

CONNECT AND PROTECT

AdvancedMC Carriers

Systems – AdvancedMC carriers

OVERVIEW

MAIN KATALOG

Cabinets 1

Wall mounted cases 2

Accessories for cabinets and wall mounted cases .. 3

Climate control .. 4

Electronics cases 5

Subracks/ 19" chassis 6

Front panels, plug-in units 7

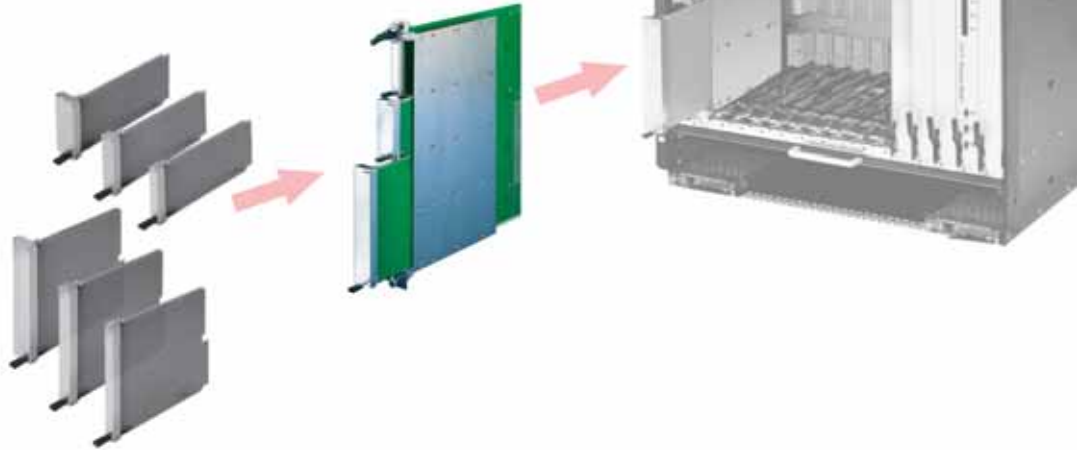
Systems 8

Power supply units 9

Backplanes 10

Connectors, front panel component system 11

Appendix 12



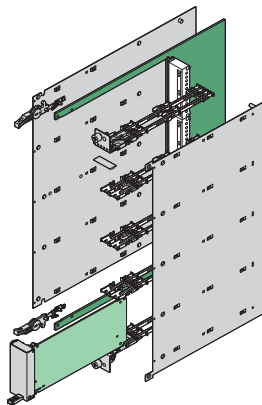
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ADVANCEDMC CARRIERS

AdvancedMC carriers are plug-in units that are slotted into an AdvancedTCA system. They contain the carrier board that accepts AdvancedMC modules.

Electrical connection to the AdvancedTCA backplane is via connectors. With the fully-assembled AdvancedMC carrier in place, cost-effective additional functions may be integrated into the system.

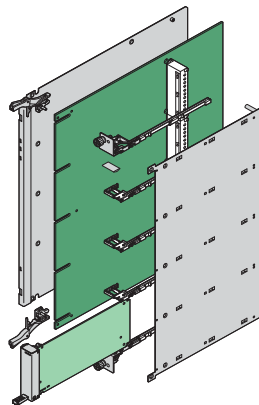
The standard, in accordance with PICMG specification AMC.0 R2.0, defines three different mechanical versions:



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Cutaway carrier

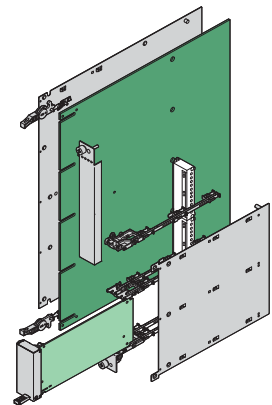
- Carrier board is cut out in the area of the AdvancedMC modules
- Max. placement: 8 single compact or 4 single full-size AdvancedMC modules
- Combinations of full-size and compact modules are possible



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Conventional carrier

- Carrier board runs continuously from front to rear
- Max. placement: 4 single compact or 4 single mid-size AdvancedMC modules



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Hybrid carrier

- Carrier board is a combination of conventional and cutaway carrier
- The maximum placement depends on the carrier board design
- Combinations of all AdvancedMC modules are possible

Systems – AdvancedMC carriers

OVERVIEW

ADVANCEDMC CARRIERS FOR ADVANCEDTCA SYSTEMS

- Cutaway, conventional and hybrid carrier mechanics for
 - compact AdvancedMC carrier boards
 - Mid-size AdvancedMC carrier boards
 - Full-size AdvancedMC carrier boards
- Standard versions from stock
- Individual carrier/module combination of your choice



12807/020

ADVANCEDMC CARRIERS

- 1 slot chassis, 8 U, 6 HP for AdvancedTCA systems
- Inserter/extractor handle for microswitch activation
- Versions
 - **Cutaway carrier** for compact and full-size modules
 - **Conventional carrier** for mid-size and compact modules



INDIVIDUAL SOLUTIONS ON REQUEST

- AdvancedMC hybrid carrier
- AdvancedMC hybrid mechanics for rugged AdvancedMC modules (MicroTCA.1)



12812005 12806016

SERVICEPLUS

- e.g. individual configuration and fitting of hybrid carriers)
- e.g. modifications (cut-outs, special colours)
- e.g. custom solutions (special sizes)

Overview 8.26

Cutaway carriers

For compact and full-size modules

Complete kits 8.28

Kit without struts, guide rails 8.29

Guide rails/struts 8.30

Microswitches . . . 8.31

Differences between standard and MF handles for AMC carriers 8.31

Conventional carriers

For mid-size and compact modules

Complete kits with AdvancedTCA IEA handle 8.32

Guide rails/struts 8.33

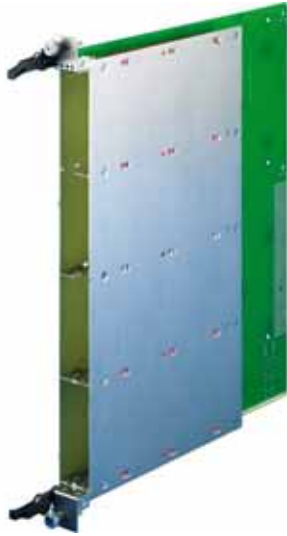
Microswitches . . . 8.33

ServicePLUS configuration

Hybrid carrier 8.34

Systems – AdvancedMC cutaway carrier

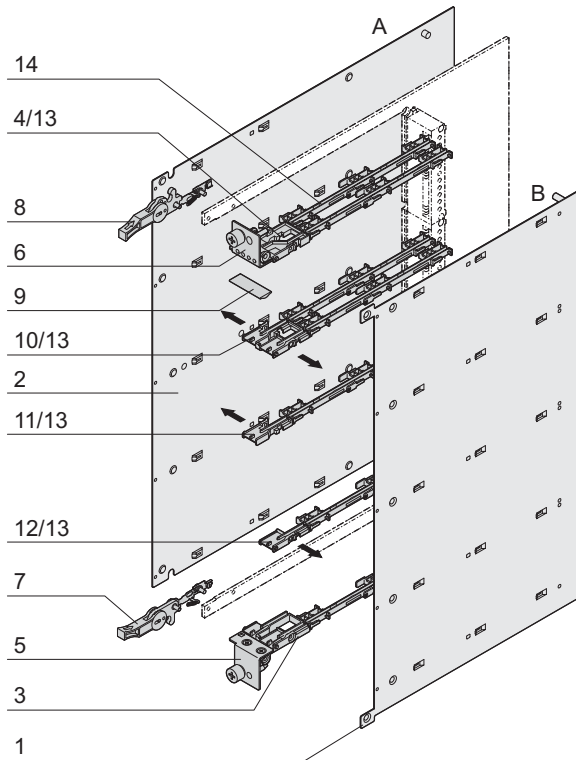
CARRIER MECHANICS FOR COMPACT AND FULL-SIZE ADVANCEDMC MODULES



- Mechanics for cutaway carrier board (carrier **with** 3 different struts, guide rails, ESD clips)
- Stainless steel (EMC shielded)
- Width 1 slot (6 HP), height 8 U, corresponds to PICMG® AMC.0 R2.0
- Inserter/extractor handle, designed for microswitch activation hot-swap)

DELIVERY COMPRISES (Kit)

Item	Qty	Description
1	1	Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
2	1	Cover plate A (left), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
3	1	Lower splitting extrusion (strut), Zn die-cast, nickel-plated
4	1	Upper splitting extrusion (strut), Zn die-cast, nickel-plated
5	1	Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
6	1	Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in, with holes for LEDs
7	1	Standard inserter/extractor handle, with microswitch operation, plastic lever, black
8	1	Standard inserter/extractor handle, plastic lever, black
9	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
10	3	Support member between cover A and B
11	3	Support member for cover A (on the left)
12	3	Support member for cover B (on the right)
13	8	ESD clip
14	10	AdvancedMC guide rail, PBT, UL 94 V-0, red
15	1	Assembly kit

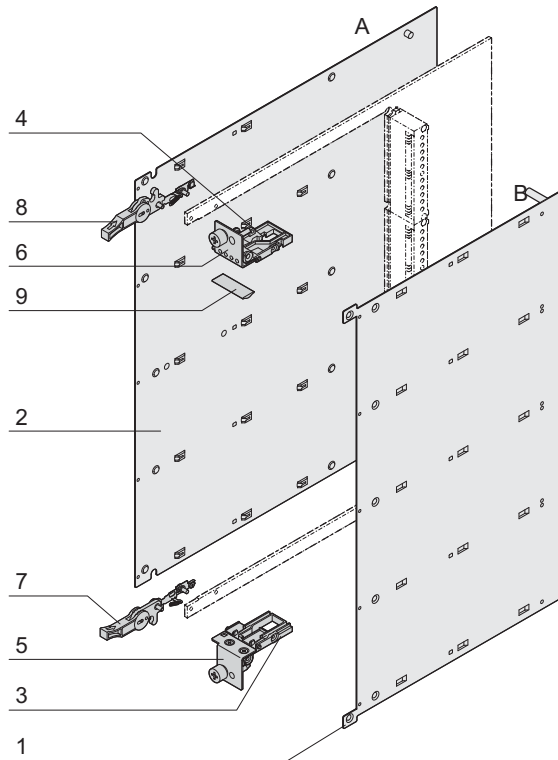


ORDER INFORMATION

Description	Part no.
Carrier mechanics for AdvancedMC compact and full-size modules with struts, ESD clips and guide rails	10849-001
Accessories	
Microswitch, normally closed , for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	20849-236
Microswitch, normally open , for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	20849-235
Description inserter/extractor handle	Page 8.31
Microswitch description	Page 8.31
AdvancedMC module mechanics	Page 8.56

Systems – AdvancedMC cutaway carrier

CARRIER MECHANICS FOR COMPACT AND FULL-SIZE ADVANCEDMC MODULES



- Mechanics for cutaway carrier board (carrier **without** struts, guide rails, ESD clips, for individual placement)
- Stainless steel (EMC shielded)
- Width 1 slot (6 HP), height 8 U, corresponds to PICMG® AMC.0 R2.0
- Inserter/extractor handle, designed for microswitch activation (hot-swap)

DELIVERY COMPRISES (Kit)

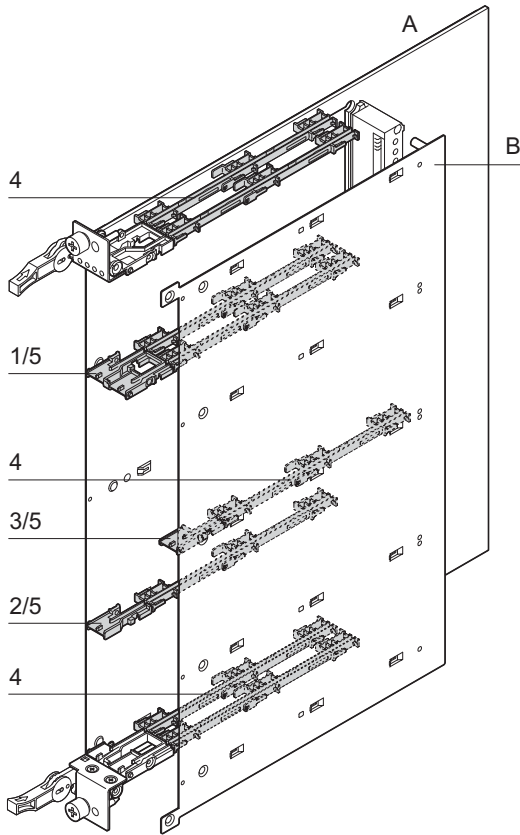
Item	Qty	Description
1	1	Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
2	1	Cover plate A (left), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
3	1	Lower splitting extrusion (strut), Zn die-cast, nickel-plated
4	1	Upper splitting extrusion (strut), Zn die-cast, nickel-plated
5	1	Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
6	1	Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in, with holes for LEDs
7	1	Standard inserter/extractor handle, with microswitch operation, plastic lever, black
8	1	Standard inserter/extractor handle, plastic lever, black
9	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
10	1	Assembly kit

ORDER INFORMATION

Description	Part no.
Carrier mechanics for AdvancedMC compact and full-size modules without struts, ESD clips and guide rails	10849-002
Accessories	
Microswitch, normally closed , for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	20849-236
Microswitch, normally open , for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	20849-235
Further struts, ESD clips and guide rails	Page 8.30
Description inserter/extractor handle	Page 8.31
Microswitch description	Page 8.31
AdvancedMC module mechanics	Page 8.56

Systems – AdvancedMC cutaway carrier

BOARD GUIDES/STRUTS FOR ADVANCEDMC COMPACT AND FULL-SIZE MODULES



- Struts and guide rails are always required to guide boards
- 3 different struts
 - The strut is assembled between the cover plates A and B
 - The strut is assembled on the left of cover plate A
 - The strut is assembled on the right of cover plate B
- The ESD clip pushes into the strut (one per board guide)
- The guide rails clip into the cover plate

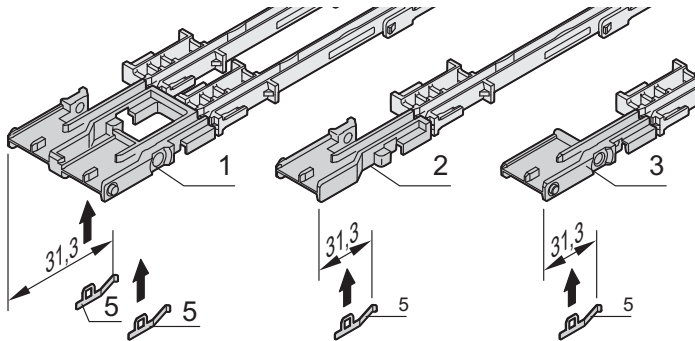
ORDER INFORMATION

Item	Description	Qty/PU	Part no.
1	Strut between cover A (left) and B (right), Zn die-cast, nickel-plated	10	20849-009
2	Splitting extrusion (strut) for cover A (left), Zn die-cast, nickel-plated	10	20849-010
3	Splitting extrusion (strut) for cover B (on the right), Zn die-cast, nickel-plated	10	20849-011
4	AdvancedMC guide rail, PBT, UL 94 V-0, red	10	20849-008
5	ESD clip, stainless spring steel, for deflection of electrostatic charges	50	20849-021

Accessories

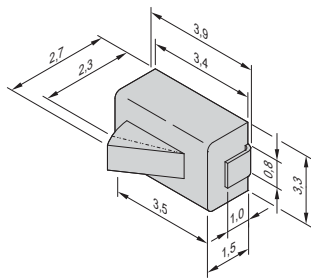
Microswitch, **normally closed**, for AdvancedMC carrier (compact and full-size modules)
for soldering (SMD), PU 10 pieces, page 8.31 **20849-236**

Microswitch, **normally open**, for AdvancedMC carrier (compact and full-size modules)
for soldering (SMD), PU 10 pieces - page 8.31 **20849-235**



Systems – AdvancedMC cutaway carrier

MICROSWITCH FOR CARRIER (COMPACT AND FULL-SIZE ADVANCEDMC MODULES)



- Microswitch for soldering (SMD)

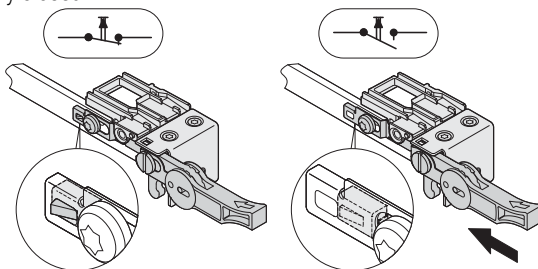
ORDER INFORMATION

Description	Qty/PU	Part no.
Microswitch, normally closed , for AdvancedMC carrier (compact and full-size modules)	10	20849-236
Microswitch, normally open , for AdvancedMC carrier (compact and full-size modules)	10	20849-235

Technical data

Max. switch current	1 mA, 5 V _{DC}
Operating temperature	-15 °C ... +70 °C
Electrical lifespan	10 ⁵ switching cycles

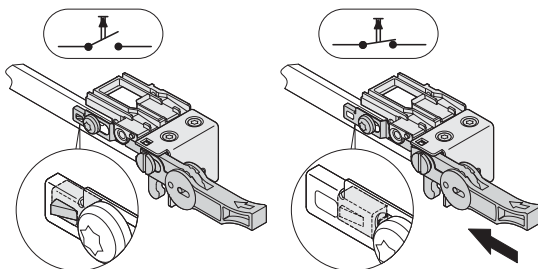
"Normally closed"



Handle in inoperative position

Handle activated

Closer

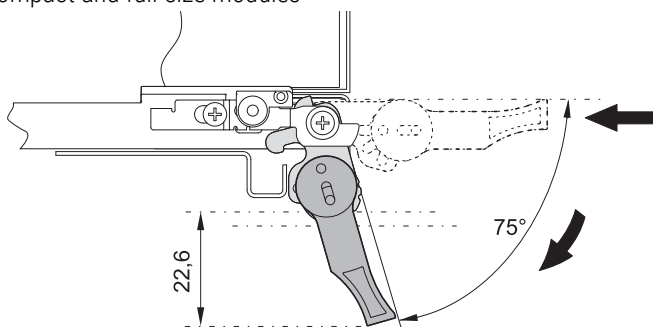


Handle in inoperative position

Handle activated

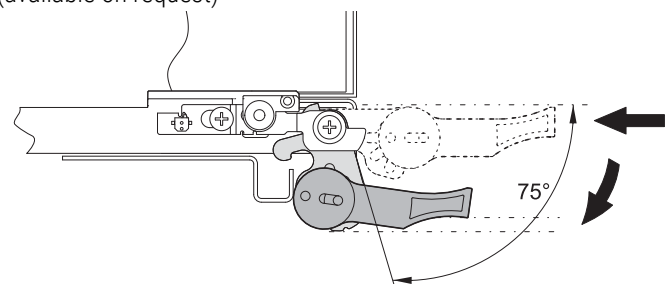
DIFFERENCES BETWEEN STANDARD AND MF HANDLE FOR ADVANCEDMC CARRIER (COMPACT AND FULL-SIZE MODULES)

Standard front handle - is included in delivery of carriers for compact and full-size modules



- Extractor handle 75° opening angle
- Insertion/extraction in one step
- Swing range: 23 mm below and above the pitch line
- Included in delivery of carrier

MF handle - can be exchanged by standard handle if needed (available on request)



- Extractor handle 75° opening angle
- Insertion/extraction in three steps (2 operations)
- Small swing range (0 mm) below and above the pitch line. The lower respectively upper limit of the carrier is not exceeded during extraction.

Systems – AdvancedMC conventional carri-

CARRIER MECHANISM FOR MID-SIZE ADVANCEDMC MODULES WITH ADVANCEDTCA IEA HANDLE, COMPLETE KIT



12808001 12808002

- Mechanics for conventional carrier, stainless steel (EMC shielded)
- Width 1 slot (6 HP), height 8 U, corresponds to PICMG® AMC.0 R2.0
- AdvancedTCA **IEA** inserter/extractor handle, designed for microswitch activation (hot-swap)
- Carrier mechanics with struts and guide rails for four modules

DELIVERY COMPRISES (Kit)

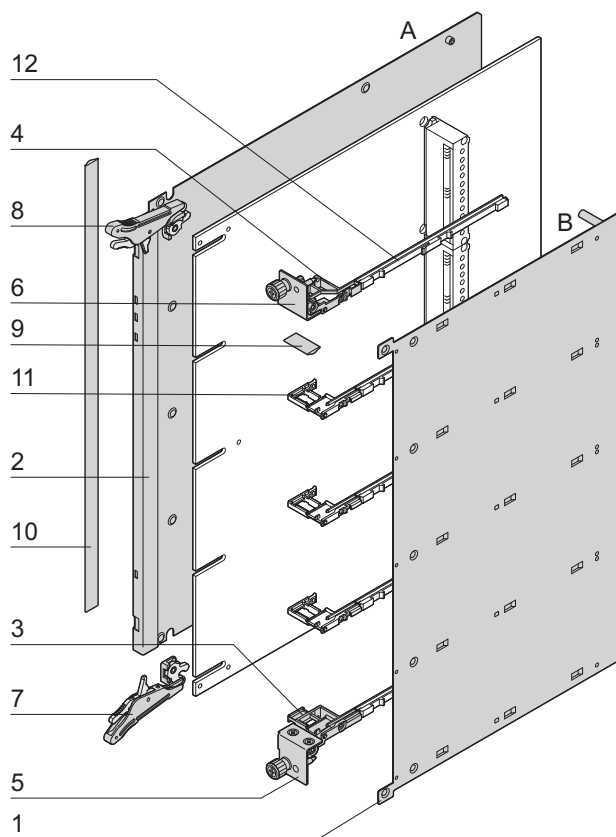
Item	Qty	Description
1	1	Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
2	1	Cover plate A (left), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
3	1	Lower splitting extrusion (strut), Zn die-cast, nickel-plated
4	1	Upper splitting extrusion (strut), Zn die-cast, nickel-plated
5	1	Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
6	1	Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
7	1	Lower AdvancedTCA IEA inserter/extractor handle, with microswitch activation, plastic lever, black
8	1	AdvancedTCA IEA inserter/extractor handle, top, with microswitch activation, lever plastic, black
9	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
10	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
11	3	Splitting extrusion between covers A and B (4 ESD clips)
12	5	AdvancedMC guide rail, PBT, UL 94 V-0, green
13	1	Fixing material kit

ORDER INFORMATION

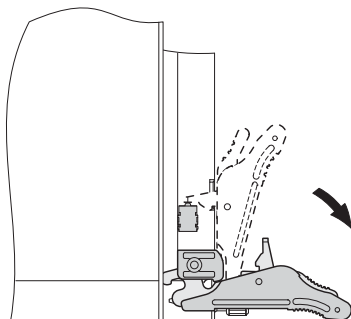
Description	Part no.
AdvancedMC carrier mechanism for mid-size AdvancedMC modules with AdvancedTCA IEA handle with struts, ESD clips and guide rails	10849-011
Accessories	
Microswitch for carriers (mid-size AdvancedMC modules) normally closed, for soldering (SMD), PU 10 pieces	20817-853
Microswitch for carriers (mid-size AdvancedMC modules) normally open, for soldering (SMD), PU 10 pieces	20817-909
AdvancedMC module mechanics	Page 8.56

NOTE

- Carrier with stronger cover plate A (1 mm) on request
- Carrier for compact AdvancedMC modules on request
- Southco type handle kit on request



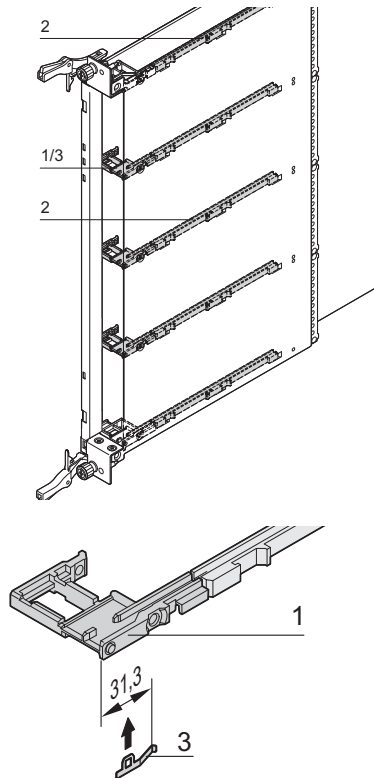
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Systems – AdvancedMC conventional

BOARD GUIDES/STRUTS FOR ADVANCEDMC MID-SIZE MODULES



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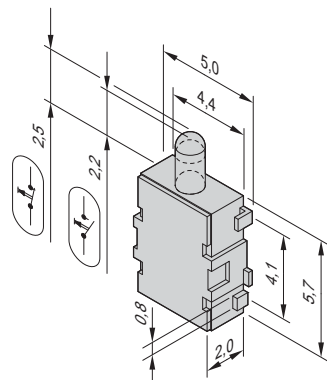
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- Struts and guide rails are always required to guide boards
- Strut is assembled between cover plates A and B
- The ESD clip pushes into the strut (one per board guide)
- The guide rails clip into the cover plate

ORDER INFORMATION

Item	Description	Qty/PU	Part no.
1	Strut between cover A (left) and B (right), Zn die-cast, nickel-plated	10	20849-242
2	AdvancedMC guide rail for mid-size carrier, PBT, UL 94 V-0, green	10	20849-166
3	ESD clip, stainless spring steel, for deflection of electrostatic charges	50	20849-021

MICROSWITCH FOR CARRIERS (MID-SIZE ADVANCEDMC MODULES)



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- Microswitch for soldering (SMD)
- Can be used for all conventional carrier handles

ORDER INFORMATION

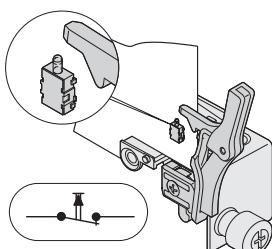
Description	Qty/PU	Part no.
Microswitch (normally closed) for carrier (mid-size AdvancedMC modules)	10	20817-853
Microswitch (normally open) for carrier (mid-size AdvancedMC modules)	10	20817-909

Technical data

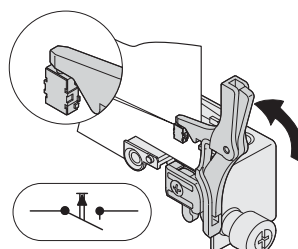
Max. switch current	100 mA, 12 V _{DC}
Operating temperature	-20 °C ... +60 °C
Electrical lifespan	5 x 10 ⁵ switching cycles

Opener

Closer



12807079



12807087

Systems – AdvancedMC carrier Ser-

SERVICEPLUS: SOLUTION



12812004

ADVANCEDMC CARRIER MECHANICS

- The carrier board is a combination of conventional and cutaway carriers
- Max. placement depends on the design of the carrier board
- Custom versions on request
 - Single/double combinations
- Handles
 - AdvancedTCA IEA
 - AdvancedTCA Southco

Systems – ServicePLUS

APPLICATION EXAMPLES



- Hybrid system, modification of a MicroTCA single-module board cage into a 3 U chassis to DIN EN 60297 ¹²⁹⁰⁸⁰⁰⁷



- MicroTCA system, 1 U for 6 single mid-size AMC modules; power supply, increased air inlet and exhaust area with inwardly curved side panels ¹²⁹⁰⁸⁰⁰⁵



- MicroTCA chassis with hot-swap fan unit and power supply ¹²⁹⁰⁹⁰⁰¹



- CompactPCI chassis with hot-swap fan unit and custom finishing ¹²³⁰⁹⁰⁰²



- CompactPCI chassis with 48 V_{DC} power supply ¹²³⁰⁹⁰⁰¹



- 2 slot, 2 U AdvancedTCA chassis with custom colour ¹²⁷⁰⁹⁰⁰³

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