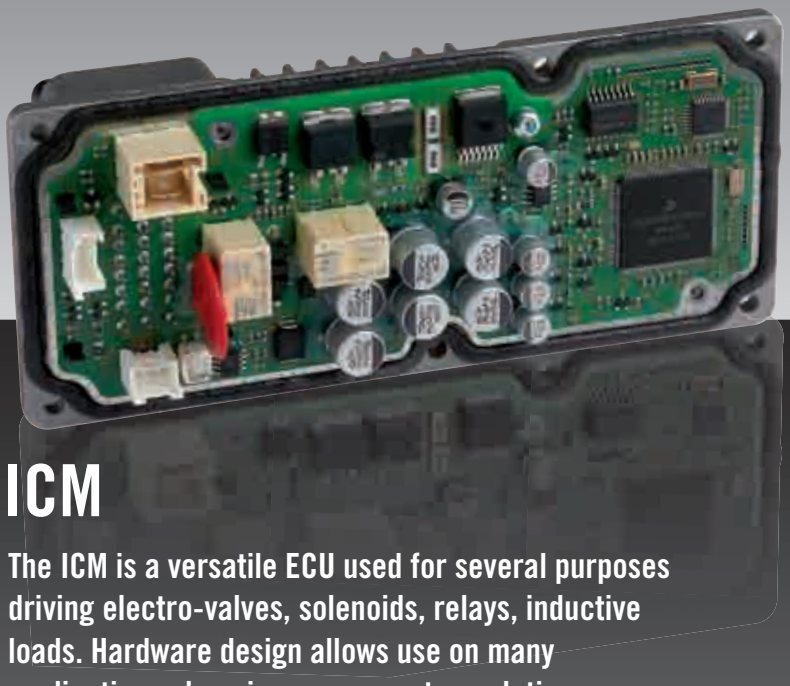
TECHNICAL FEATURES:
- Backlighting with electrolumiscent lamp
- Setting by digital input or serial communication line

EPL

The Electronic Parking Lock drives a brushed DC motor and is integrated within a parking brake actuator system.

TECHNICAL FEATURES:
- 40 Amps half bridge PWM output with current sensing
- Accelerometer to detect vehicle inclination
- Up to 10 analog/digital inputs
- 6 outputs
- Temperature sensor
- 2 microcontrollers for safety redundancy
- 2 CAN Lines
- Emergency actuator back up battery management
- SIL 2 Safety Standard Compliant
- IP 67 proof
- 40 g Vibration certified

Dimensions: 160x69x70 mm

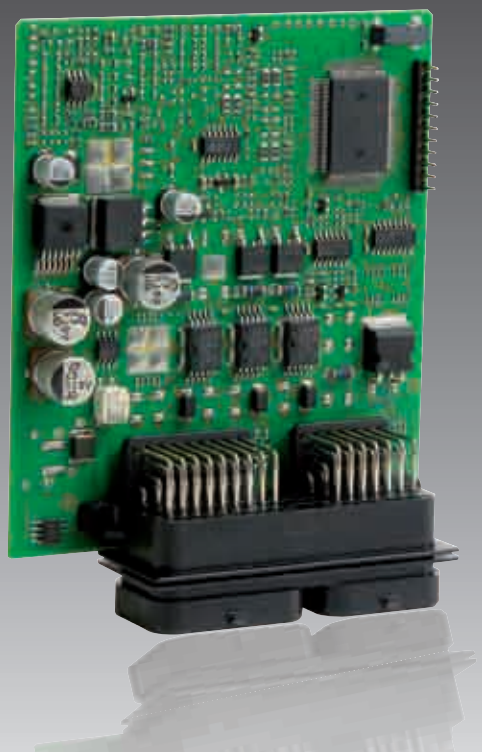


ICM

The ICM is a versatile ECU used for several purposes driving electro-valves, solenoids, relays, inductive loads. Hardware design allows use on many applications changing component population.

TECHNICAL FEATURES:
- Up to 8 High side Drivers
- Up to 10 Low Side Drivers
- Up to 20 analog/digital inputs
- 2 CAN Lines; 1 Serial Line
- IP 67 proof
- 10 g Vibration certified

Dimensions: 135x113x41 mm

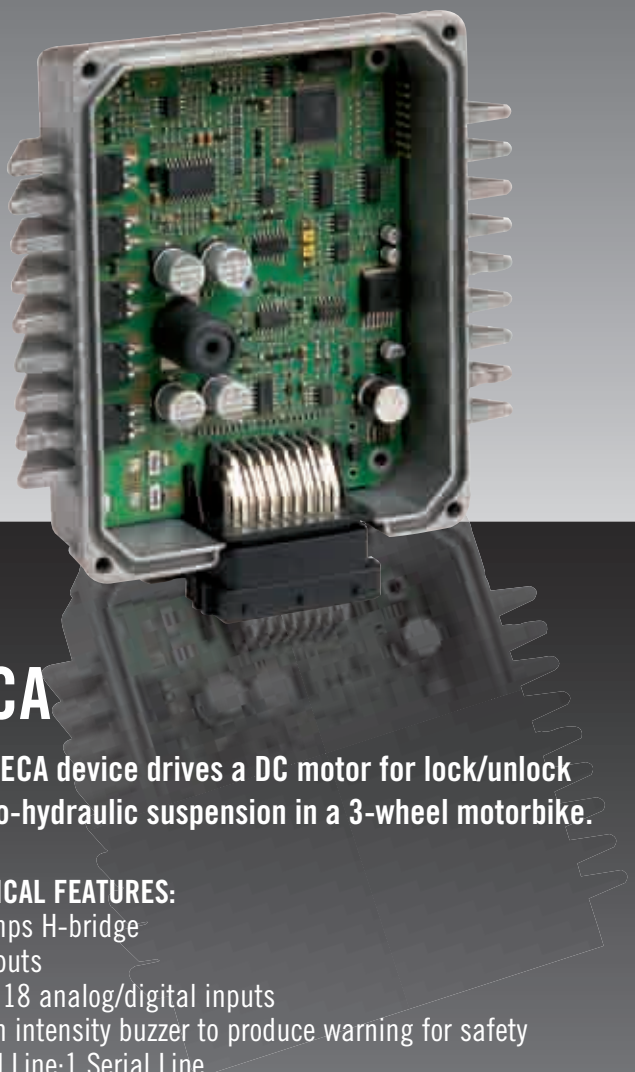


ECVT

The Electronic Continuous Variable Transmission drives a DC motor for motorbike CVT control.

TECHNICAL FEATURES:
- 30 amps H-bridge
- Up to 15 analog/digital inputs
- 1 CAN Line; 1 Serial Line
- SIL 2 Safety Standard compliant
- IP 65 proof
- 10 g Vibration certified

Dimensions: 140x130x38 mm



CECA

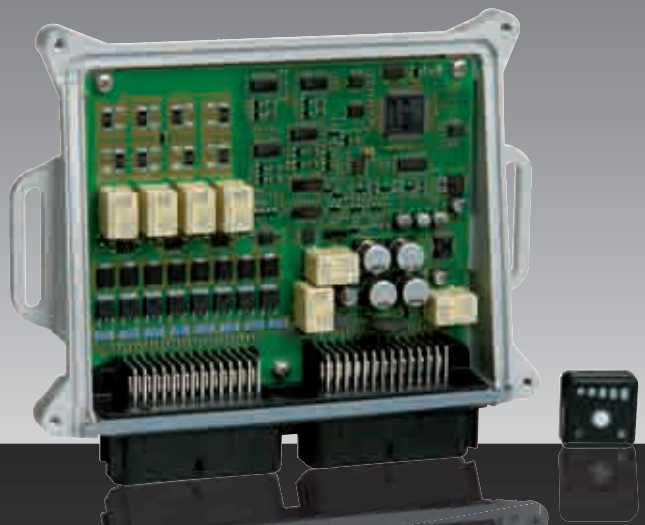
Thre CECA device drives a DC motor for lock/unlock electro-hydraulic suspension in a 3-wheel motorbike.

TECHNICAL FEATURES:
- 25 amps H-bridge
- 6 outputs
- Up to 18 analog/digital inputs
- 1 high intensity buzzer to produce warning for safety
- 1 CAN Line;1 Serial Line
- SIL 2 Safety Standard
- IP 65 proof
- 10 g Vibration certified

Dimensions: 145x100x35 mm

DGI 800 PLUS

**The ECU DGI800 is equipped to manage engines powered by LPG of CNG up to 8 cylinders.
It guarantees the same strategies of the original ECU in terms of handling and emissions.**



TECHNICAL FEATURES:

- Load for fuel injector simulation and disconnection from ECU to keep it from entering diagnostic mode.
- Total system control and fuel system changeover based on following inputs: RPM, reducer temperature, manifold pressure, reducer output pressure, injector temperature, pressure across filter ends.
- Interface to external changeover switch
- Provides separate control of up to 8 gas injectors.
- Integrated spark advance control.
- 1 serial line for diagnosis and calibration
- Default self-calibration feature
- Provides upstream / downstream 2P oxygen sensor signal simulation
- Operating temperature range: - 40 - 105 C
- 1 CAN Line: 1 K-line (OBD); 1 Serial Line for diagnosis and calibration
- IP 67 proof
- 10 g Vibration certified

Dimensions: 217x163x43 mm

MONOFUEL

The Monofuel ECU controls an engine up to 4 cylinders. Used for industrial applications (like forklifts converted and fed exclusively with LPG).

TECHNICAL FEATURES:

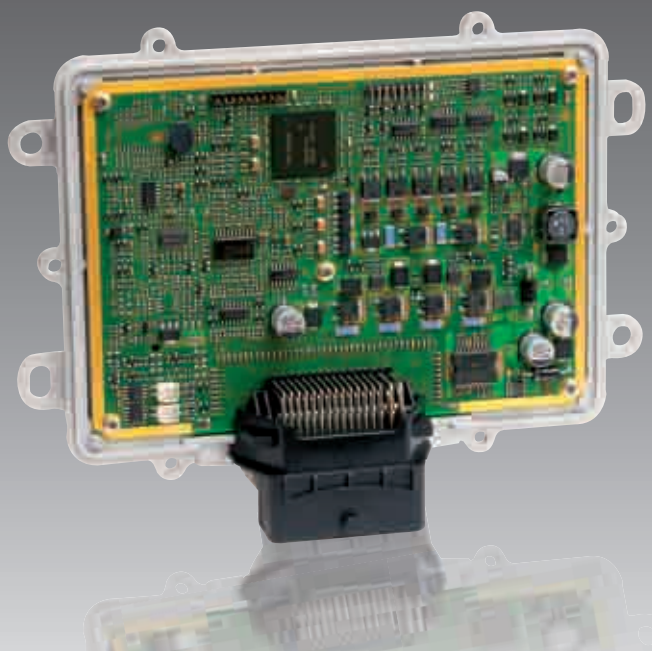
INPUT for

- Camshaft position
- Crankshaft position
- Throttle valve position
- Accelerator pedal position
- Oxygen sensors (2)
- Intake manifold temperature and pressure
- Gas temperature and pressure
- Coolant temperature
- Engine oil pressure
- Gas tank pressure
- Battery voltage
- Atmospheric pressure (built-in)
- Road speed (option)
- Knock (option)

OUTPUT for

- Gas injection per cylinder
- Spark plug ignition coils
- Throttle body control
- Oxygen sensor heater operation
- Tank safety solenoid valve and pressure reducer actuation
- Dash MIL light operation
- 2 CAN Lines
- IP 66 proof
- 10 g Vibration certified

Dimensions: 187x152x37 mm



ARMREST AGR

Multi-function armrest for tractors, with internal electronic unit , developed for vehicle systems control as electronic remote valves, transmission and engine drive, electronic injection control, electronic hand throttle.

TECHNICAL FEATURES:
- 21 Push Buttons
- 8 Potentiometers
- 1 Joystick (2 axis)
- 1 Ergonomic control lever for main tractor functions (acceleration, deceleration, powerlift, hydraulic control valves, transmission control)
- 1 Lever for electronic hand throttle
- 1 CAN Line; 1 Serial Line

DIMENSIONS:
Length: 580 mm
Width: 234 mm
Height: 283 mm

ARMREST CCM

Multi-function armrest for tractors, developed for vehicle systems control as electronic remote valves, transmission and engine drive, lifts control, electronic hand throttle.

TECHNICAL FEATURES:
- 4 Push Buttons
- 4 Potentiometers
- 2 Rocker Switches
- 2 Levers for rear lifts control
- 1 Ergonomic lever for transmission controller
- 1 Lever for electronic hand throttle
- Armrest inclination adjustment
- Transmission controller position adjustment
- Prearrangement for Joystick or Cup holder

DIMENSIONS:
Length: 625 mm
Width: 201 mm
Height: 283 mm

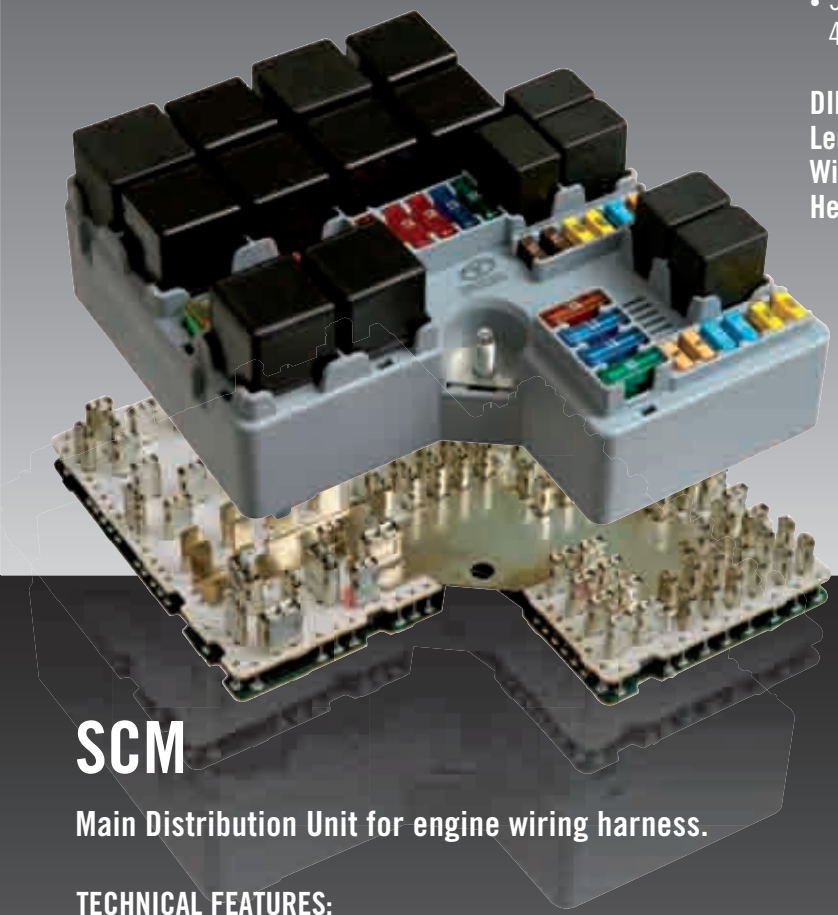
MDU

Main Distribution Unit for engine wiring harness with PCB Technology.

TECHNICAL FEATURES:
- PCB technology
- 2 PCB board + busbar
- Power screw terminal
- Cables exit with connectors
- Fuse holder material: PA66-MD25

CONTENTS:
- 5 Microrelays, 8 Minirelays, 9 Unival, 12 Minival, 4 J-Case

DIMENSIONS:
Length: 159 mm
Width: 164 mm
Height: 67 mm



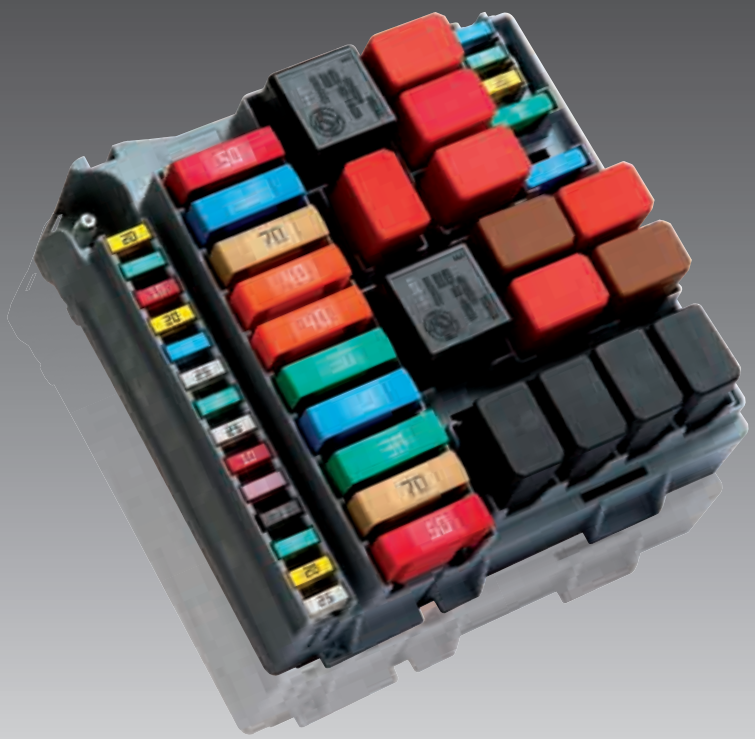
SCM

Main Distribution Unit for engine wiring harness.

TECHNICAL FEATURES:
- Bus Bar Technology
- Secondary Locks on all terminals
- CPA for principal secondary-lock (relais)
- Fuse holder material: PA66-MD25
- Cover material: PA66-MD25

CONTENTS:
- 17 Minival, 2 Unival, 10 Maxival, 12 Microrelays, 2 Maxirelays

DIMENSIONS:
Length: 148 mm
Width: 138 mm
Height: 69 mm



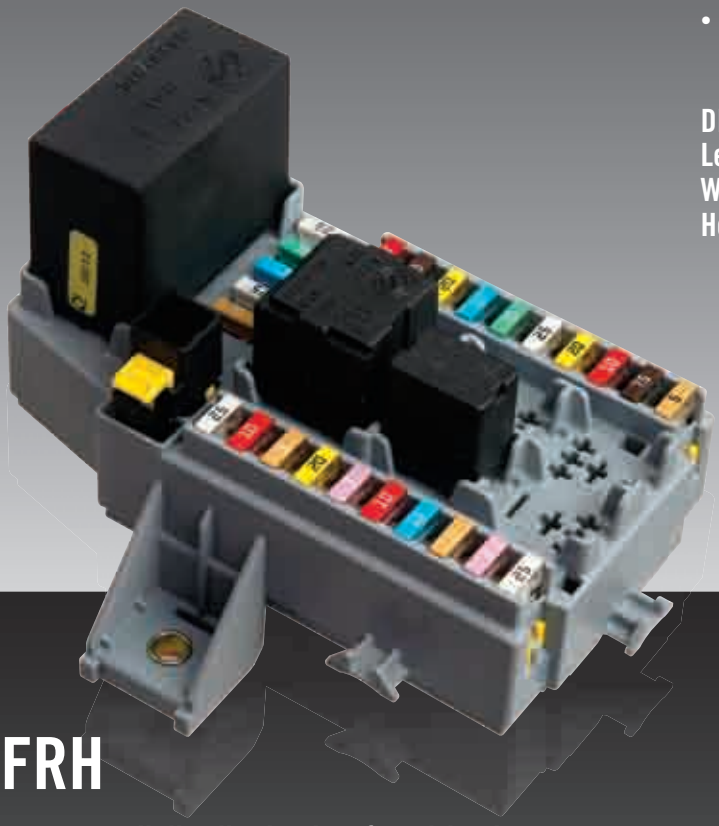
CVB

Rear Distribution Unit for rear wiring harness.

TECHNICAL FEATURES:
- Pre-mounted Secondary Lock for all terminals
- Power connection by 1-Way Connector with Secondary Lock
- Triple screw fixing system
- Double fixing points for cables
- Fuse holder material: PA66-MD25

CONTENTS:
- 20 Minival, 4 Microrelays, 1 Maxirelay, 1 Minirelay/Bub Prearranged for 5 spare Minival

DIMENSIONS:
Length: 149 mm
Width: 129 mm
Height: 78 mm



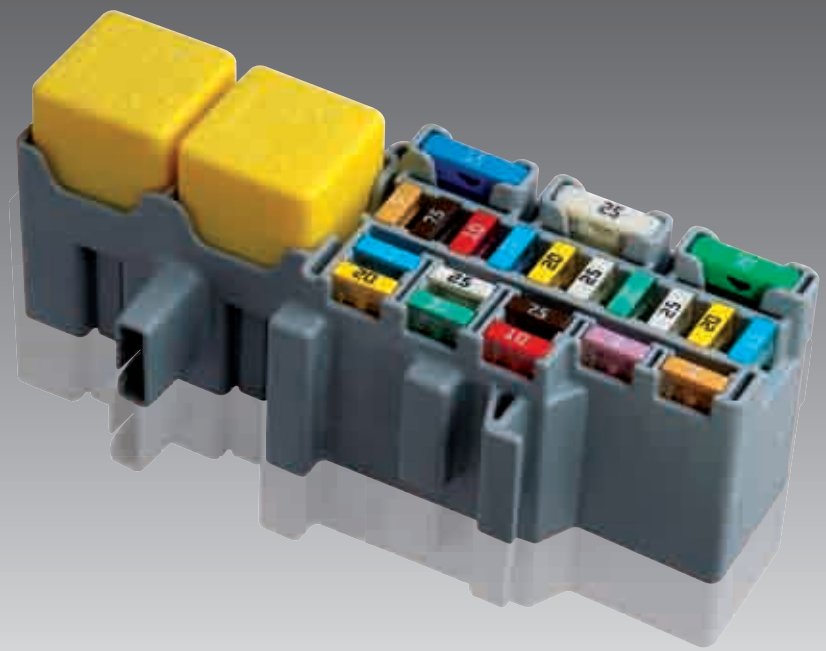
BFRH

Passenger cell distribution box for wiring harness.

TECHNICAL FEATURES:
- Housing for Minival Busbar 3 and 4 way
- Fuse holder material: PBT-GF20

CONTENTS:
- 18 Minival, 3 Unival, 2 Minirelays

DIMENSIONS:
Length: 139 mm
Width: 53 mm
Height: 54 mm



6-WAY MIDIVAL

Power Distribution Unit (seal version) for engine wiring harness (primary users).

TECHNICAL FEATURES:
- Compact Design
- Water proof
- Fuse holder material: PA66-MD25
- Double fixing points

CONTENTS:
- 6 Midival

DIMENSIONS:
Length: 209 mm
Width: 109 mm
Height: 53 mm

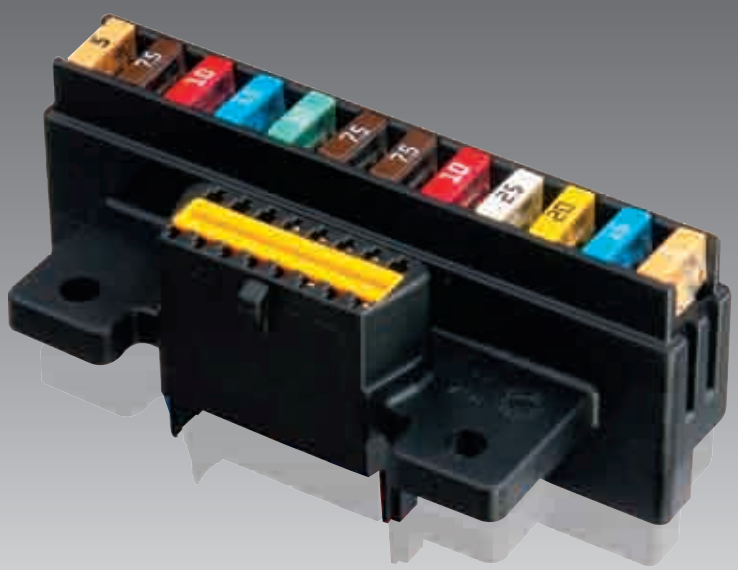
SCA

Cockpit Distribution Unit with EOBD Connections.

TECHNICAL FEATURES:
- Secondary Lock on all terminals
- Power connection by 16-Way
- Diagnostic Connector
- Double screw fixing system
- Fuse holder material: PA66-GF30

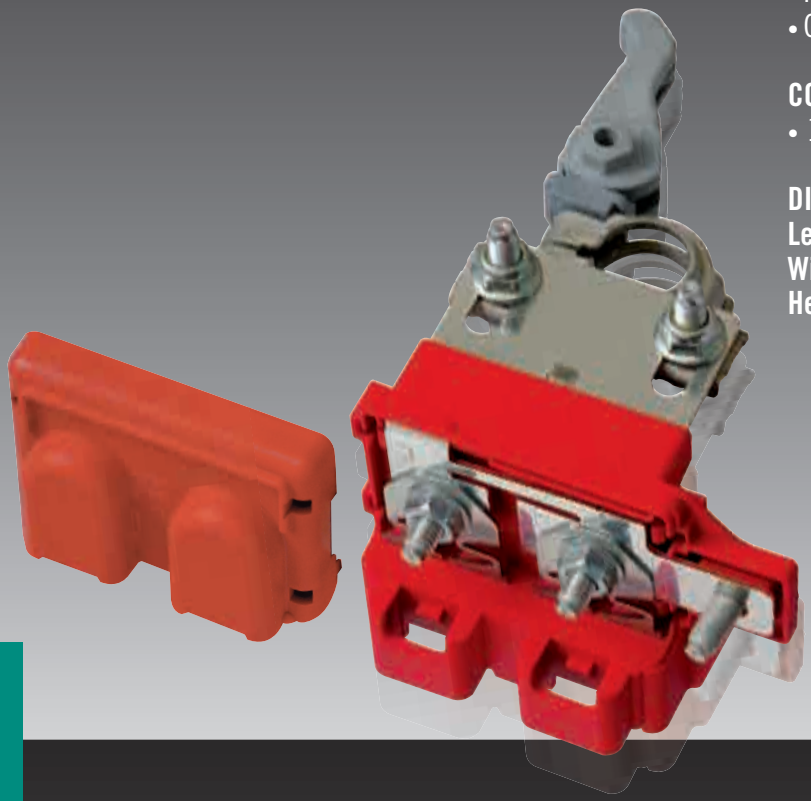
CONTENTS:
- 12 Minival

DIMENSIONS:
Length: 99 mm
Width: 42 mm
Height: 40 mm



BFT J77

Battery distribution unit with a 2-way multifuse for engine wiring harness.



TECHNICAL FEATURES:
- Connection to Multival with 2-Way Power Connectors
- Fuse holder material: PBT-GF20
- Cover material: PBT

CONTENTS:
- 1 Powerval, 2 Multival Blades

DIMENSIONS:
Length: 29 mm
Width: 62 mm
Height: 64 mm

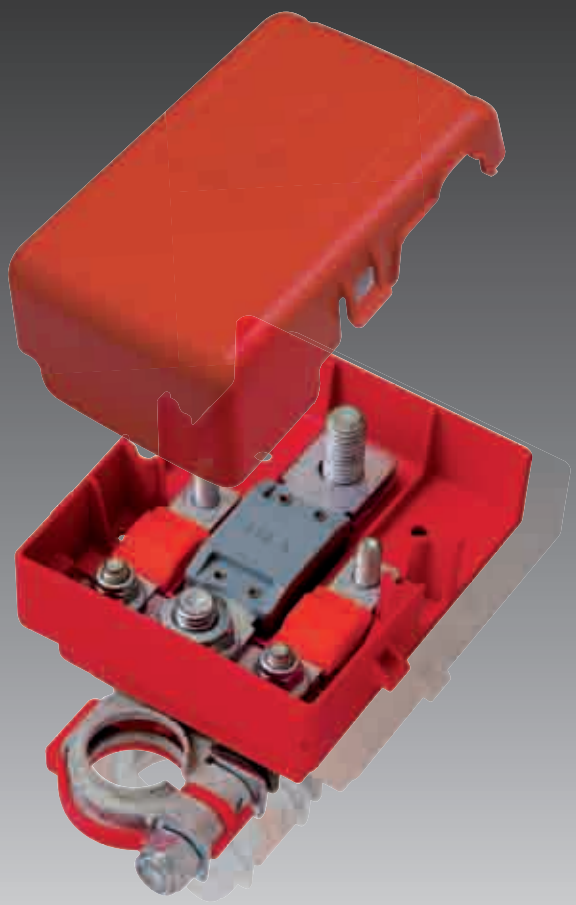
CBA W84

Battery distribution unit for engine wiring harness.

TECHNICAL FEATURES:
- Mounted directly on battery positive pole
- Fuse holder material: PBT-GF20
- Cover material: PP

CONTENTS:
- 1 Megaval/Powerval, 2 Midival

DIMENSIONS:
Length: 123 mm
Width: 77 mm
Height: 53 mm



CBPF

Battery Distribution Unit for engine wiring harness.

TECHNICAL FEATURES:
- Jump Start Terminal
- Bus Bar Technology
- Mounted directly on battery positive pole
- Fuse holder material: PBT-GF20
- Cover material: PP-GF30

CONTENTS:
- 5 Maxival, 3 Unival, 3 Microrelays, 1 Extractor for Maxival and Unival

DIMENSIONS:
Length: 160 mm
Width: 130 mm
Height: 70 mm

BDU

Battery Distribution Unit for Engine Wiring Harness.

TECHNICAL FEATURES:
- Bus Bar technology
- Mounted directly on battery positive pole
- Vertical cables exit
- Double fuse holder fixing system:
  a) clamp on battery positive pole with battery terminal
  b) clamp on battery body with metallic bracket
- Cables exit with polarized terminals
- Fuse holder material: PBT-GF20
- Cover material PP-GF20

CONTENTS:
- 5 Midival, 2 Megaval, 1 unprotected Output

DIMENSIONS:
Length: 194 mm
Width: 126 mm
Height: 135 mm

BPCB

Battery distribution unit for engine wiring harness.

TECHNICAL FEATURES:
- Bus Bar Technology
- Battery terminal power connection
- Double fuse holder fixing system:
  a) Clamp on battery positive pole with battery terminal
  b) Clamp on battery body with metallic bracket
- Cover hinged to the fuse holder body
- Fuse holder material: PBT-GF20
- Cover material: PP-GF30

CONTENTS:
- 2 Megaval, 2 Midival

DIMENSIONS:
Length: 157 mm
Width: 183 mm
Height: 86 mm

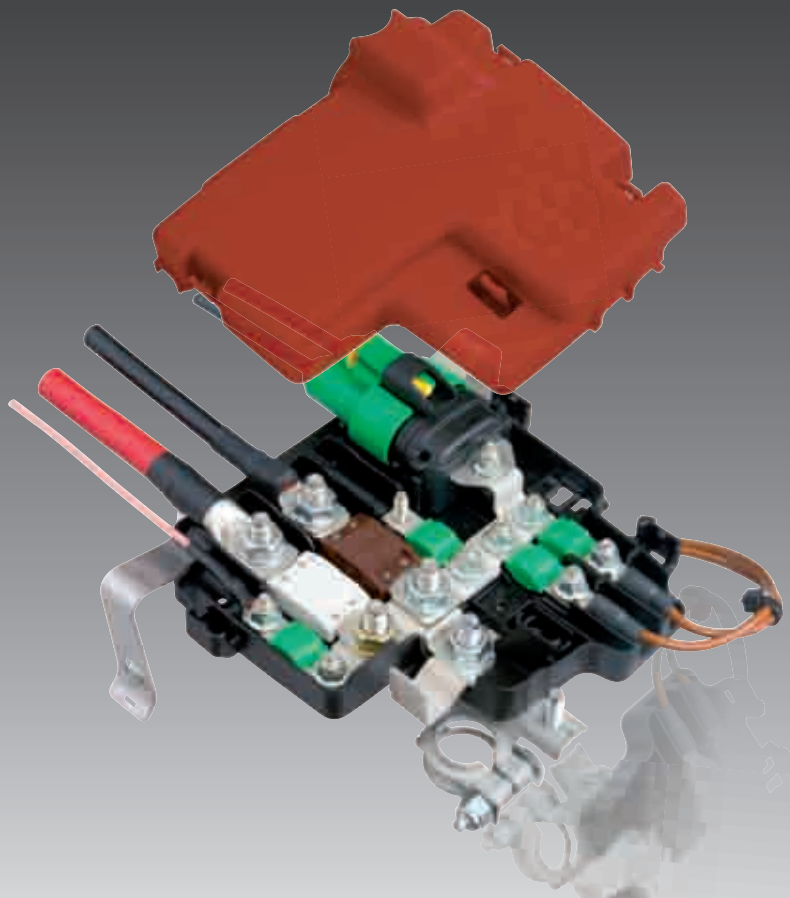
CBA W61

Battery distribution unit for engine wiring harness.

TECHNICAL FEATURES:
- Jump Start Terminal
- Mounted directly on battery positive pole
- Double fuse holder fixing system:
  a) Clamp on battery positive pole with battery terminal
  b) Clamp on battery body with metallic bracket
- Connection to Multival with 2-Way Water Proof Connector
- Fuse holder material: PBT-GF20
- Cover material: PP-GF30

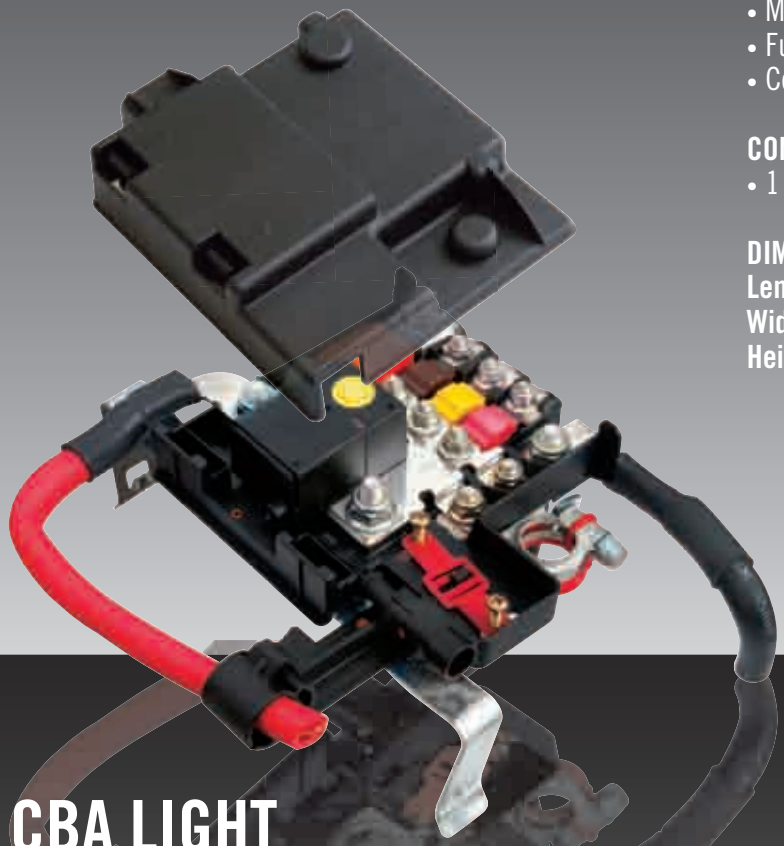
CONTENTS:
- 4 Midival, 2 Megaval/Powerval, 1 Multival Blade

DIMENSIONS:
Length: 152 mm
Width: 182 mm
Height: 95 mm



CBA W/BDS

Battery Distribution Unit (strong version) for engine wiring harness (primary users).



TECHNICAL FEATURES:
- Mounted directly on battery positive pole
- Possibility to have 2 different fuse holder fixing system:
  a) Clamp on battery body by metallic bracket
  b) Clamp on battery body by locking relock
- Battery Disconnect Switch System
- Midival Exit through polarized terminals
- Fuse holder material: PBT-GF20
- Cover material: PP-GF30

CONTENTS:
- 1 BDS, 3 Midival, 1 Megaval

DIMENSIONS:
Length: 147 mm
Width: 182 mm
Height: 87 mm

CBA LIGHT

Battery Distribution Unit (light version) for engine wiring harness (primary users).

TECHNICAL FEATURES:
- Bus Bar Technology
- Battery terminal power connection
- Mounted directly on battery positive pole
- Fuse holder material: PBT-GF20
- Cover material: PP-GF30

CONTENTS:
- 2 Midival

DIMENSIONS:
Length: 111 mm
Width: 94 mm
Height: 46 mm

BFDB X7

Battery distribution unit for engine wiring harness.

TECHNICAL FEATURES:
- Bus Bar Technology
- Prearranged for 4-Way Minival Holder with Secondary Lock for terminals
- Power screw terminal connection
- Vertical flexible fixing system
- Fuse holder material: PBT-GF25 V0
- Cover material: PP-GF30 V0

CONTENTS:
- 4 Minival, 5 Midival

DIMENSIONS:
Length: 159 mm
Width: 99 mm
Height: 53 mm

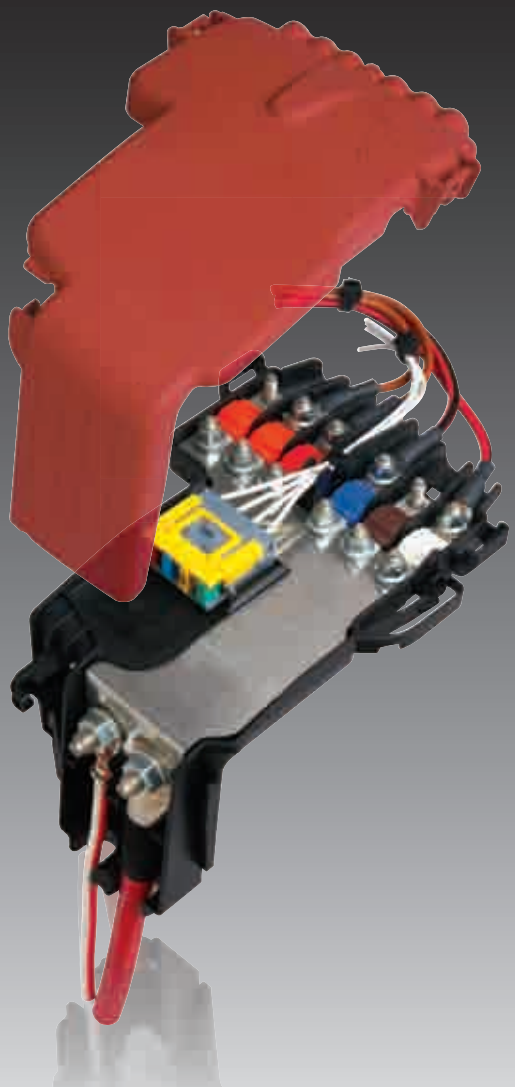
BFDB T7

Battery distribution unit for engine wiring harness.

TECHNICAL FEATURES:
- Bus Bar Technology
- Prearranged for 4-Way Minival Holder with Secondary Lock for terminals
- Double power screw terminal connection
- Vertical flexible fixing system
- Fuse holder material: PBT-GF25 V0
- Cover material: PP-GF30 V0

CONTENTS:
- 4 Minival, 6 Midival

DIMENSIONS:
Length: 184 mm
Width: 128 mm
Height: 124 mm



BFAV

Battery distribution unit for engine wiring harness.

TECHNICAL FEATURES:
- Busbar technology
- Compact design
- Vertical cable exit
- Cables exit with polarized terminals
- Integrated cable guide cover
- Fuse holder material: PBT-GF20
- Cover material: PP TD20

CONTENTS:
- 6 Midival

DIMENSIONS:
Length: 190 mm
Width: 77 mm
Height: 35 mm

NEW POWER BOX

Power distribution unit to be fixed on the starter and with integrated BDS system.

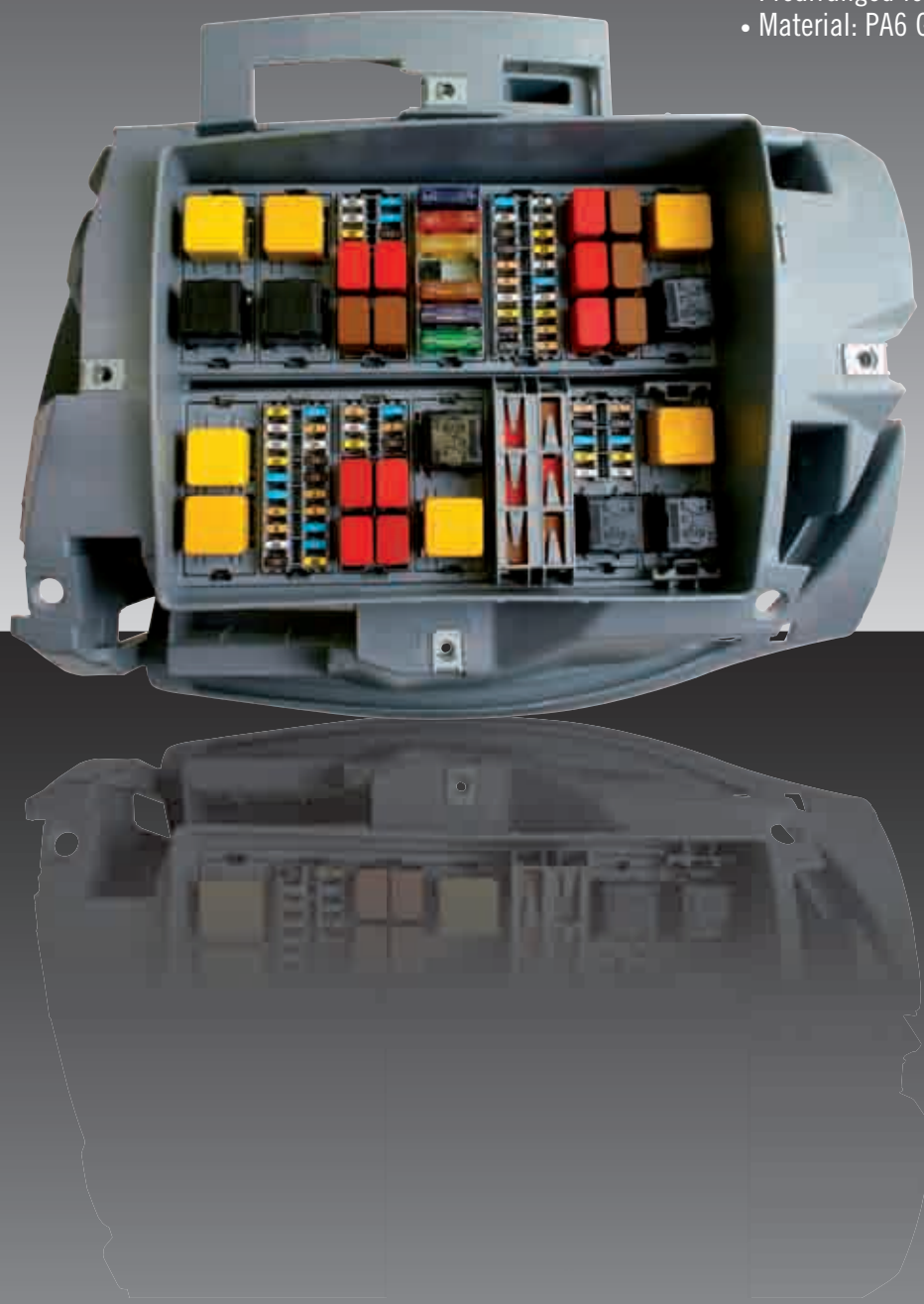
TECHNICAL FEATURES:
- Bus Bar technology
- Jump Start Terminal
- Mounted directly on starter
- Vertical cables exit
- Fuse holder fixing system with metallic bracket on starter
- Prearrangement for BDS (Battery Disconnect Switch)
- Fuse holder material: PBT-GF20
- Cover material: PP-GF30

CONTENTS:
- 2 Midival, 1 Megaval, 2 Minival
  1 BDS (Battery Disconnect Switch)

DIMENSIONS:
Length: 150 mm
Width: 183,5 mm
Height: 127 mm

CARRIER

TECHNICAL FEATURES:
- Carrier for 14 Unit Modules
- Prearranged for 14 Relay holder Covers for vertical assembling or high vibration profiles
- Prearranged for coupling with external power box by M5 clip
- Prearranged for coupling with external cover by ¼ turn clip
- Prearranged for coupling soft trim by M6 clip
- Material: PA6 GF20



CONTENTS:
- 14 Unit Modules + 14 Relay holder Covers

DIMENSIONS:
Length: 440 mm
Width: 363 mm
Height: 278.5 mm

Drawings, specifications and reference numbers may be modified and changed.
MTA S.p.A. reserves itself the right to make changes for technical or quality improvements, without any notice.

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