



PRODUCT CATALOGUE MODICO SYSTEMS & TOPSOLVE





Index

about us	page	4
customer is always welcome!	page	5
your targets - our motivation.	page	6
we will be there for you!	page	7
how can we help?	page	7
product presentation	page	9
cable and cable harnesses	page	34
workbench	page	36
process	page	38
project handling	page	42
your idea is our target	page	43
customer reference list	page	44



about us

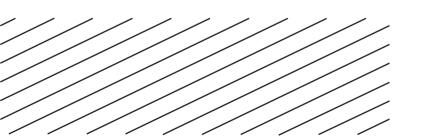
Modico System was founded in year 2007. A solid base of thirty years' experience in motor control and power electronic design, will guarantee innovative and reliable products. Combined with a detailed application knowledge collected in the machinery and furniture industry, guarantee to our customer more than just a product! We are a leading supplier of

PMDC Motorcontroller including supply and control device s Our electronically and electro mechanical solutions are used in many different industrial ranges like: seating , bedding, office, healthcare, hospital, building automation (sunshades a.s.o.), vendor machines or electrical door or window locks.

We look at our customer individually and look carefully to his wishes and needs. We offer support wherever it is necessary. Your vision is our guideline from the first scratch to the finished product. No matter if low or high volume.













customer is always welcome!

The following pages give you a small impression why Modico is not one of all other supplier. We are technology driven and outstanding independent turn key supplier for your products. Our Team in Germany and China are happy to support you!







your targets - our motivation.

We see ourselves as your partner. In close communication with your expert team, we support you with our know how in the fields of: *project management* *development* *design* *procurement* *production* and finally *full function reference samples*. Make sure to have the best solution for your projects requirements. Your technological objectives will be realized with regard to both deadlines and cost effectiveness.

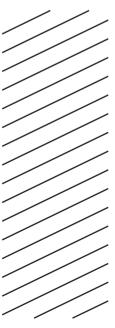
Modico and Topsolve team is looking for a TOTAL SOLUTION and not just to the part you require.

We check carefully with you together the whole system, make sure that mechanics, actuator and electronics work perfect together. At least we look also to your final assembly requirements to prevent production failures in your factory.

We are driven by innovation which does not stop at the electronics from our team!

Our electronics is a lever to present your product in a modern and stylish way. Lead by technology and good design!

Just tell us where we can help you!







we will be there for you!

As our partner Topsolve, we are present in Far East and thus at hand at the supplier's, we can guarantee compliance with processes. During the production and delivery phase Topsolve will check the quality of your standard products on site and are therefore able to offer optimal support to our customers.

how can we help?

Good purchase conditions are often the key to success. Modico-Systems and Topsolve have access to a large network of competent partners at home and abroad. No matter whether you need large, medium or small quantities - we always guarantee an optimal price-performance ratio because of our good sources of supply and consolidated goods. Best purchasing specifications in combination with development, tooling and manufacturing expertise is our recipe for your success.







product pre	esentation
lithium ionen accu packs	page 10
SMPS & charging adapters (switch mode power supplies)	page 12
microprocessor CU & relaisboxes	page 15
cable handests	page 19
insert switches	page 23
accessories	page 27
cable handsets_PCBA	page 31

lithium ion accu packs

Accu Pack 1300mAh



Technichal Datas 7 cell configuration

Nominal capacity 1300mAh @23°C Nominal Output Voltage Output 25,2V/DC Macimum Output Voltage 29,4V/DC Max. Output Current 5A/DC ON/OFF Switch Overcurrent cutoff Output short-circuit protection Undervoltage Lock out Accustical signal (beeper) 20...21,45V/DC Protection type IP20 Protection class II Intermitted mode with 10 % duty cycle with max. continuous use of 2 min Housing colour black RAL 9005 Housing material ABS V0 Ambient temperature 30°C No Stand by Power consumption

Dimensions



Options

charging and operate through a standard SMPS mounting bracket Customer Sticker (LOGO) on the Top housing mounting feets, higher capacity

L 120mm

W 87mm

H 40mm

Weiaht 470a

Standards

EN60335 MSN UN38.x

LLPS-7S Plug-In-Power-pack; Modico Series: SC701



Nominal capacity 1300mAh @23°C Nominal Output Voltage Output 25,2V/DC Macimum Output Voltage 29,4V/DC Max. Output Current 5A/DC Overcurrent cutoff Output short-circuit protection Protection type IP20 Protection class II Intermitted mode with 10 % duty cycle with max. continuous use of 2 min Housing colour black RAL 9005 Housing material ABS V0 Ambient temperature 30°C No Stand by Power consumption

Dimensions



Options Voltage Gauge Charging socket snap in Magnet ON/OFF Switch higher capacity

Standards EN60335 MSN UN38.x

L 103,5mm W 79,5mm H 54mm Weight 430g

LLPS Powerp.1300mAh Lilo. 7S1P



Technichal Datas 7 cell configuration Max. Output Current 5A/DC Overcurrent cutoff Output short-circuit protection Undervoltage Lock out Protection type IP20 Protection class II max. continuous use of 2 min Housing colour black RAL 9005 Housing material ABS V0 Ambient temperature 30°C

LLPS-7S Docking station; Modico Series: SC701



-10-



Technichal Datas

Input Voltage 30V/DC Charging Current 350mA Max. Output Current 5A/DC Integrated Motor Control Output short-circuit protection Undervoltage Lock out Housing colour black RAL 9005 Housing material ABS V0 Ambient temperature 30°C Protection type IP20



Dimensions



L 142m W 90mm H 49,5mm Weight 200g

Options

AC in cable, C7 insert snap in Magnet PCBA Lilo charger LCH735 30V DC IN cable for Lilo Charger and Bypass function

Standards EN60335

EN55014







Nominal capacity 1300mAh @23°C Nominal Output Voltage Output 25,2V/DC Macimum Output Voltage 29,4V/DC

Accustical signal (beeper) 20...21,45V/DC

Intermitted mode with 10 % duty cycle with

Dimensions



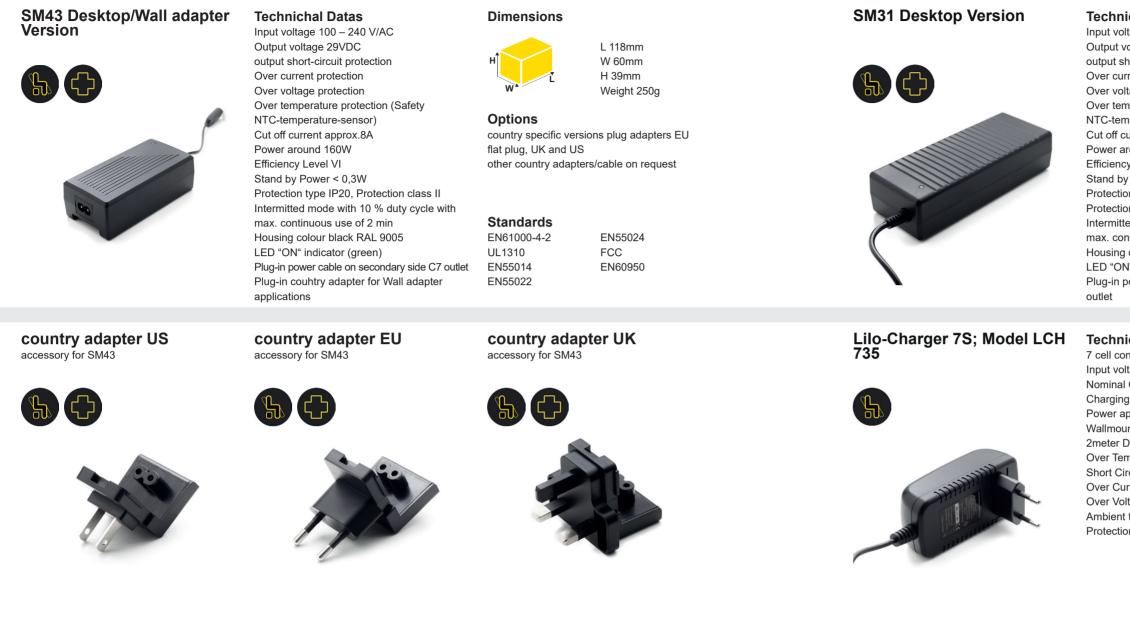
L 120mm W 87mm H 40mm Weiaht 470a

Options charging through LCH735

Standards

EN60335 MSN UN38.x

SMPS & charging adapters



SM42 Desktop Version





Input voltage 100 – 240 V/AC Output voltage 29 V DC output short-circuit protection Over current protection Over voltage protection Over temperature protection (Safety NTC-temperature-sensor) Cut off current approx.7A Power around 120W Efficiency Level VI

Technichal Datas

Stand by Power < 0,3W Protection type IP20 Protection class II Intermitted mode with 10 % duty cycle with max. continuous use of 2 min Housing colour black RAL 9005 LED "ON" indicator (green) Plug-in power cable on secondary side C7 outlet Desktop Version

Standards EN61000-4-2 UL1310

EN55014

EN55022

Dimensions

FCC

EN55024

L 118mm

W 60mm

H 39mm

weight 250g

EN60950

SM42 Wall adapter



Technichal Datas

Output voltage 29 V DC output short-circuit protection Over current protection Over voltage protection NTC-temperature-sensor) Cut off current approx.12A Power around 300W Efficiency Level V Stand by Power 0.3W Protection type IP20 Protection class II max. continuous use of 2 min Housing colour black RAL 9005 LED "ON" indicator (green)

Technichal Datas

7 cell configuration Input voltage 100 – 240 V/AC Nominal Output Voltage Output 29,4V/DC Charging current 350mA Power approx. 20W Wallmount Version 2meter DC cable with 4/1,7 socket **Over Temperature Protection** Short Circuit Protection **Over Current Protection Over Voltage Protection** Ambient temperature 40°C Protection type IP20

Technichal Datas Input voltage 100 – 240 V/AC Output voltage 29 V DC

output short-circuit protection Over current protection Over voltage protection Over temperature protection (Safety NTC-temperature-sensor) Cut off current approx.6A Power around 100W Efficiency Level VI Stand by Power < 0,3W Protection type IP20 Protection class II max. continuous use of 2 min Housing colour black RAL 9005 LED "ON" indicator (green) Desktop Version







Input voltage 100 - 240 V/AC Over temperature protection (Safety

Intermitted mode with 10 % duty cycle with Plug-in power cable on secondary side C7

Dimensions



L 167mm W 97.5mm H 41mm weiaht 450a

Options Country specific cable versions EU flat plug, UK and US Other countrie adaopters /cable on request EPR AC-Cable

Standards

EN61000-4-2 UL1310 EN55014 EN55022

EN55024 FCC EN60950

Dimensions



L 93,5mm W 47mm H 35mm

Options Country ersions EU flat plug, UK, US and AUS available with different DC plugs

Standards

EN60335 EN60602 EN55014

- Intermitted mode with 10 % duty cycle with

Dimensions



L 100mm W 49mm H 33mm weight 180g

Standards

EN61000-4-2 UL1310 EN55014 EN55022

EN55024 FCC EN60950



SM42 Desktop Version w. inegtrated LCH charger	Technichal Datas Input voltage 100 – 240 V/AC Output voltage 29 V DC output short-circuit protection Over current protection Over voltage protection Over temperature protection (Safety NTC-temperature-sensor) Cut off current approx.7A Power around 120W Efficiency Level VI Stand by Power < 0,3W Protection type IP20 Protection class II Intermitted mode with 10 % duty cycle with	Dimensions H U Options Standards	L 200mm W 70mm H 50mm weight 250g	Junction Box	Technichal Da Input/Output 29V/D 2 motor Output Handset Input Auxiliary Output Intermitted mode w max. continuous us Protection type IP2
	max. continuous use of 2 min	EN61000-4-2	EN55024		
	Housing colour black RAL 9005	UL1310	FCC		
	LED "ON" indicator (green)	EN55014	EN60950		
	Plug-in power cable on secondary side C7 outlet Desktop Version	EN55022		-	

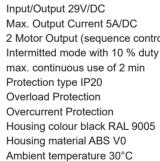
1-Mot Memo Relaisbox (JB)

Input/Output 29V/DC

Max. Output Current 5A/DC 1 Motor Output max. continuous use of 2 min Protection type IP20 Overload Protection **Overcurrent Protection** Housing colour black RAL 9005 Housing material ABS V0 Ambient temperature 30°C

2-Mot Sequence control unit (JB)













nichal Datas output 29V/DC

ted mode with 10 % duty cycle with ontinuous use of 2 min ion type IP20

Dimensions



L 100mm W 46,5mm H 39,5mm Weight 120g

Options **Overcurrent Protection** mounting clip customer sticker on the housing

Standards EN60335

Technichal Datas

Intermitted mode with 10 % duty cycle with

Dimensions



L 100mm W 46,5mm H 39,5mm Weight 180g

Options mounting Clip customer sticker on the housing

Standards EN60335

Technichal Datas

2 Motor Output (sequence control) Intermitted mode with 10 % duty cycle with

Dimensions



L 100m W 46,5mm H 39,5mm Weight 200g



LCR 1-mot Relais Box



Technichal Datas

Input/Output 29V/DC Max. Output Current 5A/DC 1 Motor Output Intermitted mode with 10 % duty cycle with max. continuous use of 2 min Protection type IP20 **Overload Protection Overcurrent Protection** Housing colour black RAL 9005 Housing material ABS V0 Ambient temperature 30°C

Dimensions



L 160mm W 55mm H 38mm Weiaht 210a

Options

charging cable for Accu use Overload Protcetion for each motor Channnel individuel different cable or socket In/outputs possible

Standards EN60335

ISP 4-mot



Technichal Datas

Input/Output 29V/DC Max. Output Current 5A/DC 4 Motor Output max. continuous use of 2 min Protection type IP20 **Overload Protection Overcurrent Protection** Housing colour black RAL 9005 Housing material ABS V0 Ambient temperature 30°C

LCR 2-mot Relais Box

Technichal Datas Input/Output 29V/DC

Max. Output Current 5A/DC 2 Motor Output Intermitted mode with 10 % duty cycle with max. continuous use of 2 min Protection type IP20 Overload Protection **Overcurrent Protection** Housing colour black RAL 9005 Housing material ABS V0 Ambient temperature 30°C

Dimensions



Optionsable for Accu use Overload Protcetion for each motor Channnel individuel different cable or socket In/outputs possible

Standards EN60335



W 55mm H 38mm Weight 230g

L 160mm

µP-multi motor control



Technichal Datas

Input/Output 35V/DC max. continuous use of 2 min Protection type IPx6 free programmable **Overload Protection Overcurrent Protection** Akku or SMPS use possible Pull out protection both sides Bottom Housing colour black RAL 9005 Top Housing color transparent Housing material ABS V0 // PC Ambient temperature 40°C Weight 500g

LCR 3-mot Relais Box





Technichal Datas

Input/Output 29V/DC Max. Output Current 5A/DC 3 Motor Output Intermitted mode with 10 % duty cycle with max. continuous use of 2 min Protection type IP20 **Overload Protection Overcurrent Protection** Housing colour black RAL 9005 Housing material ABS V0 Ambient temperature 30°C

MODIĈO

Dimensions



W 55mm H 38mm Weight 250g

L 160mm

Options

charging cable for Accu use Overload Protcetion for each motor Channnel individuel different cable or socket In/outputs possible

Standards EN60335





Intermitted mode with 10 % duty cycle with

Dimensions



L 174,5mm W 83,75mm H 39.6mm Weight 310a

Options different cable or socket In/outputs possible Massage Option free programmable mounting feets

Standards

Up to 6 motors independant selectable multiple Hand and Footswitch Input's Intermitted mode with 10 % duty cycle with

- Dimensions(lxwxh)155mmx135mmx35mm

Dimensions



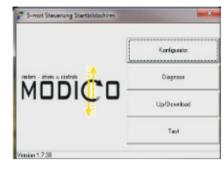
Options Lighting output Heating output Massage output Multimedia output

Standards EN60335 EN60601

L 155mm W 135mm H 35mm Weight 500g



PC Software







Chameleonic 1-mot

Technichal Datas 2 Buttons ergonomical design micro switches



Chameleonic 2-mot

Technichal Datas 5 Buttons ergonomical design micro switches

Technichal Datas

Hallsensor 0.1.2 Limit switch selection Virtual limit switches Synchron drive Driving speed adjustable for single and multiple drives Adjustable current limit Loop parameters Reset drive Reset positions

Sequenzer programming Sequenz is started by a comand from handset Test features integrated Continuous test 5 individual sequences programmable

- Total 18 keys per handset Free adjustable Each function can be placed on each button Same functionality also for the foot switch and /or other handsets
- From all 6 motors you could see current, voltage, Hallcounter etc. Graphic and numeric display View operating hours and total power on time Handset I2C diagnose Memoposition could be checked Failure history Power supply voltage Status Flags Etc.

Configurator Paramter tool Up/Download tool Diagnostic tool Test tool for handsets and footswichtes

and many other functions....

KB-2-mot

Technichal Datas 6 Buttons micro switches ergonomical design







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Real Products	Fig.F	Fight		Fight	-	
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cable handsets

Dimensions



L 113mm W 48mm H 28mm

Options soft touch charging socket LED Magnet Hook customer Logo

Dimensions



Options soft touch charging socket LED Magnet Hook Customer Logo

L 113mm W 48mm H 28mm

Dimensions



L 123mm W 45mm H 22mm

Options customer Logo Hook differnt colours and surfaces customer Logo



EI-Phone	Technichal Datas 9 Buttons silicon carbon buittons slim modern design	Dimensions L 125mm W 60mm H 17mm Dptions different colours and surfaces possible backlight Hook customer Logo	HS Easyform 3-mot +Mas- sage	Technichal Data 13 Buttons silicon carbon ergonomical design soft touch surface Massage Function
HS Cosyform 4-mot	Technichal Datas	sideward light under development Dimensions	HS Easyform 2-mot	Technichal Data
SS IN THE OWNER OF THE OWNER OWNER OF THE OWNER OWNE	9 Buttons silicon carbon ergonomical design soft touch surface	L 160mm W 55mm H 21mm Coptions Hook internal magnet different colours and surfaces possible customer Logo customized foils	Sector Contraction of the sector of the sect	5 Buttons silicon carbon ergonomical design soft touch surface
HS Easyform 2-mot +Mas- sage	Technichal Datas 11 Buttons silicon carbon ergonomical design soft touch surface Massage Function	Dimensions H U U L 160mm W 55mm H 21mm	HS Easyform 3-mot	Technichal Data 7 Buttons silicon carbon ergonomical design soft touch surface
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Options Hook different colours and surfaces possible customer Logo customized foils	9.0,0 5000 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0	





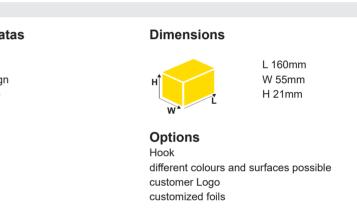
atas

Dimensions



L 160mm W 55mm H 21mm

Options Hook different colours and surfaces possible customer Logo customized foils



atas

Dimensions

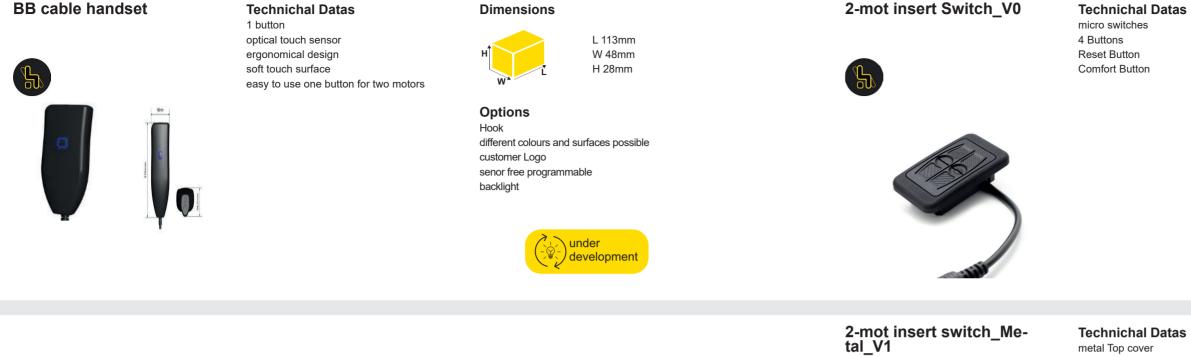


L 160mm W 55mm H 21mm

Options Hook different colours and surfaces possible customer Logo customized foils



-21-





Technichal Datas metal Top cover micro switches 4 buttons Reset Button Comfort Button





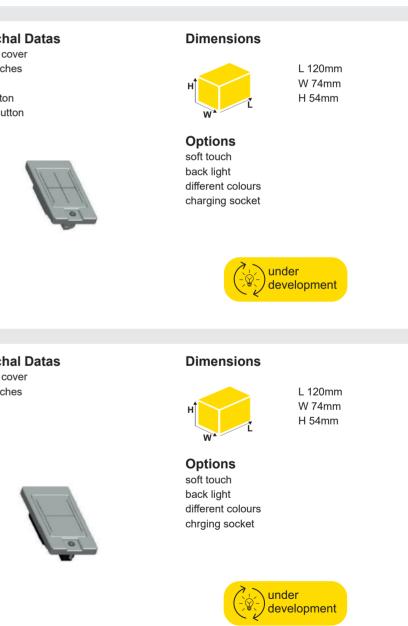


Technichal Datas metal Top cover micro switches 2 buttons



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insert switches

Dimensions



Options soft touch back light different colours L 85mm W 50mm H 23mm



2-mot insert Switch_Me-tal_V2

2-mot insert Switch_Me-tal_USB_V2

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Technichal Datas

Technichal Datas

4 bottons with USB port

micro switches

metal panel with metal buttons

metal panel with metal buttons micro switches 4 buttons





Dimensions

L 85mm W 50mm H 29mm

L 85mm

W 50mm

H 29mm

2-mot insert Switch_Me-tal_USB_V3

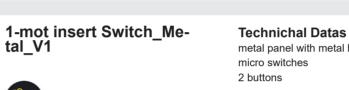
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Technichal Datas metal panel with chrom buttons micro switches 4 bottons with USB port





metal panel with metal buttons micro switches



Technichal Datas metal panel with metal buttons micro switches



2 bottons with USB port



1-mot insert Switch_Me-tal_USB_V2











Technichal Datas metal panel with Chrom buttons micro switches 4 bottons



Dimensions

L 85mm W 50mm H 29mm





Dimensions



L 85mm W 50mm H 29mm

Dimensions



Options soft touch back light different colours charging socket L 83mm W 33mm H 30mm

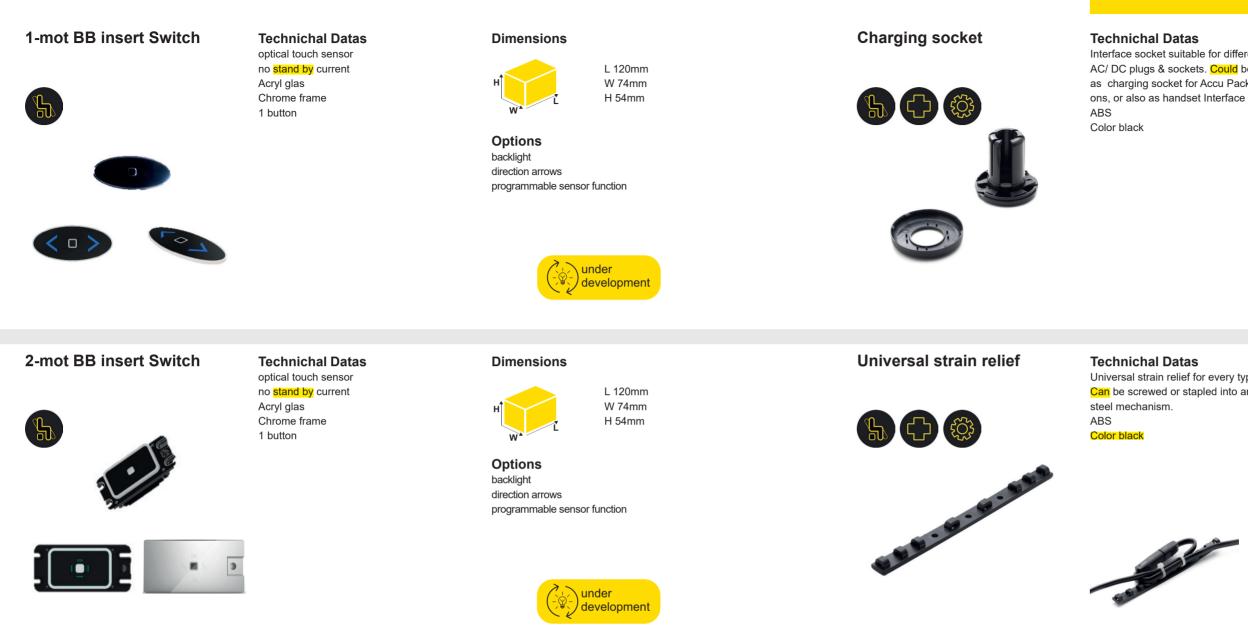
Dimensions



Options soft touch back light different colours chrging socket

L 83mm W 33mm H 30mm





mounting clip Junction Box

Technichal Datas ABS Color black







accessories

Interface socket suitable for different kind of AC/ DC plugs & sockets. Could be used i.e. as charging socket for Accu Pack applicati-

Dimensions



Ø 43mm L 42mm

Options differnt paintings for the cover on request

Universal strain relief for every type of cable. Can be screwed or stapled into any wood or

Dimensions



L 130mm W 10mm H 6mm



example

suitable for all type of modico junction boxes.

Dimensions



L 60mm W 43mm H 24mm





SR Clip for modico DIN plug & sockets Mounting Bracket for LLPS Powerp.1300mAh Lilo. 7S1P **Technichal Datas** Dimensions suitable for all Modico DIN plug and socket cable connections L 47mm ABS W 22mm Color black H 16mm L.





example

example

SR Clip for modico DIN plug & sockets IPX4/6



Technichal Datas suitable for all Modico DIN plug and socket cable connections, where an IP level are necessary ABS

Color black

Dimensions

L 48mm W 25mm H 17mm





Programmer for micropro-cessor CU





color black Material PVC



Technichal Datas suitable for all Modico handsets type LACIDEM color black /grey Material ABS V0











SR Clip for modico/OKIN/LI-MOSS LS plug & sockets **Technichal Datas**

Universal Loudspeaker strain relief for all MODICO/ LIMOSS /OKIN LS connections ABS color black compatible with Limoss/OKIN LS plug & sockets









Technichal Datas

ABS

color black

quick and tool-free installation/ replacement of a 7S1 Accu Pack

Dimensions



L 145mm W 93mm H 43mm

Technichal Datas suitable for µP-multi motor control



Technichal Datas max. operating voltage 24VDC max. switching current 30mA protection degree IPx6

conduct resistance 100mohm cable length 390mm colour grey



Technichal Datas

I2C controlled max. operating voltage 30VDC max. switching current 30mA PCB Material FR4 double sided thickness 1,6mm 18 screw terminals

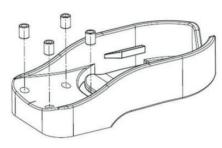


Technichal Datas 18 keys dome switch keys function free programmable I2C controlled PCB Material FR4 double sided cable length 1200mm coiled Protection degree IPX6 Material ABS V0



Handset Holder LACIDEM; M4 srew inserts





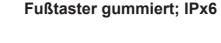
Technichal Datas

suitable for all Modico handsets type LACIDEM color black Material ABS HB



Dimensions

L 139mm W 65mm H 37,5mm













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cable handsets_PCBA

Dimensions



Ø 40mm

Dimensions



L 153mm W 58mm H 16mm



Dimensions



Options black housing grey housing customized foils L 180mm W 55mm H 34mm



Schocklagenplatine





Technichal Datas

PCBA For 1 Fußtaster PCB Material FR4 double sided thickness 1,6mm max. operating voltage 24VDC max. switching current 30mA

Dimensions



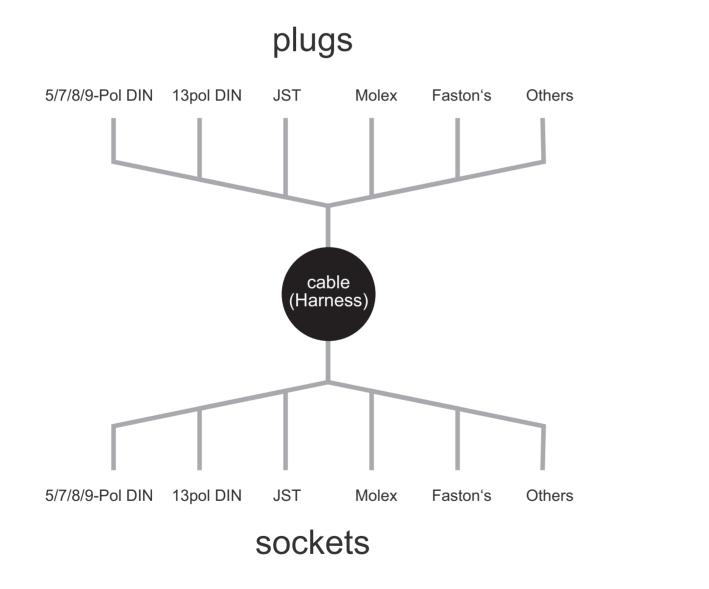
L 40mm W 20mm H 16mm

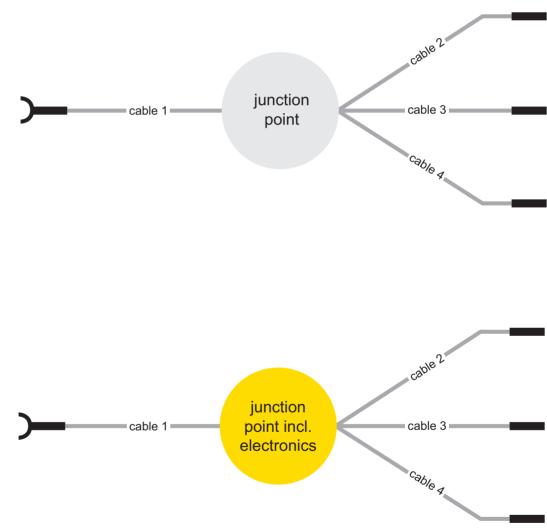


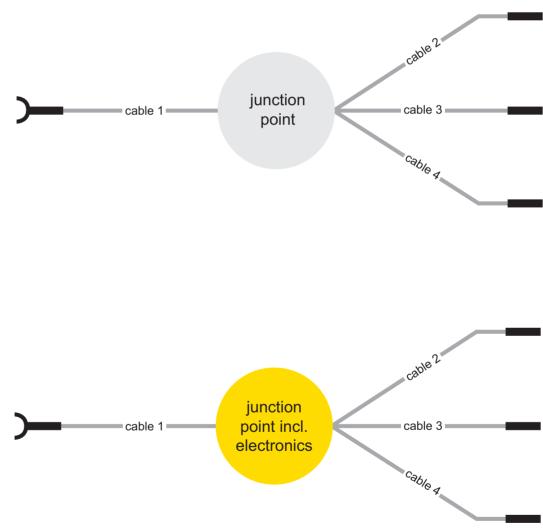
cable and cable harness

In addition to a wide range of standard cables and harnesses, Modico systems mainly offers customi-zed solutions tailored to your requirements.

Based on your specifications, we create a release drawing in advance, which later serves as the basis for the production of your cable. We use all common sockets and connector types from Molex, JST, Tyco, Nexus up to 2-13 pin DIN types. We also like to create and produce your cable, and look forward to receive your inquiry.

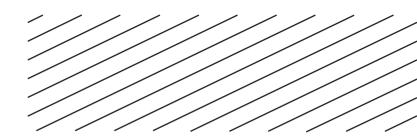


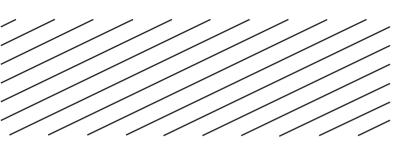












workbench

Every development and every product has its own challenges. But what is the same for all products in any way is that you have to meet and comply certain norms and standards. Modico Systems is well prepared for this, and draws on a wide range of different measuring techniques as well as EDP based simulation software. Thus, we are able to offer our customers a pre-compliant test as well as various preliminary measurements and exami-nations. For official EMC or safety inspections, we work with accredited test laboratories, for which we maintain long-term business relationships. Here is an excerpt of our measuring equipment.

a)spectrum analzer b)electronicl load c)2-4 chan-nel oscilloscope d) precession wattmeter e)High Voltage isolation tester (ESD) f) interference gene-rator g) AC- reference voltage source h) function generator I)frequency rate Monitor.













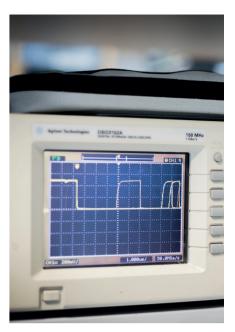
















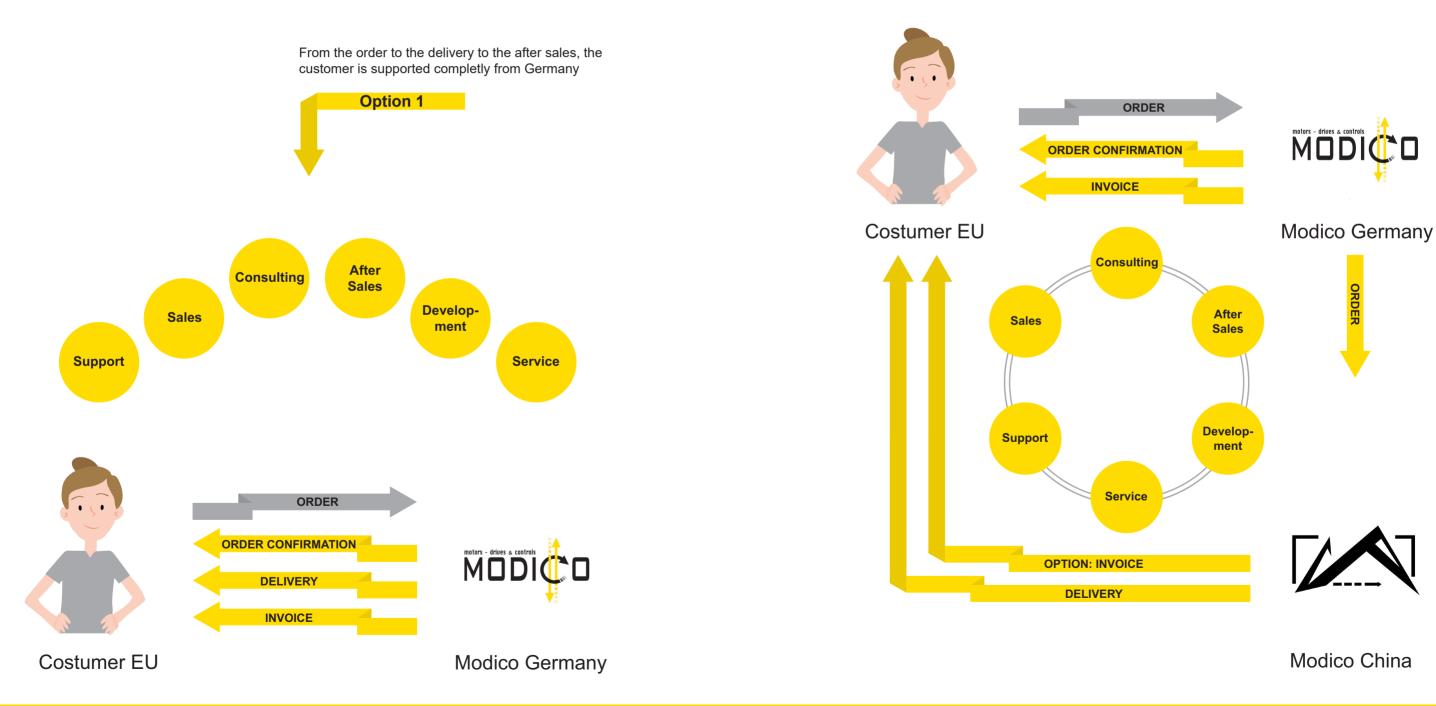


process

Modico offer's there customers a bright ran-ge of possibilities how and where they could source and produce their needed Products. The following figures should give you an first impression about the freedom degree.

Same as Option 1 but the costumer recived the delivery and/or Invoice direct from China

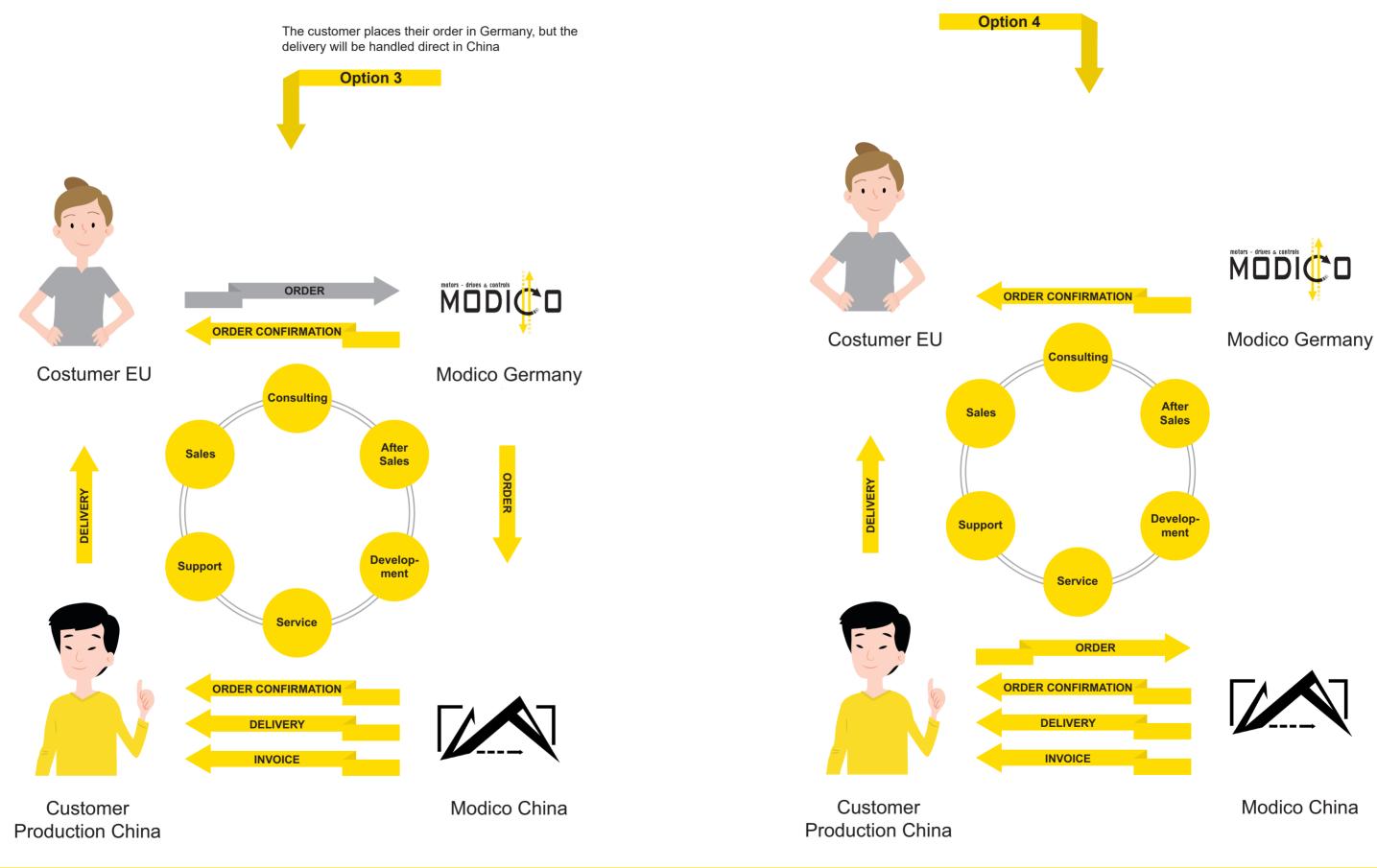








The Chinese production Company place their order direct to Modico China. Modico Germany is not in the daily business only if the customer requires.



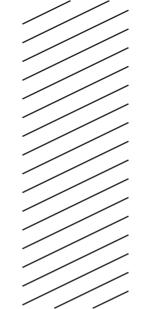


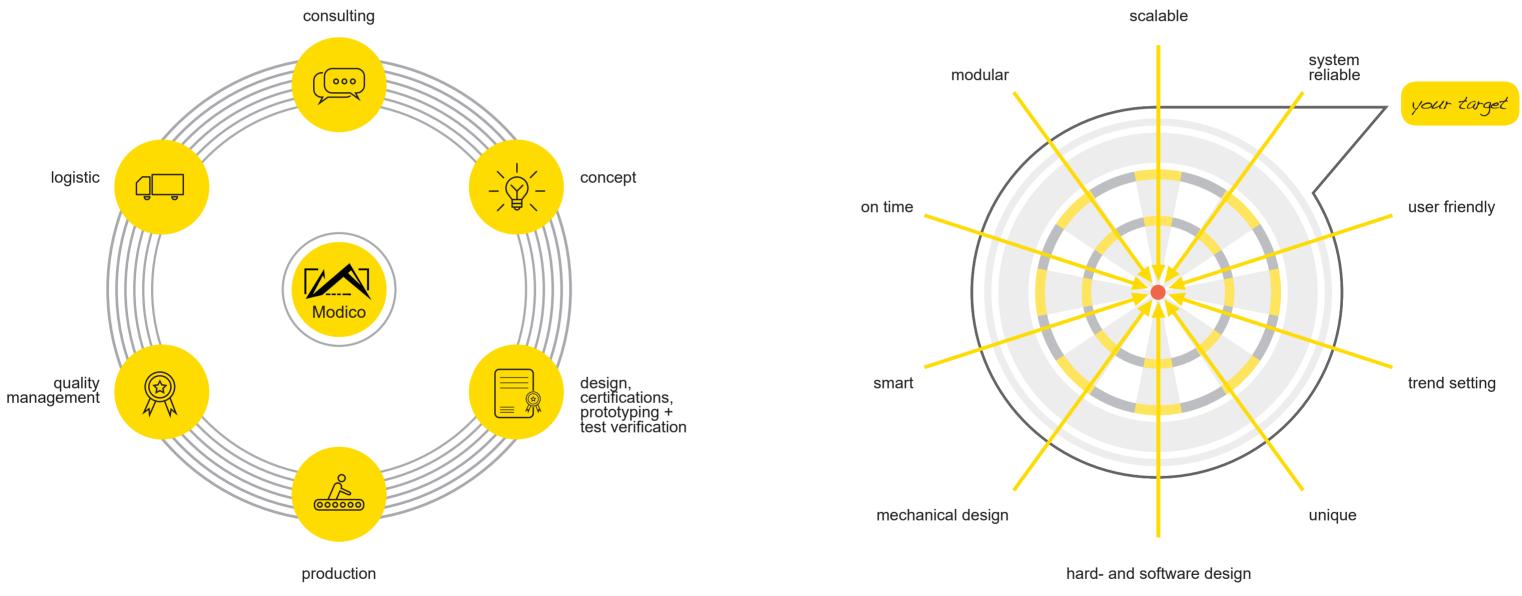


project handling

From sript to the serial product....

We accompany you from the consultation to the concept phase to the later series product. Every single project phase is closely coordina-ted with you.









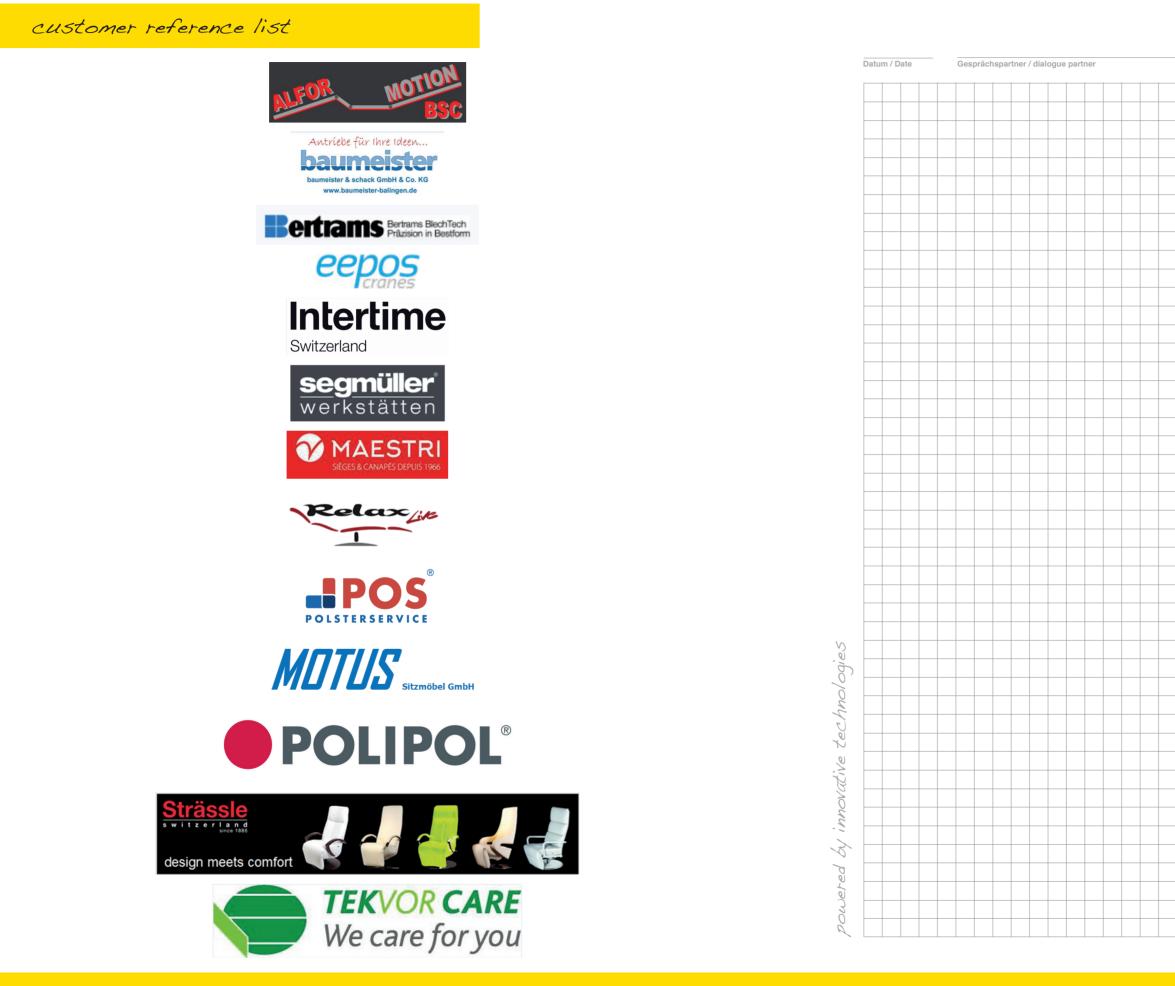
your idea is our target...

with our team of experts we develop your drive solution together with you. Here we place ma-ximum value on the following parameters.

Our teams are looking for a total solution.



Notizen / Notes









Ort / location

modico-systems GmbH & Co. KG Fraunhofer Straße 8 D-51647 Gummersbach Windhagen Tel.: +49 2261 81599-02 (or -03) Fax: +49 2261 81599-04 E-Mail: info@modico-systems.de Web: www.modico-systems.de

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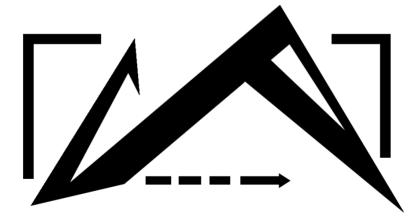












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