powerful, slim, efficient

Enclosures & Components

Slimkit 10

The new slim 19-inch EMC chassis with an overall height of 1 U

ELMA
Your Solution Partner

Introduction

Elma is a global manufacturer of products for housing electronic systems. The company provides everything from components, such as modular enclosures, cabinets and backplanes, to complete standard or custom system platforms. Elma also manufactures precision rotary switches. Elma offers a fast, flexible response to customer needs and extensive practical knowledge in tailoring solutions to specific applications.

Founded in 1960, Elma is an industry innovator in the design and manufacture of electronic enclosures and passive electronic components. Elma enjoys a leading position in the VME/VME64x, VXI, VXS, PXI, cPCI, ATCA and Rugged COTS packaging markets. Elma's component products consist of switches, knobs, and LED arrays. Headquartered in Switzerland, with partners in 22 countries, Elma has the ability to respond rapidly, with superior solutions to the requirements of its customers. Elma has a broad base of customers in diverse industries such as telecommunications, industrial control, medical electronics, military and defence.

Elma strives to provide products superior in quality, reliability, performance, and consistently presents new, innovative designs to the market. Elma's product line encompasses well over 16,000 parts, including enclosures, cabinets, high quality switches, LED arrays, knobs and much more. Elma also offers design and integration services backed by responsive and knowledgeable technical support.

Elma's leading quality level is reached through training of all employees and following of systematic procedures per ISO 9001 standards to which Elma has been registered.

Switzerland United States

Germany France

United Kingdom Israel

China Romania

Why Choose Elma?

Flexibility: Elma tailors solutions to individual applications to ensure fast and cost-effective results.

Experience: extensive practical experience in packaging electronic systems is used to minimise the time taken to develop new customised solutions without compromising system performance or reliability.

Compatibility: because the two key electromechanical components - enclosures and backplanes – are made in-house, Elma guarantees compatibility, consistency and reliability.

Global resources: with manufacturing in Europe and the USA customers benefit from local service backed by global resources.

# Datasheet

1.1 EMC-Slimkit 10 Overview

- 19" EMC chassis 1 U
- Basic model can be transformed into a complete case by adding a rear panel, top cover as well as a mounting chassis
- Design allows numerous combinations to be assembled according to the application
- Hard and wear resistant aluminium front panel
- With or without perforations for optimised thermal solution
- EMC-Slimkit 10 can be presented in a number of attractive finishes for individual product tailoring

Technical features
- 19" chassis with excellent EMC feature
- Front panel: aluminium, frame construction: sheet steel, pre-galvanised
- Vibration-proof
- EMC shielding without gaskets is standard
- Fast assembly
- Easy access
- Front- and rear panel can be removed for easy machining

Applications
- Accommodates flat components
- Slim test equipment
- Controls
- Telecommunication equipment
- Audio and radio equipment
- Signal Converters

Top Cover

Mounting Chassis

Basic Tray

Rear Panel

Front Panel

Feet (optional)
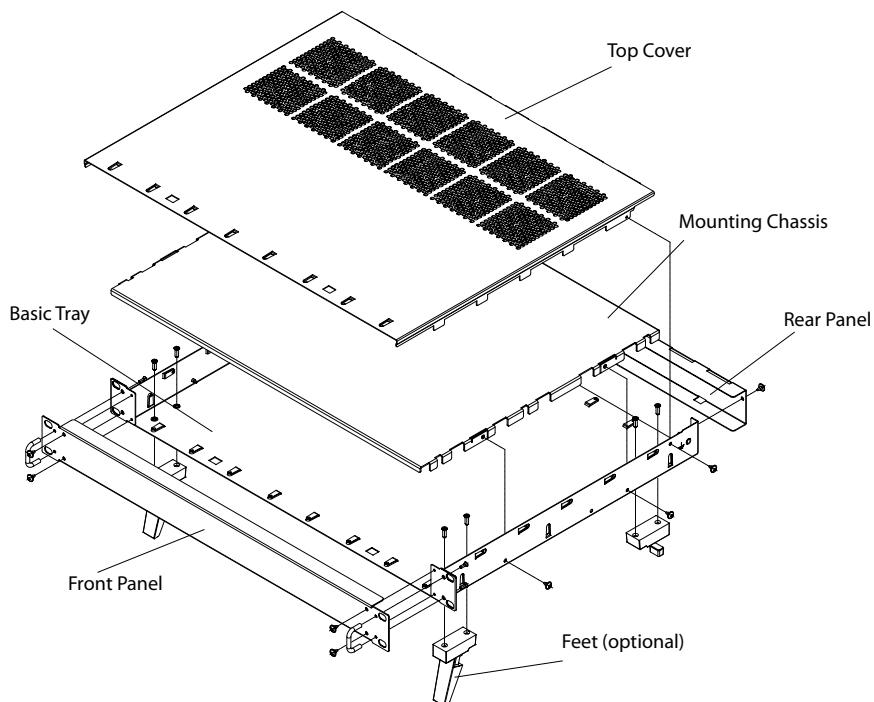
EMC

"Electromagnetic comptability is the ability of a system to operate in the intended environment without causing or suffering unacceptable degradation of performance due to unintentinal electromagnetic radiation or response."
The EMC characterstics of a system therefore consist of an appropriate immunity from interference (noise immunity) and a limited emission of interference (noise emission).

Elma's EMC concept describes three levels of electromagnetic shielding performance (Performance Level). The attenuation levels will simplify the selection of sub racks for the user.
Test setup: The first measurement E1 is without the enclosure. The next measurement E2 is made with the transmitting antenna installed inside the enclosure. The difference between the received signal without and with the enclosure represents the shielding effectiveness in dB.

Performance Level	30 - 230 MHz	230 - 1000 MHz	1000 - 2000 MHz
1 / Elma: Basic level	20 dB	10 dB	0 dB
2 / Elma: Advanced level	40 dB	30 dB	20 dB
3 / Elma: Superior level	60 dB	50 dB	40 dB

The standard configuration will provide you with an advanced EMC level (Basic level with perforation).
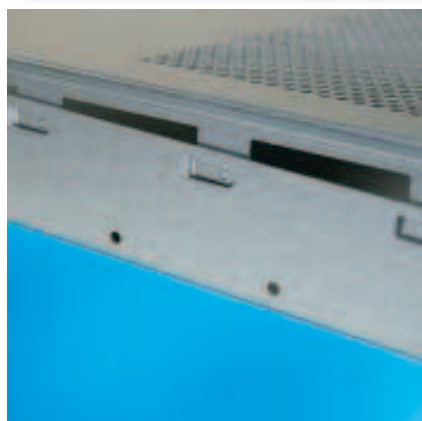
The integrated EMC solution

EMC contacts
• Top cover to rear panel

EMC contacts
• Bottom tray to rear panel
• Bottom tray to front panel
• Top cover to front panel

EMC contacts
• Top cover to bottom tray

Datasheet

Configuration

Basic Tray
1.2.1

- 1 U
- 240 mm / 360 mm
- Solid / perforated

Front Panel
1.2.2

- With / without handles
- Different colours

Rear Panel
1.2.3

Top Cover
1.2.4
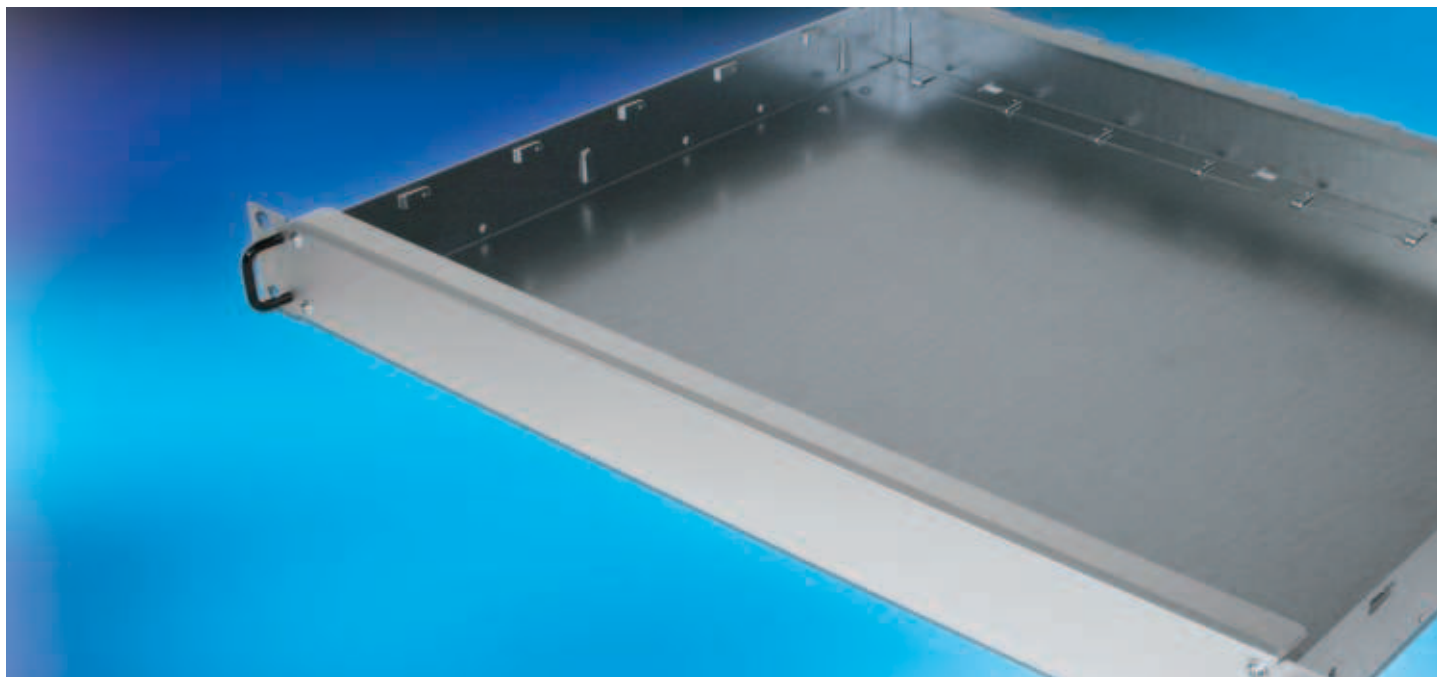
- 240 mm / 360 mm
- Solid / perforated

Mounting Chassis
1.2.5

- 240 mm / 360 mm

Accessories
1.3

- Earthing Kit
- Case feet

1.2 Slimkit 10 EMC Chassis

1.2.1 Slimkit 10 Basic Tray

- 0.75mm sheet steel, pre-galvanised
- With holes for fastening of mounting chassis, feet, earthing terminals, front / rear panel, top cover
- **Scope of delivery:**
  - Basic Tray
  - Assembly material for mounting front panel, rear panel, mounting chassis, top cover (12 round head SHEETtracs® screws 3,0 x 6, Torx T10)
- Front Panel see 1.2.2
- Rear Panel see 1.2.3
- Top Cover see 1.2.4
- Mounting Chassis see 1.2.5
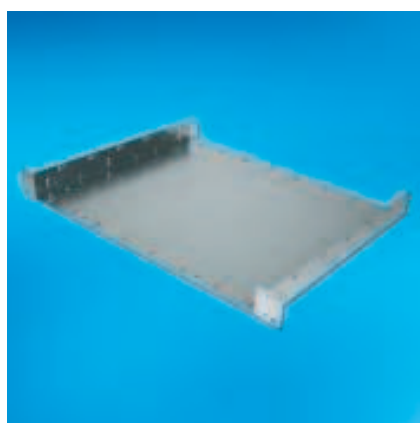
1.2.1 Slimkit 10 Basic Tray

Height	Depth		Perforation	Air Passage		Part-No.
	mm	inch		mm^2	sq. inch	
1 U	240	9.45	Solid	-	-	10-91100-00
1 U	240	9.45	Perforated	18095	28.04	10-91101-00
1 U	360	14.17	Solid	-	-	10-91110-00
1 U	360	14.17	Perforated	21714	33.65	10-91111-00

1.2.2 Front Panel

- 1.0 mm aluminium
- Rear: conductive, front: clear anodised / powder coated black (RAL 9005) / powder coated light grey (RAL 7035)
- With or without black handles
- Customised front panel upon request (see front panel service)
- **Scope of delivery:**
  - Front panel
  - Handle set (2 black U-handles, 4 countersunk screws M2.5 x 8, Torx T8) in handle versions only
- Assembly material for mounting front panel included in basic tray set

1.2.2 Front Panel

Height	Front	Handles	Part-No.
1 U	Clear anodised	Yes	10-46100-00
1 U	Clear anodised	No	10-451-00
1 U	Black powder coated	Yes	10-46160-00
1 U	Black powder coated	No	10-451-60
1 U	Light grey powder coated	Yes	10-46130-00
1 U	Light grey powder coated	No	10-451-30

1.2.3 Rear Panel

- 0.75 mm sheet steel, pre-galvanised
- Rear panel with customised cut outs upon request
- **Scope of delivery:**
  - Rear panel
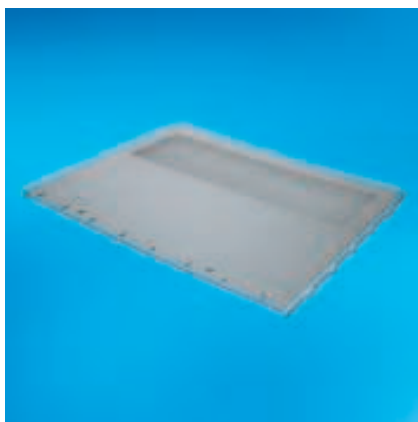- Assembly material for mounting rear panel included in basic tray set

1.2.3 Rear Panel

Description	Part-No.
Slimkit 10 Rear Panel 1 U	10-901-00

1.2.4 Top Cover

- 0.75 mm sheet steel, pre-galvanised
- With or without air perforation
- **Scope of delivery:**
  - Top cover
- Assembly material for mounting top cover included in basic tray set

1.2.4 Top Cover

Depth		Perforation	Air Passage		Part-No.
mm	inch		mm^2	sq. inch	
240	9.45	Solid	-	-	10-920-00
240	9.45	Perforated	18095	28.04	10-920-01
360	14.17	Solid	-	-	10-920-10
360	14.17	Perforated	21714	33.65	10-920-11

1.2.5 Mounting Chassis

- For mounting components
- Mounting chassis 240 mm can be mounted in Slimkit 10 with depth 360 mm
- 1.25 mm sheet steel, pre-galvanised
- Mounting chassis with customised cut outs upon request
- **Scope of delivery:**
  - Mounting chassis
- Assembly material for mounting chassis included in basic tray set
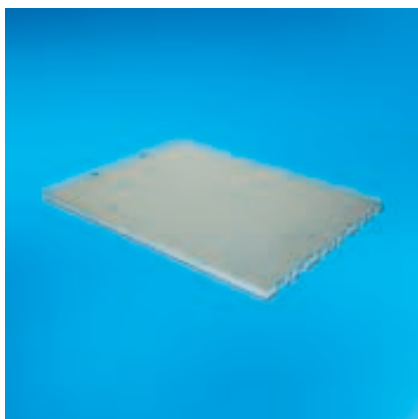
1.2.5 Mounting Chassis

Description	Part-No.
Slimkit 10 mounting chassis 240 mm	10-930-50
Slimkit 10 mounting chassis 360 mm	10-931-50

Datasheet

1.3 Accessories

1.3.1 Earthing Set

- Enables cases to be earthed in conformance with EN / VDE / SEV
- **Scope of delivery:**
  - 1 press-in threaded bolt M4
  - 2 serrated lock washers
  - 2 hexagonal nuts M4
 - 1 terminal clamp
  - 1 earthing symbol
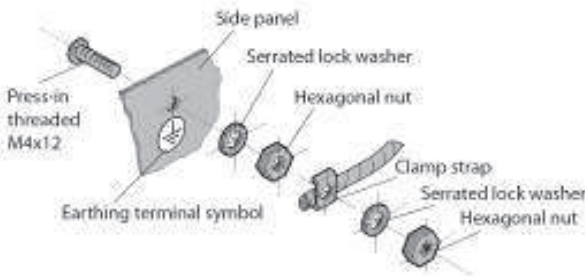
1.3.1 Earthing Set

Description	Part-No.
Earthing set according to EN VDE / SEV	63-174

1.3.2 Case Feet

- Tilt foot / Non-tilt foot
- Choice of colours: light grey (RAL 7035) or black (RAL 9005)
- Glass-fiber reinforced plastic, UL94 V-0
- Up to 30 kg carrying capacity per set
- **Scope of delivery:**
  - 1 set of feet
  - Assembly material (8 cross recessed countersunk PT-screw 3.5 x 8)
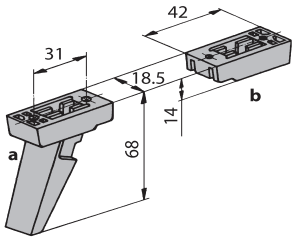
1.3.2 Case Feet

Description	Colour	Part-No.
Case feet, 4 x b	Light grey (RAL 7035)	63-019
Case feet, 4 x b	Black (RAL 9005)	63-321
Case feet, 2 x a + 2 x b	Light grey (RAL 7035)	63-018
Case feet, 2 x a + 2 x b	Black (RAL 9005)	63-320

Datasheet

1.4 Technical Information

1.4.1. Line Drawings for Slimkit 10

Front view

482,6
465,1
31,8
43,6
5,9

Side view

Plan view

(440,5 incl. screws)
341,9 / 353,6
32,1
114,2 / 133,7
240,1 / 360,1
2,5
18

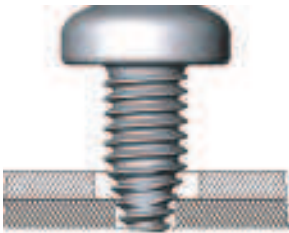Hole Ø 4,0

A-A
10
30,6
3
3
29,6
11

Mounting chassis
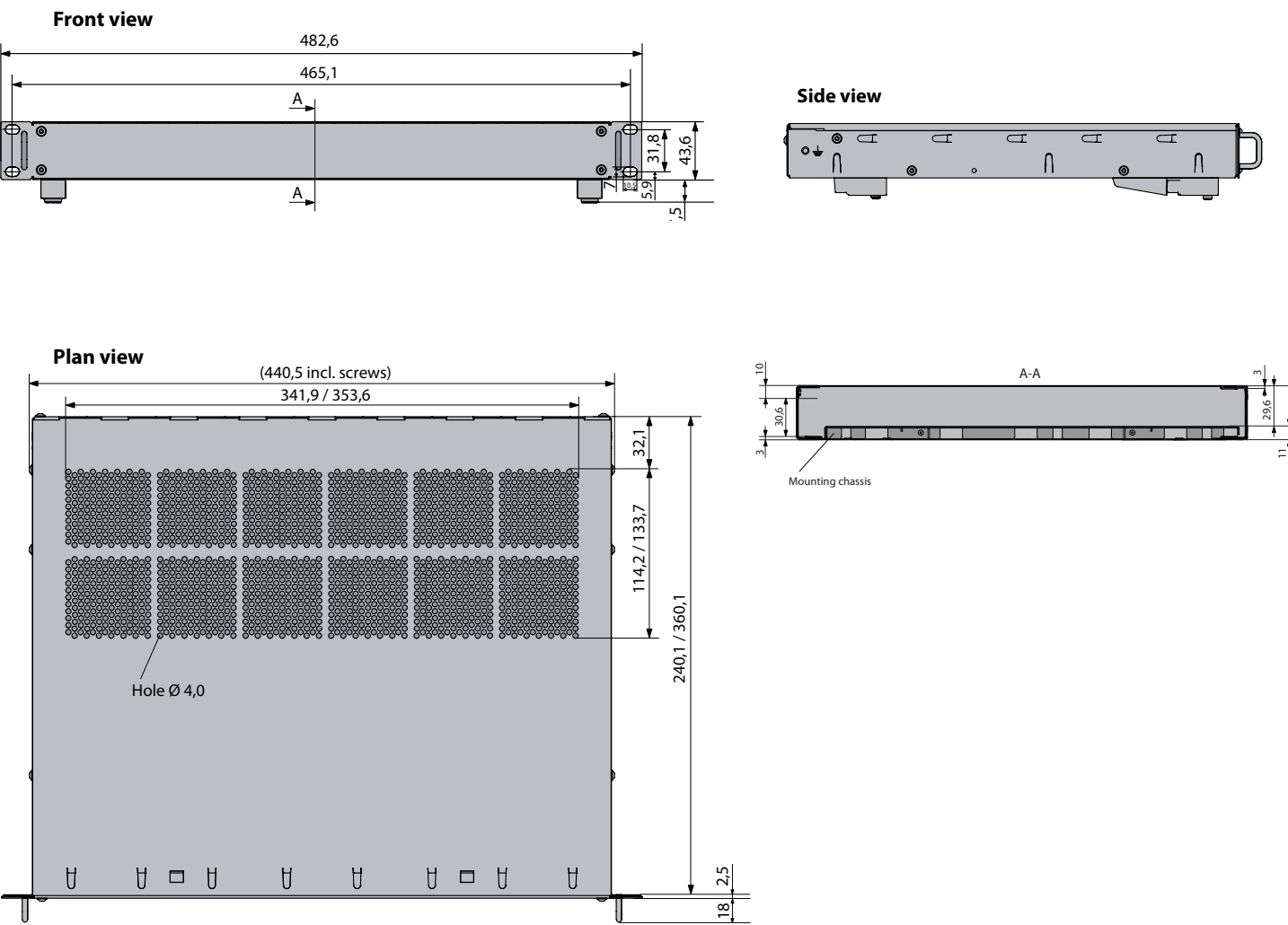
1.4.2 Assembly SHEETtracs® Screw

• For a secure thin sheet metal joint with pre-hole

1.4.2 SHEETtracs® Screw

Description	Material	Part-No.	
		1 pc.	100 pcs.
3 x 6, Torx T10	Steel, zinc-plated	5477-01	-
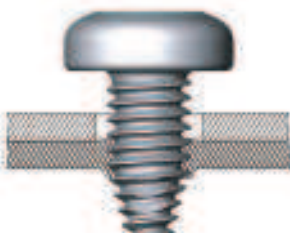
1. Initial position   2. Thread grooving   3. Tightening

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