

Serving the Automation & Control Industry since 1984





57.9

60.4

DOLD & DIN Enclosures



Altech's DIN Enclosures * DOLD &

Since 1984 Altech Corporation has grown to become a leading supplier of automation and industrial control components. Headquartered in Flemington, NJ, Altech has an experienced staff of engineering, manufacturing and sales personnel to provide the highest quality products with superior service. This is the Altech Commitment!

Build or maintain your competitive edge in the world markets. Enhance the value of your products and devices by packaging them attractively with enclosures from Altech. Applications are limitless. Our compact DIN enclosures are ideal for housing electrical, electronic and electromechanical devices including relays, sensing and monitoring devices, timers, transducers, printed circuit boards and more.

Altech's line of DIN Enclosures are manufactured by **DOLD** ⁽⁴⁾, a company well know in Europe for its quality DIN Enclosures and Safety Relays. They offer the most comprehensive selection of DIN enclosures available. These versatile housings are economical, easy to assemble and install. They provide protection and integral, ready-to-wire terminals in one attractive package. And at a level of quality that meets or exceeds national and international standards for performance and safety.

Wide Range of Sizes and Designs, Choice of Cover Styles, Terminal-To-Board Connection Options and 35mm DIN Rail or Panel Mount. Only flame retardant, maintenance free materials are used for safety, and to insure that your control devices look good for many years to come.

Customizing is easy. We can cut special holes and cutouts for operating, setting or indicating components that you may wish to install into the front panel. Terminals can be marked for quick identification and efficient field wiring. Instructions and custom markings can be imprinted. Our enclosures can even be molded in custom colors and custom configurations (OEM quantities). Whatever your requirements may be, we will do our best to help you meet them.

Our well trained technical experts welcome the opportunity to answer your technical questions and provide solutions to your automation and control needs. Give us a call or visit www.altechcorp.com.

Quality Commitment

Altech's control components meet diverse national and international standards such as UL, NEC, CSA IEC VDE and more. Altech provides superior customer service and delivery through Total Quality Management and Continuous Process Improvement. Altech is ISO 9001 approved. We perform these services with honesty and integrity and are committed to achieve these goals.





KS4400

The KS4400 series is simple, modular and flexible yet highly functional. The half shell design is cost effective and provides exceptional space utilization. Three levels of terminals with fixed and pluggable PCB terminal options allow for high density connections. A large front face area provides ample space for operator, communication and visual display components.

• Compact, Snap-together

- DIN Rail Mount
- Fixed and Pluggable Terminals
- High Density Terminal Configuration

K04700

Our most popular enclosures, the KO4700 series offer a wide range of sizes with single and double level terminal configurations. They can be used for a wide range of applications. Complete with 8 to 132 terminals, select from pressure plate or box clamp terminations with fixed or pluggable terminal-to-board connections. Several cover designs add to the versatility of this series.

- DIN Rail or Panel Mount
- Fixed and Pluggable Designs
- Snap-On Keyed Covers
- Integral PC Board Guides
 - Standard Color: Black Housing Shell with Tan Cover

• Standard Color: Black Housing with Gray Front Plate

- Modular Terminal Enclosures, pages 32-39
- 12-39

4-11



K70

K70 series enclosures include a range of small to medium size DIN enclosures, complete with 8 to 32 terminals. They offer cost effective solutions for many applications. The K70s are supplied with integral pressure plate terminals for reliable connections. Terminal-to-board connections include fixed and pluggable solutions.

- DIN Rail or Panel Mount
- Integral PC Board Guides
- Snap-On Covers
- Fixed and Pluggable Designs
- Standard Color: Light Gray





KU4000

The versatile KU4000 series enclosures feature generous internal space for printed circuit boards and electronic components. High density, double level snap-in terminals are of the pressure plate or spring cage design for gastight, vibration proof connections. Straight or angled solder pins offer flexibility in board layout. All versions have machine solderable terminals. KU4000 housings fit into standard 45mm (1.77 in.) high international style cutouts.

- DIN Rail or Panel Mount
- Integral PC Board Guides • Front Fits 45mm (1.77 in.) Cutouts

KU4100

The versatile KU4100 series features a compact design with different terminal configuration options. They are available in six widths with double level terminal locations. Terminal configuration options include blank enclosures with no terminal openings, fixed PCB terminals and pluggable PCB terminals.

• DIN Rail Mount

K04300

• DIN Rail Mount

K04070

• Front Fits 45mm (1.77 in.) Cutouts

with 16 to 64 terminals in 22.5 to 90 mm widths.

- Integral PC Board Guides
- Fixed and Pluggable Terminals

The KO4300 series offers new design styling and cost effectiveness in a high density compact package. The double level terminals offer space savings while providing gas-tight, vibration proof connections. The enclosures are available

• Compact High Density Design

• Standard Color: Light Gray

• Standard Color: Light Gray Cover with Black Base

74-84

85-89

48-73



• Machine Solderable Pins • Integral PC Board Guides



Compact, cost effective enclosures are ideal for I/O circuits, relays, timers and other small control devices. The KO4070 series enclosures are available in three widths with single and multi-level terminals. They are supplied complete with 4 to 16 box clamp type terminals that are machine solderable.

• DIN Rail Mount • Integral PC Board Guides Machine Solderable Terminals • Standard Color: Light Gray 90-95 • Compact, Snap-Together







- Standard Color: Light Gray

KS4400 Series



The KS4400 series is simple, modular and flexible yet highly functional. The half shell design is cost effective and provides exceptional space utilization. Three levels of terminals with fixed and pluggable PCB terminal options allow for high density connections. A large front face area provides ample space for operator, communication and visual display components.

MATERIALS

Housing

Housing Shell: Polyamide, Glass Filled; Front Plate: PBT

Terminals

Housing: Polyamide; Terminal Pins: Tinned Brass

Temperature Rating: 120°C (248°F) UL94V0

Standard Color: Black Housing with Gray Front Plate Other colors are available upon request.

PROTECTION

KS4400 enclosures have an IP40 rating, IP20 for terminal openings (finger protected) and meet VBG4 and other European accident prevention requirements.

CONSTRUCTION

The KS4400 enclosure series housings are supplied as unassembled kits. Each kit consists of two half shells, a front plate, DIN rail clip and terminal sets. The terminals are set on three levels to maximize space. The terminals are machine solderable with right angle pins. PC boards are mounted vertically in the enclosure, perpendicular to the DIN rail.

TERMINALS

The terminals are available as fixed or pluggable PCB terminals. The terminal blocks are all machine solderable. Fixed PCB terminals are standard screw cage clamp style terminal blocks.

Pluggable PCB terminals feature male pin headers and female screw cage clamp or spring cage clamp plugs that can be plugged/unplugged. Terminal spaces can also be left blank and covered with a snap in cover (terminal blanking plug).

MOUNTING

The KS4400 series can easily be mounted on standard 35mm DIN rail by means of the integral mounting foot and DIN clip.

MARKING

The KS4400 series have large marking areas on the front of the cover.

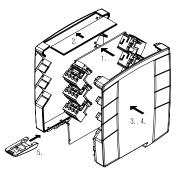
CUSTOMIZATION

We can supply the KS4400 series enclosures with many custom options including:

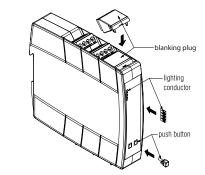
- Partial or mixed terminal loading Printing/Marking
- Enclosure bus connections
- Ventilation SlotsHinged front covers
- Machining of custom holesFront cover with test buttons

ASSEMBLY OF ENCLOSURE

- 1 With terminals fitted, place the PCB in the first enclosure half shell.
- 2 Slide the front plate in the slot in the first enclosure half shell.
- 3 Place this assembly flat and line-up the second half shell so that the front plate slides into the slot.
- 4 Manually close both half shells until they snap together.
- 5 Insert the DIN rail mounting clip into the base of the enclosure.



ACCESSORIES AND OPTIONS



Application Example



KS4400 Series

Altech

8 Terminal

Screw Terminals

TECHNICAL INFORMATION

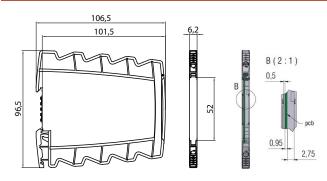
Electrical: 10A, 300V, 20-14AWG Materials: Housing - PA Hinged Front Plate - PC Temperature Range: Up to 105°C (221°F) Flammability Rating: UL94 V-O Housing UL94 V-2 Front Plate *Color: Black Housing Transparent Cover Plate Terminal Type: Screw Terminal Screw Size: M3.5 Recommended Torque: 0.6Nm Max. PCB's: (1) Vertical Mounting: 35mm DIN Rail

ORDERING INFORMATION

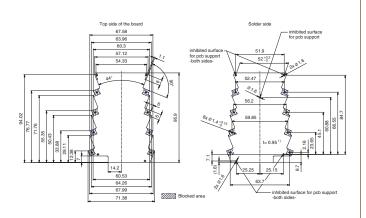
Part Number	Туре	Terminals	PCB Connection
90.110	KS4460	Screw	Solder Pin

	ACCESSORIES		
	Accessories	Part Number	Туре
	1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
j	Light Pipes, 3mm Grid	90.191	KS4400-7-1
	Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



*Other colors are available upon request.

8 Terminal

Spring Terminals

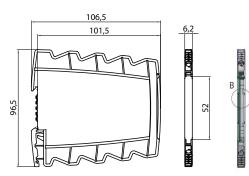
TECHNICAL INFORMATION

Electrical: 10A, 300V, 20-14AWG Materials: Housing - PA Hinged Front Plate - PC Temperature Range: Up to 105°C (221°F) Flammability Rating: UL94 V-O Housing UL94 V-2 Front Plate *Color: Black Housing Transparent Cover Plate Terminal Type: Spring Terminal Screw Size: – Recommended Torque: – Max. PCB's: (1) Vertical Mounting: 35mm DIN Rail

ORDERING INFORMATION Part Number Type Terminals PCB Connection 90.115 KS4460 Spring Solder Pin

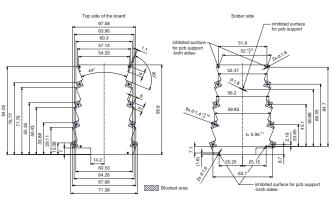
ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





B(2:1) 0.5



12 Terminal

Fixed Terminals

Altech

TECHNICAL INFORMATION

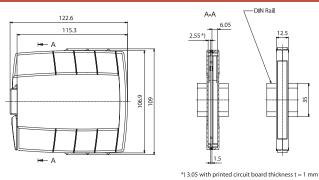
Electrical: 10A, 300V, 22-14AWG Materials: Housing - PA-GF Front Plate - PBT Terminals - PA Temperature Range: Up to 120°C (248°F) Flammability Rating: UL94 V-O *Color: Black Housing Gray Cover Plate Terminal Type: Fixed Screw Terminal Screw Size: M2.5 Recommended Torque: 0.5Nm Max. PCB's: (1) Vertical Mounting: 35mm DIN Rail

ORDERING INFORMATION

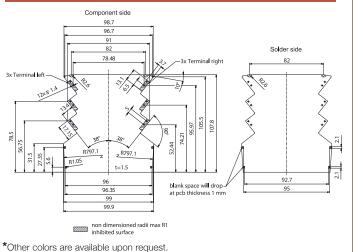
Part Number	Туре	Terminals	PCB Connection
90.120	KS4401/F	Fixed Screw	Machine Solder

ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



12 Terminal

Pluggable Terminals

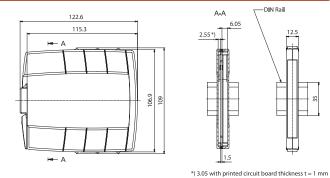


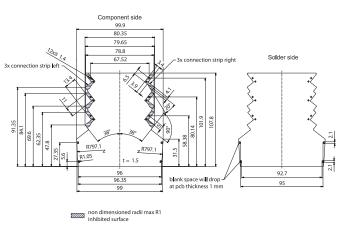
TECHNICAL INFORMATION	
Electrical:	*Color:Black Housing
10A, 300V, 30-12AWG (Screw);	Gray Cover Plate
10A, 300V, 26-12AWG (Spring)	Terminal Type:
Materials:	Pluggable Screw /
Housing - PA-GF	Pluggable Spring
Front Plate - PBT	Terminal Screw Size: M2.5
Terminals - PA	Recommended Torque:
Temperature Range:	0.5Nm
Up to 120°C (248°F)	Max. PCB's:
Flammability Rating:	(1) Vertical
UL94 V-O	Mounting:
	35mm DIN Rail

ORDERING INFORMATION Part Number Type Terminals PCB Connection 90.121 KS4401/PS Pluggable Screw Machine Solder 90.122 KS4401/PC Pluggable Spring Machine Solder

ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





18 Terminal

Fixed Terminals



TECHNICAL INFORMATION

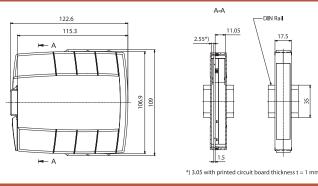
Electrical: 10A, 300V, 22-14AWG Materials: Housing - PA-GF Front Plate - PBT Terminals - PA Temperature Range: Up to 120°C (248°F) Flammability Rating: UL94 V-O *Color:Black Housing Gray Cover Plate Terminal Type: Fixed Screw Terminal Screw Size: M2.5 Recommended Torque: 0.5Nm Max. PCB's: (1) Vertical Mounting: 35mm DIN Rail

ORDERING INFORMATION

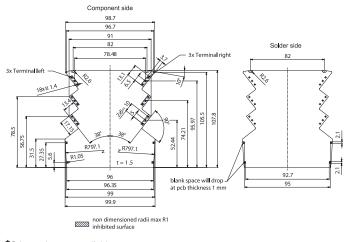
Part Number	Туре	Terminals	PCB Connection
90.130	KS4402/F	Fixed Screw	Machine Solder

ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



*Other colors are available upon request.

18 Terminal

Pluggable Terminals



TECHNICAL INFORMATION

Electrical:
10A, 300V, 30-12AWG (Screw);
10A, 300V, 26-12AWG (Spring)
Materials:
Housing - PA-GF
Front Plate - PBT
Terminals - PA
Temperature Range:
Up to 120°C (248°F)
Flammability Rating:
UL94 V-O

A

*Color:Black Housing Gray Cover Plate Terminal Type: Pluggable Screw / Pluggable Spring Terminal Screw Size: M2.5 Recommended Torque: 0.5Nm Max. PCB's: (1) Vertical Mounting: 35mm DIN Rail

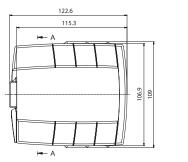
PCB Connection

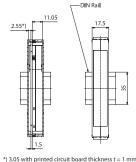
ORDERING INFORMATION Part Number Type Terminals

Meter DIN F	Rail 2	2511120/1M	TS35x7.5/1M	
Accessorie	s P	art Number	Туре	
ACCESSOR	IES			
90.132	KS4402/PC	Pluggable Spri	ng Machine Sold	er
90.131	KS4402/PS	Pluggable Scre	w Machine Sold	er

1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

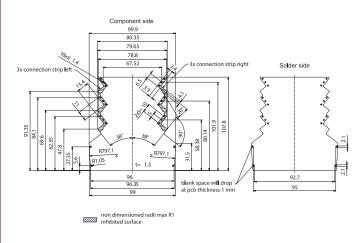
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





A-A

15.05 With printed encore bound encore



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24 Terminal

Fixed Terminals



TECHNICAL INFORMATION

Electrical: 10A, 300V, 22-14AWG Materials: Housing - PA-GF Front Plate - PBT Terminals - PA Temperature Range: Up to 120°C (248°F) Flammability Rating: UL94 V-O *Color:Black Housing Gray Cover Plate Terminal Type: Fixed Screw Terminal Screw Size: M2.5 Recommended Torque: 0.5Nm Max. PCB's: (1) Vertical Mounting: 35mm DIN Rail

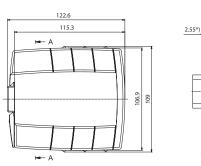
ORDERING INFORMATION

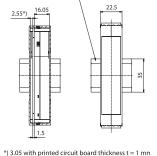
Part Number	Туре	Terminals	PCB Connection
90.140	KS4403/F	Fixed Screw	Machine Solder

ACCESSORIES

Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)

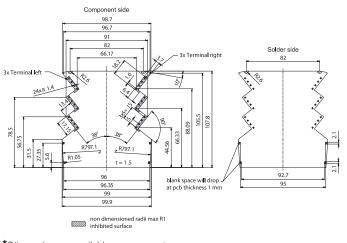




-DIN Rail

A-A

PCB DRAWING (To convert to inches divide by 25.4.)



*Other colors are available upon request.

24 Terminal

Pluggable Terminals



TECHNICAL INFORMATION

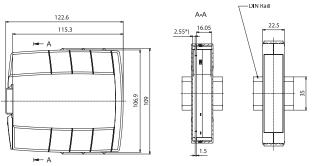
Electrical:	*Color:Black Housing
10A, 300V, 30-12AWG (Screw);	Gray Cover Plate
10A, 300V, 26-12AWG (Spring)	Terminal Type:
Materials:	Pluggable Screw /
Housing - PA-GF	Pluggable Spring
Front Plate - PBT	Terminal Screw Size: M2.5
Terminals - PA	Recommended Torque:
Temperature Range:	0.5Nm
Up to 120°C (248°F)	Max. PCB's:
Flammability Rating:	(1) Vertical
UL94 V-O	Mounting:
	35mm DIN Rail

ORDERING INFORMATION			
Part Number	Туре	Terminals	PCB Connection
90.141	KS4403/PS	Pluggable Screw	Machine Solder
90.142	KS4403/PC	Pluggable Spring	Machine Solder

ACCESSORIES

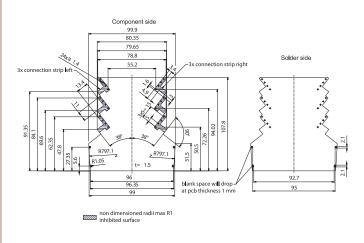
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



*) 3.05 with printed circuit board thickness t = 1 mm

PCB DRAWING (To convert to inches divide by 25.4.)



36 Terminal

Fixed Terminals



TECHNICAL INFORMATION

Electrical: 10A, 300V, 22-14AWG Materials: Housing - PA-GF Front Plate - PBT Terminals - PA Temperature Range: Up to 120°C (248°F) Flammability Rating: UL94 V-O *Color:Black Housing Gray Cover Plate Terminal Type: Fixed Screw Terminal Screw Size: M2.5 Recommended Torque: 0.5Nm Max. PCB's: (2) Vertical Mounting: 35mm DIN Rail

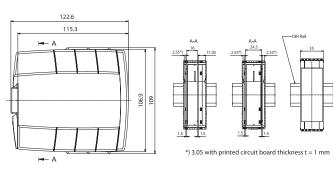
ORDERING INFORMATION

Part Number	Туре	Terminals	PCB Connection
90.150	KS4461/F	Fixed Screw	Machine Solder

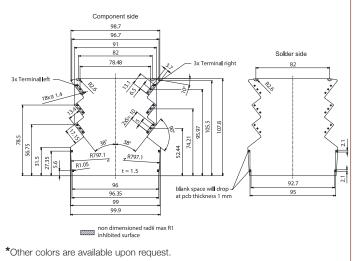
ACCESSORIES

Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



TECHNICAL INFORMATIONElectrical:*Co10A, 300V, 30-12AWG (Screw);10A, 300V, 26-12AWG (Spring)Materials:PIHousing - PA-GFPIFront Plate - PBTTerrTerminals - PARecTemperature Range:0,0

Up to 120°C (248°F) Flammability Rating: UL94 V-O

36 Terminal

Pluggable Terminals

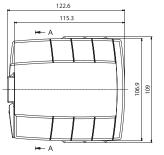
*Color:Black Housing Gray Cover Plate Terminal Type: Pluggable Screw / Pluggable Spring Terminal Screw Size: M2.5 Recommended Torque: 0.5Nm Max. PCB's: (2) Vertical Mounting: 35mm DIN Rail

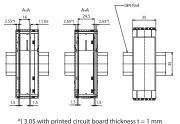
ORDERING INFORMATION				
Part Number	Туре	Terminals	PCB Connection	
90.151	KS4461/PS	Pluggable Screw	Machine Solder	
90.152	KS4461/PC	Pluggable Spring	Machine Solder	

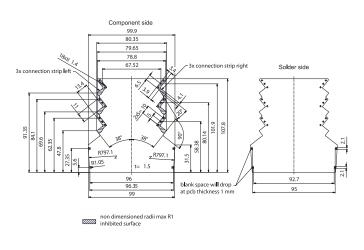
ACCESSORIES

Part Number	Туре
2511120/1M	TS35x7.5/1M
90.190	KS4403-5-1
90.191	KS4400-7-1
90.192	KS4400-6-1
	2511120/1M 90.190 90.191

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)







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48 Terminal

Fixed Terminals



TECHNICAL INFORMATION

Electrical: 10A, 300V, 22-14AWG Materials: Housing - PA-GF Front Plate - PBT Terminals - PA Temperature Range: Up to 120°C (248°F) Flammability Rating: UL94 V-O *Color:Black Housing Gray Cover Plate Terminal Type: Fixed Screw Terminal Screw Size: M2.5 Recommended Torque: 0.5Nm Max. PCB's: (2) Vertical Mounting: 35mm DIN Rail

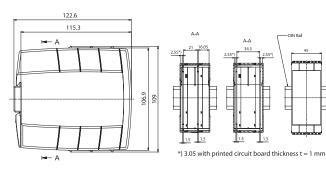
ORDERING INFORMATION

Part Number	Туре	Terminals	PCB Connection
90.160	KS4404/F	Fixed Screw	Machine Solder

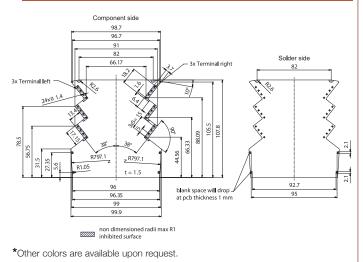
ACCESSORIES

Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



48 Terminal

Pluggable Terminals



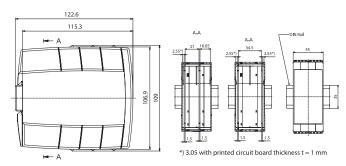
TECHNICAL INFORMATION

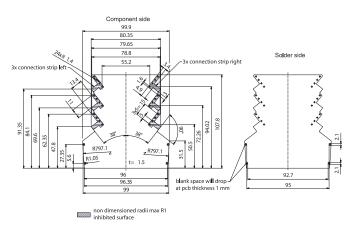
Electrical:	*Color:Black Housing
10A, 300V, 30-12AWG (Screw);	Gray Cover Plate
10A, 300V, 26-12AWG (Spring)	Terminal Type:
Materials:	Pluggable Screw /
Housing - PA-GF	Pluggable Spring
Front Plate - PBT	Terminal Screw Size: M2.5
Terminals - PA	Recommended Torque:
Temperature Range:	0.5Nm
Up to 120°C (248°F)	Max. PCB's:
Flammability Rating:	(2) Vertical
UL94 V-O	Mounting:
	35mm DIN Rail

ORDERING INFORMATION			
Part Number	Туре	Terminals	PCB Connection
90.161	KS4404/PS	Pluggable Screw	Machine Solder
90.162	KS4404/PC	Pluggable Spring	Machine Solder

ACCESSORIES Accessories Part Number Туре 1 Meter DIN Rail 2511120/1M TS35x7.5/1M Terminal Blanking Plug 90.190 KS4403-5-1 Light Pipes, 3mm Grid 90.191 KS4400-7-1 Light Pipes, 5mm Grid KS4400-6-1 90.192

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





72 Terminal

Fixed Terminals



TECHNICAL INFORMATION

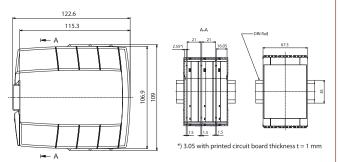
Electrical: 10A, 300V, 22-14AWG Materials: Housing - PA-GF Front Plate - PBT Terminals - PA Temperature Range: Up to 120°C (248°F) Flammability Rating: UL94 V-O *Color:Black Housing Gray Cover Plate Terminal Type: Fixed Screw Terminal Screw Size: M2.5 Recommended Torque: 0.5Nm Max. PCB's: (3) Vertical Mounting: 35mm DIN Rail

ORDERING INFORMATION

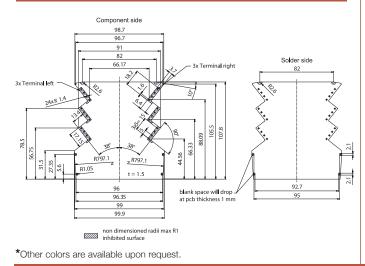
Part Number	Туре	Terminals	PCB Connection
90.170	KS4405/F	Fixed Screw	Machine Solder

ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



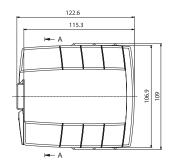
PCB DRAWING (To convert to inches divide by 25.4.)



Electrical: *Color:Black Housing 10A, 300V, 30-12AWG (Screw); Gray Cover Plate 10A, 300V, 26-12AWG (Spring) **Terminal Type:** Materials: Pluggable Screw / Housing - PA-GF **Pluggable Spring** Front Plate - PBT Terminal Screw Size: M2.5 Terminals - PA **Recommended Torque: Temperature Range:** 0.5Nm Up to 120°C (248°F) Max. PCB's: Flammability Rating: (3) Vertical UL94 V-O Mounting: 35mm DIN Rail **ORDERING INFORMATION** Part Number Туре Terminals **PCB** Connection 90.171 KS4405/PS Pluggable Screw Machine Solder 90.172 KS4405/PC Pluggable Spring Machine Solder ACCESSORIES

Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

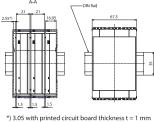
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



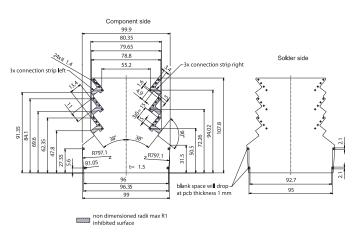
72 Terminal

Pluggable Terminals

TECHNICAL INFORMATION



PCB DRAWING (To convert to inches divide by 25.4.)



Altech

96 Terminal

Fixed Terminals



TECHNICAL INFORMATION

Electrical: 10A, 300V, 22-14AWG Materials: Housing - PA-GF Front Plate - PBT Terminals - PA Temperature Range: Up to 120°C (248°F) Flammability Rating: UL94 V-O *Color:Black Housing Gray Cover Plate Terminal Type: Fixed Screw Terminal Screw Size: M2.5 Recommended Torque: 0.5Nm Max. PCB's: (4) Vertical Mounting: 35mm DIN Rail

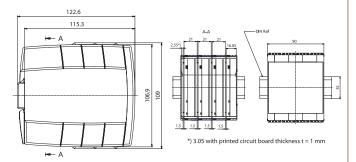
ORDERING INFORMATION

Part Number	Туре	Terminals	PCB Connection
90.180	KS4406/F	Fixed Screw	Machine Solder

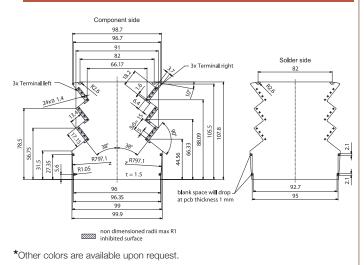
ACCESSORIES

Accessories	Part Number	Туре	
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M	
Terminal Blanking Plug	90.190	KS4403-5-1	
Light Pipes, 3mm Grid	90.191	KS4400-7-1	
Light Pipes, 5mm Grid	90.192	KS4400-6-1	

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



96 Terminal

Pluggable Terminals



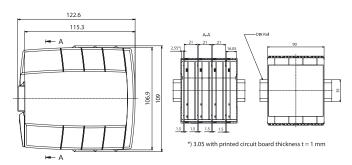
TECHNICAL INFORMATION

Electrical:	*Color:Black Housing
10A, 300V, 30-12AWG (Screw);	Gray Cover Plate
10A, 300V, 26-12AWG (Spring)	Terminal Type:
Materials:	Pluggable Screw /
Housing - PA-GF	Pluggable Spring
Front Plate - PBT	Terminal Screw Size: M2.5
Terminals - PA	Recommended Torque:
Temperature Range:	0.5Nm
Up to 120°C (248°F)	Max. PCB's:
Flammability Rating:	(4) Vertical
UL94 V-O	Mounting:
	35mm DIN Rail

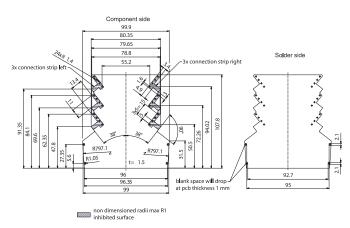
ORDERING INFORMATION				
Part Number	Туре	Terminals	PCB Connection	
90.181	KS4406/PS	Pluggable Screw	Machine Solder	
90.182	KS4406/PC	Pluggable Spring	Machine Solder	
ACCESSORIES				

Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Blanking Plug	90.190	KS4403-5-1
Light Pipes, 3mm Grid	90.191	KS4400-7-1
Light Pipes, 5mm Grid	90.192	KS4400-6-1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)





Ideal for industrial applications. Small to large in size, KO4700 enclosures can accommodate 8 to132 terminals for field wire connections. Series KO4700 enclosures can be customized to the exact number of terminals required. Standard enclosures are equipped with the maximum number of terminal strips and terminals. The KO4700 series are available with two types of terminations for connecting external wires. The Pressure Plate type terminals, with a center line spacing of 9mm (.35 in.) and the Box Clamp design, which has a 5mm (.19 in.) center line spacing for much higher density.

MATERIALS

Housing

Housing Shell: Polycarbonate, 10% Glass Filled Cover: Polycarbonate, 10% Glass Filled Cover Panel: Clear Polycarbonate or Glass Filled Polycarbonate

Terminals

Pressure Plate: Zinc Plated, Chromated Steel Terminal Screw: Zinc Plated, Chromated Steel Clamp: Nickel Plated Brass Busbar: Tin Plated Bronze Connector Contact: Beryllium Copper, Tin Plated (gold plating available)

Temperature Rating:

125°C (257°F), UL94VO Housing Shell Color: Black Terminal Cover Color: Tan

PROTECTION

KO4700 enclosures have an IP20 rating (finger protected) and meet VBG4 and other European accident prevention requirements.

CONSTRUCTION

The KO4700 enclosure series consists of a black housing shell and a tan cover with integral terminals and terminal-to-board connections. They are supplied unassembled. The housing shell has molded printed circuit board guides to save time when inserting printed circuit boards, prevent misconnections and to keep the boards from moving. Integral tabs on the bottom of the shell further help to hold boards in place, eliminating lateral movement. KO4700 housing shells can be potted.

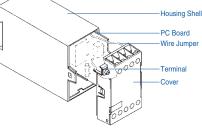


Printed circuit boards can be mounted in three ways:

- Behind the Front Cover
- Horizontally
- Vertically

Depending on the enclosure type, one board can be mounted directly behind the front cover (parallel to the DIN rail).Boards can also be mounted horizontally (parallel to the DIN rail) or vertically (perpendicular to the DIN rail). (Refer to the Ordering Pages for board patterns and location of board guides.)

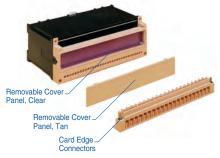
The housing cover snaps onto the housing (shell. Two keyed tabs lock the cover firmly in place. Removal of the cover is possible for service and repair.



COVER DESIGNS

Single piece, tan color covers are typically used with the smaller enclosures. They incorporate terminals and connections to the inside of the enclosure. In some of the smaller enclosures, the cover doubles as a plug. A printed circuit board can be mounted directly behind the front cover. This board is ideal for mounting

components used for setting, adjusting and monitoring such as switches, potentiometer, LEDs and LCDs. There is no interferance with any other boards mounted within the enclosure.



Modular covers consist

of a one-piece tan frame with matching flat front panel. Some versions have a front cover panel that is removable and offered in matching tan or clear. The front covers can be custom imprinted or marking plates can be produced and installed behind the transparent front cover panel.

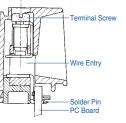
TERMINAL DESIGNS

Select from Pressure Plate or Box Clamp terminals with wire protectors, and fixed or pluggable terminal-to-board connections. (Please refer to the Ordering Pages). Removable fixed or pluggable terminal strips can be replaced by terminal plugs if not all of the external connections of the standard enclosure are needed. The terminal screws used with both the pressure plate and box clamp designs can be operated with a flat tip or a #1 or #2 Philips type screwdriver.



Pressure Plate Termination

This type of terminal consists of a pressure plate (captive to the terminal screw) and the terminal bottom. The pressure plate rises automatically when the screw is loosened. One or two wires, of equal or different sizes up to 2.5mm² (14 AWG) can be terminated.



The grooved corners of the pressure plate ensure positive retention of wire(s). The flat bottom of the terminal extends to the inside of the enclosure and connects the terminal to the board(s) inside.

Box Clamp Termination

The box clamp terminal accepts wires up to 4mm² (12 AWG). When the terminal screw is tightened, the serrated bottom of the wire protector pushes the wire to be terminated against the serrated busbar. The busbar extends to the inside of the enclosure to provide the terminal-to-board connection.

TERMINAL-TO-BOARD CONNECTIONS

The KO4700 Series offers fixed and pluggable terminal-to-board connection possibilities. (Please refer to the Ordering Pages on the following pages for your selection.)

Fixed Connections

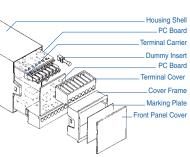
Fixed terminal-to-board connections can be made by Wire Jumper, Fast On tabs, Solder tabs, or Machine Solderable Pins.

Fast On tabs, 2.8mm (.11in.) accept industry standard Fast On connectors. Use

with wire jumpers to connect to board(s).

Wire Jumper

connections can also be made by soldering a wire jumper between the center hole of the



Fast On tab and the printed circuit board(s).

Solder Tab can be hand soldered to the board.

Machine Solderable Pins can be machine soldered to the board in the same step as the other components, saving assembly time. The metal parts of the terminals are supplied as separate strips which snap into the terminal housing after soldering.

Pluggable Connections

The pluggable terminal strips of the KO4700 series fit across the width of the enclosure and plug directly into the board(s) by using a Card Edge connector. Enclosures equipped with pressure plate terminals also provide Solder Tabs for terminal-to-board connections when mounting an additional board directly behind the front cover. A Wire Jumper can be soldered to these tabs as well.

For better retention, the strips have captive screws at each end

that insert into brass bushings, molded into the housing shell. The pluggable versions are ideal whenever quick connections and replacement of boards and devices is important. They also reduce the danger of misconnected wires and downtime.

MOUNTING

The KO4700 Series enclosures are designed to be mounted on standard 35 x 7.5mm DIN rail but will also fit on the 35 x15mm DIN rail. The extra high enclosures should be mounted on the deeper, 35×15 mm DIN rail. (Refer to the Ordering Pages on the following pages to determine the correct size rail for the enclosure you select.)

KO4700 series enclosures can also be panel mounted using pullout tabs on the base of the

enclosure. One tab is factory installed on each enclosure. Up to a total of 6 pull-out mounting tabs can be installed (See Accessories) (Refer to page 49 for mounting instructions.)



MARKING

KO4700 enclosures have a flat center area on the cover for marking and mounting of components. Several types have removable front cover panels, which can be marked at a separate location. Imprinted marking plates can be used in conjunction with the transparent, removable cover panel.

ACCESSORIES

- Terminal Cover Strips
- Pull-Out Panel Mounting Tabs
- · Screws for Mounting Printed Circuit Board
- 35 x 7.5mm DIN Rail
- 35 x 15mm DIN Rail

CUSTOMIZATION

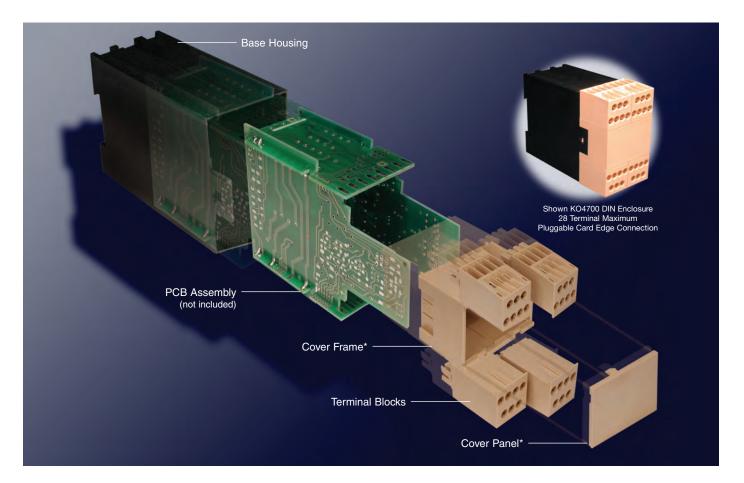
Enclosures can be customized to the exact number of terminals needed. We can punch, drill or cut custom cutouts and holes for potentiometers, switches, LEDs or LDCs. Custom colors and special markings are also available. Please call us for further information.



MODULAR ENCLOSURES (pages 32-39)

A group of modular enclosures is available in the KO4700 series. These enclosures can be ordered in a variety of terminal arrangements allowing for many different customized configurations. Terminal sets are available in 3, 4 and 7 pole blocks as well as blank blocks without terminals. High Current terminals are also available on some models. This modular terminal design allows anywhere from 0 to 56 terminals for field wire connections.

The KO4700 modular enclosures have the same design features of the standard series as well as the same materials. The terminals are of the box clamp style. The standard terminals feature pluggable connections while solder connections are used on the high current terminals. Printed circuit board placement is horizontal (parallel to the DIN rail) or vertical (perpendicular to the DIN rail).



Ordering Information

The modular enclosures are ordered in separate pieces. A complete enclosure consists of a base, cover frame^{*}, cover panel^{*} and the appropriate number of terminal blocks. Standard terminal blocks can be ordered as blank blocks with no termination points or with 3, 4, or 7 terminations. High current terminal blocks are available on some models. Theses blocks can also be ordered as blank blocks with no terminations or with 3 terminations. (Please refer to the Ordering Pages on the following pages for a list of how many blocks should be ordered per enclosure).

 * High current versions have one piece center cover section instead of this two piece design.

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8 Terminal Solder Connection



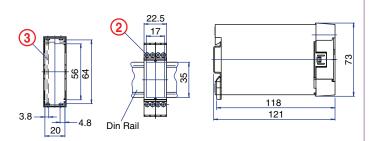
TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O (V-2 Clear Panel) Color: Black Housing with Tan Cover Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (2) Vertical (1) Behind cover Mounting: 35mm DIN Rail or optional panel mounting*

ORDERING INFORMATION

Part Number	Туре	Description	PCB Connection	
90.201	KO4712	Solid Cover	Machine	
			Solderable Pins	
90.201.1	KO4712	Removable Cover	Machine	
		Panel, Tan	Solderable Pins	
90.201.2	KO4712	Removable Cover	Machine	
		Panel, Clear	Solderable Pins	
40050000150				
ACCESSOR	ACCESSORIES			
Accessories	S	Part Number	Туре	
1 Meter DIN Rail		2511120/1M	TS35x7.5/1M	
*Panel Mount Tab		93.001.2	PMA	

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)

65.4 (2) (3) 67 34.8 4.5 Ø1 35 16.2 5.4 19.4 1.5 thick 55.6 ŝ 107 85 87 1.5 thick winused space

8 Terminal Solder/Tab Connection



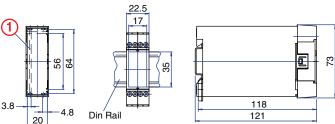
TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O (V-2 Clear Panel) Color: Black Housing with Tan Cover Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (2) Vertical Mounting: 35mm DIN Rail or optional panel mounting*

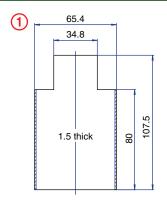
ORDERING INFORMATION

Part Number	Туре	Description	PCB Connection
90.202	KO4712B	Solid Cover	Wire
			Jumper
90.202.1	KO4712B	Removable Cover	Wire
		Panel, Tan	Jumper
90.202.2	KO4712B	Removable Cover	Wire
		Panel, Clear	Jumper
ACCESSORIES			
Accesso	ries	Part Number	Туре
1 Meter DIN Rail		2511120/1M	TS35x7.5/1M
*Panel Mount Tab		93.001.2	PMA

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



white a state stat

10 Terminal Spring Clamp Solder/Tab Connection	10 Terminal Solder/Tab Connection
TECHNICAL INFORMATION	TECHNICAL INFORMATION
Electrical:Terminal Type:16A, 300V, 24-14 AWGSpring Cage ClampHousing Material:Terminal Screw Size:Glass-filled Polycarbonate-Cover Material:Recommended Torque:Glass-filled Polycarbonate-Glass-filled Polycarbonate-Temperature Range:Max. PCB's:Up to 125°C (257°F)(2) VerticalFlammability Rating:Mounting:UL94 V-O35mm DIN RailColor:Black Housing with Tan Cover	Electrical:Terminal Type:25A, 300V, 22-14 AWGScrew / Pressure PlateHousing Material:Screw / Pressure PlateGlass-filled PolycarbonateM3.5Cover Material:Recommended Torque:Glass-filled Polycarbonate0.8NmTemperature Range:0.8NmUp to 125°C (257°F)(2) VerticalFlammability Rating:Mounting:UL94 V-O35mm DIN RailColor:Black Housing with Tan Cover
ORDERING INFORMATION	ORDERING INFORMATION
Part Number Type Description PCB Connection 90.215 KO4761 Solid Cover Wire Jumper/ Fast On	Part Number Type Description PCB Connection 90.230 KO4762 Solid Cover Wire Jumper/ Fast On
ACCESSORIES Accessories Part Number Type	ACCESSORIES Accessories Part Number Type
1 Meter DIN Rail 2511120/1M TS35x7.5/1M	1 Meter DIN Rail 2511120/1M TS35x7.5/1M
45	$\begin{array}{c} 8.7 \\ \hline \\ $
PCB DRAWING (To convert to inches divide by 25.4.)	PCB DRAWING (To convert to inches divide by 25.4.)
1.5 thick	1.5 thick

wnused space

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63

65.4

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63

65.4

16 Terminal

Solder

Connection

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1

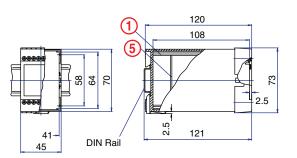
TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O (V-2 clear panel) Color: Black Housing with Tan Cover Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (2) Vertical (1) Horizontal Mounting: 35mm DIN Rail

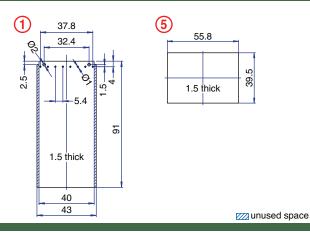
ORDERING INFORMATION

Part Number	Туре	Description	PCB Connection
90.290	KO4763A	Solid Cover	Machine
			Solderable Pins
90.291	KO4763A	Removable Cover	Machine
		Panel, Tan	Solderable Pins
90.292	KO4763A	Removable Cover	Machine
		Panel, Clear	Solderable Pins
ACCESSOF	RIES		
Accessorie	S	Part Number	Туре
1 Meter DIN F	Rail	2511120/1M	TS35x7.5/1M

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



16 Terminal Solder/Tab

Connection



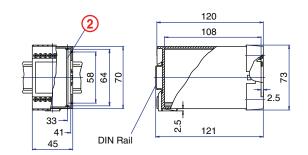
TECHNICAL INFORMATION

Electrical:
16A, 300V, 22-12 AWG
Housing Material:
Glass-filled Polycarbonate
Cover Material:
Glass-filled Polycarbonate
Temperature Range:
Up to 125°C (257°F)
Flammability Rating:
UL94 V-O (V-2 clear panel)
Color:
Black Housing with Tan Cover

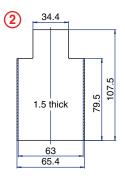
Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (2) Vertical Mounting: 35mm DIN Rail

ORDERING INFORMATION Part Number Description **PCB** Connection Type 90.300 KO4763B Solid Cover Wire Jumper 90.301 KO4763B Removable Cover Wire Panel, Tan Jumper 90.302 KO4763B **Removable Cover** Wire Panel, Clear Jumper ACCESSORIES Accessories Part Number Туре 1 Meter DIN Rail 2511120/1M **FS35x7.5/1M**

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



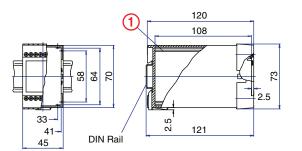
PCB DRAWING (To convert to inches divide by 25.4.)



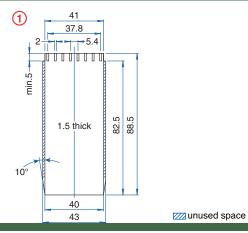
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Pluggat Connec	tion			20 Teri Pluggable Connectio	e on		-	
Electrical: 10A, 300' Housing M Glass-fille Cover Ma Glass-fille Temperate Up to 125 Flammabi UL94 V-C Color:	V, 22-12 AWG Material: ed Polycarbon	Termina Box Cla Box Cla Termina M3.5 Recomm ate 0.8Nm Max. PC (2) Vert (1) Hori anel) Mountin 35mm I	I Screw Size: nended Torque: B's: ical zontal	Housing M Glass-filled Cover Mate Glass-filled Temperatu Up to 125° Flammabili UL94 V-O Color:	22-14 AWG aterial: I Polycarbon erial: I Polycarbon re Range: C (257°F)	ate F ate M nel)	Terminal Screw / Terminal M3.5 Recomm 0.8Nm Max. PCI (5) Vertic (1) Horiz Mounting 35mm D optional	Pressure Screw hended B's: cal zontal be g: DIN Rail o
ORDERIN		ATION		ORDERING		ATION		
Part Numb 90.320	er Type KO4763P	Description Solid Cover	PCB Connection Card Edge	Part Numbe 90.350	r Type KO4718P	Descri Solid C		PCB C Car Wire
90.321	KO4763P	Removable Cover Panel, Tan	Card Edge	90.351	KO4718P	Removabl Panel,	Tan	Car Wire
90.322	KO4763P	Removable Cover Panel, Clear	Card Edge	90.352	KO4718P	Removabl Panel, (Car Wire
ACCESSO	DRIES			ACCESSO	RIES			
Accessor		Part Number	Type	Accesso 1 Meter D		251112		TS3
1 Meter DIN	N Rall	2511120/1M	TS35x7.5/1M	i Wieter D		251112		153

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



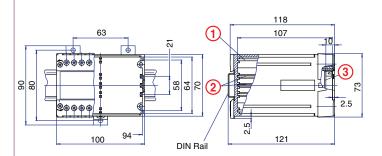


sure Plate ew Size: ed Torque: behind cover ail or

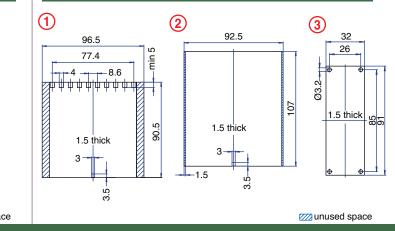
el mounting*

Part Number	Туре	Description	PCB Connection
90.350	KO4718P	Solid Cover	Card Edge/
			Wire Jumper
90.351	KO4718P	Removable Cover	Card Edge/
		Panel, Tan	Wire Jumper
90.352	KO4718P	Removable Cover	Card Edge/
		Panel, Clear	Wire Jumper
ACCESSOF	RIES		
Accesso	ories	Part Number	Туре
1 Meter DI	N Rail	2511120/1M	TS35x7.5/1M
*Panel Mount	Tab (need 2)	93.001.2	PMA

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)





22 Terminal Solder Connection



TECHNICAL INFORMATION

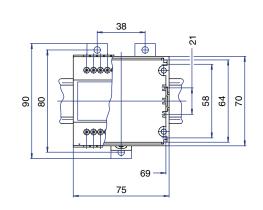
Electrical: 16A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O (V-2 Clear Panel) Color: Black Housing with Tan Cover Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (5) Vertical (1) Behind cover Mounting: 35mm DIN Rail or optional panel mounting*

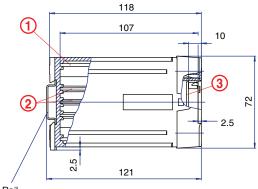
ORDERING INFORMATION

ONDENING				
Part Number	Туре	Description	PCB Connection	
90.380	KO4713A	Solid Cover	Machine	
			Solderable Pins	
90.381	KO4713A	Removable Cover	Machine	
		Panel, Tan	Solderable Pins	
90.382	KO4713A	Removable Cover	Machine	
		Panel, Clear	Solderable Pins	

ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
*Panel Mount Tab (need 2)	93.001.2	PMA

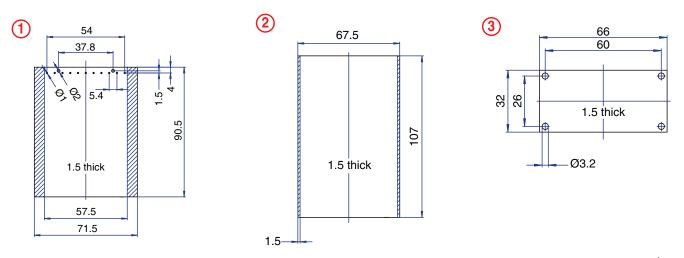
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





DIN Rail

PCB DRAWING (To convert to inches divide by 25.4.)



winused space

22 Terminal Pluggable Connection

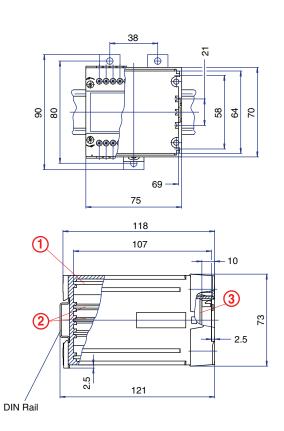


TECHNICAL INFORMATION

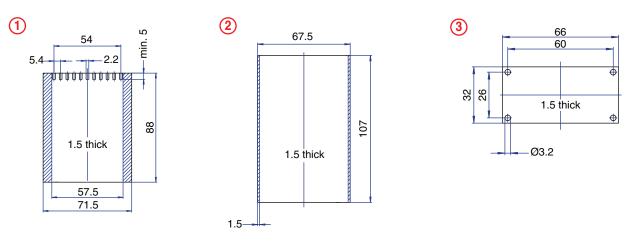
Electrical:	Terminal Type:
10A, 300V, 22-12 AWG	Box Clamp
Housing Material:	Terminal Screw Size:
Glass-filled Polycarbonate	M3.5
Cover Material:	Recommended Torque:
Glass-filled Polycarbonate	0.8Nm
Temperature Range:	Max. PCB's:
Up to 125°C (257°F)	(5) Vertical
Flammability Rating:	(1) Behind cover
UL94 V-O (V-2 clear panel)	Mounting:
Color:	35mm DIN Rail or
Black Housing with Tan Cover	optional panel mounting*
ORDERING INFORMATION	

Part Number Type	Description	PCB Connection
90.410 KO4713P	Solid Cover	Card Edge
90.411 KO4713P	Removable Cover Panel, Tan	Card Edge
90.412 KO4713P	Removable Cover Panel, Clear	Card Edge
ACCESSORIES		
Accessories	Part Number	Type
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
*Panel Mount Tab (need 2)	93.001.2	PMA

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



winused space



30 Terminal Solder Connection



TECHNICAL INFORMATION

Electrical:
16A, 300V, 22-12 AWG
Housing Material:
Glass-filled Polycarbonate
Cover Material:
Glass-filled Polycarbonate
Temperature Range:
Up to 125°C (257°F)
Flammability Rating:
UL94 V-O (V-2 clear panel)
Color:
Black Housing with Tan Cover
ORDERING INFORMATION

Туре

KO4717A

KO4717A

KO4717A

Description

Solid Cover

Removable Cover

Panel, Tan

Removable Cover

Panel, Clear

Part Number

2511120/1M

93.001.2

Part Number

90.440

90.441

90.442

ACCESSORIES

Accessories

1 Meter DIN Rail

*Panel Mount Tab (need 2)

Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (5) Vertical (1) Behind Cover Mounting: 35mm DIN Rail or optional panel mounting*

PCB Connection

Machine

Solderable Pins

Machine

Solderable Pins

Machine

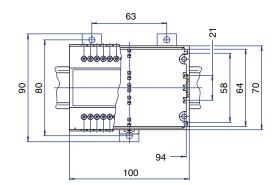
Solderable Pins

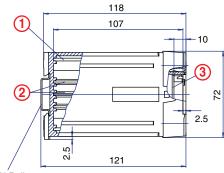
Туре

PMA

35x7.5/1M

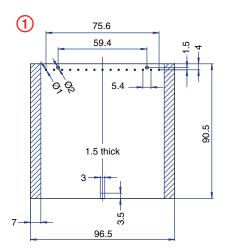
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)

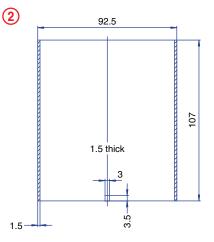


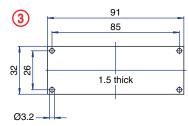


DIN Rail

PCB DRAWING (To convert to inches divide by 25.4.)







would be a constrained space

30 Terminal

Pluggable Connection

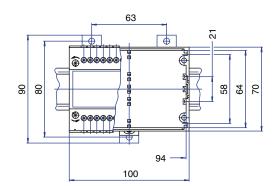


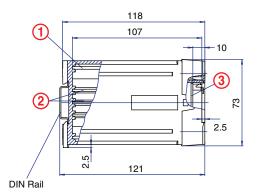
TECHNICAL INFORMATION

Electrical:		Terminal	Туре:
10A, 300V,	22-12 AWG	Box Cla	mp
Housing Ma	aterial:	Terminal	Screw Size:
Glass-filled	Polycarbona	ate M3.5	
Cover Mate	erial:	Recomm	nended Torque:
Glass-filled	Polycarbona	ate 0.8Nm	
Temperatu	re Range:	Max. PC	B's:
Up to 125°	C (257°F)	(5) Verti	cal
Flammabili	ty Rating:	(1) Behi	nd Cover
UL94 V-O (V-2 clear pa	nel) Mountin	g:
Color:		35mm E	DIN Rail or
Black Hous	sing with Tan	Cover optional	panel mounting*
ORDERING		ATION	
Part Number	r Type	Description	PCB Connection
90.470	KO4717P	Solid Cover	Card Edge
90.471	KO4717P	Removable Cover Panel, Tan	Card Edge
90.472	KO4717P	Removable Cover Panel, Clear	Card Edge
ACCESSOR	RIES		

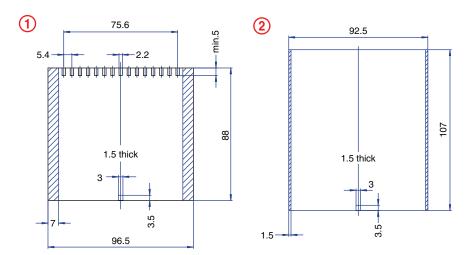
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
*Panel Mount Tab (need 2)	93.001.2	PMA

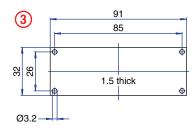
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





PCB DRAWING (To convert to inches divide by 25.4.)





winused space





Pluggable and **Solder Connection**

32 Terminal

TECHNICAL INFORMATION

Electrical:	T
10A, 300V, 22-14 AWG	
Housing Material:	Т
Glass-filled Polycarbonate	
Cover Material:	R
Glass-filled Polycarbonate	
Temperature Range:	N
Up to 125°C (257°F)	
Flammability Rating:	
UL94 V-O (V-2 clear panel)	
Color:	N
Black Housing with Tan Cover	

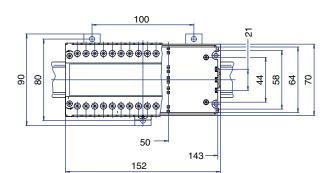
Ferminal Type: Screw/ Pressure Plate **Ferminal Screw Size:** M3.5 Recommended Torque: 0.8Nm Max. PCB's: (5) Vertical (1) Behind cover (1) Base Mount Mounting:

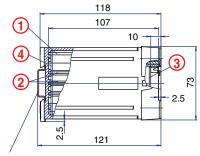
35mm DIN Rail or optional panel mounting*

ORDERING INFORMATION

Part Number	Туре	Description	PCB Connection
90.500	KO4719P	Solid Cover	Card Edge/
			Wire Jumper
90.501	KO4719P	Removable Cover	Card Edge/
		Panel, Tan	Wire Jumper
90.502	KO4719P	Removable Cover	Card Edge/
		Panel, Clear	Wire Jumper
ACCESSOF	RIES		
Accessorie	S	Part Number	Туре
1 Meter DIN F	Rail	2511120/1M	TS35x7.5/1M
*Panel Mount	Tab (need 3)	93.001.2	PMA

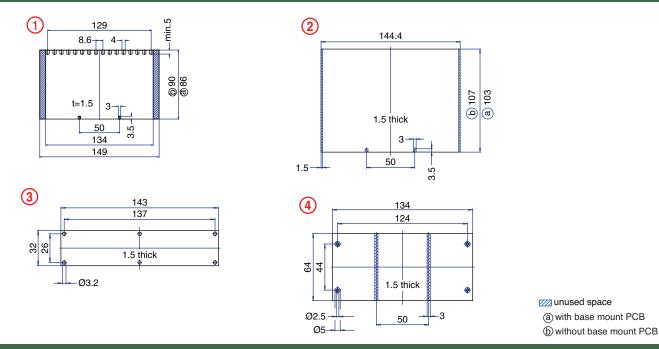
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





DIN Rail

PCB DRAWING (To convert to inches divide by 25.4.)



42 Terminal Pluggable and Solder Connection

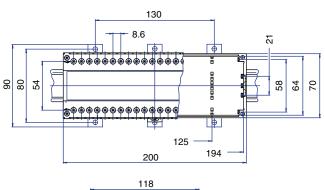


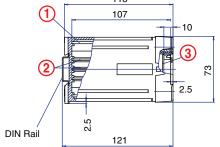
TECHNICAL INFORMATION

Electrical:	Terminal Type:
10A, 300V, 22-14 AWG	Screw/ Pressure Plate
Housing Material:	Terminal Screw Size:
Glass-filled Polycarbonate	M3.5
Cover Material:	Recommended Torque:
Glass-filled Polycarbonate	0.8Nm
Temperature Range:	Max. PCB's:
Up to 125°C (257°F)	(5) Vertical
Flammability Rating:	(1) Behind cover
UL94 V-O (V-2 clear pane) Mounting:
Color:	35mm DIN Rail or
Black Housing with Tan Co	over optional panel mounting*
ORDERING INFORMATI	ON
Part Number Type	Description PCB Connection
90.530 KO4720P	Solid Cover Card Edge/

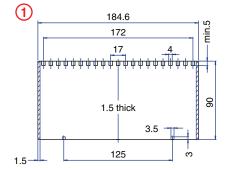
Part Number	Туре	Description	PCB Connection
90.530	KO4720P	Solid Cover	Card Edge/
			Wire Jumper
90.531	KO4720P	Removable Cover	Card Edge/
		Panel, Tan	Wire Jumper
90.532	KO4720P	Removable Cover	Card Edge/
		Panel, Clear	Wire Jumper
ACCESSOR	IES		
Accesso	ries	Part Number	Туре
1 Meter DI	N Rail	2511120/1M	TS35x7.5/1M
*Panel Mount T	ab (need 3)	93.001.2	PMA

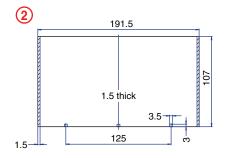
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)

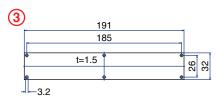




PCB DRAWING (To convert to inches divide by 25.4.)







white states and space



42 Terminal

Pluggable and Solder Connection

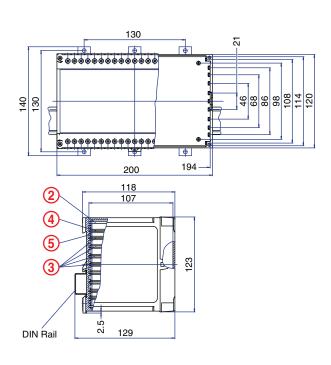


TECHNICAL INFORMATION

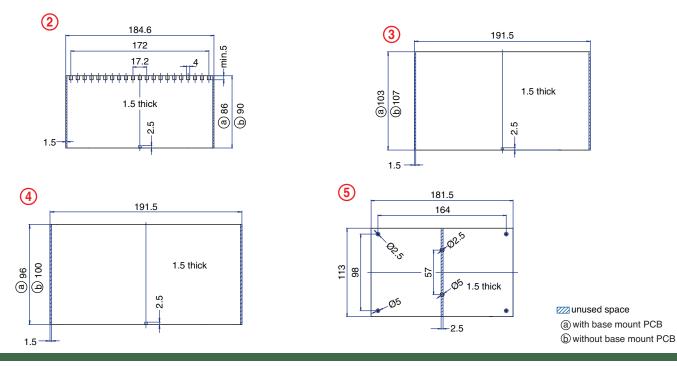
Electrical:	Terminal Type:	
10A, 300V, 22-14 AWG	Screw/ Pressure Plate	
Housing Material:	Terminal Screw Size:	
Glass-filled Polycarbonate	M3.5	
Cover Material:	Recommended Torque:	
Glass-filled Polycarbonate	0.8Nm	
Temperature Range:	Max. PCB's:	
Up to 125°C (257°F)	(11) Vertical	
Flammability Rating:	(1) Base Mount	
UL94 V-O	Mounting:	
Color:	35mm DIN Rail or	
Black Housing with Tan Cover	optional panel mounting*	
ORDERING INFORMATION		
Part Number Type Desc	ription PCB Connection	
90.560 KO4722SP Solid	Cover Card Edge/ Wire Jumper	

ACCESSORIES			
Accessories	Part Number	Туре	
1 Meter DIN Rail	CA701/15-S	TS35x15/1M	
*Panel Mount Tab (need 3)	93.001.2	PMA	

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



50 Terminal

Solder Connection



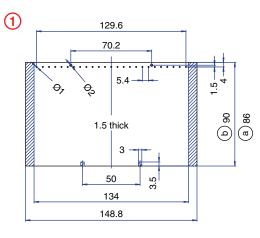
TECHNICAL INFORMATION

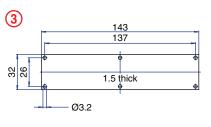
Electrical: 16A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O (V-2 Clear Panel) Color: Black Housing with Tan Cover Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (5) Vertical (1) Behind Cover (1) Base Mount Mounting: 35mm DIN Rail or optional panel mounting*

ORDERING INFORMATION

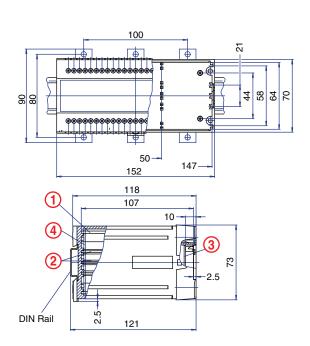
Part Number	Туре	Description	PCB Connection
90.590	KO4716A	Solid Cover	Machine
			Solderable Pins
90.591	KO4716A	Removable Cover	Machine
		Panel, Tan	Solderable Pins
90.592	KO4716A	Removable Cover	Machine
		Panel, Clear	Solderable Pins
ACCESSOR	IES		
Accesso	ries	Part Number	Туре
1 Meter DI	N Rail	2511120/1M	TS35x7.5/1M
*Panel Mount T	ab (need 3)	93.001.2	PMA

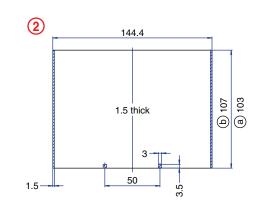
PCB DRAWING (To convert to inches divide by 25.4.)

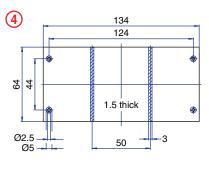




ENCLOSURE DRAWING (To convert to inches divide by 25.4.)







a) with base mount PCB
b) without base mount PCB



50 Terminal

Pluggable Connection



TECHNICAL INFORMATION

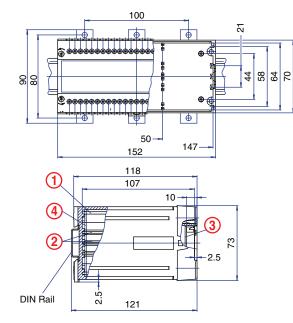
Electrical: 10A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O (V-2 Clear Panel) Color: Black Housing with Tan Cover Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (5) Vertical (1) Behind cover (1) Base Mount Mounting:

35mm DIN Rail or optional panel mounting*

ORDERING INFORMATION

Part Number	Туре	Description	PCB Connection
90.620	KO4716P	Solid Cover	Card Edge
90.621	KO4716P	Removable Cover Panel, Tan	Card Edge
90.622	KO4716P	Removable Cover Panel, Clear	Card Edge
ACCESSOR	IES		
Accesso	ries	Part Number	Туре
1 Meter DI	N Rail	2511120/1M	TS35x7.5/1M
*Panel Mount T	ab (need 3)	93.001.2	PMA

PCB DRAWING (To convert to inches divide by 25.4.)



3

50

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)

ŝ (1) min. 2 129.6 144.4 5.4 - 2.2 88 (b) 107 (a) 103 84 1.5 thick (n) ٩ 1.5 thick 3 3 50 3.5 50 1.5 3.5-134 148.8 4 134 124 (3) 143 137 64 44 32 26 1.5 thick 1.5 thick 6 Ø3.2

a) with base mount PCB
b) without base mount PCB

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Ø2.5

66 Terminal

Connection



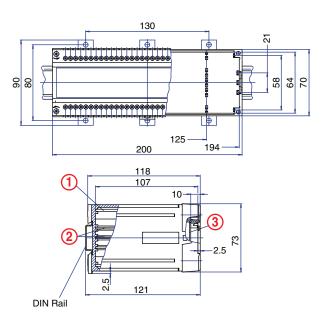
TECHNICAL INFORMATION

Electrical: 10A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O (V-2 Clear Panel) Color: Black Housing with Tan Cover ORDERING INFORMATION Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (5) Vertical (1) Behind cover Mounting: 35mm DIN Rail or

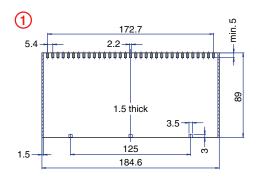
optional panel mounting*

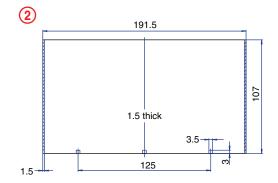
Description **PCB** Connection Part Number Туре 90.680 KO4721P Solid Cover Card Edge 90.681 KO4721P **Removable Cover** Card Edge Panel, Tan **Removable Cover** 90.682 KO4721P Card Edge Panel, Clear ACCESSORIES Part Number Accessories Туре 1 Meter DIN Rail 2511120/1M TS35x7.5/1M *Panel Mount Tab (need 3) 93.001.2 PMA

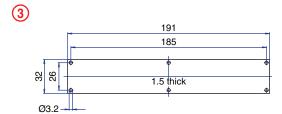
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)







winused space



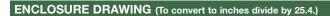
66 Terminal Pluggable Connection

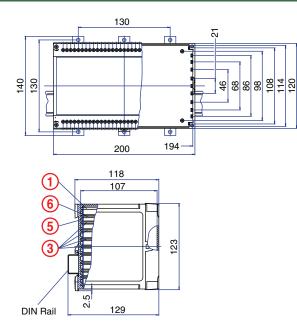


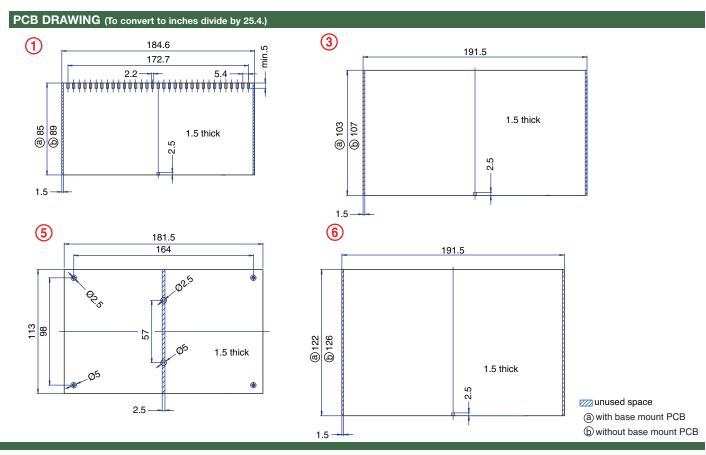
TECHNICAL INFORMATION

Electrical:	Termina	
10A, 300V, 22-12 AWG		
	Box Cl	
Housing Material:		al Screw Size:
Glass-filled Polycarbonate	e M3.5	
Cover Material:	Recom	mended Torque:
Glass-filled Polycarbonate	e 0.8Nm	l
Temperature Range:	Max. P	CB's:
Up to 125°C (257°F)	(11) Ve	ertical
Flammability Rating:	(1) Bas	se Mount
UL94 V-O	Mounti	ng:
Color:	35mm	DIN Rail or
Black Housing with Tan C	over optiona	al panel mounting*
ORDERING INFORMAT	ION	
Part Number Type	Description	PCB Connection
90.710 KO4723SP	Solid Cover	Card Edge
ACCESSORIES		
Accessories	Part Number	Туре

Accessories Part Number 1 Meter DIN Rail 2511120/1M *Panel Mount Tab (need 3) 93.001.2







35x7.5/1M

PMA

TS

84 Terminal Pluggable and

Solder Connection

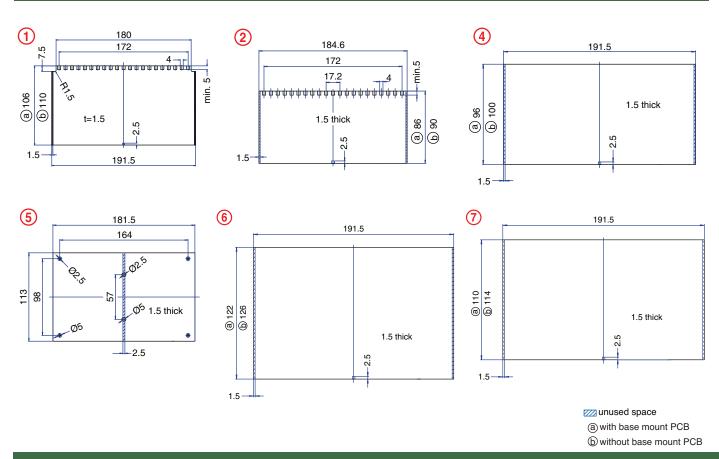


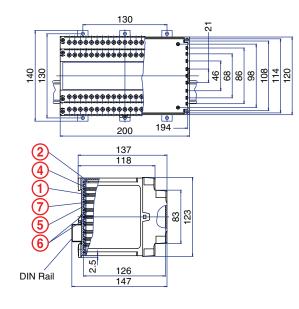
TECHNICAL INFORMATION

Electrical:	Terminal Type:
10A, 300V, 22-14 AWG	Screw / Pressure Plate
Housing Material:	Terminal Screw Size:
Glass-filled Polycarbonate	e M3.5
Cover Material:	Recommended Torque:
Glass-filled Polycarbonate	e 0.8Nm
Temperature Range:	Max. PCB's:
Up to 125°C (257°F)	(11) Vertical
Flammability Rating:	(1) Base Mount
UL94 V-O	Mounting:
Color:	35mm DIN Rail or
Black Housing with Tan C	over optional panel mounting*
ORDERING INFORMAT	ION
Part Number Type	Description PCB Connection
90.740 KO4722DP	Solid Cover Card Edge/ Wire lumper

00.7 10			Wire Jumper	
ACCESSO	RIES			
Access	ories	Part Number	Туре	
Access 1 Meter E		Part Number CA701/15-S	Type TS35x15/1M	

PCB DRAWING (To convert to inches divide by 25.4.)





132 Terminal

Pluggable Connection



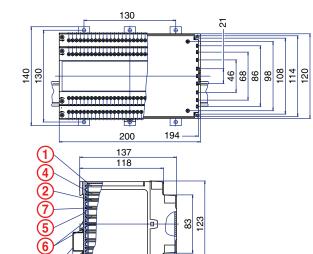
TECHNICAL INFORMATION

Electrical:	Terminal Type:
10A, 300V, 22-12 AWG	Box Clamp
Housing Material:	Terminal Screw
Glass-filled Polycarbonate	M3.5
Cover Material:	Recommended
Glass-filled Polycarbonate	0.8Nm
Temperature Range:	Max. PCB's:
Up to 125°C (257°F)	(11) Vertical
Flammability Rating:	(1) Base Mount
UL94 V-O	Mounting:
Color:	35mm DIN Rail
Black Housing with Tan Co	ver optional panel n
ORDERING INFORMATIO	ИС
Part Number Type	Description PCB C

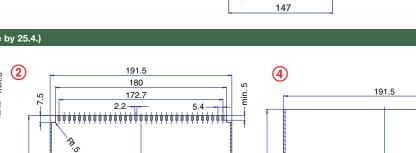
rew Size: ded Torque: ount Rail or el mounting*

0

Part Number Type 90.770 KO4723DP	Description Solid Cover	PCB Connection Card Edge
ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	CA701/15-S	TS35x15/1M
*Panel Mount Tab (need 3)	93.001.2	PMA



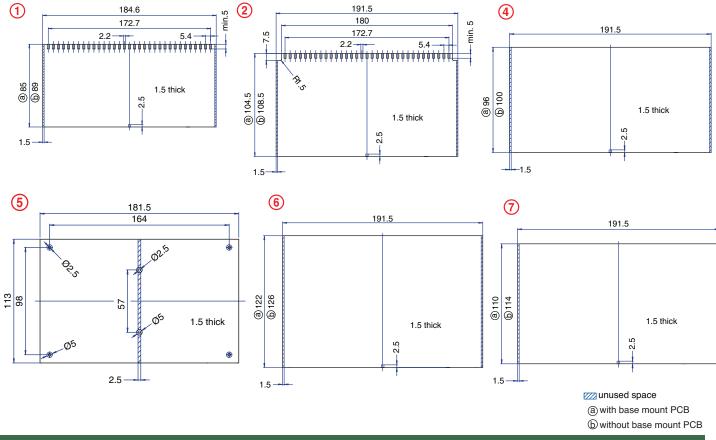
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



DIN Rail

2.5

126



K04700 Series - Modular

6 Terminal with 6 High Current Terminals Solder Connection



TECHNICAL INFORMATION

Electrical: 40A, 300V, 18-8 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Black Housing with Tan Cover Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (2) Vertical (2) Horizontal Mounting: 35mm DIN Rail or optional panel mounting*

ORDERING INFORMATION

 Part Number
 Type

 90.815
 KO4734

Description Removable High Current Wire Jumper Terminals

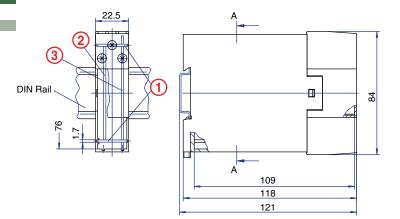
Туре

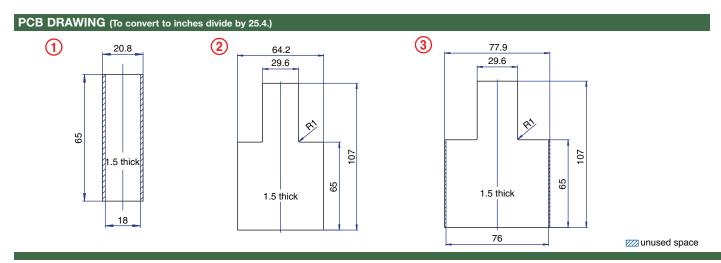
PMA

35x7.5/1M

ACCESSORIES Accessories Part Number 1 Meter DIN Rail 2511120/1M T3 *Panel Mount Tab 93.001.2

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





14 Terminal Maximum **Pluggable Card Edge** Connection



TECHNICAL INFORMATION

Electrical:

see chart for Amperages, 300V, 22-12 AWG **Housing Material:** Glass-filled Polycarbonate **Cover Material:** Glass-filled Polycarbonate **Temperature Range:** Up to 125°C (257°F) **Flammability Rating:** UL94 V-O (V-2 Clear Panel) Color: Black Housing with Tan Cover

Box clamp Terminal Screw Size: M3.5 **Recommended Torque:** 0.8Nm Max. PCB's: (2) Vertical (2) Horizontal Mounting:

Terminal Type:

35mm DIN Rail or optional panel mounting*

COMPLETE ENCLOSURE CONSISTS OF

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)

- (1) Base Housing
- (1) Cover Frame
- (1) Cover Panel

A-A 15.8

14.8

1.8

2.8

14.8

69.5

2

2b

DIN Ra

Inner Surface

Outer Surface

(2) Terminal or blanking blocks

Part Number	Туре	Description	
90.810	KO4730H	Base Housing	
90.810.1	KO4730F	Cover Frame	
90.810.2	KO4730P	Cover Panel, Tan	
90.810.3	KO4730P-C	Cover Panel, Clear	
90.810.4	KO4730P/S	Cover Panel with terminal	
		release slots, Tan	
90.810.5	KO4730P-C/S	Cover Panel with terminal	
		release slots, Clear	
90.803	KO473xT/3	Terminal Block, 3 terminals	
90.804	KO473xT/4	Terminal Block, 4 terminals	
90.807	KO473xT/7	Terminal Block, 7 terminals	
90.800	KO473xT/B	Blanking Block, 0 terminals	

ACCESSORIES

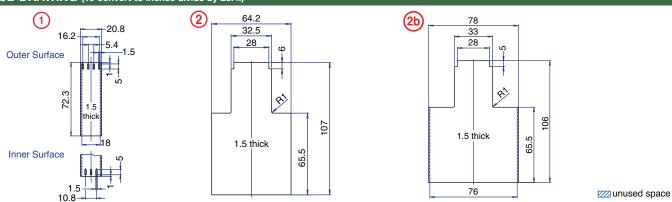
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
*Panel Mount Tab	93.001.2	PMA

AMPERAGE CHART

Max. Current Carrying Capacity of Terminal Blocks

	3 pole 000	4 pole	7 pole
Max Amperage of Terminal Blocks	15A	28A	15A top row 28A bottom row
Max Amperage Per Terminal Point	5A	8A	5A top row 8A bottom row

PCB DRAWING (To convert to inches divide by 25.4.)



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84

A

118

121

KO4700 Series - Modular

20 Terminal Maximum

with 6 High Current Terminals Pluggable Card Edge Connection/ Solder Connection



TECHNICAL INFORMATION

Electrical:
see chart for Amperages,
300V, 22-12 AWG standard
18-8 AWG high current
Housing Material:
Glass-filled Polycarbonate
Cover Material:
Glass-filled Polycarbonate
Temperature Range:
Up to 125°C (257°F)
Flammability Rating:
UL94 V-O (V-2 Clear Panel)
Color:
Black Housing with Tan Cover
ORDERING INFORMATION

Recommended Torque: 0.8Nm Max. PCB's: (2) Vertical (2) Horizontal Mounting: 35mm DIN Rail or

Terminal Screw Size:

Terminal Type:

Box clamp

M3.5

optional panel mounting*

COMPLETE ENCLOSURE CONSISTS OF

- (1) Base Housing
- (1) Cover Frame
- (1) Cover Panel

A-A

36

DIN Rail

Outer Surface

4.4 69.5

3

- (2) Terminal or blanking blocks
- (2) High current terminal blocks

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)

17

41

(1a

(1b)

Inner Surface

Ā

108 118

121

Part Number	Туре	Description
90.825	KO4735H	Base Housing
90.825.1	KO4735F	Cover Frame
90.820.2	KO4731/5P	Cover Panel, Tan
90.820.3	KO4731/5P-C	Cover Panel, Clear
90.820.4	KO4731/5P/S	Cover Panel with terminal
		release slots, Tan
90.820.5	KO4731/5P-C/S	Cover Panel with terminal
		release slots, Clear
90.803	KO473xT/3	Terminal Block, 3 terminals
90.804	KO473xT/4	Terminal Block, 4 terminals
90.807	KO473xT/7	Terminal Block, 7 terminals
90.800	KO473xT/B	Blanking Block, 0 terminals
90.808	KO473xHCT	High Current Block, 3 terminals
ACCESSORIES	\$	
Accessories	Dort Nur	nber Type

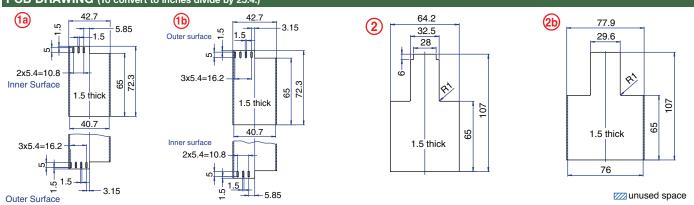
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
*Panel Mount Tab	93.001.2	PMA

AMPERAGE CHART

Max. Current Carrying Capacity of Terminal Blocks

	3 pole	4 pole	7 pole	High Current
		0000	0000	00
Max Amperage of Terminal Blocks	15A	28A	15A top row 28A bottom rov	40A
Max Amperage Per Terminal Point	8A	8A	5A top row 8A bottom row	40A

PCB DRAWING (To convert to inches divide by 25.4.)



28 Terminal Maximum Pluggable Card Edge Connection



TECHNICAL INFORMATION

Electrical: see chart for Amperages, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O (V-2 Clear Panel) Color: Terminal Type: Box clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (2) Vertical (2) Horizontal Mounting: 35mm DIN Rail or

optional panel mounting*

Black Housing with Tan Cover

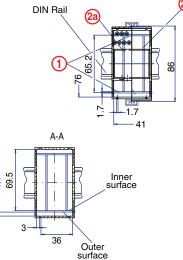
ORDERING INFORMATION

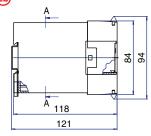
	Part Number	Туре	Description		
	90.820	KO4731H	Base Housing		
	90.820.1	KO4731F	Cover Frame		
	90.820.2	KO4731/5P	Cover Panel, Tan		
	90.820.3	KO4731/5P-C	Cover Panel, Clear		
	90.820.4	KO4731/5P/S	Cover Panel with terminal		
I			release slots, Tan		
	90.820.5	KO4731/5P-C/S	Cover Panel with terminal		
			release slots, Clear		
I	90.803	KO473xT/3	Terminal Block, 3 terminals		
	90.804	KO473xT/4	Terminal Block, 4 terminals		
I	90.807	KO473xT/7	Terminal Block, 7 terminals		
	90.800	KO473xT/B	Blanking Block, 0 terminals		

COMPLETE ENCLOSURE CONSISTS OF

- (1) Base Housing
- (1) Cover Frame
- (1) Cover Panel
- (4) Terminal or blanking blocks

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





ACCESSORIES

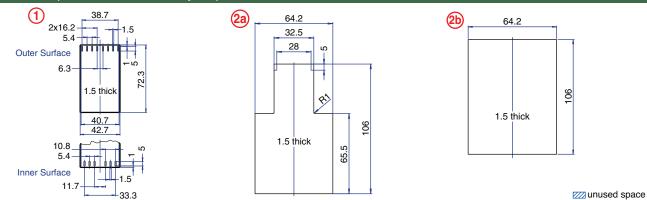
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
*Panel Mount Tab	93.001.2	PMA

AMPERAGE CHART

Max. Current Carrying Capacity of Terminal Blocks

	3 pole 000	4 pole	7 pole 000
Max Amperage of Terminal Blocks	15A	28A	15A top row 28A bottom row
Max Amperage Per Terminal Point	5A	8A	5A top row 8A bottom row

PCB DRAWING (To convert to inches divide by 25.4.)



K04700 Series - Modular

34 Terminal Maximum with 6 High Current Terminals **Pluggable Card Edge Connection/ Solder Connection**



TECHNICAL INFORMATION

Electrical: Terminal Type: see chart for Amperages, 300V, 22-12 AWG standard 18-8 AWG high current **Housing Material:** Glass-filled Polycarbonate **Cover Material:** Glass-filled Polycarbonate **Temperature Range:** Up to 125°C (257°F) **Flammability Rating:** UL94 V-O (V-2 Clear Panel) Color: Black Housing with Tan Cover **ORDERING INFORMATION** Part Number Туре KO4732/6H 90.830

KO4736F

KO473xT/3

KO473xT/4

KO473xT/7

KO473xT/B

KO473xHCT

90.830.6

90.803

90.804

90.807

90.800

90.808

Box clamp
Terminal Screw Size:
M3.5
Recommended Torque:
0.8Nm
Max. PCB's:
(3) Vertical
(2) Horizontal
(1) Parallel with cover
Mounting:
35mm DIN Rail or
optional panel mounting*
Description

Terminal Block, 3 terminals

Terminal Block, 4 terminals

Terminal Block, 7 terminals

Blanking Block, 0 terminals

High Current Block, 3 terminals

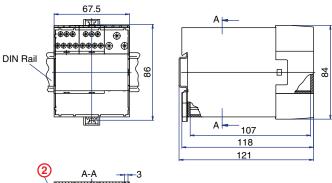
Base Housing

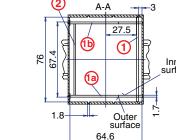
Center Cover

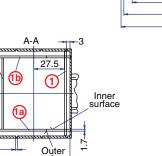
COMPLETE ENCLOSURE CONSISTS OF

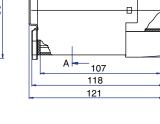
- (1) Base Housing
- (1) Center Cover
- (4) Terminal or blanking blocks
- (2) High current terminal blocks

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)







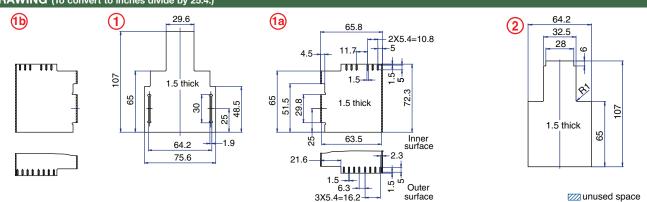


ACCESSORIES Accessories Part Number Туре 1 Meter DIN Rail 2511120/1M 35x7.5/1M *Panel Mount Tab (need 2) 93.001.2 PMA AMPERAGE CHART

Max. Current Carrying Capacity of Terminal Blocks

	3 pole	4 pole	7 pole	High Current
	000	0000	0000	00
Max Amperage of Terminal Blocks	15A	28A	15A top row 28A bottom row	v 40A
Max Amperage Per Terminal Point	8A	8A	5A top row 8A bottom row	, 40A

PCB DRAWING (To convert to inches divide by 25.4.)



40 Terminal Maximum

with 12 High Current Terminals **Pluggable Card Edge Connection/ Solder Connection**



TECHNICAL INFORMATION

Electrical:

Part Number

90.845.6

90.845

90.803

90.804

90.807

90.800

90.808

see chart for Amperages,
300V, 22-12 AWG standard
18-8 AWG high current
Housing Material:
Glass-filled Polycarbonate
Cover Material:
Glass-filled Polycarbonate
Temperature Range:
Up to 125°C (257°F)
Flammability Rating:
UL94 V-O (V-2 Clear Panel)
Color:
Black Housing with Tan Cover
ORDERING INFORMATION

Type

KO4737H

KO4737F

KO473xT/3

KO473xT/4

KO473xT/7

KO473xT/B

KO473xHCT

Box clamp **Terminal Screw Size:** M3.5 **Recommended Torque:** 0.8Nm Max. PCB's: (4) Vertical (2) Horizontal (1) Parallel with cover

Terminal Type:

Mounting:

Description

Base Housing

Center Cover

35mm DIN Rail or optional panel mounting*

Terminal Block, 3 terminals

Terminal Block, 4 terminals

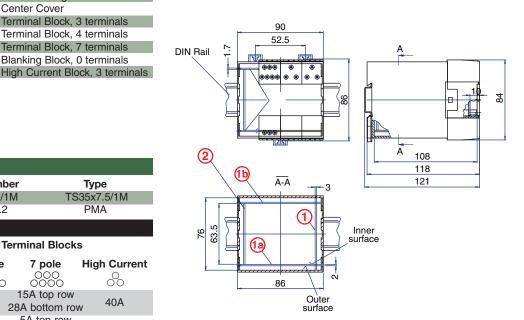
Terminal Block, 7 terminals

Blanking Block, 0 terminals

COMPLETE ENCLOSURE CONSISTS OF (1) Base Housing

- (1) Center Cover
- (4) Terminal or blanking blocks
- (4) High current terminal blocks

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)

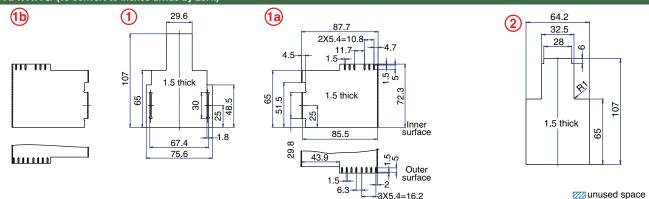


ACCESSORIES Accessories Part Number Туре 1 Meter DIN Rail 2511120/1M 35x7.5/1M Panel Mount Tab (need 2) 93.001.2 PMA AMPERAGE CHART

Max. Current Carrying Capacity of Terminal Blocks

	3 pole	4 pole	000	High Current
		0000	0000	00
Max Amperage of Terminal Blocks	15A	28A	15A top row 28A bottom row	v 40A
Max Amperage Per Terminal Point	8A	8A	5A top row 8A bottom row	40A

PCB DRAWING (To convert to inches divide by 25.4.)



K04700 Series - Modular

42 Terminal Maximum **Pluggable Card Edge** Connection



Terminal Type:

Terminal Screw Size:

Recommended Torque:

Box clamp

M3.5

0.8Nm

Max. PCB's:

(3) Vertical

Mounting:

(2) Horizontal (1) Parallel with cover

35mm DIN Rail or

optional panel mounting*

TECHNICAL INFORMATION

Electrical: see chart for Amperages, 300V, 22-12 AWG **Housing Material:** Glass-filled Polycarbonate **Cover Material:** Glass-filled Polycarbonate **Temperature Range:** Up to 125°C (257°F) Flammability Rating: UL94 V-O (V-2 Clear Panel) Color: Black Housing with Tan Cover

ORDERING INFORMATION

Part Number	Туре	Description
90.830	KO4732/6H	Base Housing
90.830.1	KO4732F	Cover Frame
90.830.2	KO4732P	Cover Panel, Tan
90.830.3	KO4732P-C	Cover Panel, Clear
90.830.4	KO4732P/S	Cover Panel with terminal release slots, Tan
90.830.5	KO4732P-C/S	Cover Panel with terminal release slots, Clear
90.803	KO473xT/3	Terminal Block, 3 terminals
90.804	KO473xT/4	Terminal Block, 4 terminals
90.807	KO473xT/7	Terminal Block, 7 terminals
90.800	KO473xT/B	Blanking Block, 0 terminals

ACCESSORIES

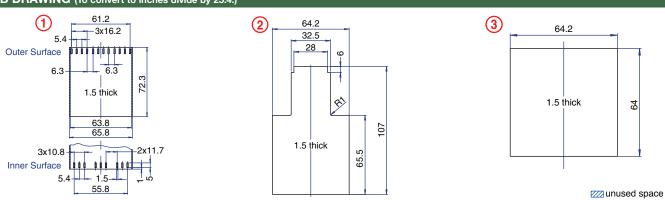
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
*Panel Mount Tab (need 2)	93.001.2	PMA

AMPERAGE CHART

Max. Current Carrying Capacity of Terminal Blocks

	3 pole	4 pole	7 pole
Max Amperage of Terminal Blocks	15A	28A	15A top row 28A bottom row
Max Amperage Per Terminal Point	5A	8A	5A top row 8A bottom row

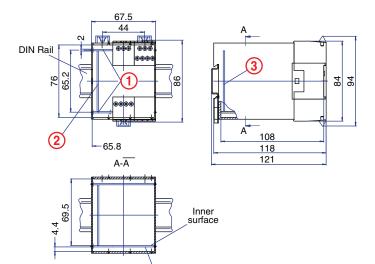
PCB DRAWING (To convert to inches divide by 25.4.)



COMPLETE ENCLOSURE CONSISTS OF

- (1) Base Housing
- (1) Cover Frame
- (1) Cover Panel
- (6) Terminal or blanking blocks

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



8

Outer surface

56 Terminal

Maximum

Pluggable Card Edge Connection



TECHNICAL INFORMATION

Electrical:
see chart for Amperages,
300V, 22-12 AWG
Housing Material:
Glass-filled Polycarbonate
Cover Material:
Glass-filled Polycarbonate
Temperature Range:
Up to 125°C (257°F)
Flammability Rating:
UL94 V-O (V-2 Clear Panel)
Color:
Black Housing with Tan Cover

Terminal Type: Box clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (4) Vertical (2) Horizontal (1ea.) Parallel with/ behind cover

Mounting:

35mm DIN Rail or optional panel mounting*

ORDERING INFORMATION

Part Number	Туре	Description
90.840	KO4733H	Base Housing
90.840.1	KO4733F	Cover Frame
90.840.2	KO4733P	Cover Panel, Tan
90.840.3	KO4733P-C	Cover Panel, Clear
90.840.4	KO4733P/S	Cover Panel with terminal
		release slots, Tan
90.840.5	KO4733P-C/S	Cover Panel with terminal
		release slots, Clear
90.803	KO473xT/3	Terminal Block, 3 terminals
90.804	KO473xT/4	Terminal Block, 4 terminals
90.807	KO473xT/7	Terminal Block, 7 terminals
90.800	KO473xT/B	Blanking Block, 0 terminals

ACCESSORIES

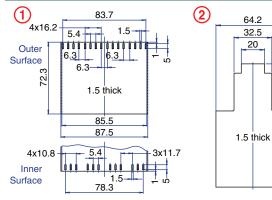
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
*Panel Mount Tab (need 2)	93.001.2	PMA

AMPERAGE CHART

Max. Current Carrying Capacity of Terminal Blocks

	3 pole 000	4 pole	7 pole
Max Amperage of Terminal Blocks	15A	28A	15A top row 28A bottom row
Max Amperage Per Terminal Point	5A	8A	5A top row 8A bottom row

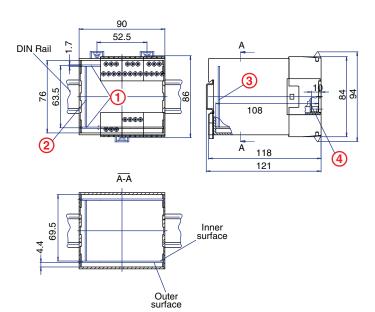
PCB DRAWING (To convert to inches divide by 25.4.)

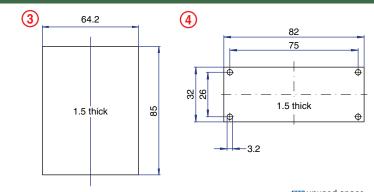


COMPLETE ENCLOSURE CONSISTS OF

- (1) Base Housing
- (1) Cover Frame
- (1) Cover Panel
- (8) Terminal or blanking blocks

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)





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65.5



The K70 series enclosures are small to medium in size and offer cost effective solutions for many applications.

They can accommodate 8 to 32 terminals for field wire connections. Pressure plate terminals are standard with both the fixed and pluggable versions.

MATERIALS

Housing

Housing Shell: Polycarbonate, 10% Glass-filled Housing Cover: Polycarbonate, 10% Glass-filled *Terminals* Pressure Plate: Chromated Steel

Terminal Screw: Chromated Steel Connector Contact: Tin Plated Bronze

Temperature Rating: 125°C (257°F) UL94VO **Standard Color:** Light Gray

PROTECTION

K7O enclosures have an IP10 rating (hand protected). By using optional terminal covers the protection rating can be increased to IP20 (finger protected). VBG4 and other European accident prevention requirements are met.

CONSTRUCTION

The K70 enclosures are supplied as unassembled kits. Each kit consists of a housing shell and a snap-on cover, complete with integral terminals and terminal-to-board connection provisions. Integral printed circuit board guides are molded into the housing shell to save time when inserting boards, to prevent misconnections and to keep the boards in place. Integral tabs on the bottom of the shell further help to hold the boards in place and eliminate lateral movement and warpage. Printed circuit boards can be mounted in three ways:

- Vertically
- Horizontally
- Behind the Front Cover

Boards can be placed vertically (perpendicular to the DIN rail) and/or horizontally (parallel with the DIN rail). Enclosures with plug-in covers can accept an additional board mounted directly behind the front cover. This board is ideal for mounting indicating devices such as LEDs, LCDs for monitoring, switches and potentiometers for setting and adjusting purposes. The housing cover snaps onto the housing shell. Two tabs lock the cover firmly in place. Removal of the cover is possible for service and repair. Potting is possible.

The K70 housing covers have external and internal barriers between terminals to increase creepage distance and to help prevent accidental touching of live potentials that may be present. Optional terminal covers that decrease the size of the opening are available as accessories.

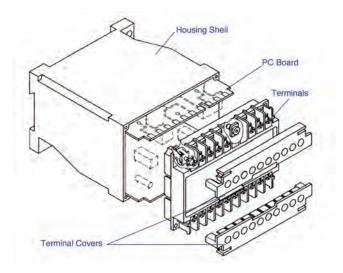


TERMINALS

Pressure Plate terminals with either fixed or pluggable terminalto-board connections are offered in the K70 enclosures. The pressure plate, which is captive to the terminal screw, automatically rises when the screw is loosened. One or two wires of equal or different sizes up to 2.5mm² (14 AWG) can be terminated in each terminal. The grooved corners of the pressure plate ensure positive wire retention. The flat bottom of the terminal extends to the inside of the enclosure and provides the terminal-to-board connection. The terminal screws can be turned by a flat tip or a #2 Phillips screwdriver.

Upon request, terminals can be loaded in selected positions only.





TERMINAL-TO-BOARD CONNECTIONS

The K70 series offers fixed and pluggable terminal-to-board connection possibilities.

Fixed Connections

Fixed terminal-to-board connections can be made by Wire Jumper, Fast On tabs or Machine Solderable Pins (K7022.5C only).

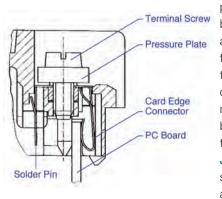
Fast On tabs, (2.8 x 0.8 mm) accept industry standard Fast On connectors crimped onto wire jumpers.

Wire Jumper connections can also be made by soldering a wire jumper between the center holes of the Fast On tab and the printed circuit board(s).

Machine Solderable Pins (offered only with type K7022.5C) can be removed from the enclosure and machine soldered to the board in the same step as other components, saving assembly time.

Pluggable Connections

Pluggable terminal-to-board connections are made by using *Card Edge* connectors. They are an integral part of the covers



of K7075P, K70100P and K70150P and plug directly onto the board(s). *Solder Pins* are also provided in these enclosures for terminal-to-board connections when mounting an additional board directly behind the front cover. A *Wire Jumper* can be soldered to these pins as well. For better retention, the plug-in type covers have captive screws at the corners that insert into brass bushings, molded into the housing shell. The pluggable versions are ideal whenever quick connections and replacement are important. They also reduce the danger of misconnected wires and downtime.

MOUNTING

The K70 Enclosures mount easily by snapping onto standard 35mm DIN Rail. Many can also be panel mounted using corner mounting holes which accept two M4 or M5 (#6 or #10) screws. These mounting holes are molded into two corners of the housing shell base and do not increase the height or width of the enclosure, thus insuring a compact, high density arrangement when multiple enclosures are installed adjacent to each other. Enclosure types K7022.5A, K7022.5B and K7022.5C have two integral pull-out tabs on the base of the enclosure for panel mounting. (Refer to Enclosure Mounting Procedures on page 49.)



MARKING

The K70 enclosures have an area on the front of the cover for marking and mounting of components such as switches, potentiometers, LEDs or LCD indicators. Custom imprinted plates can be inserted as well, allowing imprinting of plates separate from the enclosure, reducing cost and delays.

ACCESSORIES

- 35 x 7.5 mm DIN Rail
- Terminal Covers
- Pull-Out Panel Mounting Tabs.

CUSTOMIZATION

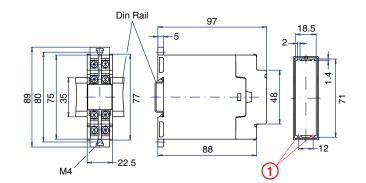
Enclosures can be customized with cutouts and holes for potentiometers, switches, LEDs, LCDs and other devices. Using state of the art machining, we can punch, drill or cut to your most exacting specifications. Custom colors and special markings are also available. Please let us know what your requirements are.



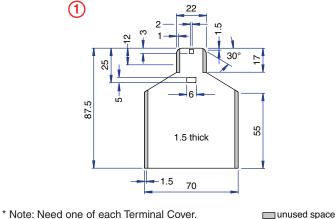


Part Number	Туре	Description	PCB Connection
90.001	K7022.5A	Double Level	Wire Jumper/
		Terminals	Fast On
ACCESSOR	RIES		
			_
Accessorie	s	Part Number	Туре
Accessorie DIN Rail	s	Part Number 2511120/1M	Type TS35x7.5/1M
	-		

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)







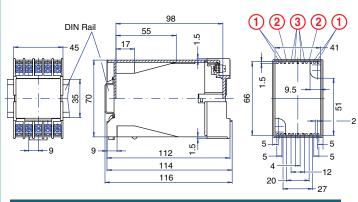
Note. Need one of each terminal Cover.



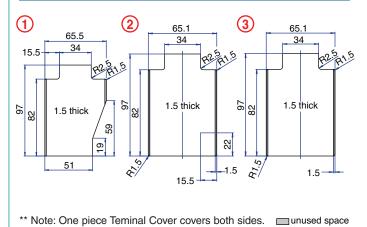
Terminal Type: Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations: (10) Vertical Mounting: 35mm DIN Rail or panel mount

PCB Connection 90.010 K7045C Single Level Wire Jumper/ Terminals Fast On ACCESSORIES Accessories Part Number Type DIN Rail 2511120/1M TS35x7.5/1M 90.010.1 K7045C/TC1 Terminal Cover*

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



<u>Altech</u>

12 Terminal

Solder/Tab Connection



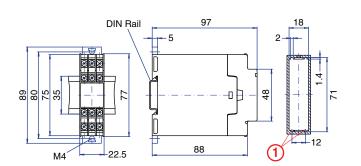
TECHNICAL INFORMATION

Electrical: 20A, 300V, 24-14 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Pressure Plate Terminal Screw Size: M2.5 Recommended Torque: 0.8Nm PCB Locations: (2) Vertical Mounting: 35mm DIN Rail or panel mount

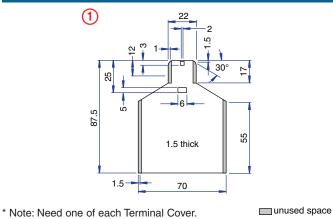
ORDERING INFORMATION

Part Number	2 1 1 1	Description	PCB Connection
90.020	K7022.5B	Double Level	Wire Jumper/
		Terminals	Fast On
ACCESSO			
AUCLOSU	NLO		
Accessorie	s	Part Number	Туре
DIN Rail		2511120/1M	TS35x7.5/1M
Terminal Cove	rs*	90.020.1/90.020.2	K7022.5BTC1/TC2

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



12 Terminal

Solder Connection



TECHNICAL INFORMATION

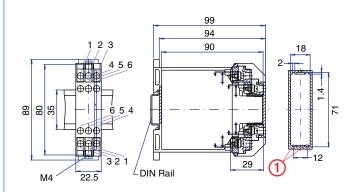
Electrical:
20A, 300V, 22-14 AWG
Housing Material:
Glass-filled Polycarbonate
Cover Material:
Glass-filled Polycarbonate
Temperature Range:
Up to 125°C (257°F)
Flammability Rating:
UL94 V-O
Color:
Light Gray

Terminal Type: Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations: (2) Vertical Mounting: 35mm DIN Rail or panel mount

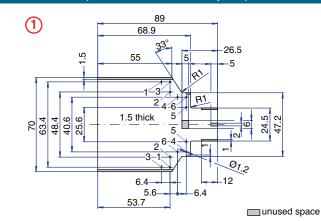
ORDERING INFORMATION Part Number Type Description

Part Number	Туре	Description	PCB Connection
90.030	K7022.5C	Shrouded Double	Wire Jumper/
		Level Terminals	Machine Solderable Pins
ACCESSO	RIES		
Accessori	es	Part Number	Туре
DIN Rail		2511120/1M	TS35x7.5/1M

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



12 Terminal Solder/Tab Connection



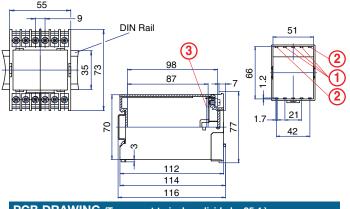
TECHNICAL INFORMATION

Electrical: 25A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations: (5) Vertical (1) Behind Cover Mounting: 35mm DIN Rail

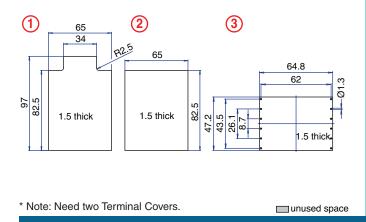
ORDERING INFORMATION

Part Number	Туре	Description	PCB Connection
90.040	K7055	Single Level Terminals	Wire Jumper/
		Terminais	Fast On
ACCESSOR	IES		
Accessories	6	Part Number	Туре
DIN Rail		2511120/1M	TS35x7.5/1M
Terminal Cove	rs*	90.040.1	K7055/TC1
ENCLOSUR		ING (To convert to inc	has divide by 25.4)

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



16 Terminal Pluggable Connection



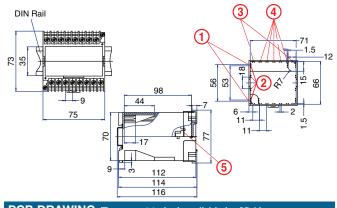
TECHNICAL INFORMATION

Electrical: 10A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations: (7) Vertical (6) Horizontal (1) Behind Cover Mounting: 35mm DIN Rail or panel mount

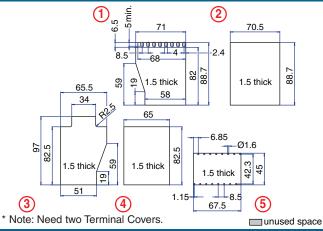
ORDERING INFORMATION

Part Number	Туре І	Description	PCB Connection
90.050 ł	<7075P \$	Single Level	Wire Jumper/
		Terminals So	older Pin/ Card Edge
ACCESSOR	IES		
Accessories	s P	art Number	Туре
Accessories DIN Rail		art Number 2511120/1M	Type TS35x7.5/1M
	2		2 P P P

ENCLOSURE DRAWING (To convert to inches divide by 25.4)



PCB DRAWING (To convert to inches divide by 25.4.)



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16 Terminal

Pluggable Connection (DIN Rail Mount Only)

TECHNICAL INFORMATION

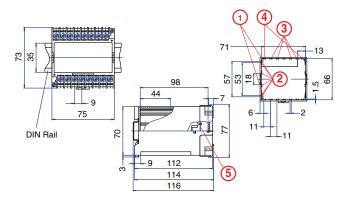
Electrical: 10A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations: (7) Vertical (6) Horizontal (1) Behind Cover Mounting: 35mm DIN Rail

SPPPPPP

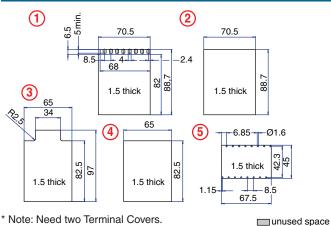
ORDERING INFORMATION

Single Level	Wire Jumper/
Terminals	Solder Tab/ Card Edge
Part Number	Туре
2511120/1M	TS35x7.5/1M
90.050.1	K7075P/TC1
	Part Number 2511120/1M

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



20 Terminal Solder/Tab Connection



TECHNICAL INFORMATION

Electrical:
25A, 300V, 22-14 AWG
Housing Material:
Glass-filled Polycarbonate
Cover Material:
Glass-filled Polycarbonate
Temperature Range:
Up to 125°C (257°F)
Flammability Rating:
UL94 V-O
Color:
Light Gray

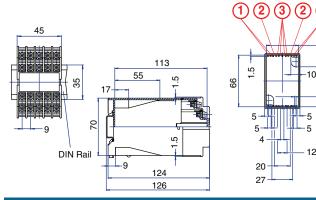
Terminal Type: Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations: (10) Vertical Mounting: 35mm DIN Rail or

panel mount

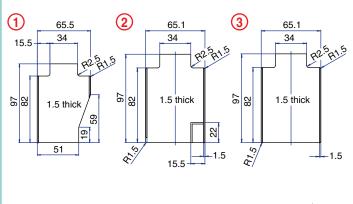
ORDERING INFORMATION Part Number Type Description PCB Connection 90.060 K7045D1 Double Level Terminals Wire Jumper/ Fast On ACCESSORIES Value Value Value

Accessories	Part Number	Туре
DIN Rail	2511120/1M	TS35x7.5/1M

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



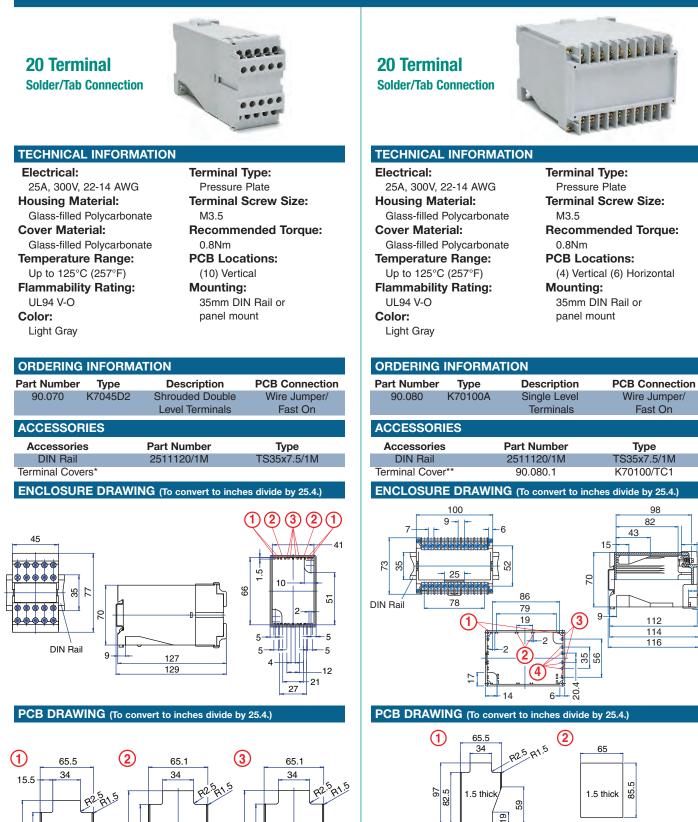
unused space

(1)

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51

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98

14

-11

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1.5

3

85.5

** Note: Need two Terminal Covers.

96

1.5 thick

83.5

4

85.5

52

19

95.5

1.5 thick

unused space

82

1.5 thick

51

59 <u>6</u>

* Note: Integral Terminal Covers.

97 82

A7.

1.5 thick

15.5

97 82

A1.51

2

1.5

1.5 thick

unused space

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20 Terminal

Pluggable Connection

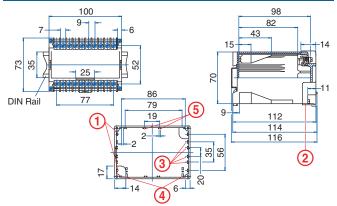
TECHNICAL INFORMATION

Electrical: 10A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations (4) Vertical (6) Horizontal (1) Behind Cover Mounting: 35mm DIN Rail or panel mount

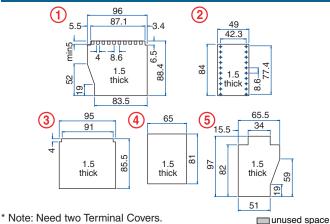
ORDERING INFORMATION

Part Number	Туре	Description	PCB Connection
90.090	K70100P	Single Level	Wire Jumper/
		Terminals	Solder Pin/ Card Edge
ACCESSOF	RIES		
Accessorie	s	Part Number	Туре
DIN Rail		2511120/1M	TS35x7.5/1M
Terminal Cove	ers*	90.080.1	K70100/TC1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



32 Terminal

Pluggable Connection

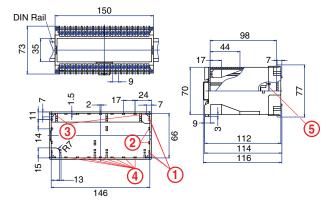
SHIMM

TECHNICAL INFORMATION

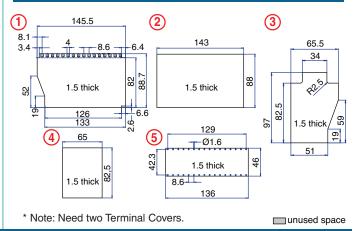
Electrical: 10A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Cover Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations (9) Vertical (6) Horizontal (1) Behind Cover Mounting: 35mm DIN Rail or panel mount

ORDERING INFORMATION Description PCB Connection Part Number Type Single Level 90.100 K70150P Wire Jumper/ Terminals Solder Pin/ Card Edge ACCESSORIES Accessories Part Number Type **DIN Rail** 2511120/1M TS35x7.5/1M Terminal Cover^{*} 90.100.1 K70150P/TC1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)





Versatile, compact enclosures are ideal for applications with space constraints and for mounting within large international style enclosures with 45mm (1.77 in.) cutouts, such as Altech's EK and AK series nonmetallic enclosures. Small to medium in size, KU4000 enclosures offer 8 to 64 terminals for field wire connections. Pressure plate or spring cage terminals are standard. The KU4000 series are equipped with double level terminals which provide a maximum number of external connections in a minimal amount of space. Standard enclosures are supplied as kits, containing the base, cover and the maximum number of terminals.

MATERIALS

Housing

Housing Shell: Polycarbonate, 10% Glass Filled Base: Polycarbonate, 10% Glass Filled

Terminals

Terminal Pins: Tinned Steel Pressure Plate: Chromated Steel Terminal Screws: Chromated Steel Spring Clamps: Stainless Steel

Temperature Rating: 110°C (230°F) UL94VO Standard Color: Light Gray

PROTECTION

KU4000 enclosures have an IP20 rating (finger protected) and meet VBG4 and other European accident prevention requirements.

h

CONSTRUCTION

The KU4000 series housings are supplied as unassembled kits. Each kit consists of a flat base, a housing cover and 8, 16, 24, 32, 48 or 64 terminals. Double level

terminals keep the enclosure size to a minimum, and yet, due to the innovative housing design, relatively large components can be mounted inside.

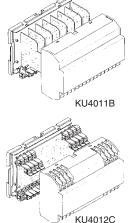
The terminals are machine solderable and have straight or right angle pins, depending on enclosure type (Type C has straight pins, Type B has right angle pins). We can also supply enclosures with fewer than the maximum number of terminals, please contact us with your requirements.

The KU4000 series are available in five widths, and are supplied with terminals in three standard positions:

- Terminals on top and bottom
- Terminals on one side only

• Terminals at both ends, the center area has no terminals.

Cover plugs are available as accessories and can be plugged into unused screw holes and wire entries. Plugs are offered as sets, consisting of one screw-hole cover and one wire



entry cover (Refer to Accessories in the Ordering Pages).

Integral printed circuit board guides are molded into the housing cover to save time when inserting boards. They also prevent misconnections and keep the boards from moving.

Printed circuit boards can be mounted in three ways:

- Horizontally, parallel with the base
- Vertically, perpendicular to the base
- Vertically, parallel with the DIN rail

One large board can be mounted against the base of the enclosure (parallel with the base) using terminals with straight solder pins. Boards can also be mounted vertically (perpendicular to the base) by using terminals with right angle solder pins, or vertically (parallel with the DIN rail) by using a wire jumper connection.

(Refer to the Ordering Pages).

The face of the cover is 45mm (1.77 in.) high, and can be mounted into standard DIN distribution systems which have 45mm cutouts like Altechs EK and AK series of industrial enclosures. Mount the KU4000 enclosures together with circuit breakers and other DIN rail



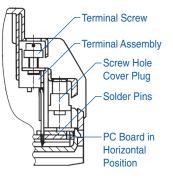
EK Series Industrial Enclosure

mount devices which also meet the 45mm standard. Removal of the housing cover is possible for service and repair after disconnecting the wires. KU4000 covers cannot be potted without taking special steps.



TERMINALS

Pressure plate terminals are standard for the KU4000 enclosure and ensure a vibration proof connection. The pressure plate, which is captive to the terminal screw, automatically rises when the screw is loosened. One or two wires of equal or different sizes up to 2.5mm² (14 AWG) can be terminated in each terminal. The grooved corners of the



pressure plate ensure positive retention of the wires. The flat bottom of the terminal extends to the inside of the enclosure and provides the terminal-to-board connection. The terminal screws can be turned by a flat tip or a #2 Pozidriv screwdriver.

The KU4000 series is also available with spring cage terminals. The terminal is opened by appling pressure with a screwdriver to open the clamp. Once the wire is inserted, the screwdriver is removed, creating a vibration proof connection to the wire.

TERMINAL-TO-BOARD CONNECTIONS

The KU4000 series offers several fixed terminal-to-board connection possibilities. (Refer to the Ordering Pages for connection types.)

Wire Jumper connections can be made by soldering a wire jumper between the center hole of the right angle solder pins and the printed circuit board(s). Upon soldering, the board is installed into the enclosure complete with terminals and other components.

All KU4000 terminals have *Machine Solderable Pins*, which can be machine soldered to the board(s) in the same step as the other components, saving assembly time.

MOUNTING

The KU4000 enclosures snap onto standard 35mm DIN rail or can be panel mounted. Mount one or several enclosures together, or mix them with other DIN rail mounted devices such as terminal blocks, circuit breakers, etc. The choice is yours.

MARKING

The KU4000 series have large marking areas on the front of the cover.

ACCESSORIES

- Cover Plugs for Screw Hole and Wire Entries
- Screws for Mounting Printed Circuit Board
- Pull-Out Panel Mounting Tabs
- 35mm DIN Rail

CUSTOMIZATION

We can supply the KU4000, series enclosure kits with the exact number of terminals to requirements. meet your can Enclosures also be customized with cutouts and holes. Custom colors and special markings are also available.



Enclosure Mounting Procedures

DIN Rail Mounting

The top of the enclosure base has notches molded onto the sides. The bottom of the base has one spring-loaded tab that is factory installed into a molded guide for DIN rail mounting.

When mounting, tilt the bottom of the enclosure slightly away from the rail until the notches grab onto the top flange of the DIN rail. Push the bottom of the enclosure forward towards the DIN rail. The spring-loaded tab will snap onto the bottom of the rail and hold the enclosure firmly in place.



To remove the enclosure from the DIN rail, insert a screwdriver into the exposed slot in the tab and pull the tab down. Pull enclosure forward and remove from the rail.

Panel Mounting

To mount enclosures on a panel or any flat surface, at least one tab must be in place on the top and on the bottom of the enclosure base in the panel mount position. Standard enclosures are supplied with one tab on the bottom for DIN rail mounting.

Install one or more additional tabs (see Accessories in the Ordering Pages) into molded tab guides on the back of the enclosure base. Move the pre-installed bottom tab from the DIN rail position to the panel mount position.

To move the tab, insert a screwdriver under the spring pin, lift it and pull the tab forward until it extends approximately 6mm(.25 in.) from the enclosure. Release pin and lock the tab in the panel mount position.

We can supply the enclosures already set up for panel mounting if desired. *(Please specify when ordering)*.

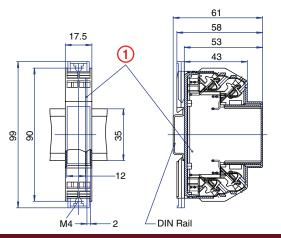
8 Terminal Vertical PCB Screw Clamp	8 Terminal Horizontal PCB Screw Clamp
TECHNICAL INFORMATIONElectrical:Terminal Type:16A, 300V, 22-14 AWGScrew / Pressure PlateHousing Material:Terminal Screw Size:Glass-filled PolycarbonateM3.5Temperature Range:Up to 125°C (257°F)Up to 125°C (257°F)0.8NmFlammability Rating:Max. PCB's:UL94 V-O(1) VerticalColor:Mounting:Light Gray35mm DIN Rail or	TECHNICAL INFORMATIONElectrical:Terminal Type:16A, 300V, 22-14 AWGScrew / Pressure PlateHousing Material:Terminal Screw Size:Glass-filled PolycarbonateM3.5Temperature Range:M3.5Up to 125°C (257°F)0.8NmFlammability Rating:Max. PCB's:UL94 V-O(1) HorizontalColor:Mounting:Light Gray35mm DIN Rail or
optional panel mounting*	optional panel mounting*
ORDERING INFORMATION	ORDERING INFORMATION
Part Number Type Description PCB Connection	Part Number Type Description PCB Connection
91.201 KU4001B Right Angle Pins Machine Solder/	91.202 KU4001C Straight Pins Machine Solder
Wire Jumper	Ŭ
ACCESSORIES	ACCESSORIES
AccessoriesPart NumberType1 Meter DIN Rail2511120/1MTS35x7.5/1M	Accessories Part Number Type 1 Meter DIN Rail 2511120/1M TS35x7.5/1M
Screw-hole and 91.201.1 SHPC	Screw-hole and 91.201.1 SHPC
Wire-Entry Cover Plug Set	Wire-Entry Cover Plug Set
*Panel Mount Tab 93.001.5 PMA/KU	*Panel Mount Tab 93.001.5 PMA/KU
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)	ENCLOSURE DRAWING (To convert to inches divide by 25.4.)
17.5 17.5 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 <	Image: Constrained state Image: Constrained state
PCB DRAWING (To convert to inches divide by 25.4.)	PCB DRAWING (To convert to inches divide by 25.4.)
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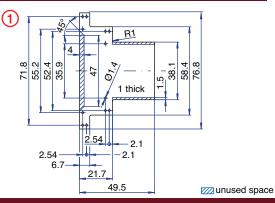
B Terminal Vertical PCB Opring Clamp			3
ECHNICAL I Ilectrical: 10A, 300V, 26 Iousing Mate Glass-filled Po Temperature Up to 125°C (Flammability UL94 V-O Color: Light Gray	6-14 AWG erial: olycarbona Range: (257°F)	Terminal T Spring Ca Terminal S te – Recomme – Max. PCB (1) Vertica Mounting: 35mm Dil	age Clamp Screw Size: ended Torque: 'S: al
ORDERING I	NFORMA	TION	
Part Number 91.501 k	Type (U4037B	Description Right Angle Pins	PCB Connection Machine Solder/ Wire Jumper
ACCESSORIE	ES		
Accessories	il	Part Number 2511120/1M	Type TS35x7.5/1M

1

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



8 Terminal Horizontal PCB Spring Clamp



TECHNICAL INFORMATION

Terminal Type: Spring Cage Clamp Terminal Screw Size:

Recommended Torque:

Max. PCB's: (1) Horizontal

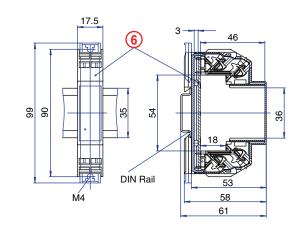
Mounting: 35mm DIN Rail or

optional panel mounting*

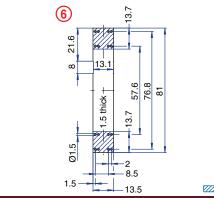
ORDERING INFORMATION				
Part Number	Туре	Description	PCB Connection	
91.502	KU4037C	Straight Pins	Machine Solder	

ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
*Panel Mount Tab	93.001.5	PMA/KU

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)

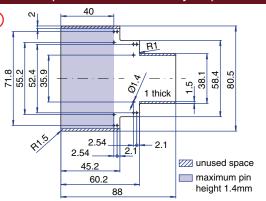


PCB DRAWING (To convert to inches divide by 25.4.)



winused space

8 Terminal Tall Vertical PCB Screw Clamp		8 Terminal Tall Vertical PCB Spring Clamp		
TECHNICAL INFORMAT	ON	TECHNICAL INFORM	ATION	
Electrical: 16A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray	Terminal Type: Screw / Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (1) Vertical Mounting: 35mm DIN Rail or optional panel mounting*	Electrical: 10A, 300V, 26-14 AWG Housing Material: Glass-filled Polycarbona Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray	Terminal Spring Ca Spring Ca Terminal S Recomme – Max. PCE (1) Vertica Mounting 35mm DI	age Clamp Screw Size: ended Torque: 3's: al :
	· · · ·	ORDERING INFORMA		barler mounting
ACCESSORIES Accessories Pa Accessori	Description PCB Connection Right Angle Pins Machine Solder/ Wire Jumper art Number Type 511120/1M TS35x7.5/1M 91.201.1 SHPC 93.001.5 PMA/KU (To convert to inches divide by 25.4.)	ONDERING INFORMA Part Number Type 91.503 KU4037BT ACCESSORIES Accessories 1 Meter DIN Rail *Panel Mount Tab ENCLOSURE DRAWIN	Description Right Angle Pins Part Number 2511120/1M 93.001.5	PCB Connection Machine Solder/ Wire Jumper Type TS35x7.5/1M PMA/KU
	100 97 92 82 01 Rai			
PCB DRAWING (To conver	t to inches divide by 25.4.)	PCB DRAWING (To con	40 **	y 25.4.)



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71.8 55.2 52.4 35.9

R1.5

* <u>R1</u>

1 thick

2.1

01.4

2.1

88

2.54

60.2

2.54

45.2

1.5⁻ 38.1 58.4 80.5

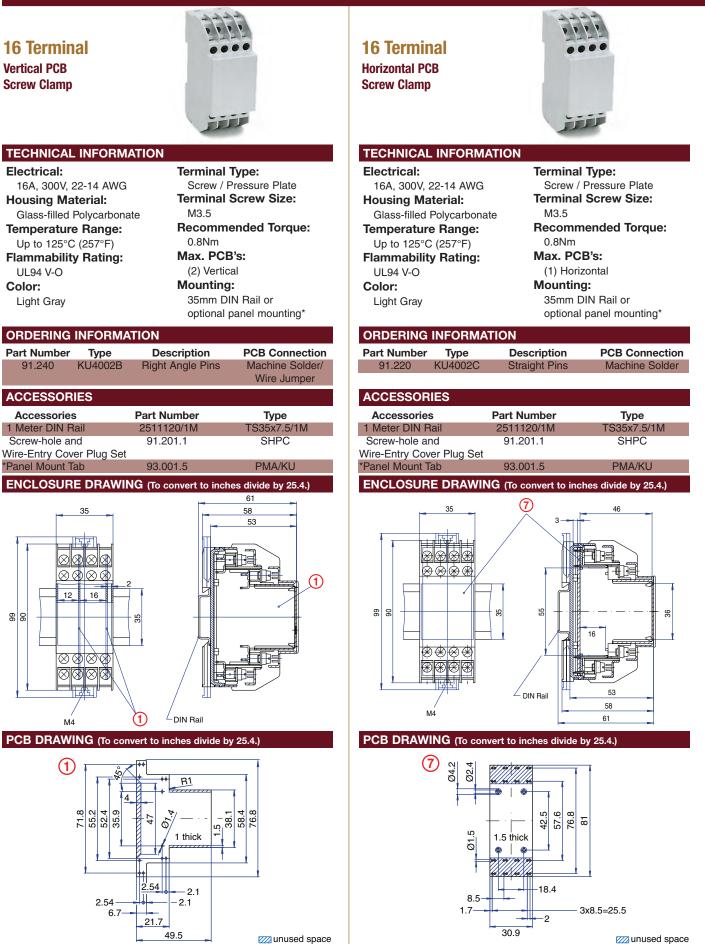
winused space

🔲 maximum pin

height 1.4mm

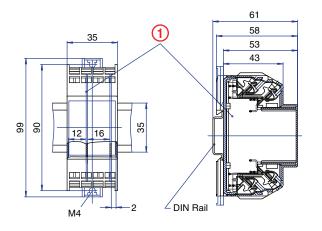
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12 Terminal with 8 Standard and 4 High Current Terminals Vertical PCB Screw Clamp	12 Terminal with 8 Standard and 4 High Current Terminals Horizontal PCB Screw Clamp
TECHNICAL INFORMATIONElectrical:Terminal Type:Standard Terminal:56A, 300V, 22-14 AWGHigh Current Terminal:Standard: Screw/Pressure Plate50A, 300V, 18-8 AWGHigh Current: Box ClampHousing Material:Material:Glass-filled PolycarbonateM3.5 / M4Temperature Range:0.8Nm/1.2NmUp to 125°C (257°F)Max. PCB's:Flammability Rating:0.10 VerticalUL94 V-O35mm DIN Rail orColor:optional panel mounting*	TECHNICAL INFORMATIONElectrical:Terminal Type:Standard Terminal:Standard Terminal:16A, 300V, 22-14 AWGHigh Current Terminal:High Current Terminal:Standard: Screw/Pressure Plate50A, 300V, 18-8 AWGMa.5 / M4Housing Material:M3.5 / M4Glass-filled PolycarbonateRecommended Torque:Temperature Range:0.8Nm/1.2NmUp to 125°C (257°F)(1) HorizontalFlammability Rating:35mm DIN Rail orUL94 V-O35mm DIN Rail orColor:optional panel mounting*
ORDERING INFORMATION	ORDERING INFORMATION
Part Number Type Description PCB Connection 91.710 KU4088BHC Right Angle Pins Machine Solder/ Wire Jumper	Part Number Type Description PCB Connection 91.720 KU4088CHC Straight Pins Machine Solder Wire Jumper Wire Jumper
ACCESSORIES	ACCESSORIES
Accessories Part Number Type	Accessories Part Number Type
1 Meter DIN Rail 2511120/1M TS35x7.5/1M	1 Meter DIN Rail 2511120/1M TS35x7.5/1M
Screw-hole and 91.201.1 SHPC Wire-Entry Cover Plug Set	Screw-hole and 91.201.1 SHPC Wire-Entry Cover Plug Set
*Panel Mount Tab 93.001.5 PMA/KU	*Panel Mount Tab 93.001.5 PMA/KU
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)	ENCLOSURE DRAWING (To convert to inches divide by 25.4.)
	8 8 8 16 16 16 16 16 16 16 16 16 10 10 10 10 10 10 10 10 10 10
PCB DRAWING (To convert to inches divide by 25.4.)	PCB DRAWING (To convert to inches divide by 25.4.)
(1)	9.7 2.4 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7

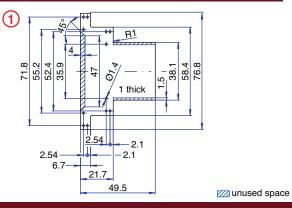


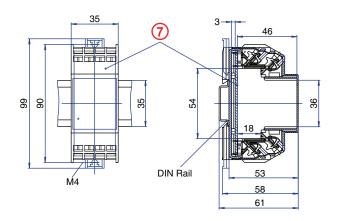
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16 Terminal Vertical PCB Spring Clamp		E.	16 Termin Horizontal PCI Spring Clamp	В		
TECHNICAL INFORM	ATION		TECHNICAL	INFORMA	TION	
Electrical: 10A, 300V, 26-14 AWG Housing Material: Glass-filled Polycarbona Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray	Terminal S te – Recomme – Max. PCB (2) Vertica Mounting 35mm DI	age Clamp Screw Size: ended Torque: i's: al	Electrical: 10A, 300V, 2 Housing Mat Glass-filled F Temperature Up to 125°C Flammability UL94 V-O Color: Light Gray	terial: Polycarbonate Range: (257°F)	Terminal e – Recomm – Max. PC (1) Horiz Mounting 35mm D	Cage Clamp Screw Size: nended Torque: B's: zontal
ORDERING INFORMA	TION	-	ORDERING I	INFORMAT	ION	· _
Part Number Type 91.540 KU4038B	Description Right Angle Pins	PCB Connection Machine Solder/ Wire Jumper	Part Number 91.520	Type KU4038C	Description Straight Pins	PCB Connection Machine Solder
ACCESSORIES			ACCESSORI	ES		
Accessories 1 Meter DIN Rail *Panel Mount Tab	Part Number 2511120/1M 93.001.5	Type TS35x7.5/1M PMA/KU	Accessories 1 Meter DIN Ra *Panel Mount Ta	ail	Part Number 2511120/1M 93.001.5	Type TS35x7.5/1M PMA/KU
ENCLOSURE DRAWIN	NG (To convert to inch	es divide by 25.4.)	ENCLOSUR	E DRAWIN	G (To convert to inc	hes divide by 25.4.)

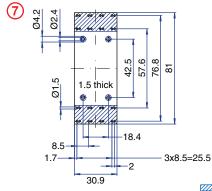


PCB DRAWING (To convert to inches divide by 25.4.)



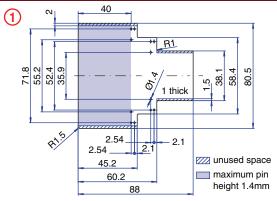


PCB DRAWING (To convert to inches divide by 25.4.)



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16 Terminal Tall Vertical PCB Screw Clamp		16 Terminal Tall Vertical PCB Spring Clamp		
TECHNICAL INFORMAT		TECHNICAL INFORMA	-	
Electrical:	Terminal Type:	Electrical:	Terminal 1	
16A, 300V, 22-14 AWG	Screw / Pressure Plate	10A, 300V, 26-14 AWG		age Clamp
Housing Material:	Terminal Screw Size:	Housing Material:		Screw Size:
Glass-filled Polycarbonate		Glass-filled Polycarbonate		
Temperature Range:	Recommended Torque: 0.8Nm	Temperature Range:	Recomme	ended Torque:
Up to 125°C (257°F) Flammability Rating:	Max. PCB's:	Up to 125°C (257°F) Flammability Rating:	_ Max. PCB	
UL94 V-O	(2) Vertical	UL94 V-O	(2) Vertica	
Color:	Mounting:	Color:	Mounting	
Light Gray	35mm DIN Rail or	Light Gray	35mm DII	
g.n (a.a.)	optional panel mounting*	g.n c		anel mounting*
ORDERING INFORMATI	ON CON	ORDERING INFORMAT	ION	Ŭ
Part Number Type	Description PCB Connection	Part Number Type	Description	PCB Connection
	Right Angle Pins Machine Solder/ Wire Jumper	91.543 KU4038BT	Right Angle Pins	Machine Solder/ Wire Jumper
ACCESSORIES		ACCESSORIES		
Accessories P	Part Number Type	Accessories	Part Number	Туре
	2511120/1M TS35x7.5/1M	1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Screw-hole and	91.201.1 SHPC	*Panel Mount Tab	93.001.5	PMA/KU
Wire-Entry Cover Plug Set *Panel Mount Tab	93.001.5 PMA/KU			
	(To convert to inches divide by 25.4.)	ENCLOSURE DRAWIN	G (To convert to inch	as divide by 25.4)
ENGLOSONE DRAMING		ENCECCOTE DIAMIN		es ulvide by 23.4.
	100		-	100
	97			97
35	92	35	∥	92
16	82		(1)	02
				-
				•
35 35		6 0 12 16 ⁵		
-3				
M4	^Z DIN Rail	M4 1.4		
PCB DRAWING (To conve		PCB DRAWING (To conve	-	25.4.)
	<u>) </u>		0	
	***		**	-



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24 Terminal Vertical PCB





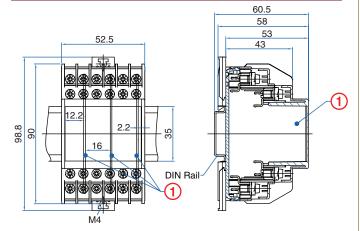
TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Screw / Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (3) Vertical Mounting: 35mm DIN Rail or optional panel mounting*

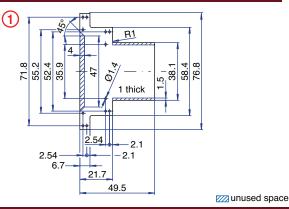
ORDERING INFORMATION

David Marsala av	Trues	Description	
Part Number	Туре	Description	PCB Connection
91.440	KU4084B	Right Angle Pins	Machine Solder/
		0 0	Wire Jumper
			the campe.
ACCESSOR	IES		
Accessories	6	Part Number	Туре
1 Meter DIN R	lail	2511120/1M	TS35x7.5/1M
Screw-hole and		91.201.1	SHPC
Wire-Entry Cov	er Plug Set		
*Panel Mount Tab		93.001.5	PMA/KU

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



24 Terminal Horizontal PCB Screw Clamp



TECHNICAL INFORMATION

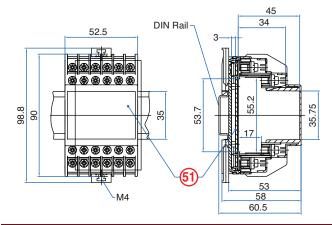
Electrical:
16A, 300V, 22-14 AWG
Housing Material:
Glass-filled Polycarbonate
Temperature Range:
Up to 125°C (257°F)
Flammability Rating:
UL94 V-O
Color:
Light Gray

Terminal Type: Screw / Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (1) Horizontal Mounting: 35mm DIN Rail or optional panel mounting*

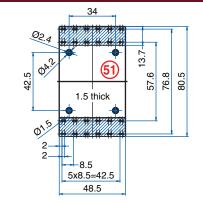
ORDERING INFORMATION Part Number Type Description PCB Connection 91.420 KU4084C Straight Pins Machine Solder

ACCESSORIES						
Accessories	Part Number	Туре				
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M				
Screw-hole and 91.201.1 SHPC						
Wire-Entry Cover Plug Set						
*Panel Mount Tab 93.001.5 PMA/KU						

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



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24 Terminal Tall Vertical PCB Screw Clamp



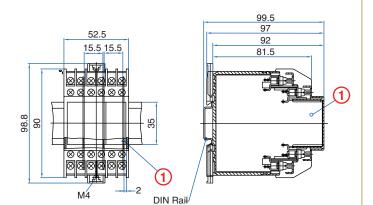
TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Screw / Pressure Plate Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm Max. PCB's: (3) Vertical Mounting: 35mm DIN Rail or

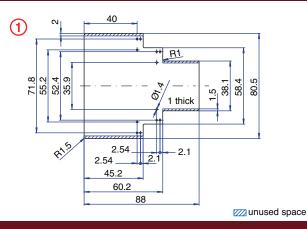
optional panel mounting*

ORDERING INFORMATION

Part Number	Туре	Description	PCB Connection		
91.443	KU4084BT	Right Angle Pi	ins Machine Solder/ Wire Jumper		
ACCESSOR	RIES				
Accessorie	s	Part Number	Туре		
1 Meter DIN F	Rail	2511120/1M	TS35x7.5/1M		
Screw-hole a Wire-Entry Cov		91.201.1	SHPC		
*Panel Mount 7		93.001.5	PMA/KU		
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)					

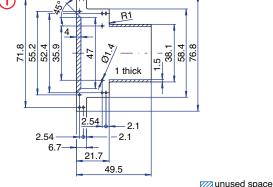


PCB DRAWING (To convert to inches divide by 25.4.)



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24 Terminal with 16 Standard and **8 High Current Terminals** Vertical PCB **Screw Clamp** 111000 **TECHNICAL INFORMATION Electrical: Terminal Type:** Standard: Screw/Pressure Plate Standard Terminal: 16A, 300V, 22-14 AWG High Current: Box Clamp High Current Terminal: **Terminal Screw Size:** 50A, 300V, 18-8 AWG M3.5 / M4 **Housing Material: Recommended Torque:** Glass-filled Polycarbonate 0.8Nm / 1.2Nm Temperature Range: Max. PCB's: Up to 125°C (257°F) (2) Vertical Flammability Rating: Mounting: UL94 V-O 35mm DIN Rail or Color: Light Gray optional panel mounting* ORDERING INFORMATION Part Number Туре Description PCB Connection 91.730 KU4089BHC **Right Angle Pins** Machine Solder/ Wire Jumper ACCESSORIES Part Number Туре Accessories 1 Meter DIN Rail 2511120/1M S35x7.5/1M Screw-hole and 91.201.1 SHPC Wire-Entry Cover Plug Set *Panel Mount Tab 93.001.5 PMA/KU ENCLOSURE DRAWING (To convert to inches divide by 25.4.) 1 70 ⓓ æ • 98.8 35.5 6 35 ۲ *** 52.9 57.9 M4 DIN Rail 60.4 PCB DRAWING (To convert to inches divide by 25.4.) 1 R1



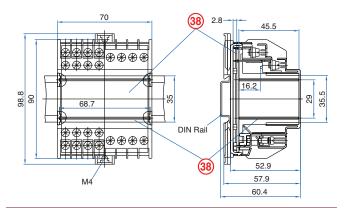
24 Terminal with 16 Standard and **8 High Current Terminals Horizontal PCB** Screw Clamp



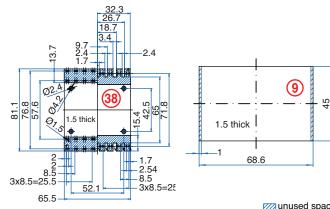
TECHNICAL INFORMATION

TECHNICAL INFOR	MATION		
Electrical: Standard Terminal: 16A, 300V, 22-14 AW High Current Terminal 50A, 300V, 18-8 AWG Housing Material: Glass-filled Polycarbo Temperature Range Up to 125°C (257°F) Flammability Rating UL94 V-O Color: Light Gray	Standard: G High Curr I: Terminal S M3.5 / M4 Recomme nate 0.8Nm/ 1. Max. PCB (1) Horizot Mounting: 35mm Dif	Terminal Type: Standard: Screw/Pressure Plat High Current: Box Clamp Terminal Screw Size: M3.5 / M4 Recommended Torque:	
ORDERING INFORM	ATION		
Part Number Type 91.740 KU4089Cł	Description HC Straight Pins	PCB Connection Machine Solder/ Wire Jumper	
ACCESSORIES			
Accessories 1 Meter DIN Rail Screw-hole and Wire-Entry Cover Plug S	Part Number 2511120/1M 91.201.1 et	Type TS35x7.5/1M SHPC	
*Panel Mount Tab	93.001.5	PMA/KU	

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



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32 Terminal			32 Termina	al	11	
Vertical PCB Screw Clamp			Horizontal PCE Screw Clamp			
	تتتر	تتتت			ji	
TECHNICAL INFORMAT	ION		TECHNICAL	INFORMATI	ION	
Electrical: 16A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Temperature Range:	Terminal M3.5 Recomm	Type: Pressure Plate Screw Size: ended Torque:	Electrical: 16A, 300V, 22 Housing Mat Glass-filled P Temperature	erial: Polycarbonate Range:	Terminal M3.5 Recomm	Type: Pressure Plate Screw Size: nended Torque:
Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray	0.8Nm Max. PCI (4) Vertio Mounting 35mm D	cal	Up to 125°C Flammability UL94 V-O Color: Light Gray		Mounting	zontal, (2) Vertical
0 7	optional	panel mounting*			optional	panel mounting*
ORDERING INFORMAT			ORDERING I			
Part Number Type 91.280 KU4003B	Description Right Angle Pins	PCB Connection Machine Solder/ Wire Jumper	Part Number 91.260	Type KU4003C	Description Straight Pins	PCB Connection Machine Solder
ACCESSORIES			ACCESSORII	ES		
1 Meter DIN Rail Screw-hole and Vire-Entry Cover Plug Set Panel Mount Tab	Part Number 2511120/1M 91.201.1 93.001.5	Type TS35x7.5/1M SHPC PMA/KU	Accessories 1 Meter DIN Ra Screw-hole and Wire-Entry Cove *Panel Mount Ta	ail 2 d er Plug Set b	art Number 2511120/1M 91.201.1 93.001.5	Type TS35x7.5/1M SHPC PMA/KU
ENCLOSURE DRAWING	(To convert to incl	61	ENCLOSURE	DRAWING	(To convert to inc	hes divide by 25.4.)
72 72 72 72 72 72 72 72 72 72	35				35 35	46 3 90 53
M4		il	M	14		58 61
2.54	rt to inches divide t	y 25.4.)	PCB DRAWIN 8 7 7 7 7 7 7 7 7 7 7 7 7 7		t to inches divide I	by 25.4.)
6.7			8.5			
	<u>21.7</u> 49.5			<u>3.5=59.5</u> 65.5	-2	

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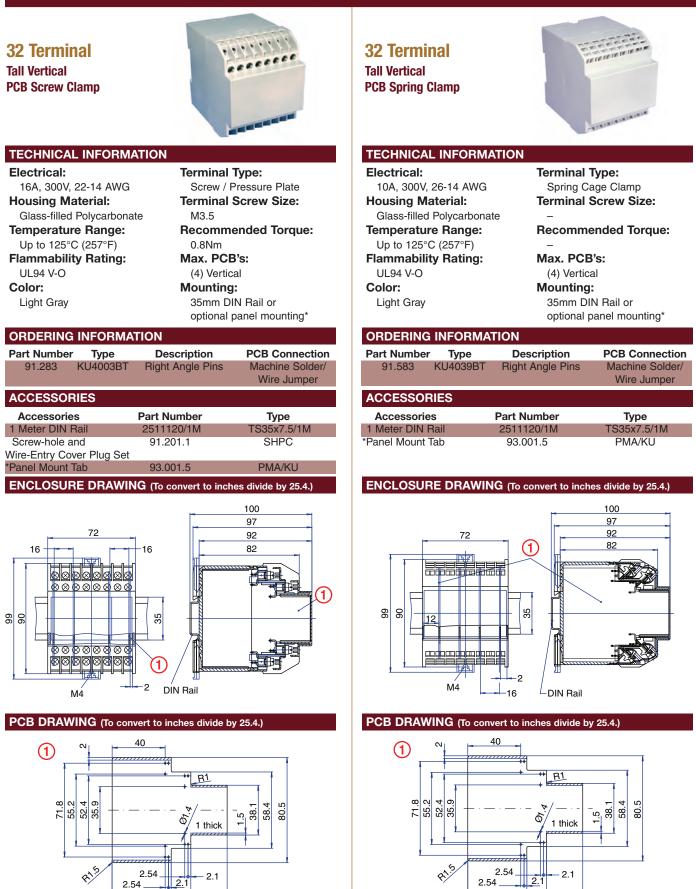
32 Terminal Vertical PCB Spring Clamp			32 Termin Horizontal PC Spring Clamp	B			
TECHNICAL INFORM			TECHNICAL				
		Turnet	Electrical:			Turaci	
Electrical:	Terminal	•••					
10A, 300V, 26-14 AWG Housing Material:		age Clamp Screw Size:	10A, 300V, 26-14 AWG Housing Material:		1 0	Spring Cage Clamp Terminal Screw Size:	
Glass-filled Polycarbon		Sciew Size.	Glass-filled I			lerminal Screw Size:	
Temperature Range:		ended Torque:	Temperature	•		nended Torque:	
Up to 125°C (257°F)	_		Up to 125°C	-	_		
Flammability Rating:	Max. PCE	3's:	Flammability		Max. PC	B's:	
UL94 V-O	(4) Vertic	al	UL94 V-O	· ·	(1) Horiz	zontal	
Color:	Mounting	:	Color:		Mountin	g:	
Light Gray		IN Rail or	Light Gray			DIN Rail or	
	optional p	panel mounting*			optional	panel mounting*	
ORDERING INFORM	ATION		ORDERING	INFORMA	TION		
Part Number Type	Description	PCB Connection	Part Number	Туре	Description	PCB Connection	
91.580 KU4039B	Right Angle Pins	Machine Solder/	91.560	KU4039C	Straight Pins	Machine Solder	
		Wire Jumper					
ACCESSORIES			ACCESSOR	ES			
ACCESSONIES					Part Number	Туре	
Accessories	Part Number	Туре	Accessories				
Accessories 1 Meter DIN Rail *Panel Mount Tab	2511120/1M 93.001.5	TS35x7.5/1M PMA/KU	1 Meter DIN R *Panel Mount Ta	ail ab	2511120/1M 93.001.5	TS35x7.5/1M PMA/KU	
Accessories 1 Meter DIN Rail	2511120/1M 93.001.5	TS35x7.5/1M PMA/KU	1 Meter DIN R *Panel Mount Ta ENCLOSUR	ail ab	2511120/1M 93.001.5	TS35x7.5/1M PMA/KU	

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65.5



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45.2

60.2

88

would be a constructed space

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6.7

21.7

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16 Terminal Vertical PCB Screw Clamp			16 Terminal Horizontal PCB Screw Clamp		
TECHNICAL INFORMAT	ION		TECHNICAL INFO	RMATION	
Electrical: 16A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F)	Terminal M3.5	Type: Pressure Plate Screw Size: ended Torque:	Electrical: 16A, 300V, 22-14 A Housing Material: Glass-filled Polycar Temperature Rang Up to 125°C (257°F	Terminal bonate M3.5 ge: Recomm	Type: Pressure Plate Screw Size: ended Torque:
Flammability Rating:	Max. PCE	Pier	Flammability Ratir		B'er
			-	•	
UL94 V-O	(2) Vertic		UL94 V-O		contal, (2) Vertical
Color:	Mounting	:	Color:	Mounting	j:
Light Gray	35mm DI	IN Rail or	Light Gray	35mm D	IN Rail or
	optional i	panel mounting*		optional	panel mounting*
	· ·	Ű			· •
ORDERING INFORMATIO	ON		ORDERING INFOR	RMATION	
Part Number Type	Description	PCB Connection	Part Number Type	e Description	PCB Connection
	Right Angle Pins	Machine Solder/	91.230 KU4090	•	Machine Solder
	0 0	Wire Jumper		5	
40050000150					
ACCESSORIES			ACCESSORIES		
Accessories Pa	art Number	Туре	Accessories	Part Number	Туре
1 Meter DIN Rail 2	2511120/1M	TS35x7.5/1M	1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Screw-hole and	91.201.1	SHPC	Screw-hole and	91.201.1	SHPC
Wire-Entry Cover Plug Set			Wire-Entry Cover Plug	Set	
*Panel Mount Tab	93.001.5	PMA/KU	*Panel Mount Tab	93.001.5	PMA/KU
	<i></i>				
ENCLOSURE DRAWING	(To convert to inch	es divide by 25.4.)	ENCLOSURE DRA	WING (To convert to incl	hes divide by 25.4.)
	DIN Rail	47 47 47 59 62	66 06 06 06 06 06 06 06 06 06 06 06 06 0	DIN Rail	46 16 43 54 59 62
PCB DRAWING (To conver	t to inches divide b	y 25.4.)	PCB DRAWING (To	o convert to inches divide b	oy 25.4.)
(1) 8:12 2:54 67 0 0 0 0 0 0 0 0 0 0 0 0 0	E	76.8	LEL S S S C L S S C C C C C C C C C C C C C	2 3x8.5=25.5 86.4 99.5	(19)

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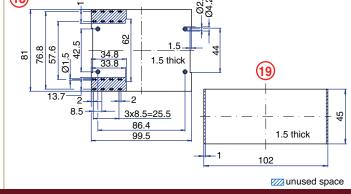
16 Terminal 16 Terminal Vertical PCB Horizontal PCB Screw Clamp Screw Clamp with vent slots with vent slots **TECHNICAL INFORMATION TECHNICAL INFORMATION Electrical: Terminal Type: Electrical: Terminal Type:** 16A. 300V. 22-14 AWG Screw / Pressure Plate 16A. 300V. 22-14 AWG Screw / Pressure Plate **Housing Material: Terminal Screw Size: Housing Material: Terminal Screw Size:** Glass-filled Polycarbonate M3 5 Glass-filled Polycarbonate M3.5 **Recommended Torque: Temperature Range: Temperature Range: Recommended Torque:** Up to 125°C (257°F) Up to 125°C (257°F) 0.8Nm 0.8Nm Flammability Rating: Max. PCB's: Flammability Rating: Max. PCB's: UL94 V-O UL94 V-O (3) Vertical (1) Horizontal, (2) Vertical Color: Mounting: Color: Mounting: Light Gray 35mm DIN Rail or Light Gray 35mm DIN Rail or optional panel mounting* optional panel mounting* **ORDERING INFORMATION ORDERING INFORMATION** Description **PCB** Connection Description **PCB** Connection Part Number Туре Part Number Туре 91.255 KU4090B16V Right Angle Pins Machine Solder/ 91.235 KU4090C16V Straight Pins Machine Solder Wire Jumper ACCESSORIES ACCESSORIES Accessories Part Number Туре Accessories Part Number Туре 1 Meter DIN Rail 1 Meter DIN Rail 2511120/1M 35x7.5/1M 2511120/1M 35x7.5/1M Screw-hole and 91.201.1 SHPC Screw-hole and 91.201.1 SHPC Wire-Entry Cover Plug Set Wire-Entry Cover Plug Set *Panel Mount Tab 93.001.5 PMA/KU *Panel Mount Tab 93.001.5 PMA/KU ENCLOSURE DRAWING (To convert to inches divide by 25.4.) ENCLOSURE DRAWING (To convert to inches divide by 25.4.) (18) 105 105 <u>aaaa</u>a *** ΠD 66 66 *** 4 @ @ @ @ @ d R 43 43 54 M4 **DIN Rail**

PCB DRAWING (To convert to inches divide by 25.4.) (1) R1 .5 | 38.1 58.4 76.8 71.8 55.2 52.4 35.9 4 6 1 thick 54 2.1 2.54 2.1 6.7 21.7 49.5 white a second s

59

54 M4 **DIN Rail** 59 PCB DRAWING (To convert to inches divide by 25.4.) 13.7 (18)

(19)



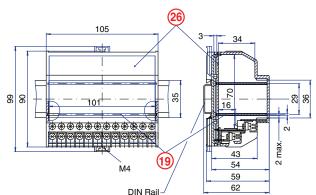
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24 Terminal Vertical PCB Screw Clamp			24 Terminal Horizontal PCB Screw Clamp		
TECHNICAL INFORMA	TION		TECHNICAL INFORM	MATION	
Electrical: 16A, 300V, 22-14 AWG Housing Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color:	Terminal Screw / F Terminal M3.5	Pressure Plate Screw Size: ended Torque: 3's: al	Electrical: 16A, 300V, 22-14 AWC Housing Material: Glass-filled Polycarbor Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color:	G Termina G Screw Termina M3.5 Recomi 0.8Nm Max. PO	/ Pressure Plate al Screw Size: mended Torque: CB's: rizontal (2) Vertical
Light Gray	35mm DI		Light Gray		DIN Rail or
Light didy		banel mounting*	Light druy		al panel mounting*
ORDERING INFORMAT Part Number Type 91.290 KU4090B24	ION Description Right Angle Pins	PCB Connection Machine Solder/ Wire Jumper	ORDERING INFORM Part Number Type 91.270 KU4090C2	ATION Description	PCB Connection
ACCESSORIES			ACCESSORIES		
Accessories 1 Meter DIN Rail Screw-hole and Wire-Entry Cover Plug Set *Panel Mount Tab ENCLOSURE DRAWING		13 14 13 14 15 13 13 14 15 15 15 15 15 15 15 15 15 15	ACCESSORIES Accessories 1 Meter DIN Rail Screw-hole and Wire-Entry Cover Plug Set *Panel Mount Tab ENCLOSURE DRAW	93.001.5 ING (To convert to in	Type TS35x7.5/1M SHPC PMA/KU ches divide by 25.4.)
PCB DRAWING (To conv	ert to inches divide by	<u>62</u>	PCB DRAWING (To co	onvert to inches divide	by 25.4.)
	37.7 5 6.3	4. 4.	26 5 6 7 7 7 1 .5 1 .5 thi 1 .5	31	(19 1.5 thick

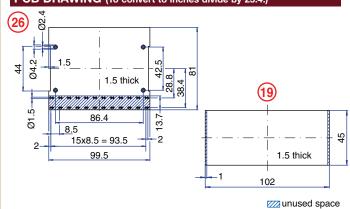
2.1 6.7

217

Recommended Torque: 0.8Nm Max. PCB's: (1) Horizontal (2) Vertical Mounting: 35mm DIN Rail or optional panel mounting* Description **PCB** Connection Straight Pins Machine Solder t Number Туре 11120/1M 35x7.5/1M 1.201.1 SHPC



o inches divide by 25.4.)



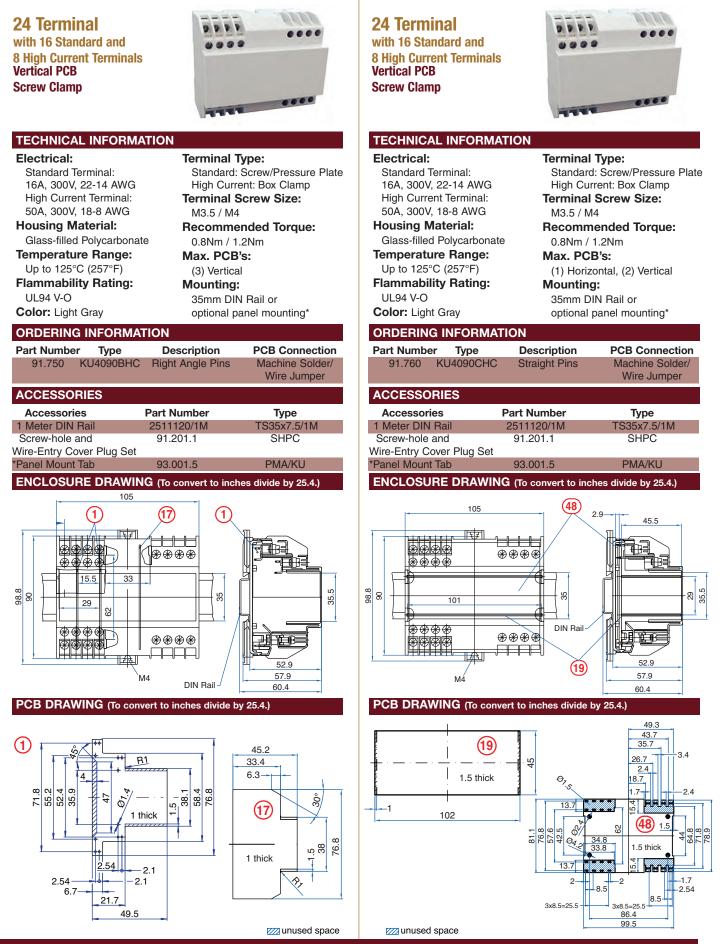
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white the second second

24 Terminal Vertical PCB Spring Clamp	24 Terminal Horizontal PCB Spring Clamp
TECHNICAL INFORMATION Electrical: Terminal Type: 10A, 300V, 26-14 AWG Spring Cage Clamp Housing Material: Terminal Screw Size: Glass-filled Polycarbonate - Temperature Range: Percention Up to 125°C (257°F) - Flammability Rating: Max. PCB's: UL94 V-O (6) Vertical Color: 35mm DIN Rail or optional panel mounting*	TECHNICAL INFORMATIONElectrical: 10A, 300V, 26-14 AWGTerminal Type: Spring Cage ClampHousing Material: Glass-filled PolycarbonateTerminal Screw Size: -Temperature Range: Up to 125°C (257°F)-Up to 125°C (257°F)-Flammability Rating: UL94 V-OMax. PCB's: (1) HorizontalLight Gray35mm DIN Rail or optional panel mounting*
ORDERING INFORMATION Part Number Type Description PCB Connection 91.590 KU4040B Right Angle Pins Machine Solder/	ORDERING INFORMATION Part Number Type Description PCB Connection 91.570 KU4040C Straight Pins Machine Solder
ACCESSORIES Accessories Part Number Type 1 Meter DIN Rail 2511120/1M TS35x7.5/1M Panel Mount Tab 93.001.5 PMA/KU	ACCESSORIESAccessoriesPart NumberType1 Meter DIN Rail2511120/1MTS35x7.5/1M*Panel Mount Tab93.001.5PMA/KU
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)	ENCLOSURE DRAWING (To convert to inches divide by 25.4.)
PCB DRAWING (Io convert to inches divide by 25.4.) 37.7 6.3 6.3 7 7 7 7 7 7 7 7	PCB DRAWING (to convert to inches divide by 25.4.) 26 7 7 7 7 7 7 7 86.4 7 7 8.5 86.4 7 7 7 7 7 8 86.4 7 7 7 7 7 7 7 7 7 7

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N04000 301103					
48 Terminal Vertical PCB Screw Clamp	******		48 Terminal Horizontal PCB Screw Clamp	P.P.P.P.P.F.	accece
TECHNICAL INFORMATI Electrical: 16A, 300V, 22-14 AWG	Terminal	Type: Pressure Plate	TECHNICAL INFOR Electrical: 16A, 300V, 22-14 AW	Terminal	Type: Pressure Plate
Housing Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F)	M3.5	Screw Size: ended Torque:	Housing Material: Glass-filled Polycarbo Temperature Range Up to 125°C (257°F)	onate M3.5 e: Recomm	Screw Size: nended Torque:
Flammability Rating: UL94 V-O Color: Light Gray	Max. PCB (6) Vertica Mounting 35mm DI	al : N Rail or	Flammability Rating UL94 V-O Color: Light Gray	g: Max. PC (1) Horiz Mounting 35mm D	zontal, (2) Vertical g: DIN Rail or
		anel mounting*			panel mounting*
ORDERING INFORMATIC			ORDERING INFOR		
Part Number Type 91.330 KU4090B48 F	Description Right Angle Pins	PCB Connection Machine Solder/ Wire Jumper	Part Number Type 91.310 KU4090C	Description248Straight Pins	PCB Connection Machine Solder
ACCESSORIES			ACCESSORIES		
Accessories Pa 1 Meter DIN Rail 2	art Number 511120/1M	Type TS35x7.5/1M	Accessories 1 Meter DIN Rail Screw-hole and	Part Number 2511120/1M	Type TS35x7.5/1M
Wire-Entry Cover Plug Set	91.201.1 93.001.5	SHPC PMA/KU	Wire-Entry Cover Plug S *Panel Mount Tab	91.201.1 Set 93.001.5	SHPC PMA/KU
ENCLOSURE DRAWING	(To convert to inch	es divide by 25.4.)	ENCLOSURE DRAV	VING (To convert to inc	hes divide by 25.4.)
			6 6 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	21 05 05 05 05 05 05 05 05 05 05 05 05 05	46 3 67 17 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 67 88 88 88 88 88 88 88 88 88 88 88 88 88
PCB DRAWING (To convert	t to inches divide by	/ 25.4.)	PCB DRAWING (To d	convert to inches divide I	oy 25.4.)
71.8 55.2 35.9 55.2 55.2 55.2	*** <u></u>	76.8	21) +	y 425 7.68 81 81 13.7	(19)

winused space

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<u>1</u>3

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1.5 thick

winused space

102

86.4

15x8.5=93.5

99.5

2.54

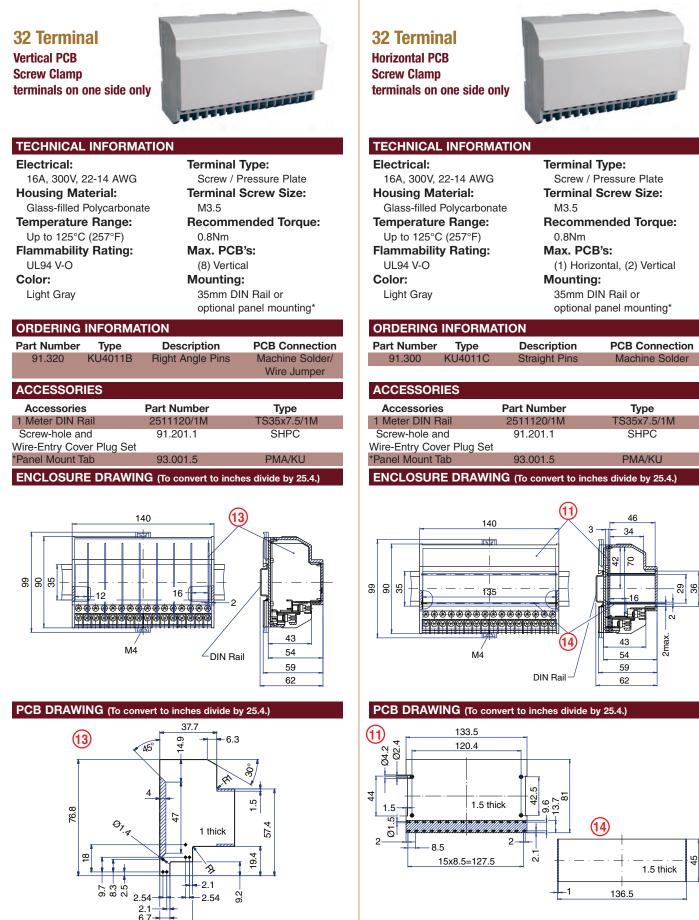
21.7

2.54 — 6.7-2.1

-2.1

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white a space

21.7

32 Terminal

Vertical PCB

Screw Clamp

terminals in corners only TTT FTT

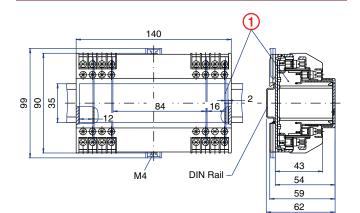
TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-14 AWG **Housing Material:** Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray

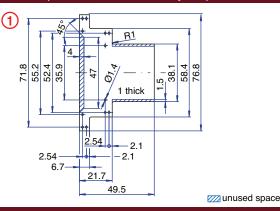
Terminal Type: Screw / Pressure Plate **Terminal Screw Size:** M3.5 **Recommended Torque:** 0.8Nm Max. PCB's: (4) Vertical Mounting: 35mm DIN Rail or optional panel mounting*

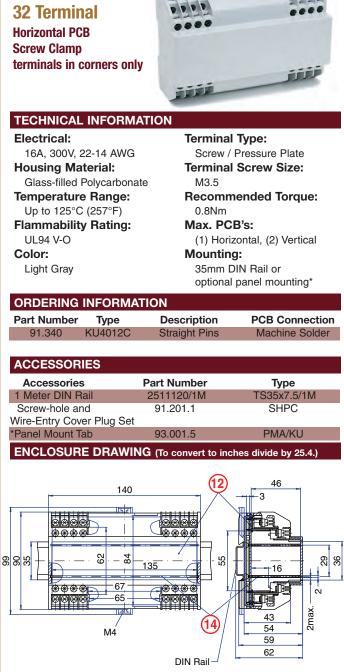
ORDERING INFORMATION

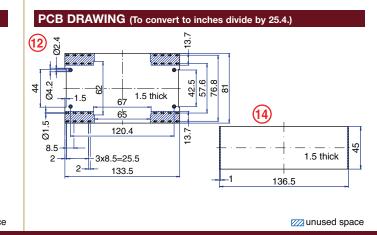
Part Number	Туре	Description	PCB Connection	
91.360	KU4012B	Right Angle Pi	ns Machine Solder/ Wire Jumper	
ACCESSOR	IES			
Accessories	6	Part Number	Туре	
1 Meter DIN R	ail	2511120/1M	TS35x7.5/1M	
Screw-hole ar	nd	91.201.1	SHPC	
Wire-Entry Cov	er Plug Set			
*Panel Mount T	ab	93.001.5	PMA/KU	
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)				



PCB DRAWING (To convert to inches divide by 25.4.)





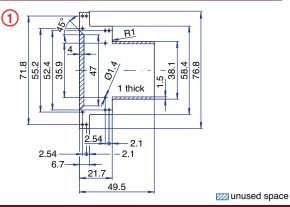


32 Terminal Vertical PCB Screw Clamp with vent slots		ecce
TECHNICAL INFORMA	ATION	
Electrical: 16A, 300V, 22-14 AWG		Pressure Plate
Housing Material: Glass-filled Polycarbona		Screw Size:
Temperature Range:		nended Torque:
Up to 125°C (257°F)	0.8Nm	londoù lorquoi
Flammability Rating:	Max. PC	B's:
UL94 V-O	(1) Verti	cal
Color:	Mounting	•
Light Gray		DIN Rail or panel mounting*
	•	panermounting
ORDERING INFORMA		
Part Number Type 91.365 KU4012BV	Description Right Angle Pins	PCB Connection Machine Solder/
91.305 KU4012DV		Wire Jumper
ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Screw-hole and	91.201.1	SHPC
Wire-Entry Cover Plug Set	00.004 5	
Panel Mount Tab	93.001.5	PMA/KU
ENCLOSURE DRAWIN	IG (To convert to inc	hes divide by 25.4.)
M4		43 54

59

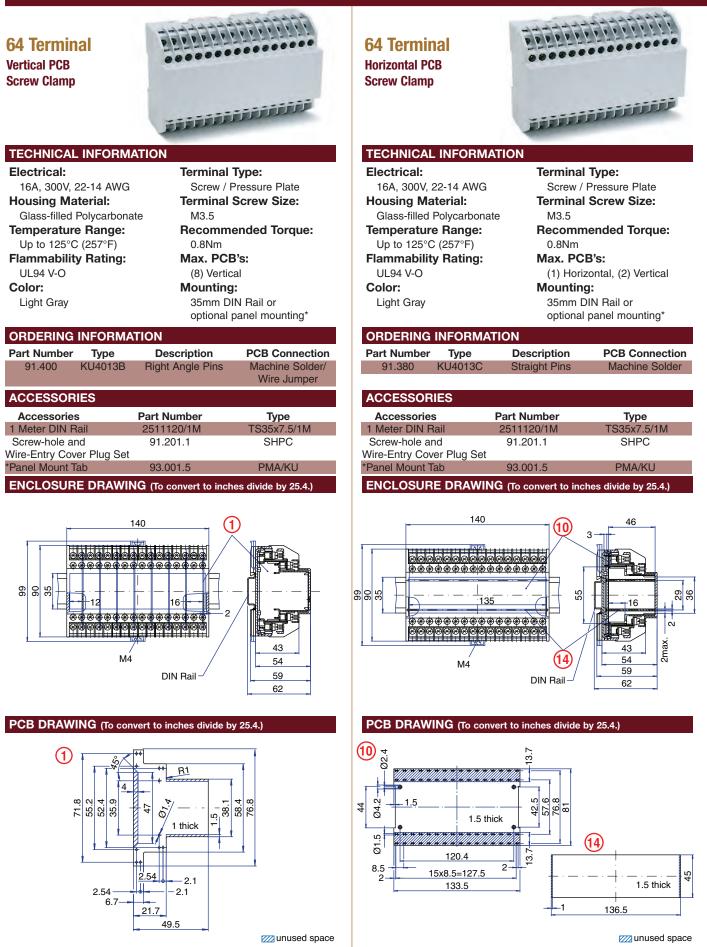
62

PCB DRAWING (To convert to inches divide by 25.4.)



32 Terminal ece **Horizontal PCB** Screw Clamp with vent slots **TECHNICAL INFORMATION Electrical: Terminal Type:** 16A, 300V, 22-14 AWG Screw / Pressure Plate **Housing Material: Terminal Screw Size:** Glass-filled Polycarbonate M3 5 **Temperature Range: Recommended Torque:** Up to 125°C (257°F) 0.8Nm Max. PCB's: Flammability Rating: UL94 V-O (1) Horizontal Color: Mounting: Light Gray 35mm DIN Rail or optional panel mounting* **ORDERING INFORMATION** Connection Description **PCB** Connection Part Number Туре 91.345 KU4012CV Straight Pins Machine Solder ACCESSORIES Accessories Part Number Туре 1 Meter DIN Rail 2511120/1M S35x7.5/1M Screw-hole and 91.201.1 SHPC Wire-Entry Cover Plug Set *Panel Mount Tab 93.001.5 PMA/KU ENCLOSURE DRAWING (To convert to inches divide by 25.4. 140 (12) (14 *** ktin. ቅወቅወ TU 88 s In B 2013 *** 43 M4 54 59 62 ╘╘╘╘╘╘ PCB DRAWING (To convert to inches divide by 25.4.) 13.7 (12) 02.4 Ø4.2-42.5 57.6 76.8 81 44 1.5 thick 1 5 67 (14) 6¹5 'n 120.4 13.7 6 8.5 45 1.5 thick 3x8.5=25.5 2 2-133.5 136.5

winused space



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PCB Connection

36

Machine Solder

64 Terminal Vertical PCB Spring Clamp	64 Terminal Horizontal PCB Spring Clamp
TECHNICAL INFORMATIONElectrical:Terminal Type:10A, 300V, 26-14 AWGSpring Cage ClampHousing Material:Terminal Screw Size:Glass-filled Polycarbonate–Temperature Range:Recommended Torque:Up to 125°C (257°F)–Flammability Rating:Max. PCB's:UL94 V-O(8) VerticalColor:35mm DIN Rail or optional panel mounting*	TECHNICAL INFORMATIONElectrical: 10A, 300V, 26-14 AWGTerminal Type: Spring Cage ClampHousing Material: Glass-filled PolycarbonateTerminal Screw Size: -Temperature Range: Up to 125°C (257°F)-Flammability Rating: UL94 V-OMax. PCB's: (1) HorizontalColor: Light Gray35mm DIN Rail or optional panel mounting*
ORDERING INFORMATION Part Number Type Description PCB Connection 91.600 KU4041B Right Angle Pins Machine Solder/ Wire Jumper ACCESSORIES Part Number Type 1 Meter DIN Rail 2511120/1M TS35x7.5/1M *Panel Mount Tab	ORDERING INFORMATION Part Number Type Description PCB Connection 91.610 KU4041C Straight Pins Machine Solde Accessories Part Number Type 1 Meter DIN Rail 2511120/1M TS35x7.5/1M *Panel Mount Tab
<image/>	ENCLOSURE DRAWING (To convert to inches divide by 25.4.)
PCB DRAWING (To convert to inches divide by 25.4.) $ \begin{array}{c} \hline \hline $	PCB DRAWING (To convert to inches divide by 25.4.)

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The versatile **KU4100 series** features a compact design with different terminal configuration options. They are available in six widths with double level terminal locations. Terminal configuration options include blank enclosures with no terminal openings, fixed PCB terminals and pluggable PCB terminals.

MATERIALS

Housing

Housing Shell: Polycarbonate, 10% Glass Filled Base: Polycarbonate, 10% Glass Filled

Terminals

Housing: Polyamide Terminal Pins: Tinned Brass

TEMPERATURE RATING:

115°C (239°F) UL94V0 Housing: Light Gray Cover with Black Base

PROTECTION

KU4100 enclosures have an IP30 rating, IP20 for terminal openings, (finger protected) and meet VBG4 and other European accident prevention requirements.

CONSTRUCTION

The KU4100 enclosure series housings are supplied as unassembled kits. Each kit consists of a flat base, a housing cover and terminal sets where applicable. The terminals are set on two levels to maximize space. The terminals are machine solderable. Integral printed circuit guides are molded into the cover for proper board insertion and containment. Multiple boards can be mounted in each enclosure, usually 2 PCBs are used with the terminals and one additional PCB can be used for display or control elements in the enclosure front.

TERMINALS

There are 4 options available; no terminal openings, fixed PCB terminals, pluggable PCB terminals and high current terminals. The terminal blocks are all machine solderable.

The option of no terminal openings allows for custom openings to be made to accommodate alternate connector types.

Fixed PCB terminals are standard screw cage clamp style terminal blocks. Terminal covers are available for the fixed PCB terminal version to cover unused terminals. The terminal cover is a 12 pole strip that is breakable into individual poles. It snaps into the enclosure covering the screw hole and wire entry areas.

Pluggable PCB terminals feature male pin headers and female screw cage clamp plugs that can be plugged/unplugged. **Power source must be disconnected before plugging/unplugging terminals.**

High current terminals feature rising clamps where the wire is clamped between the clamp and the terminal strip.

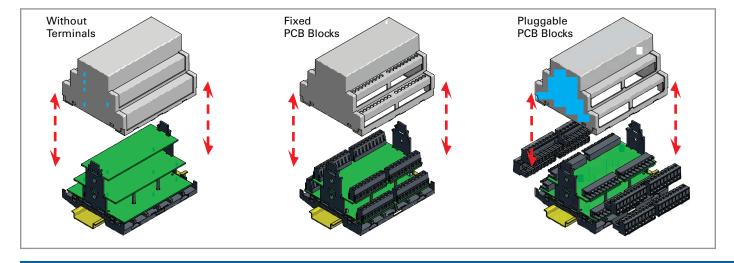
MOUNTING

The KU4100 series can easily be mounted on standard 35mm DIN rail by means of the integral mounting foot and DIN clip.

CUSTOMIZATION

We can supply the KU4100 series enclosures with many custom options including:

Partial terminal loading Enclosure bus connections Ventilation Slots Machining of custom holes



Altec

17.5mm Enclosure Without Terminals



TECHNICAL INFORMATION

Electrical:

Housing Material:

Up to 115°C (239°F)

Flammability Rating:

UL94 V-O

Color:

Terminal Type:

Terminal Screw Size: Glass-filled Polycarbonate **Temperature Range:**

Recommended Torque:

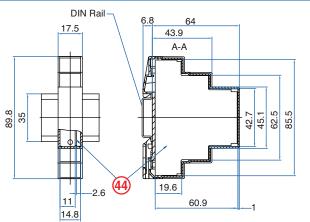
PCB Locations: (1) Vertical, Perpendicular Mounting: 35mm DIN Rail

ORDERING INFORMATION

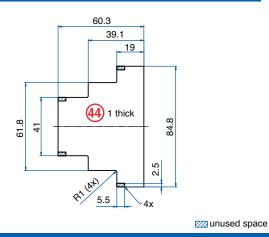
Light Gray Cover, Black Base

Part Number	Туре	Description	PCB Connection
91.800	KU4187B	Without Terminals	None
ACCESSOR	IES		
Accessories	6	Part Number	Туре
1 Meter DIN R	lail	2511120/1M	TS35x7.5/1M

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



TECHNICAL INFORMATION Electrical: 12A, 250V, 24-12 AWG **Housing Material:** Glass-filled Polycarbonate **Temperature Range:** Up to 115°C (239°F) Flammability Rating: UL94 V-O Color:

12 Terminal

Fixed PCB Blocks

Terminal Type: Screw / Rising Clamp Terminal Screw Size: M2.5 **Recommended Torque:** 0.4Nm **PCB Locations:** (1) Vertical, Perpendicular Mounting: 35mm DIN Rail

ORDERING INFORMATION

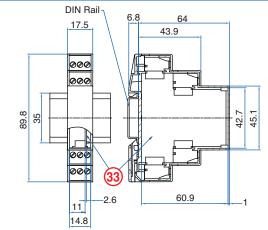
and Terminals

Light Gray Cover, Black Base

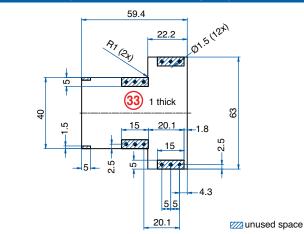
Part Number	Туре	Description	PCB Connection
91.801	KU4187F	Fixed PCB Terminal	Machine Solder
10050000			

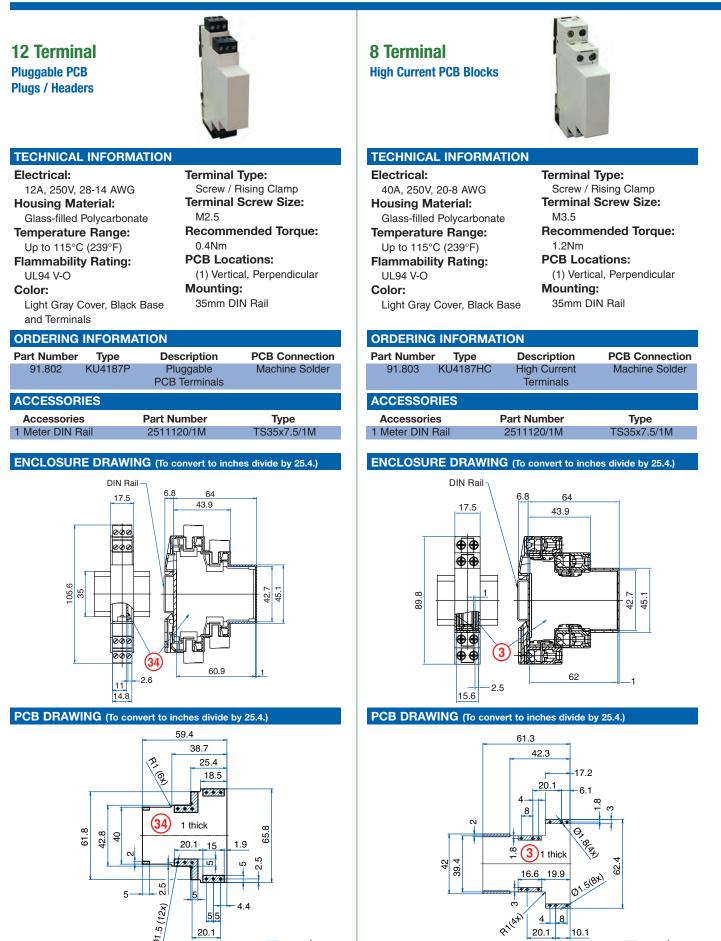
ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M
Terminal Cover (12 pole)	91.801.1	TCS/12

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)





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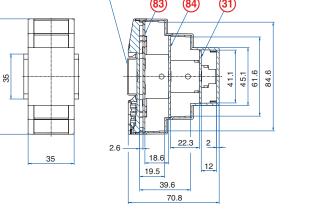
-2.6

18.5

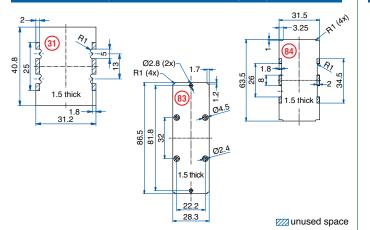
19.5

39.6

35mm Enclosure Without Terminals			20 Termin Fixed PCB Blo		2000	000
TECHNICAL INFORMATI	ION		TECHNICAL	INFORM	ATION	
Electrical:	Terminal	Туре:	Electrical:		Termina	
–	- Torminal	Screw Size:	12A, 250V, 2			Rising Clamp
Housing Material: Glass-filled Polycarbonate		Screw Size:	Housing Mat Glass-filled F			Screw Size:
Temperature Range:	Recomm	ended Torque:	Temperature	,		nended Torque:
Up to 115°C (239°F)	-		Up to 115°C	(239°F)	0.4Nm	
Flammability Rating:	PCB Loca		Flammability	Rating:	PCB Loc	
UL94 V-O Color:	(3) Vertic Mounting	al, Parallel	UL94 V-O Color:		(2) Verti Mountin	ical, Parallel
Light Gray Cover, Black Ba			Light Gray C	over, Black		9. DIN Rail
			and Terminal			
ORDERING INFORMATIO	ON		ORDERING I	NFORMA	TION	
Part Number Type 91.810 KU4188B	Description Without Terminals	PCB Connection None	Part Number 91.811	Type KU4188F	Description Fixed PCB Terminal	PCB Connection Machine Solder
ACCESSORIES			ACCESSORI	ES		
	art Number	Туре	Accessories		Part Number	Туре
1 Meter DIN Rail 2	2511120/1M	TS35x7.5/1M	1 Meter DIN Ra Terminal Cover		2511120/1M 91.801.1	TS35x7.5/1M TCS/12
ENCLOSURE DRAWING	(To convert to inch	a_{2} divide by 25.4.)		· · /	IG (To convert to inc	
ENCLOSURE DRAWING	(10 convert to inch	les divide by 25.4.)	ENCLOSURE			ches divide by 25.4.)
DIN Rail-	83 8	l) <u>31</u>		DIN Rail		



PCB DRAWING (To convert to inches divide by 25.4.)



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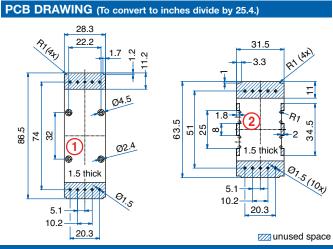
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35

89 B

35



20 Terminal Pluggable PCB Plugs / Headers	16 Terminal High Current PCB Blocks
TECHNICAL INFORMATION	TECHNICAL INFORMATION
Electrical:Terminal Type:12A, 250V, 28-14 AWGScrew / Rising ClampHousing Material:Terminal Screw Size:Glass-filled PolycarbonateM2.5Temperature Range:0.4NmUp to 115°C (239°F)0.4NmFlammability Rating:UL94 V-OUL94 V-O(2) Vertical, ParallelColor:Mounting:Light Gray Cover, Black Base35mm DIN Rail	Electrical:Terminal Type:40A, 250V, 20-8 AWGScrew / Rising ClampHousing Material:Glass-filled PolycarbonateGlass-filled PolycarbonateM3.5Temperature Range:M3.5Up to 115°C (239°F)1.2NmFlammability Rating:(2) Vertical, PerpendicularUL94 V-O(2) Vertical, PerpendicularColor:35mm DIN Rail
ORDERING INFORMATION	ORDERING INFORMATION
Part NumberTypeDescriptionPCB Connection91.812KU4188PPluggableMachine SolderPCB TerminalsPCB Terminals	Part NumberTypeDescriptionPCB Connection91.813KU4188HCHigh CurrentMachine SolderTerminalsTerminalsTerminals
ACCESSORIES	ACCESSORIES
Accessories Part Number Type	Accessories Part Number Type
1 Meter DIN Rail 2511120/1M TS35x7.5/1M	1 Meter DIN Rail 2511120/1M TS35x7.5/1M
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)	ENCLOSURE DRAWING (To convert to inches divide by 25.4.)
PCB DRAWING (To convert to inches divide by 25.4.)	PCB DRAWING (To convert to inches divide by 25.4.)
28.3 22.2 1.7 N N N 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 31.5 3	60.5 20.1 10.1 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7

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1.5 thick

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Altech

PCB Connection Machine Solder

> 45.1 61.6 84.6 41.1

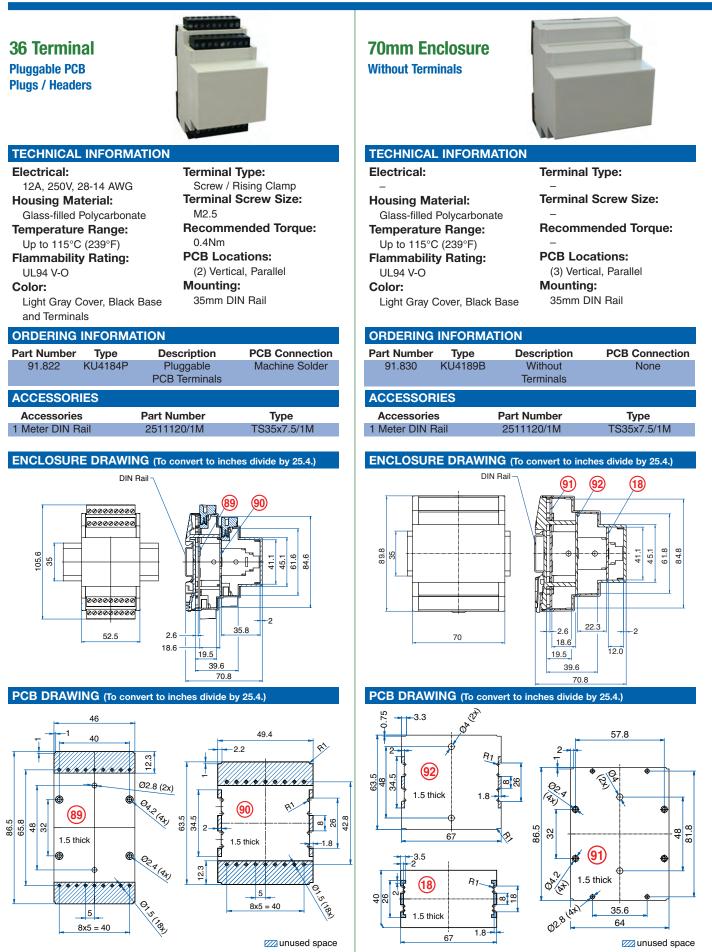
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R04100 001105						GULUEL
52.5mm Enclosur Without Terminals	e		36 Termin Fixed PCB Blo		000000	600 QEOCC
TECHNICAL INFORM	ATION		TECHNICAL	INFORM/	ATION	
		Type:	Electrical:		Termina	l Type:
Housing Material: Glass-filled Polycarbona Temperature Range: Up to 115°C (239°F) Flammability Rating: UL94 V-O Color:	Glass-filled Polycarbonate - Temperature Range: Recommended Torque: Up to 115°C (239°F) - Flammability Rating: PCB Locations: UL94 V-O (3) Vertical, Parallel		12A, 250V, 2 Housing Mar Glass-filled F Temperature Up to 115°C Flammability UL94 V-O Color: Light Gray C and Termina	terial: Polycarbona Range: (239°F) r Rating:	Screw / Termina te M2.5 Recomr 0.4Nm PCB Lo (2) Vert Mountin	/ Rising Clamp Il Screw Size: mended Torque: cations: tical, Parallel
ORDERING INFORMA	TION		ORDERING	INFORMA	TION	
Part Number Type 91.820 KU4184B	Description Without Terminals	PCB Connection None	Part Number 91.821	Type KU4184F	Description Fixed PCB Terminals	PCB Connection Machine Solde
ACCESSORIES			ACCESSOR	ES		
Accessories	Part Number	Туре	Accessories		Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M	1 Meter DIN Ra		2511120/1M	TS35x7.5/1M
			Terminal Cover		91.801.1	TCS/12
ENCLOSURE DRAWIN	IG (To convert to incl	nes divide by 25.4.)	ENCLOSUR		IG (To convert to in	ches divide by 25.4.)
∞ ເສ	N Rail 2.6 19.5 39.6 70	.8	00 00 00	00000000 000000000 000000000 52.5	=	39.6 70.8
PCB DRAWING (To con	vert to inches divide b	y 25.4.)	PCB DRAWI		vert to inches divide	by 25.4.)
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48 Terminal

Fixed PCB Blocks

<u>Altech</u>

300000000003 BBBBBBBBBBBBB

TECHNICAL INFORMATION

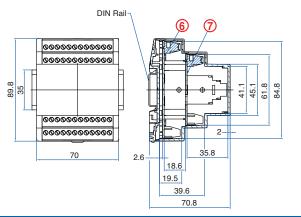
Electrical:Term12A, 250V, 24-12 AWGScHousing Material:TermGlass-filled PolycarbonateM2Temperature Range:DetectorUp to 115°C (239°F)0.4Flammability Rating:PCEUL94 V-O(2)Color:MoutLight Gray Cover, Black Base35and TerminalsSc

Terminal Type: Screw / Rising Clamp Terminal Screw Size: M2.5 Recommended Torque: 0.4Nm PCB Locations: (2) Vertical, Parallel Mounting: 35mm DIN Rail

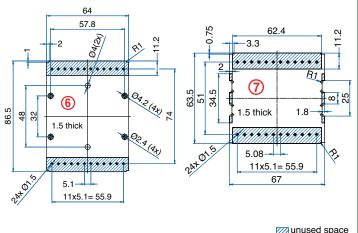
ORDERING INFORMATION

Part Number	Туре	Description	PCB Connection
91.831	KU4189F	Fixed	Machine Solder
		PCB Terminals	
ACCESSOR	IES		
Accessories	;	Part Number	Туре
1 Meter DIN R	ail	2511120/1M	TS35x7.5/1M
Terminal Cover	(12 pole)	91.801.1	TCS/12

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



 TECHNICAL INFORMATION

 Electrical:
 Terminal T

 12A, 250V, 28-14 AWG
 Screw / Ri

 Housing Material:
 Terminal S

 Glass-filled Polycarbonate
 M2.5

 Temperature Range:
 0.4Nm

 Up to 115°C (239°F)
 0.4Nm

 Flammability Rating:
 0.2 Verticat

 UL94 V-O
 (2) Verticat

 Light Gray Cover, Black Base
 35mm DIM

Terminal Type: Screw / Rising Clamp Terminal Screw Size: M2.5 Recommended Torque: 0.4Nm PCB Locations: (2) Vertical, Parallel Mounting: 35mm DIN Rail

ORDERING INFORMATION

and Terminals

48 Terminal

Pluggable PCB Plugs / Headers

 Part Number
 Type
 Description
 PCB Connection

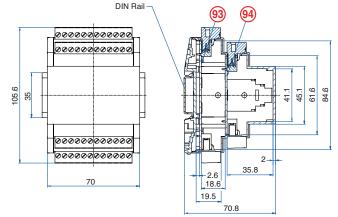
 91.832
 KU4189P
 Pluggable
 Machine Solder

 PCB Terminals
 PCESORIES
 Accessories
 Part Number

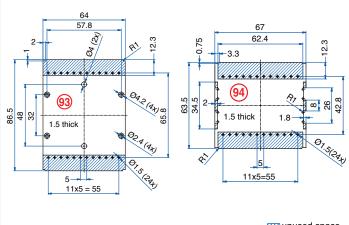
Accessories	Part Number
1 Meter DIN Rail	2511120/1M

Type TS35x7.5/1M

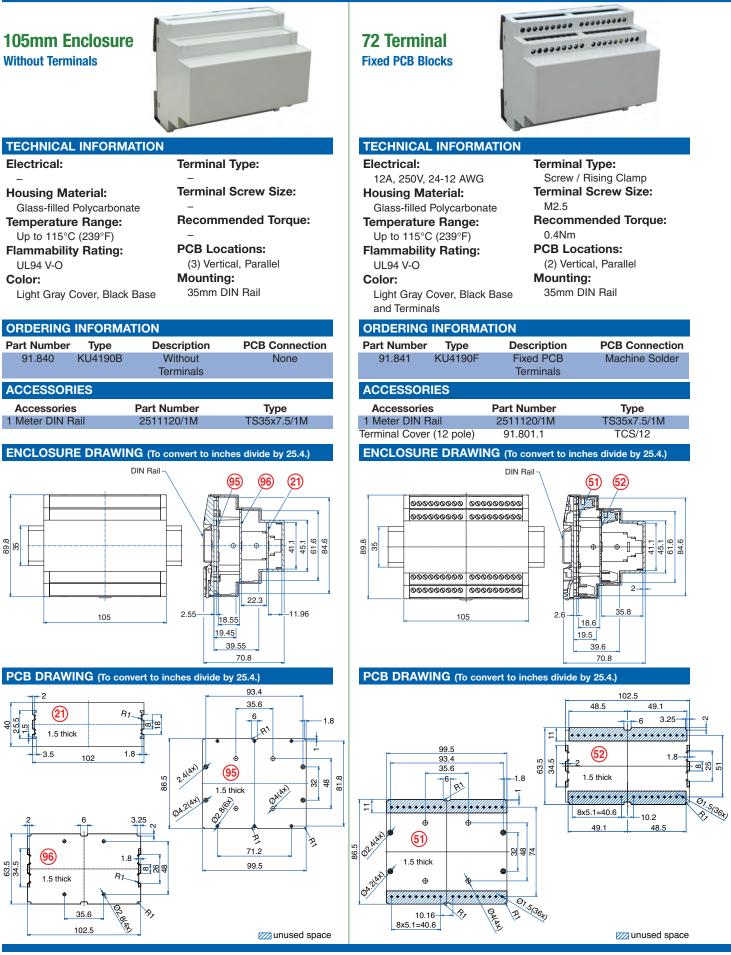
ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



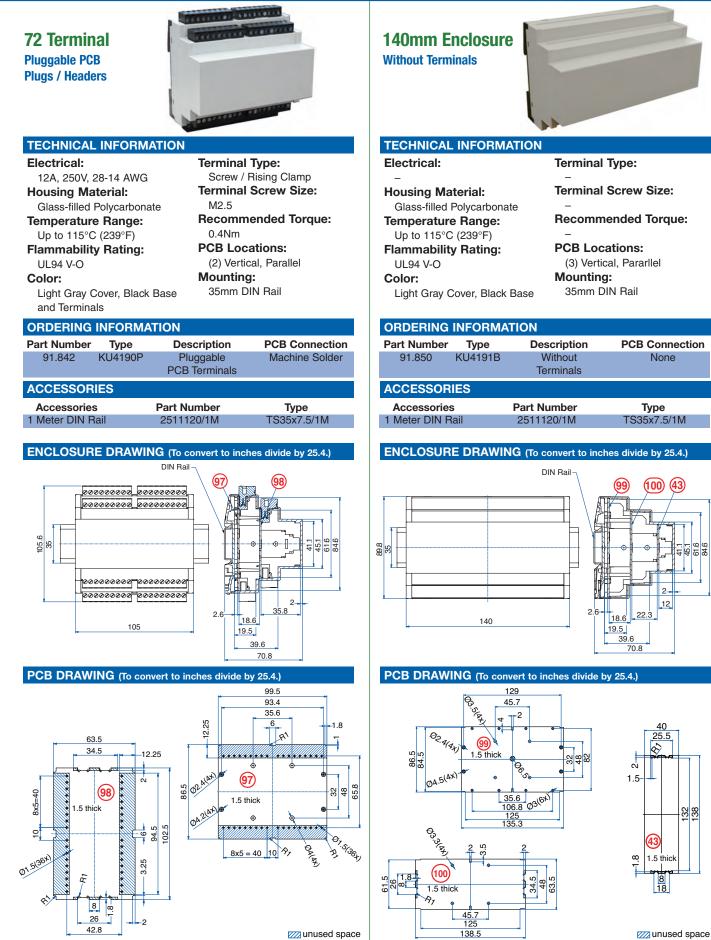
PCB DRAWING (To convert to inches divide by 25.4.)



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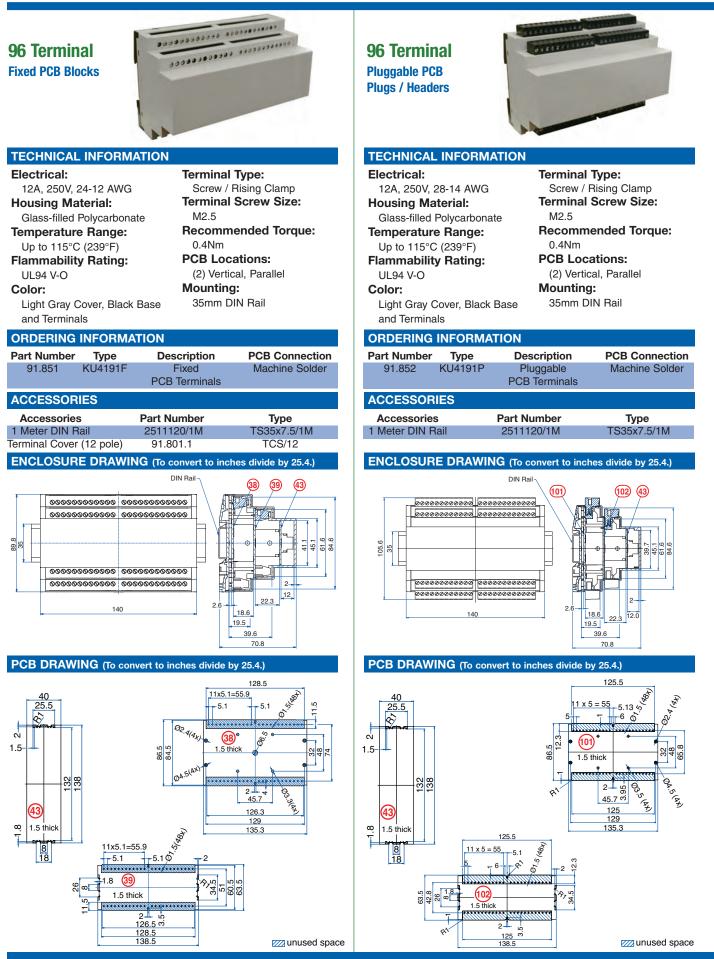


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132



KO4300 Series



The KO4300 Series Enclosures feature high density double level terminals making them ideal for many electronic applications. They are small to medium in size ranging from 16 to 64 terminals. There are 4 widths available each having a short and tall version. Terminal styles are available in fixed scew terminals, pluggable screw terminals or pluggable spring clamp terminals.

MATERIALS

Housing Shell: Polycarbonate, 10% Glass Filled Terminal Housing: Polyamide, 40% Glass Filled Terminal: Tin-plated Steel (spring terminal: stainless steel) Standard Color: Light Gray

TEMPERATURE RATINGS:

Terminal Housing: 290°C (554°F) UL94VO Housing: 115°C (239°F) UL94VO

PROTECTION

KO4300 series enclosures have an IP20 rating (finger protected) and meet VBG4 and other European accident prevention requirements.

CONSTRUCTION

The KO4300 enclosure series housings are supplied as unassembled kits. Each kit consists of a housing base, terminal cover side parts, terminal blocks and a front plate. The double level terminal design keeps the enclosure width to a minimum freeing valuable DIN rail space. The terminals are machine solderable with right angle pins. Integral printed circuit board guides are molded into the housing base to help with proper board insertion and containment. Boards are mounted vertically in the enclosure, perpendicular to the DIN rail.

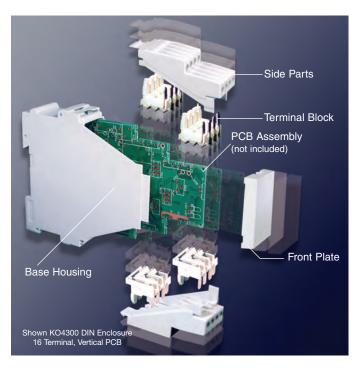
TERMINALS

Rising clamp screw terminals are used with the KO4300 series enclosures. Wires to be terminated are squeezed between the bottom of the rising clamp and the terminal strip for reliable, gas-tight connections. The terminals can be machine soldered to the board in the same step as the other components to save time and labor. All terminals have funnel shaped wire openings to eliminate wire fraying. The terminal screws can be turned with a flat tip or a #2 Philips screwdriver.

Pluggable screw clamp and spring clamp terminals are also available. A 3mm wide flat blade screwdriver should be used to open the spring terminal for wire insertion.

MOUNTING

The KO4300 series can easily be mounted on standard 35mm DIN rail by means of the integral mounting foot and DIN clip.



CUSTOMIZATION

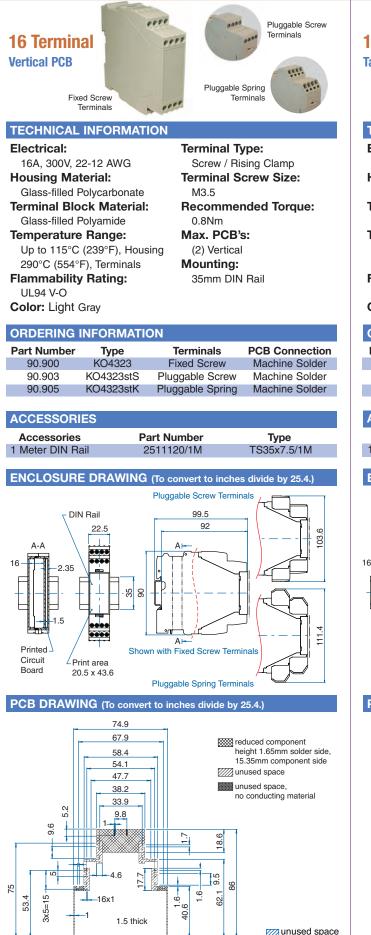
Many custom options are available for the KO4300 series enclosures. Some of the available options are:

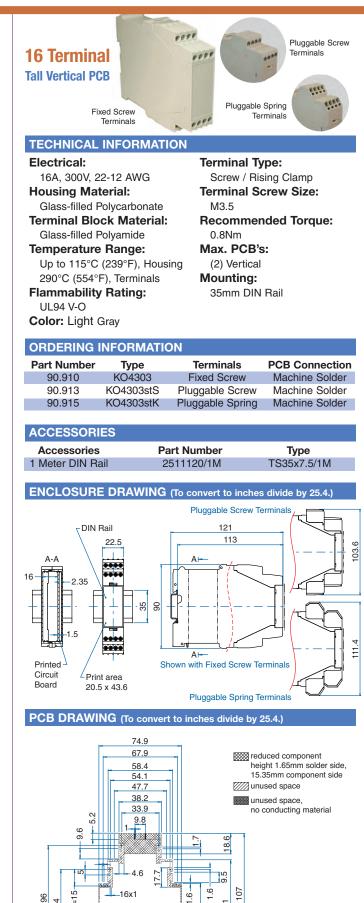
- Partial terminal loading
- Side ventilation slots
- Internal/External bus connections
- Machining of custom holes
- PCB grounding to the DIN rail
- RJ45 and DB9 openings in front plate

HOUSING ASSEMBLY

- Place all assemblies on a level surface
- Terminal blocks should be pre-assembled on the PCB
- Push the side parts over the terminal blocks ensuring that the guide pins of the terminal blocks slide into the holes of the side parts
- Snap the front plate onto the pre-mounted side parts
- Slide the PCB of the upper section into the guide groves of the base
- Slide the upper section into the base. Make sure that the wall areas overlap correctly and the guide element of the base slides in the mating recess of the base.
- Push the assembly completely together so that the clips on the side parts snap into the recesses in the base

KO4300 Series





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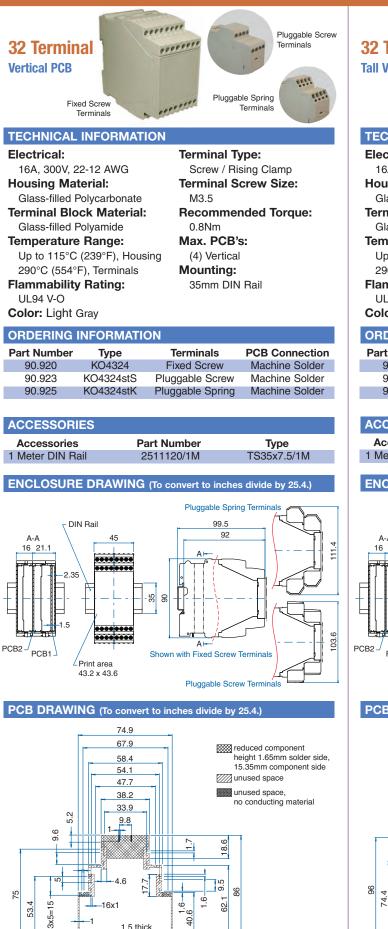
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62.0

1.5 thick

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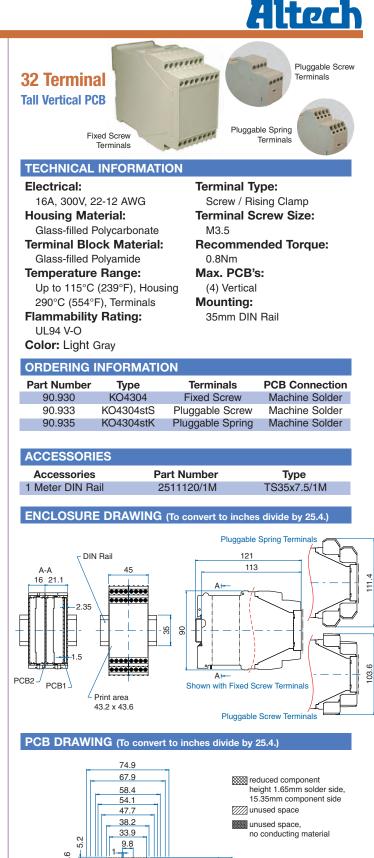
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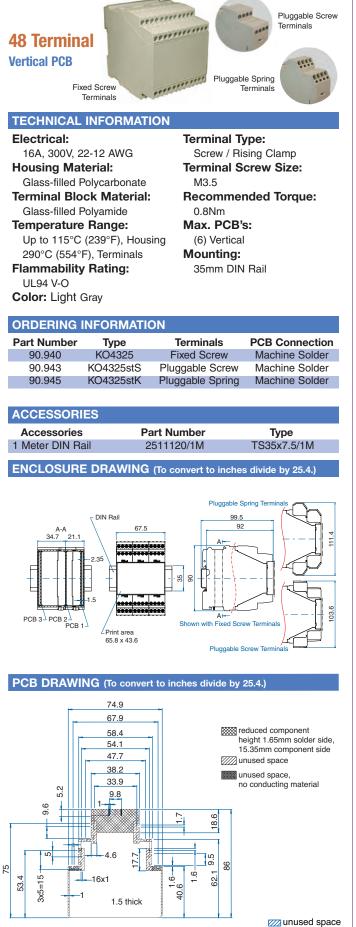
1.5 thick

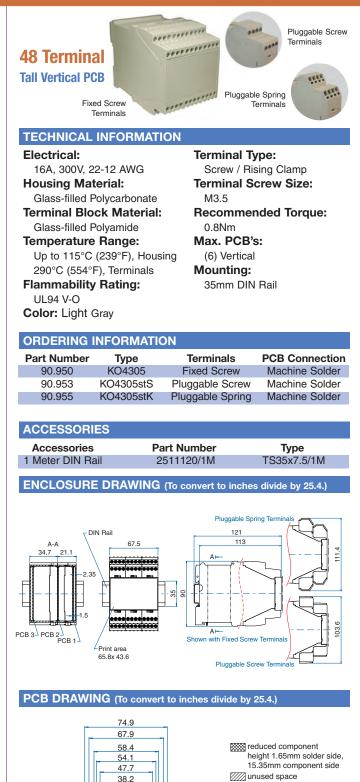
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unused space

3x5=1

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1.5 thick

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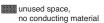
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3X5=

96

74.4



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9.5

83.1

107

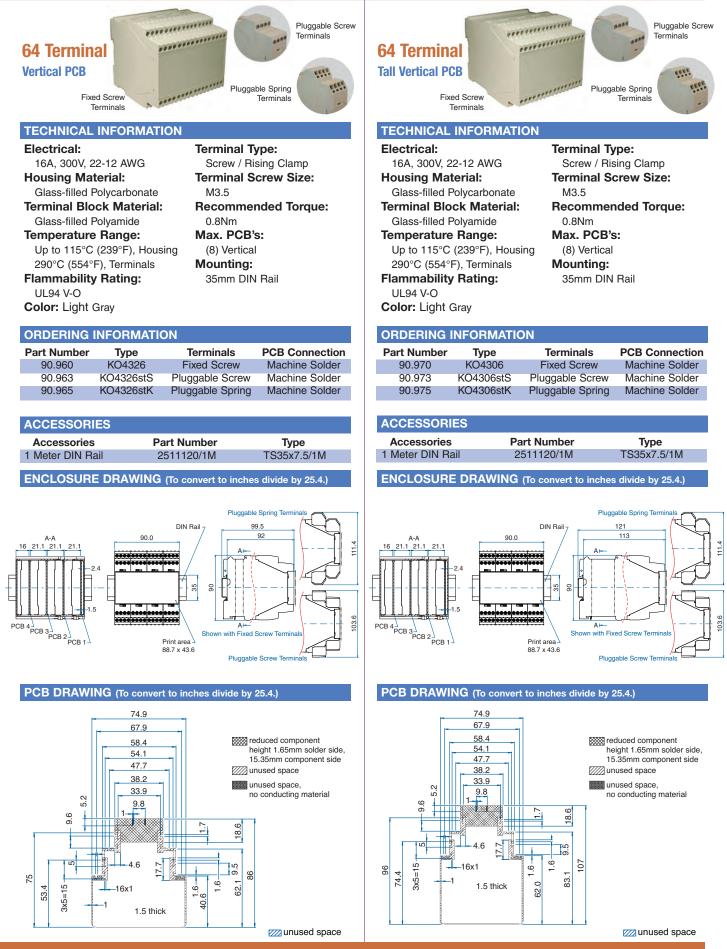
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9.1

62.0

KO4300 Series

Altech





Economical, compact KO4070 enclosures are supplied as easy to assemble kits. They are ideal for housing I/O circuits, relays, timers and other small devices. Each kit consists of two housing half shells and 4 to 16 machine solderable terminals with standard or extended length pins.

MATERIALS

Housing Shell: Polycarbonate, 10% Glass Filled Terminal: Tinned Bronze Terminal Screw: Chromated Steel

Temperature Rating:

125°C (257°F) UL94 VO Standard Color: Light Gray

PROTECTION

KO4070 enclosures have an IP20 rating (finger protected) and meet VBG4 and other European accident prevention requirements.

CONSTRUCTION

The KO4070 enclosures consist of two housing shells that snap together, and sectional, snap-together terminals. The maximum preassembled number of terminals are part of the enclosure kit. Potting is not recommended. Enclosures with removable center cover sections are available upon request.

BOARD PLACEMENT

Each enclosure can accept two boards, each up to 1.5mm (.0625 in.) thick, inserted vertically (parallel to the DIN rail) facing the terminals. These boards can be machine soldered to the terminals. Enclosure types KO4074 through KO4079, accept larger boards that can be screwed to the sidewalls of the housing shells (vertically, perpendicular to the DIN rail) using molded-in standoffs and 2 screws. Boards mounted on the sides can be 1mm (.04 in.) thick and require a wire jumper connection.

TERMINALS

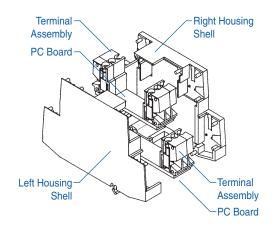
Box clamp design terminal blocks are used with the KO4070 series enclosures. Wire(s) to be terminated are squeezed between the bottom of the clamp and the busbar for reliable, gastight connections. The terminal blocks can be machine soldered to the board in the same step as the other components to save time and labor. Enclosures with extended length pins are available to increase enclosure cavity for large components. All terminals have funnel shaped wire openings to eliminate wire fraying. The terminal screws can be turned with a flat tip or a #1 or #2 Philips screwdriver.

MOUNTING

The KO4070 series have integral mounting feet that snap onto standard 35mm DIN rail. They cannot be panel mounted.

MARKING

Silk screen or attach label to the face of the enclosure.



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4 Terminal



TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations: (2) Vertical, Parallel Mounting: 35mm DIN Rail

ORDERING INFORMATION

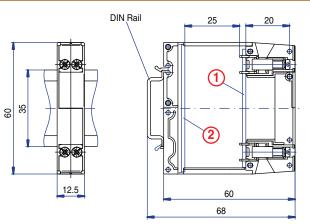
 Part Number
 Type
 Descriptio

 91.001
 KO4071
 Standard Length

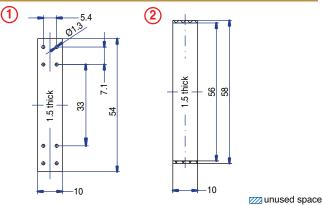
DescriptionPCB ConnectionStandard Length PinsSolder Pins

ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



6 Terminal



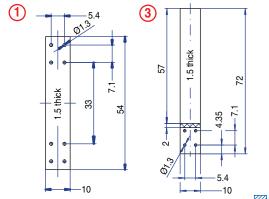
TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations: (2) Vertical, Parallel Mounting: 35mm DIN Rail

ORDERING INFORMATION PCB Connection Part Number Туре Description 91.010 KO4072 Standard Length Pins Solder Pins ACCESSORIES Accessories Part Number Type 2511120/1M 1 Meter DIN Rail TS35x7.5/1M ENCLOSURE DRAWING (To convert to inches divide by 25.4.) DIN Rail 25 20 35 75



PCB DRAWING (To convert to inches divide by 25.4.)



winused space

6 Terminal



TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-12 AWG **Housing Material:** Glass-filled Polycarbonate **Temperature Range:** Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray

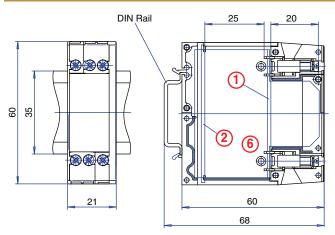
Terminal Type: Box Clamp **Terminal Screw Size:** M3.5 **Recommended Torque:** 0.8Nm PCB Locations: (1) Vertical, Perpendicular (2) Vertical, Parallel Mounting: 35mm DIN Rail

ORDERING INFORMATION

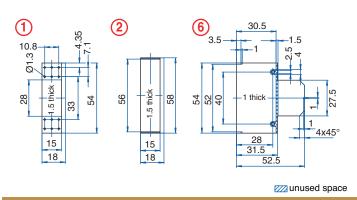
Part Number	Туре	Description	PCB Connection
91.020	KO4074	Standard Length Pins	Solder Pins

ACCESSORIES		
Accessories	Part Number	Туре
1 Meter DIN Rail	2511120/1M	TS35x7.5/1M

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)



PCB DRAWING (To convert to inches divide by 25.4.)



8 Terminal



TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-12 AWG **Housing Material:** Glass-filled Polycarbonate **Temperature Range:** Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray

Terminal Type: Box Clamp **Terminal Screw Size:** M3.5 **Recommended Torque:** 0.8Nm **PCB Locations:** (2) Vertical, Parallel Mounting: 35mm DIN Rail

ORDERING INFORMATION

Part Number Type 91.030 KO4073 Standard Length Pins

ACCESSORIES

Accessories Part Number 1 Meter DIN Rail 2511120/1M

TS35x7.5/1M

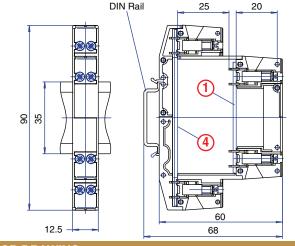
PCB Connection

Solder Pins

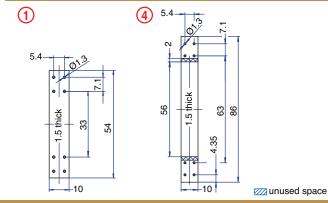
Туре

ENCLOSURE DRAWING (To convert to inches divide by 25.4.)

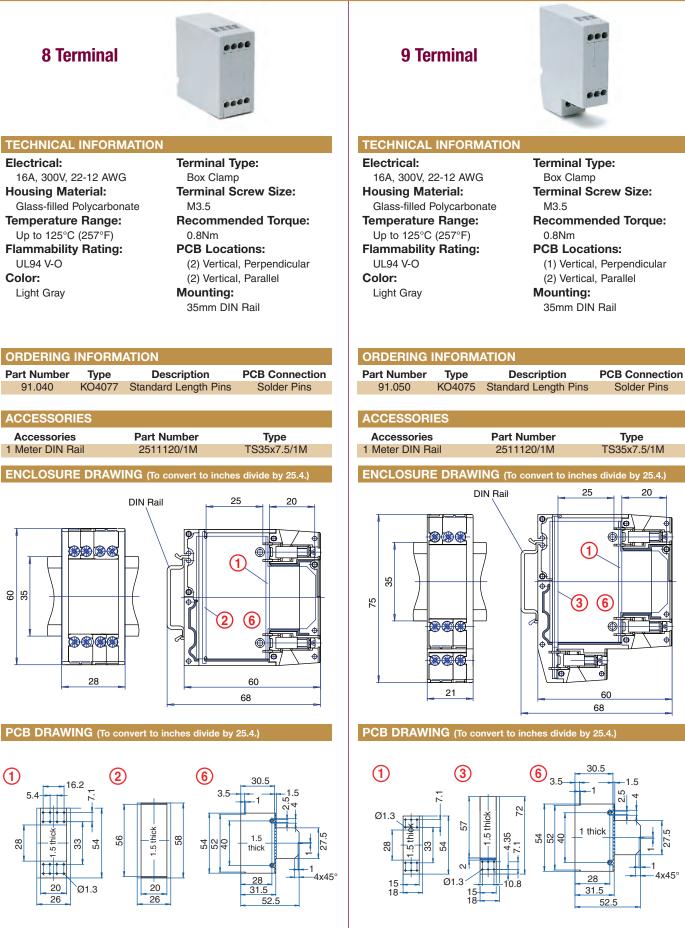
Description



PCB DRAWING (To convert to inches divide by 25.4.)



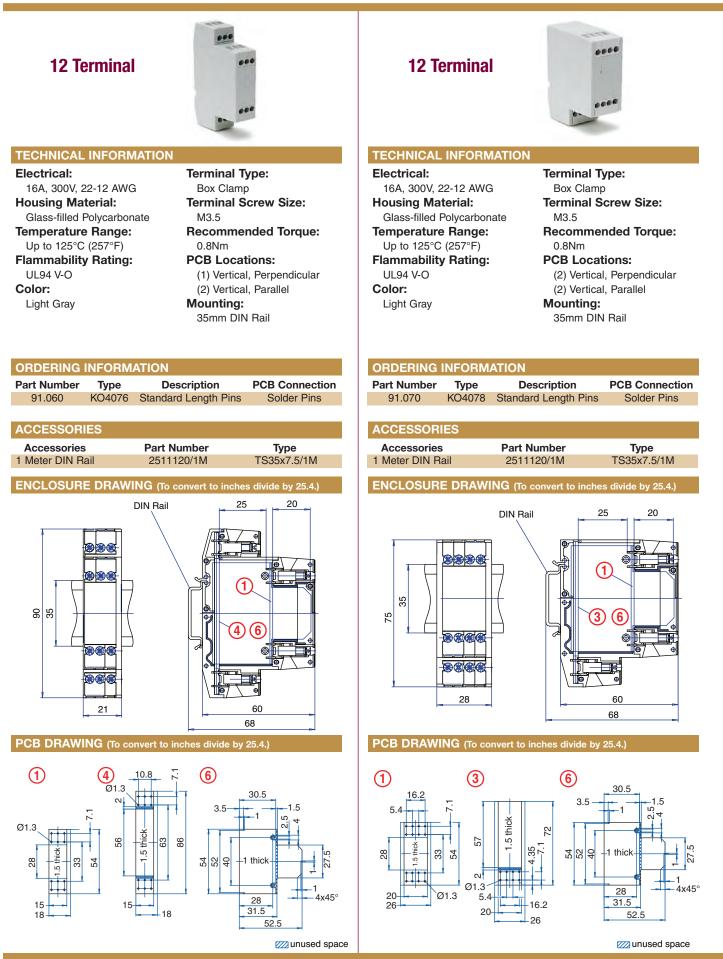
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16 Terminal



TECHNICAL INFORMATION

Electrical: 16A, 300V, 22-12 AWG Housing Material: Glass-filled Polycarbonate Temperature Range: Up to 125°C (257°F) Flammability Rating: UL94 V-O Color: Light Gray

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20

26

Ø1.3

Terminal Type: Box Clamp Terminal Screw Size: M3.5 Recommended Torque: 0.8Nm PCB Locations: (2) Vertical, Perpendicular (2) Vertical, Parallel Mounting: 35mm DIN Rail

ORDERING Part Number	INFORM Type	ATION Description	PCB Connection	
91.080	KO4079			
011000				
ACCESSORIES				
Accessories		Part Number	Туре	
1 Meter DIN R	ail	2511120/1M	TS35x7.5/1M	
ENCLOSURI		ING (To convert to incl	nes divide by 25.4.)	
		DIN Rail	25 20	
66				
PCB DRAWI	NG (To co	onvert to inches divide b	y 25.4.)	
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31.5

52.5

In-Rail Bus System

The In-Rail Bus System is an extremely flexible bus system suitable for data transmission and power supply. The principle is a printed circuit board with 5 bus lines that is installed into a DIN rail. This bus system can carry 5A per trace with a voltage of up to 63V. Spring contact blocks can be installed in almost any DIN enclosure for connection to the bus system. Contact security is ensured due to the high spring force of the gold plated, double contact springs.

Features:

- Universal Bus system useable with most DIN enclosure types*
- 5 Bus lines per Bus PCB
- 5A per bus, 25A max per PCB rail
- Quick and easy mounting in the DIN rail
- Gold plated contact surfaces
- Contact block springs with double contacts
- High spring force on the contact springs
- Max temperature 70°C
- Can be used for internal busing
- Standard DIN profiles, 7.5mm and 15mm
- UL approval
- 250 mm piece components can be supplied
- in lengths up to 1 meter

Safety Cap – Right or Safety Cap – Left

Carrier-rail Cover

TS35x7.5mm DIN Rail, slotted TS35x15mm DIN Rail, slotted

Carrier Profile for 7.5mm DIN Rail Carrier Profile for 15mm DIN Rail

BUS PCB

Ordering Information

Part Number	Description
91.905/250mm	Carrier Profile for 7.5mm DIN Rail, 250 mm length
91.915/250mm	Carrier Profile for 15mm DIN Rail, 250 mm length
91.925/250mm	BUS PCB, 250 mm length
91.935/250mm	Carrier-rail Cover, 250 mm length
91.945	Safety Cap – Right
91.946	Safety Cap – Left
91.955	Spring Contact Block
2511120/1M	TS35x7.5mm DIN Rail, slotted, 1 meter length
CA701-15/S	TS35x15mm DIN Rail, slotted, 1 meter length



Spring Contact Block .



* Hole must be milled in enclosure base to accept spring contact block.



Altech DIN Enclosure Index

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TITLE - Title to the products of ALTECH shall remain with ALTECH until payment is made in full by Customer. Such reservation of title is for the purpose of securing the purchase price and shall not relieve Customer of the duty to inspect the products upon receipt, to notify ALTECH of any deficiencies or defects, and to exercise due care in the use, installation, operation, and maintenance of the products when on the premise of the Customer or under the control of the Customer. Notwithstanding any reservation of title by ALTECH, risk of loss shall pass to customer at any time of shipment.

SHIPMENT AND DELIVERY - All orders for destination in the mainland United States (less Hawaii, Alaska and non-continental United States possessions) will be shipped F.O.B. Flemington, N.J. All destination, shipping and other charges shall be paid by the Customer in accordance with ALTECH's then current shipping and billing practices.

Delivery dates given in the acceptance of any order are approximate. ALTECH shall not be liable for delays in delivery or in performance due to causes beyond its reasonable control including acts of God, acts of Customer, acts of civil or military authority, fires, strikes or other labor disturbances, war, riot or delays in transportation. In the event of such delay, the date of delivery or performance shall be extended for a period equal to the time lost by reason of the delay.

PRICE - PRICES in any ALTECH publication are subject to change without prior notification. Catalog prices are based on prices published in the current price list. All written quotations are valid for thirty (30) days from the date of quotation. Customer shall pay all sales, use, excise or similar taxes whenever ALTECH must itself pay and/or collect such tax from Customer arising out of the sale.

PAYMENT - Customer agrees to make payment within thirty (30) days of date of the invoice from ALTECH. Customer agrees to pay a late payment charge of one and one-half percent (1.5% per month, or the maximum late payment charge permitted by applicable law, whichever is less, on any unpaid amount for each calendar month (or fraction thereof) that such payment is in default. Orders amounting to less than \$100.00 will be billed at \$100.00 plus freight. Full carton purchases are required. In the event of referral to an attorney for collection, reasonable attorney's fees for collection of the overdue amount shall be paid by Customer. In the event payment is not received within 30 days from the date of invoice, any discount shall be cancelled and the full list price will be due.

LIMITED WARRANTY - ALTECH warrants to Customer that the equipment purchases shall be free from defects in material and workmanship under normal use and service for a period of one year from shipment.

Written notice as an explanation of the circumstances of any claim that the equipment has proved defective in material or workmanship shall be given promptly by the Customer to ALTECH.

ALTECH will not be liable for any misuse, improper operations, improper installation, improper maintenance, alteration, modification, accident or unusual degradation of the equipment or parts due to an unsuitable installation environment.

No representation of other affirmation of facts, including but not limited to statements regarding capacity, suitability for use or performance of the equipment, shall be or be deemed to be a warranty or representation by ALTECH for any purpose, nor give rise to any liability or obligation of ALTECH whatsoever.

Customer's sole and exclusive remedy in the event of breach of warranty, as set forth herein, is expressly limited to (1) the correction of the defect by adjustment, repair, modification, or replacement, or (2) issuance of a credit or refund of the purchase price for the defective equipment at ALTECH's election and sole expense.

EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT, THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

THIS WARRANTY EXTENDS ONLY TO THE CUSTOMER FROM ALTECH OR ITS AUTHORIZED DISTRIBUTOR.

LIMITATION OF LIABILITY - IN NO EVENT, SHALL ALTECH BE LIABLE FOR LOSS OF PROFITS, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER SIMILAR DAMAGES ARISING OUT OF ANY BREACH OF THIS AGREEMENT OR OBLIGATIONS UNDER THE AGREEMENT.

ALTECH SHALL NOT BE LIABLE FOR ANY DAMAGES CAUSED BY DELAY IN SHIPMENT, INSTALLATION OR FURNISHING OF EQUIPMENT OR SERVICES UNDER THIS AGREEMENT.

No action arising out of any claimed breach of this Agreement may be brought by either party more than two (2) years after the cause of action has accrued.

PATENT INDEMNITY - ALTECH shall defend or settle any suit or proceeding brought against Customer based on a claim that any equipment made to ALTECH design and furnished hereunder constitutes an infringement of any existing United States patent, provided (ALTECH) is notified promptly in writing and is given complete authorization and information required for the defense, and ALTECH shall pay all damages and costs awarded against Customer, but shall not be responsible for any costs, expense or compromise incurred or made by Customer without ALTECH's prior written consent. If any equipment is in ALTECH's opinion likely to or does become the subject of a claim for patent infringement, ALTECH may at its option and expense procure for Customer the right to continue using the device, modify it to become non-infringing, but in the event ALTECH is not reasonably able to modify, substitute, or otherwise procure for Customer the right to continue using it, ALTECH will remove such equipment and refund to Customer the amount paid in excess of a reasonable rental for past use.

ALTECH shall not be liable for any infringement or claim based upon use of the equipment in combination with other equipment not supplied by ALTECH or with modifications made by Customer.

The foregoing states the entire liability of ALTECH to Customer arising from patent infringement.

SELLER'S REMEDIES - Should Customer fail to make any payment within ten (10) days of its due date, or fail to perform any other of the Customer's obligation hereunder upon thirty (30) days written notice, or should Customer be or become insolvent or be a party to any bankruptcy receivership proceeding prior to full payment of all amounts payable hereunder, ALTECH may: (a) with or without demand or notice to customer declare the entire amount unpaid immediately due and payable; (b) enter upon the premises where the equipment may be found and remove it (Customer shall assemble the equipment and make it available to ALTECH at a place reasonably convenient to both parties and shall permit and assist ALTECH in effecting the retaking and removal of the equipment); and (c) sell any or all the equipment as permitted under applicable law, applying the proceeds of the sale to payment of the expenses of retaking, repairing and selling the equipment, reasonable attorney fees and to the satisfaction of all indebtedness then due and unpaid under this Agreement. Any surplus shall be paid to Customer and any deficiency shall be paid to ALTECH by Customer.

The remedies provided herein shall be cumulative and in addition to all other remedies provided by law or equity or under the Uniform Commercial Code.

GOVERNING LAW - This agreement will be governed by the Laws of the State of New Jersey.

GENERAL - This Agreement shall only become effective and binding when either (a) it has been accepted and executed by an authorized representative of ALTECH, or (b) the equipment has been shipped to Customer, with or without acceptance in writing hereon. Notice of acceptance is hereby waived by Customer. Customer hereby acknowledges receipt of a true and complete copy hereof.

No addition to or modification of any of the Terms and Conditions of Sale as they appear herein shall be binding upon ALTECH unless signed in writing by duly authorized representative of ALTECH in Flemington, N.J.

Typographical and clerical errors in quotations, orders and acknowledgments are subject to correction.

This Agreement is not assignable without the prior written consent of ALTECH. Any attempt to assign any of the rights, duties or obligations of this Agreement without such consent is void.

If any provision or provisions of this Agreement shall be held to be invalid, illegal or unenforceable, the validity, legality and enforceability, of the remaining provisions shall not in any way be affected or impaired thereby.

ALTECH is not responsible for failure to fulfill its obligation under this Agreement due to causes beyond its control, or except as agreed herein.

THE CUSTOMER ACKNOWLEDGES THAT HE HAS READ THE AGREEMENT, UNDERSTANDS IT, AND AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS. FURTHERMORE, THE CUSTOMER AGREES THAT IT IS THE COMPLETE AND EXCLUSIVE STATEMENT OF THE AGREEMENT BETWEEN THE PARTIES, WHICH SUPERSEDES ALL PROPOSALS OR PRIOR AGREEMENTS, ORAL OR WRITTEN, EXPRESSED OR IMPLIED, AND ALL OTHER COMMUNICATIONS BETWEEN THE PARTIES RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT.

Here are other great catalogs available from Altech!

Circuit Protection Devices



Altech carries DIN Rail mounted UL508 Manual Motor Controllers/ Miniature Circuit Breakers, UL489 Miniature Circuit Breakers and UL1077 Supplementary Protectors. The UL489 versions are 17.5mm wide, thermal magnetic, 240V, 480Y/277V AC, 50/60Hz, 125 and 250 VDC models, with short circuit interrupt capacity of 10kA, a positive trip indicator, and are line/load reversible. The UL1077 versions are DIN rail mounted, 17.5mm wide, thermal magnetic, 480Y/277V AC, 50/60Hz, a short circuit withstand capacity 10kA, have a positive trip indicator.

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Interface Modules and Power Supplies



Altech offers a wide range of DIN Rail or panel mount cable interface modules, relay interface modules, carrier modules, custom designed modules and industrial relays. Cable to connector models include: D-Sub connectors, ribbon cable connectors, and Dip socket connectors to terminals. Standard relay modules from 1 to 16 channels, and safety relay modules from 1 to 16 channels and up to 10 poles are included. The catalog also contains industrial and slimline relays and custom designed interface modules.

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Terminal Blocks



Altech offers a NEW Terminal Block catalog with the most competitively priced blocks in the industry. We feature screw and spring clamp models for DIN rail and panel mount applications. This advanced line of wire termination products will increase your design options and help to get the job done more efficiently. Our line of blocks include feedthrough (single, double or triple level), distribution, ground, fuse, disconnect, thermocouple, surge suppressor and indicator. A wide variety of accessories, tools and ferrules are available.

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Liquid Tight Strain Reliefs



This 50-page catalog introduces Altech's full line of Liquid Tight Strain Reliefs (Cord Grips) which are used to seal cable entries, keep contaminant's from entering enclosures, provide strain relief and thus reduce stress on components and termination points inside enclosures. Functions include Straight-Through, Increased Strain Relief, Bend Protection, Pull/Bend Protection, Multiconductor, Flat Cable, Atex and EMI/RFI. They can be used with almost any type of cable, cord or conductor - solid, stranded, flat, shielded, high temperature, etc.

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Contactors and More!



Altech's now carries contactors, mini contactors, definite purpose contactors & overload relays. The contactors come in 3 and 4 pole configurations at 9A to 800A. Available in Single Phase (115 -230V) and Three Phase (200 - 575V) AC and DC models. A large variety of coil voltages are supported and the accessories are auxiliary contacts and overload relays. The mini contactors come in screw clamp, fast-on, cage clamp and solder pin types.

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Industrial Enclosures



Altech's expanded it's line of TK Industrial Enclosures with metric knockouts and also added the versatile TG Enclosure series. Now our entire line of industrial enclosures is in metric. Metric knockouts align with international standards making selection easier and more universal. Plus the PG standard is still available. All of Altech's enclosures are internationally accepted and stand up to the harshest environments. They protect against dust, water and corrosion while enhancing the value of your product. Rated up to IP66 (NEMA type 4x), Altech enclosures are available in a wide range of sizes. **Altech Corp.**

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Motor Disconnect Switches



Altech's line of Motor Disconnect Switches are UL 508 listed as Manual Motor Controllers for AC Motor Starting Across-the-line and AC General use. This new 24 page catalog includes the 3 different handle designs, which are all available in gray/black or yellow/red housings. Electrical ratings are 25-150A / 600V. The switches are non-fused DIN Rail mountable. Neat features include: snap-on auxiliary switches, door mounting kit and a retrofit 30A fuse holder. Also featured are Enclosed Motor Disconnect Switches & Fused (plastic only) versions (30A), available in plastic, aluminum, sheet metal or stainless steel.

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DIN Rail Power Supplies



Altech DIN RAIL mountable power supplies have Universal AC input. They are suitable for industrial and automation applications.

- UL508 Listed
- Installed on DIN rail TS35/ 7.5 or 15
 Available from 30-960W
- Protections: Short circuit / Overload / Over-voltage / Over temperature
- Cooling by free air convection
- Worldwide approvals3 year warranty
- NEW DC-UPS Solutions and Battery Chargers

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