

**COVER STORY**

# MTA India moves to its new premises

**ZOOM**

# MTA Studio software tool

ENG/CN





# MTA EXHIBITIONS 2016-17

ELECTRONICA CHINA, Shanghai, March 15-17 2016 / MIMS-AUTOMECHANIKA, Moscow, August 22-25 2016 / ELECTRONICA, Monaco, November 8-11 2016 / EIMA, Bologna, November 9-13 2016 / BAUMA, Shanghai, November 22-25 2016 / BAUMA CONEXPO, New Delhi, December 12-15 2016 / CONEXPO, Las Vegas, March 7-11 2017 / ELECTRONICA CHINA, Shanghai, March 14-17 2017 / AGRITECHNICA, Hannover, November 12-18 2017.





## EDITORIAL

### 序

Welcome to the new edition of the MTA journal, with our latest corporate and product news. Let's start off with some images, here on the left, of the various trade fairs we participated in 2016, and a preview of those to come in 2017. These events gave our company great visibility and we will continue to participate throughout the world this year. You can also read about our refurbished site in India, with the new plastic molding area. As always, ample space has been dedicated to our products and their applications. The range of products that we offer our clients is constantly updated to meet the demands of the producers. This allows us to supply parts to important car manufacturers or manufacturers of tractors and construction vehicles, who choose our products for their quality and reliability. There are many examples of this in our Journal 17 but we will let you discover them on your own in these pages.

欢迎阅读新一期 MTA 杂志，关注我们最新的企业与产品新闻。本期的杂志之旅将从几张照片开始，照片中是我们在 2016 年参加的几次商展，以及 2017 年的展会预览。这些活动极大地提升了公司的知名度，今年我们将再接再厉，继续积极参加全球商展。接着，您还将领略我们印度工厂新址的面貌，改造后的新厂增设了塑料成型加工区。此外，我们还将一如既往，留出大量篇幅介绍公司的各种产品及其应用。我们始终在根据生产商的需求不断更新我们的产品组合，为那些信赖我们产品质量和可靠性的重要汽车厂商或拖拉机制造商供应各种零部件。本期第 17 期杂志刊载许多应用实例，敬请自行阅读。

## MTA Journal

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**Direttore Responsabile**  
Maria Vittoria Falchetti - MTA SpA  
V.le dell'Industria, 12 - 26845 Codogno (LO)  
T. +39 0377 4181 - F. +39 0377 418493  
www.mta.it

**Redazione**  
COM&MEDIA  
Viale Emilio Caldara, 43 - 20122 Milano  
T.+39 02.45.40.95.62 - F. +39 02.81.32.485  
www.comedia.it

**Progetto Grafico ed Impaginazione**  
SDWWG  
C.so Sempione, 8 - 20154 Milano  
T. +39.02.33.10.42.72 ra - F. +39.02.31.80.97.34  
www.sdwwg.it

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Nuova Litoeffe  
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# MTA India moves to its new premises

## MTA 印度工厂乔迁新址

After only 7 years since its first establishment, the demands of a growing market and of our customers who have always considered MTA a reliable partner have made it necessary to move into premises that could meet the new growth.

MTA India is located in Pune, which is considered a strategic city for the automotive market due to the presence of major local and foreign carmakers. We moved into a new building not far from the previous one, and this allowed us to remain operational.

The new premises, which were designed according to the style standards of all MTA premises, cover a total area of about three and a half times the previous one. In particular, we were able to duplicate the production and warehouse area. In this new plant, we also added dining halls and a courtyard, a highly distinctive element of all our locations.

The offices are better organized, and will enable improved operations. However, the qualitative breakthrough will come from opening the molding department, with a medium-term plan for installing six plastic injection presses.

从初建至今短短 7 年时间里，MTA 印度工厂在飞速成长的市场中，赢得了始终视 MTA 为可靠合作伙伴的客户。如今，面对市场和客户增长的双重压力，工厂必须迁入新址才能适应新的增长。

MTA 印度工厂座落于普纳市，这座城市汇集了众多本地与国际的主要汽车制造商，因此被视为汽车市场的一座战略性城市。

工厂新址与原址相距不远，这样保证了工厂的持续运营。

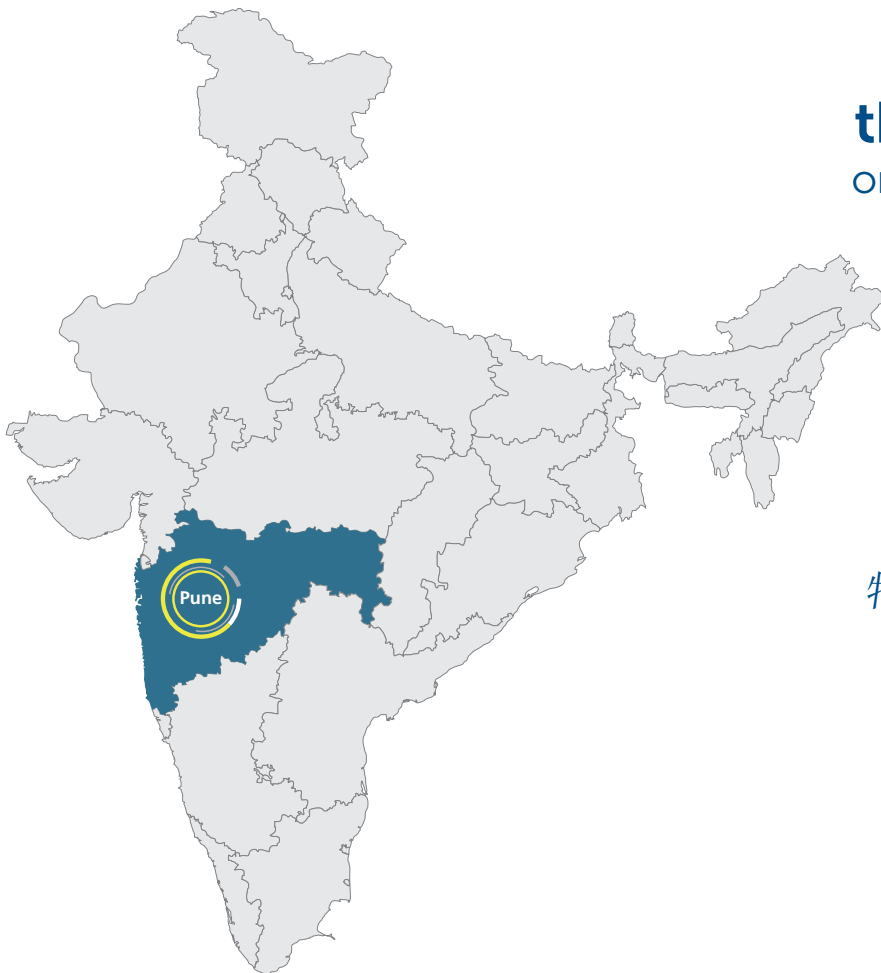
新厂区设计沿袭了 MTA 工厂的所有风格标准，总面积约为原厂的 3.5 倍。

特别是，生产和仓储区面积比过去大了一倍。

新厂区还增设了餐厅和庭院，与其它工厂一样，非常具有 MTA 特色。

办公区更加合理有序，可提高运营效率。

此外，新工厂还增设了成型工段，并制定了装配六台注塑压机的中期计划，这必将帮助工厂实现质的突破。



Total covered area of about **three and a half times** the previous one. In particular, we were able to duplicate the production and warehouse area.

Molding department with **6 plastic injection presses**

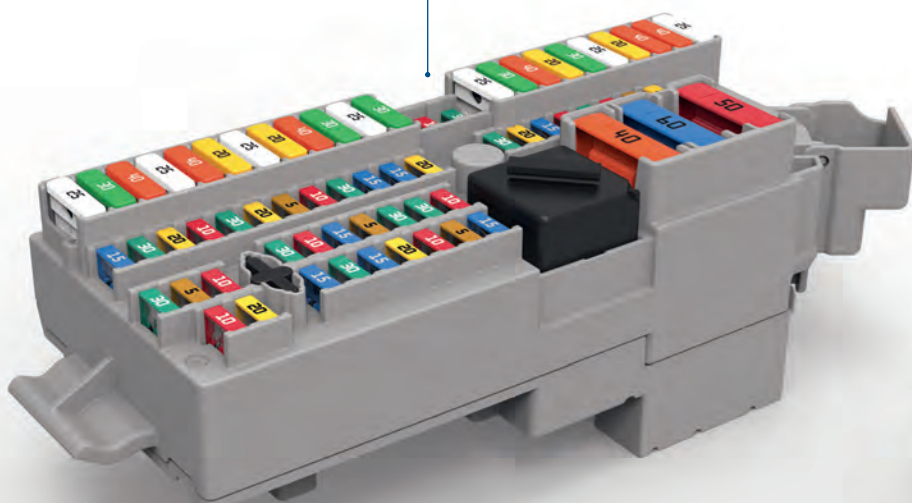
总面积约为原厂面积的3.5倍，特别是生产和仓储面积区域比过去大了一倍。

模具部门装配了6台注塑压机

# Control unit for power distribution - High-tech wiring... in Bavaria and in the world

配电控制单元 - 在巴伐利亚和全球  
... 完成高科技接线

## Control Unit Right Side



## Control Unit Left Side



MTA supplies two control units for the new BMW Series 7 of the BMW Group. They are mounted inside the vehicle on the right and left sides and form part of the on-board electricity distribution and wiring protection thanks to the fuses. With its intelligent and innovative design, our company has managed to provide a high current capacity with a compact design, allowing it to be installed even in small spaces. The latest bus-bar technology, together with optimized contact terminals and integrated Secondary Lock systems, ensure the direct contact with the wiring.

Various thermal FEM (Finite-Element-Method) simulations were carried out with many variations, which were then verified in the laboratory, so as to guarantee safe use under all conditions for the entire standard production. State-of-the-art mold technology allows the components to be attached perfectly to the insertion openings (cavities) with contact 100% guaranteed, a characteristic that is important for Thermomanagement inside the control unit. Modern developments, state-of-the-art laboratories and equipment for testing are the foundations that have allowed us to develop these latest generation control units, which are long lasting, highly reliable and functional.

**MTA control units for BMW - ready for various vehicle configurations and new models.**

MTA 为宝马集团的全新 7 系宝马汽车供应两款控制单元。这些控制单元安装于汽车内部左右两侧，是车载配电和接线保护系统的一部分，借助保险丝实现接线保护。这些单元采用智能化的创新型设计，可在紧凑设计条件下提供高电流容量，能轻松安装在小空间内。最新的母线技术搭配经优化的接触端子及集成式副锁系统，可确保与接线直接接触。

产品经过多种变体形式的多种热 FEM（有限元法）模拟，再经实验室验证，保证能在整个标准生产过程的所有条件下安全使用。一流的模具技术可保证组件与插口（型腔）完美契合、100% 接触，这一特性对于控制单元内的热管理具有重要作用。

现代化的开发技术、一流的实验室与先进的测试设备为我们开发兼具耐用性、高可靠性和功能性的最新一代控制单元奠定了坚实的基础。

**搭载于宝马汽车的 MTA 控制单元 - 适配多种汽车配置与新车型。**

# A display for the Volvo XC90

## 搭载于沃尔沃 XC90 的显示屏

Volvo has chosen an MTA display for the 4-seater Excellence variant of Volvo XC90 SUV, the first car born from the common development platform called SPA (Scalable Product Architecture).

The display developed by MTA can handle several functions, such as displaying and adjusting the different seating positions, operating their heating, the lumbar massage, and more.

This display can also turn on the food warmer and the refrigerator that equip this highly accessoried car. The touchscreen display was developed from the ground up and put into production in just one year, allowing us to comply with the timing of the manufacturer's assembly lines.

This product is the first that we create for Volvo, and we will offer derivatives of it in the future also for other cars of this important brand.

沃尔沃为其首款诞生于 SPA（可扩展整车平台架构）通用开发平台的 XC90 Excellence 4 座 SUV 选用了一款 MTA 显示屏。

由 MTA 开发的该款显示屏可用来操控座椅位置显示与调节、座椅加热及腰部按摩等多种功能，还可打开高配车型中的食物保温器和车载冰箱。

此款触摸显示屏从全新开发到投入生产仅用了短短一年时间，完美地配合了制造商装配线的时间。

这是我们为沃尔沃打造的第一款产品，未来，这款显示屏还将选配到该重要品牌的其它车型上。



[www.media.volvocars.com](http://www.media.volvocars.com)

Display with capacitive sensor, with 4.3" touchscreen

Retractable positioning on the centre console of the car, available to the rear passengers

Very short development time

OS Autosar R4.X

Automotive Spice Level 3

显示屏配备电容传感器和 4.3" 触摸屏

置于汽车中控台、可以伸缩，可供后排乘客使用

极短的研发时间

Autosar R4.X 操作系统

Automotive Spice 3 级





# Bolloré, the collaboration continues

## 博洛雷 合作不断

From the development of the first electric vehicle, the Bolloré Group decided to entrust the production of their electromechanical components to our company. Recent examples include the new E-MEHARI, Bluecar and Bluebus vehicles that use the MiniVal, MidiVal and MegaVal fuses as well as the new MaxiCompact and M8Compact electromechanical control units with dedicated equipment and a 5-way frame with fuse and relay holder modules.

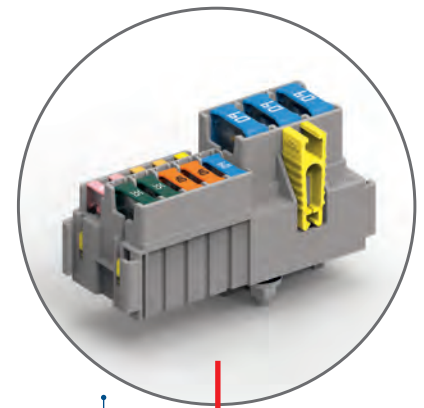
从研发首款电动汽车开始，博洛雷就决定委托我们为其生产机电元件。此后，双方一直保持着密切的合作，例如最近，全新 E-MEHARI、Bluecar 及 Bluebus 车型采用了 MiniVal、MidiVal 和 MegaVal 型保险丝，以及全新的 MaxiCompact 和 M8Compact 机电控制单元，该控制单元配有专用设备和一个带保险丝和继电器底座模块的 5 路框架。

## Bluecar and Bluebus

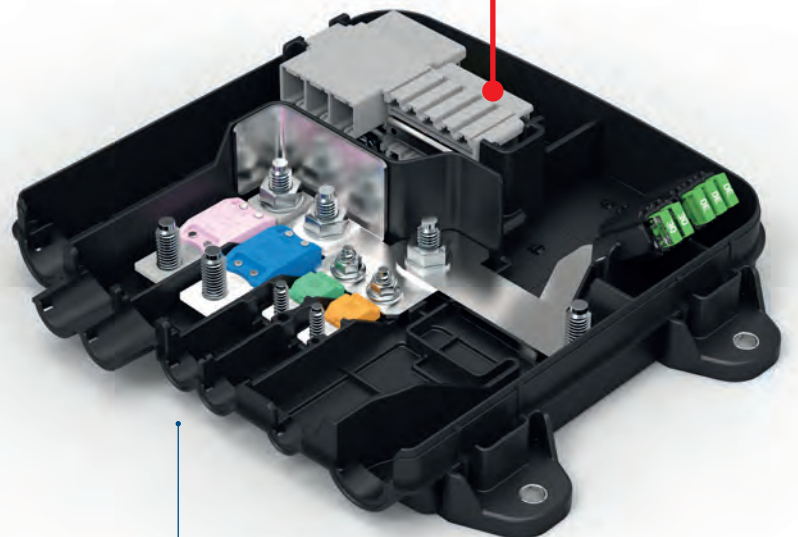
### Bluecar 与 Bluebus

Bluecar is an electric car designed by Pininfarina and produced in Italy by Bolloré Group. It features many technological components, as for example the on board computer, to facilitate the dialogue between the car and its driver. Bolloré Group also manufactures the Bluebus, an electric bus with 2 different versions: 6 and 12 meters. The Bluebus stands out for its easy access and handling. Both the car and the minibus guarantee a high safety level thanks to the innovative LMP® (Lithium-Metal-Polymer) batteries of Bolloré Group.

Bluecar 是宾尼法利纳公司设计的一款电动汽车，生产于意大利。该车配有许多方便人车对话的技术组件。而配有 6 米和 12 米两种款型的博洛雷 Bluebus 是市面上最紧凑的迷你巴士之一，其易用性和易操控性受到广大用户的青睐。这两款车均采用创新的锂金属聚合物电池，从而确保了超长的电池寿命。



Module with:  
5 MiniVal  
5 MaxiCompact  
3 M8Compact



Power Distribution Unit



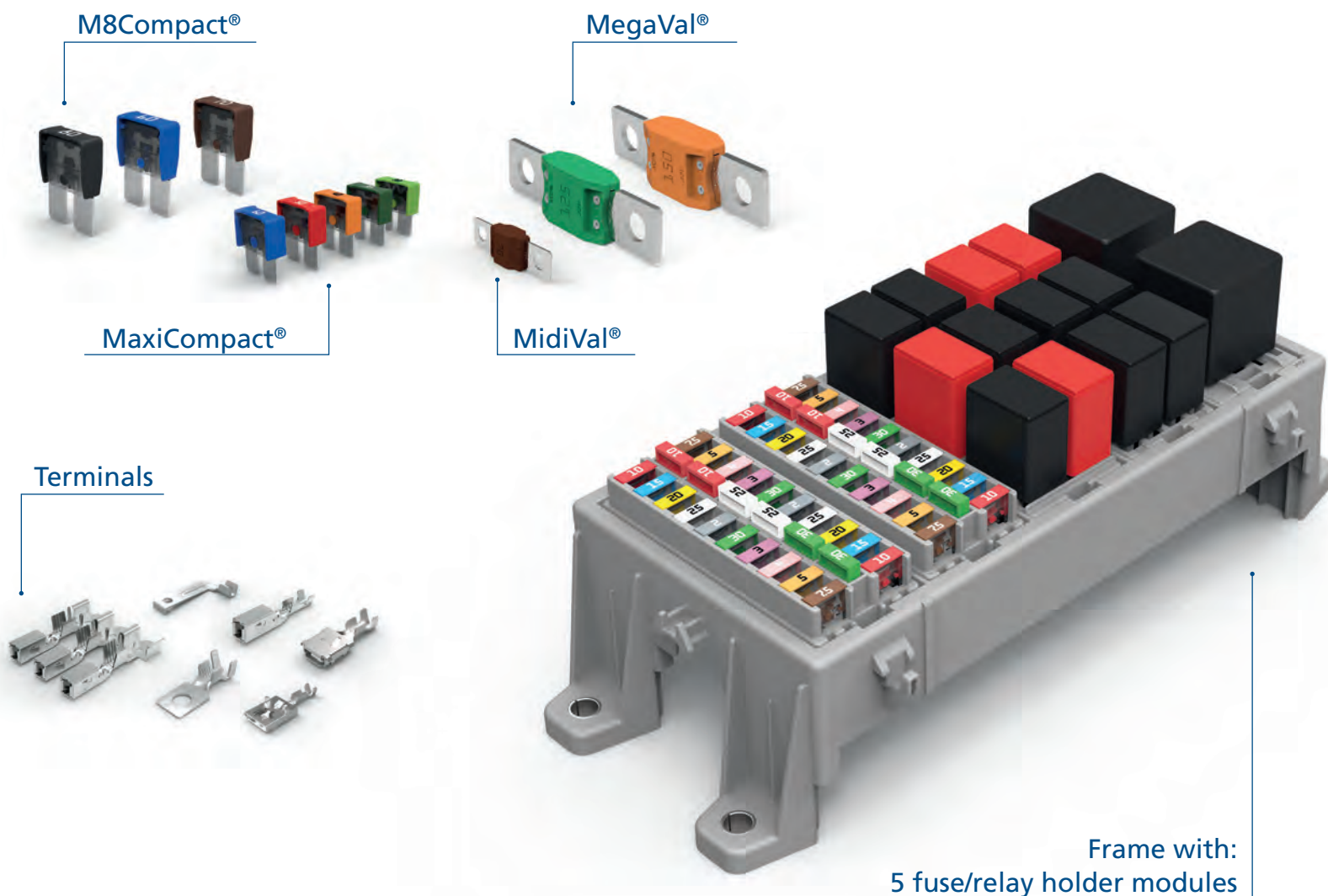


www.sito-stampa.citroen.com

## E-MEHARI

Descendant of the legendary Mehari of late '60s, Citroën's E-MEHARI is a 100% electric car (with recyclable Lithium-Metal-Polymer batteries), designed by Bolloré and assembled by Citroën. For the power distribution and the protection of the main electrical utilities, Bolloré decided to select reliable products and modular solutions such as those offered by our company.

作为上世纪 60 年代末传奇般的 Mehari 车型的血统延续，E-MEHARI 是一款 100% 纯电动汽车（配备可回收锂金属聚合物电池），由博洛雷设计，雪铁龙组装。出于配电和主电气设施保护的考虑，博洛雷决定选择我们公司为其提供可靠的产品和模块化解决方案。





[www.cnhindustrial.com/it-IT/media\\_center/photogallery/](http://www.cnhindustrial.com/it-IT/media_center/photogallery/)

## MTA for Stralis

### MTA 为 Stralis 助力

The new version of Iveco Stralis, TCO<sub>2</sub> Champion, is characterized by a series of cutting-edge technological solutions aimed at containing fuel consumption and reducing operating costs. For this giant of the road, we have developed two electromechanical units for the power distribution and the protection of electrical devices.

新款依维科 Stralis TCO<sub>2</sub> Champion (全生命周期低成本冠军) 车型配备了一系列旨在减少油耗、降低运行成本的尖端科技解决方案。针对这款公路巨人，我们开发出了两款配电及电气设备保护机电单元。

### FRAME CONTROL UNIT

#### 车架控制单元

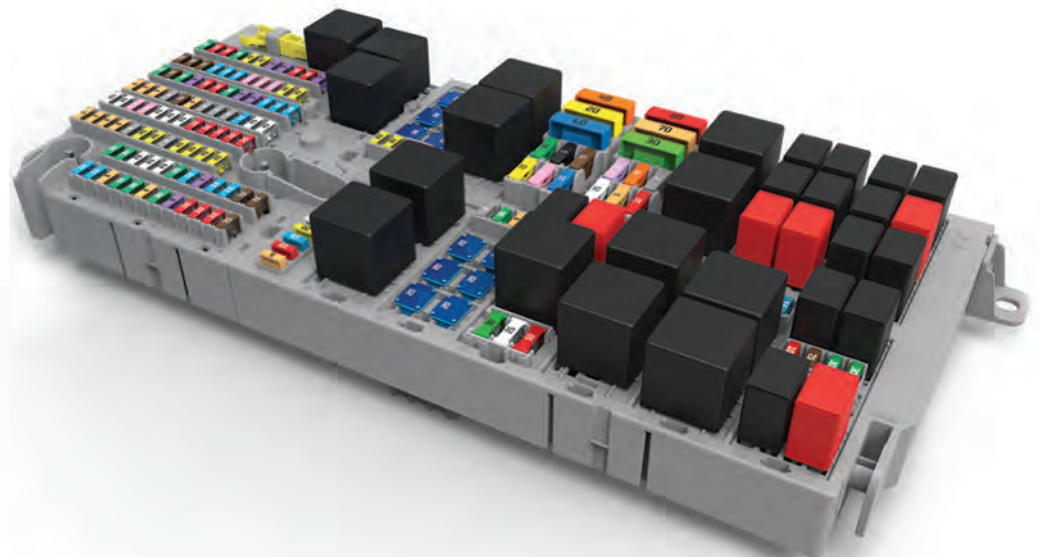
- waterproof unit with 2 MegaVal and up to 6 MidiVal
- cover with CPA (Connector Position Assurance) to ensure a seal
- 配有 2 个 MegaVal 型及最多 6 个 MidiVal 型保险丝的防水单元
- 加配 CPA (连接器定位保障) 装置以确保密封



### PASSENGER COMPARTMENT CONTROL UNIT

#### 车厢控制单元

- main node for the distribution and protection of the engine's utilities
- modular system to manage shared and OPT utilities
- can accommodate up to 18 fuse and relay holder modules
- 配电和发动机设施保护的主节点
- 通过模块化系统管理共用和选配设施
- 最多可容纳 18 个保险丝和继电器底座模块



# New PDMs. Two control units for the truck world

## 全新 PDM 面向卡车的两款控制单元

MTA has recently industrialized two new electromechanical control units for power distribution and the protection of the electrical devices, designed for use in the world of heavy transport. The two products stand out for a design logic that allows them to operate at peak performance even under harsh conditions and in the presence of possible corrosion-related problems. This guided the choice of materials used for the bodies and lids of the control units, with V2 degree; the exterior in stainless steel (particularly resistant to corrosion); the ability to withstand high currents at high temperatures. The areas that hold the fuses have a specific level of protection.

Thanks to these characteristics, the two MTA control units can be installed anywhere in the vehicle, even in the engine compartment.

MTA 研发了两款专为载重运输领域设计的新型配电与电气设备保护机电控制单元，这两款产品近期已完成工业化开发。根据设计逻辑，这两款产品均可在严酷条件及可能存在腐蚀的环境下，保持最佳运行性能，因而备受业界瞩目。根据设计，控制单元本体与护盖将采用 V2 等级材料，外部为不锈钢材质（特别耐腐蚀），可在高温条件下承受强电流。保险丝放置区域将设有特殊等级的防护。

由于上述特性，两款 MTA 控制单元可安装在汽车内部的任何位置，甚至引擎室内。

### CHASSIS CONTROL UNIT

#### 底盘控制单元

- IP67
- holds two MegaVal fuses
- adopts a solution with 2.5 mm thick copper bus-bars to handle high currents
- IP67
- 安装两个 MegaVal 型保险丝
- 采用 2.5 毫米厚铜制母线解决方案应对强电流

### UNDERHOOD CONTROL UNIT

#### 引擎室控制单元

- IP69K
- assembled with the Pressfit method
- holds three MidiVal fuses, six MiniVal and five MaxiCompact, plus two spare MaxiCompact fuses
- adopts a solution with 1.8 mm thick copper bus-bars to handle high currents
- uses a hybrid technology with a PCB (printed circuit board) that allows different configurations of fuses
- IP69K
- 采用压配法装配
- 安装三个 MidiVal 型保险丝、六个 MiniVal 型保险丝和五个 MaxiCompact 型保险丝，再加上两个备用 MaxiCompact 型保险丝
- 采用 1.8 毫米厚铜制母线解决方案应对强电流
- 采用混合技术，配备可搭配不同保险丝配置的 PCB（印刷电路板）



# 1-Way fuse holder modules

## 单路保险丝盒模块

Our catalog has been enriched with the addition of 3 new 1-way fuse holder modules, designed for MidiVal, MegaCompact and MegaVal screw-in fuses, and ideal for heavy-duty applications, thanks to their ability to withstand high currents. The 3 new modules can be used individually or attached together, so as to create a multiple module with bus-bars. The 2 new 1-way modules for MaxiCompact and M8Compact blade-type fuses can also be fitted to each other. With this important addition to the range, we can now offer modular solutions for the new family of fuses that includes the MaxiCompact, the M8Compact and the MegaCompact, designed to meet the increasing demands of the major OEMs for compactness and weight reduction.

随着三款面向 *MidiVal*、*MegaCompact* 和 *MegaVal* 型旋入式保险丝而设计的全新单路保险丝盒模块的推出，我们的产品阵容再添新锐。这三款产品均可承受强电流，是重载级应用的理想之选。三款新型模块既可单独使用，亦可通过母线搭配在一起组成多模块。两款用于 *MaxiCompact* 和 *M8Compact* 刀型保险丝的新型单路模块也可彼此接合。随着这些重要产品的加入，我们现在已经可以根据各主要 OEM 日益迫切的紧凑和减重需求，为包括 *MaxiCompact*、*M8Compact* 和 *MegaCompact* 在内的新系列保险丝产品提供各种模块化解决方案。



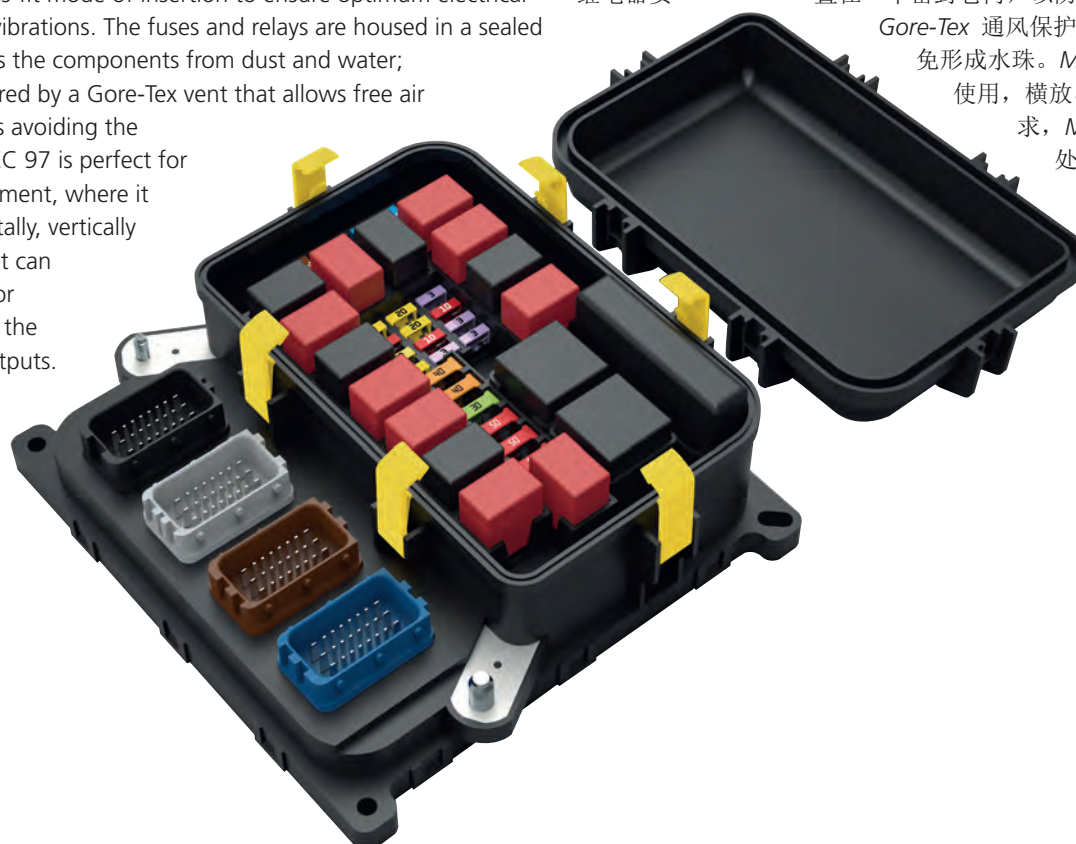
# Modular Electrical Center 97

## 模块化电气中心 97 (MEC 97)

MEC 97 is the new electromechanical unit specifically designed for off-highway applications. It is a plug&play product created using PCB logic, which allows fuses, relays and circuits to be customized to the highest degree possible. The control unit has a press-fit mode of insertion to ensure optimum electrical contact even with strong vibrations. The fuses and relays are housed in a sealed compartment that protects the components from dust and water; the protection is also ensured by a Gore-Tex vent that allows free air circulation in the unit, thus avoiding the formation of moisture. MEC 97 is perfect for use in the engine compartment, where it can be positioned horizontally, vertically or inclined. Upon request it can accommodate a module for processing messages from the CAN network in digital outputs.

MEC 97 是一种专为非公路应用设计的新型机电单元，是一款利用 PCB 逻辑打造的即插即用型产品，可在最大程度上进行保险丝、继电器及电路的定制。该控制单元设有一种压配插入模式，可在强振动下保持最佳电接触。保险丝和继电器安

置在一个密封仓内，以防组件进灰进水。外加 Gore-Tex 通风保护，单元内空气自由流通，避免形成水珠。MEC 97 非常适合在引擎室内使用，横放、竖放、斜放皆宜。如有要求，MEC 97 还可以加装模块，以处理来自数字输出 CAN 网络的信息



# MTA STUDIO

MTA Studio is a software tool that allows the customer to customize dashboards and control units according to their needs, thanks to its exceptional configurability.

MTA Studio 是一款软件工具，客户可借助软件出众的可配置性，根据自身需求定制仪表盘和控制单元。

SOFTWARE TOOL



CUSTOMIZATION



CUSTOMIZED FUNCTIONS



Revo Plus

MTA Studio was developed in-house by our team of electronic engineers and was designed to cater for mid to small customers in the field of motorcycles, trucks, earth-moving and agricultural vehicles who are looking for an off-the-shelf product that can be customized.

MTA Studio 由我们电子工程师团队内部研发，旨在满足摩托车、卡车、运土车及农用车领域中寻求可定制式现成产品的中小客户的需求。

```
mirror_mod = modifier_ob.modifiers.new("mirror_mod")
# Add mirror object to mirror_ob
mirror_mod.mirror_object = mirror_ob

# MIRROR_X
mirror_mod.use_x = True
mirror_mod.use_y = False
mirror_mod.use_z = False
# MIRROR_Y
mirror_mod.use_x = False
mirror_mod.use_y = True
mirror_mod.use_z = False
# MIRROR_Z
mirror_mod.use_x = False
mirror_mod.use_y = False
mirror_mod.use_z = True

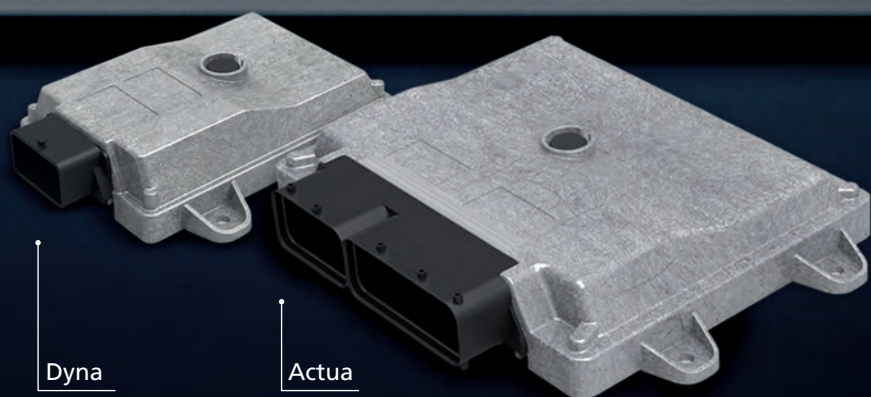
# Selection at the end -add back the deselected objects
mirror_ob.select=1
mirror_ob.select=1
# context.scene.objects.active = modifier_ob
# name "selected" + str(modifier_ob) # modifier object
mirror_ob.select = 0
# key = bpy.context.selected_objects[0]
# key.name.objects[one.name].select = 1

print("please select exactly two objects, else error")

OPERATOR CLASSES -----

class MirrorOperator(bpy.types.Operator):
    """Add a mirror to the selected object"""
    bl_idname = "object.mirror_mirror_x"
    bl_label = "Mirror X"

    @classmethod
    def register(cls):
        bpy.types.Scene.active_object is not None
```



MTA Studio, not only allows you to configure the cluster but it can also be programmed with C/C++, LADDER, FBD, for the operational logics. For the HMI graphics, the interface is WhatYouSeelsWhatYouGet that allows the user to see how the graphics will be presented at the end while creating the software.

利用 MTA Studio 不仅能够配置集群，还能使用 C/C++、LADDER 和 FBD 完成操作逻辑编程。人机界面采用所见即所得画面，用户可以在创建软件的同时直观看到画面的呈现效果。



Today the range includes the Spot, Quik and Quik Plus, Revo and Revo Plus, Smart and Smart Plus dashboards, whose different display sizes, dimensions, shapes and specifications meet many requirements of vehicle manufacturers. In the range of products that can be customized with MTA Studio there are the two control units, Dyna and Actua, intended to drive actuators.

如今，随着 Spot、Quik 与 Quik Plus、Revo 与 Revo Plus、Smart 和 Smart Plus 仪表盘的先后推出，我们的产品线已经涵盖了各种屏幕分辨率、尺寸、形状和规格，可以满足汽车制造商的各种要求。在 MTA Studio 可定制的产品中，有两款控制单元 Dyna 和 Actua，用于驱动致动器。

Today two new displays have been added to our range, Giotto and Leonardo, respectively 8" and 12". These can also be customized by the customer and developed on an Android platform that has been optimized by our electronics division for automotive vehicles.

如今，又有两款显示屏加入我们的产品阵营，分别是 Giotto (8") 和 Leonardo (12")。这两款产品也可以由客户进行定制，它们均基于 Android 平台开发，并由我们的电子事业部面向汽车业进行了优化。



Quik Plus

Revo

Spot



# MTA EXHIBITIONS 2016/17

ELECTRONICA CHINA, Shanghai, March 15-17 2016 / MIMS-AUTOMECHANIKA, Moscow, August 22-25 2016 / ELECTRONICA, Monaco, November 8-11 2016 / EIMA, Bologna, November 9-13 2016 / BAUMA, Shanghai, November 22-25 2016 / BAUMA CONEXPO, New Delhi, December 12-15 2016 / CONEXPO, Las Vegas, March 7-11 2017 / ELECTRONICA CHINA, Shanghai, March 14-17 2017 / AGRITECHNICA, Hannover, November 12-18 2017.