

passion for connections

Series 30 Micromodul™ connectors	MICAL · MICALD Micromodul™ solder-in connector,	MICA Micromodul™ connector for direct	a02299 Micromodul™ connector for direct	MICS Micromodul™ tab headers	Series ∃1 Minimodul™ connectors	3114 · 3111       Minimodul™ connectors, crimp	<b>2,5 MSF</b> Minimodul™ pin headers, upright	<b>2,5 MSFW</b> Minimodul™ pin headers, angular	Series 38 Multimodul™ connectors	3810	<b>3823 · 3111</b> Multimodul™ connectors, crimp	385 · 8385         Multimodul™ pin headers with	Series 51 Direct connectors for insert cards	8510 Socket board for direct mating,	8514 Socket board for direct mating,
pitch 1.27 mm (0.050")	insulation displacement technology	mating, insulation displacement technology	mating, insulation displacement technology, with locking on print- ed circuit board by means of lock- ing hooks and toes, with closed sides		pitch 2.5 mm (0.098")	technology	with guide collar	with guide collar	pitch 2.5 mm (0.098")	insulation displacement technol- ogy, with insulator crimp as strain relief and positioning spigots	technology	guide collar and locking latch	pitch 2.54 mm (0.100") pitch 5.08 mm (0.200")	pitch 2.54 mm	with or without keying rib, pitch 5.08 mm
For signal and low load currents up to 1.2 A.	solder contacts MICAL dual row staggered MICALD dual row parallel	MICA in bulk MICA VP3 on reel	for flat cables and discrete con- ductors	for THT soldering MICS upright, with retaining hooks MICS-D upright, without hooks MICSW angular, without hooks solder contacts dual row staggered (MICS-D dual row parallel) for SMT soldering MICS/SMD upright, in bulk MICS/SMD RP upright, on reel solder contacts dual row staggered	connections: easy harnessing of single leads and flat cables with crimp technology. Especially suit- able for low and middle-volume production.	empty socket housing 3114 crimp contacts 3111 L in bulk 3111 G on reel	solder contacts single row 2,5 MSF/O 2,5 MSF with locking latch solder contacts dual row staggered 2,5 MSFQ with locking latch	solder contacts single row <b>2,5 MSFW/O</b> <b>2,5 MSFW</b> with locking latch	board connections. Easy harness- ing of single leads and flat cables with insulation displacement and crimp technology. Especially suit- able for middle and high-volume production.	3810	empty socket housing 3823 crimp contacts 3111 L in bulk 3111 G on reel	3850 upright, with retaining hooks 3853 angular, with retaining hooks 8385 double, feed-through con- nector for chassis mounting	sockets boards for insert cards, with solder pins for board-to-board or solder eyes for cable-to-board con- nections. With accessory keying in- serts, mounting and guide flanges. For signal and load currents up to 5 A.	8510	8514
	mating with printed circuit board	mating with tab headers MICS	mating with printed circuit board	mating with connector MICA	up to 5 A.	mating with pin headers 2,5 MSF	mating with connectors 3114/3111, 4143 01	mating with connectors 3114/3111, 4143 01	For signal and low load currents up to 5 A.	mating with printed circuit board	mating with pin headers 385, 8385	mating with connectors 382, 4143 01		mating with printed circuit board	mating with printed circuit board
Pole number	4	-26	2-22	4–26	Pole number		2–20		Pole number		2–20 ( <b>8385</b> 2)		Pole number	6	3-4
Insulating body	PBT, V0 r	nach UL 94	PA GF, V0 nach UL 94	PA GF, V0 nach UL 94	Insulating body	PBT, V0 according to UL 94	PA GF <sup>1</sup> , V0 acc	ording to UL 94	Insulating body	PA GF <sup>1</sup> , V0 according to UL 94	<b>3823 00</b> PBT GF, V0 acc. to UL 94 <b>3823 30</b> PA GF <sup>1</sup> , V0 acc. to UL 94	PA GF <sup>1</sup> , V0 according to UL 94 ( <b>8385</b> PBT, V0 according to UL 94)	Insulating body	PA GF <sup>1</sup> , V0 according to UL 94	PPE/PS GF, V1 according to UL 94 8514 M13 PA GF <sup>1</sup> , V0 acc. to UL 94
Contact spring	CuSn, t MICA SEL 0.8 AU CuSn, gold-p insulation dis	in-plated lated in contact area, tin-plated in placement area	302299 CuSn, pre-nickel and tin- plated 302299 V122 CuSn, pre-nickel and gold-plated in contact area, tin-plated in insulation displace- ment area	CuZn, pre-nickel and tin-plated	Contact spring	CuSn, tin-plated	CuZn, pre-nick	el and tin-plated	Contact spring	CuSn, t	in-plated	CuZn, pre-nickel and tin-plated	Contact spring	CuSn, pre-nick	el and tin-plated
Connectable wire section <sup>2</sup>	AWG 28 ( AWG 26 ( AWG 26 (	(0.090 mm²) (0.135 mm²) (0.140 mm²)	AWG 28 (0.090 mm²)		Connectable wire section <sup>2</sup>	<b>3111 01</b> 0.10–0.25 mm <sup>2</sup> <b>3111 03</b> 0.30–0.60 mm <sup>2</sup>			Connectable wire section <sup>2</sup>	0.196–0.22 mm²	<b>3111 01</b> 0.10–0.25 mm <sup>2</sup> <b>3111 03</b> 0.30–0.60 mm <sup>2</sup>				
Rated current		1	.2 A		Rated current	5 A at T <sub>amb</sub> 30 °C 2.5 A at T <sub>amb</sub> 70 °C	5	5 A	Rated current	3 A	5 A at T <sub>amb</sub> 30 °C 2.5 A at T <sub>amb</sub> 70 °C	3 A at T <sub>amb</sub> 60 °C	Rated current	5 A at	T <sub>amb</sub> 60 °C
Rated voltage	32	V AC	125 V AC	32 V AC	Rated voltage	125 V AC (with pitch 2.5 mm) 250 V AC (with pitch 5.0 mm)	160	V AC	Rated voltage	63 V AC	200 V AC (pollution degree 2) 63 V AC (pollution degree 3)	160 V AC	Rated voltage	160 V AC	250 V AC

<sup>1</sup> glow-wire resistant (GWT 750 °C), see specification at www.lumberg.com

<sup>2</sup> range of values of conductors approved by laboratory tests; covering various geometries of insulation displacement terminations



## Series 97

# Tools and harnessing machines

pitch Efficient Harnessing

From manual tongs over hand presses, various semiautomatic harnessing machines to our premium products, our fully automatic harnessing machines from our VARICON™ line: We offer from one source all options for efficient termination of cables with our connectors – no matter if low, middle or high-volume production.







Lumberg 🗳 passion for connections

Service-friendly: quick a connecting and detach ductors.	and easy ing of con-For all cable-to-board connections relevant to maintainance, string- able without loss of pitch.	Series 65 Space-saving solution of pluggable screw termination, no mismating, with locking.
Spring terminal blocks For signal and load cure 10 A.	rents up to Screw terminal blocks For signal and load currents up to 16 A.	Pluggable screw terminal blocks on socket beards
pitch 5.08 mm (0.200")	pitch 3.5 · 5.0 · 5.08 · 10.0 mm (0.138" · 0.197" · 0.200" · 0.394")	pitch 5.0 mm (0.197")
IVIX508	KRML Micro screw terminal blocks	KS  Puggable screw terminal blocks with lock-
		ing and clamps with wire protectors
upright MX 122-508	pitch 3.5 mm (0.138") KRMC with wire protector	KS without sidewalls
angular	desetere	KSC with sidewalls
MX 222-508	TOTO TO TOTO TO TOTO TO TOTO TO TOTO TO	Province -
10 A · 300 V AC · poles 2–4, 6 and 8	6 A • 250 V AC • poles 2–8	10 A · 250 V AC · poles 2–10
KRF	KRES KRM	KB
KRE Screw terminal blocks, with lift clamps with	KRES · KRM Screw terminal blocks, clamps with wire	KB Socket boards
KRE Screw terminal blocks, with lift clamps with protection against missplacing, upright	KRES · KRM           Screw terminal blocks, clamps with wire protector	KB Socket boards
KRE Screw terminal blocks, with lift clamps with protection against missplacing, upright pitch 5.0 mm (0.197")	KRES · KRM Screw terminal blocks, clamps with wire protector pitch 5.0 mm (0.197")	KB Socket boards upright KB solder pins single row
KRE Screw terminal blocks, with lift clamps with protection against missplacing, upright pitch 5.0 mm (0.197") KRE with screws M2, 0.4 Nm KREG with screws M3, 0.5 Nm	KRES · KRM Screw terminal blocks, clamps with wire protector pitch 5.0 mm (0.197") upright KRESS	KB Socket boards upright KBQ solder pins single row KBQ solder pins dual row stagered
KRE Screw terminal blocks, with lift clamps with protection against missplacing, upright pitch 5.0 mm (0.197") KRE with screws M2, 0.4 Nm KREG with screws M3, 0.5 Nm pitch 10.0 mm (0.394"), for mains supply	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197")         upright         KRESS         KRM with dovetail joint	KB         Socket boards         upright         KB solder pins single row         KBQ solder pins dual row stagered         angular, solder pins single row         KBWO
KRE Screw terminal blocks, with lift clamps with protection against missplacing, upright pitch 5.0 mm (0.197") KRE with screws M2, 0.4 Nm KREG with screws M3, 0.5 Nm pitch 10.0 mm (0.394"), for mains supply, with imprint PE N L1	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197")         upright         KRESS         KRM with dovetail joint         angular         VDESW (FE)	KB Socket boards upright KB solder pins single row KBQ solder pins dual row stagered angular, solder pins single row KBWO KBW with retaining hooks
KRE Screw terminal blocks, with lift clamps with protection against missplacing, upright pitch 5.0 mm (0.197") KRE with screws M2, 0.4 Nm KREG with screws M3, 0.5 Nm pitch 10.0 mm (0.394"), for mains supply, with imprint PE N L1 KREN with screws M2, 0.4 Nm KRENG with screws M3, 0.5 Nm	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197")         upright         KRESS         KRM with dovetail joint         angular         KRESW 45°         KRESL 90°	KB Socket boards upright KB solder pins single row KBQ solder pins dual row stagered angular, solder pins single row KBWO KBW with retaining hooks
KRE         Screw terminal blocks, with lift clamps with protection against missplacing, upright         pitch 5.0 mm (0.197")         KRE with screws M2, 0.4 Nm         KREG with screws M3, 0.5 Nm         pitch 10.0 mm (0.394"), for mains supply, with imprint PE N L1         KREN with screws M2, 0.4 Nm         KREN with screws M3, 0.5 Nm         15 A - 250 V AC (KREN, KRENG 500 V AC) - poles 2–18 (KREN, KRENG	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197")         upright         KRESS         KRM with dovetail joint         angular         KRESW 45°         KRESL 90°         3)         15 A · 250 V AC · poles 2–16 (KRESW 2–12, KRM 2–12, 6)	KB Socket boards upright KB solder pins single row KBQ solder pins dual row stagered angular, solder pins single row KBWO KBW with retaining hooks 10 A · 250 V AC · poles 2–10
KRE         Screw terminal blocks, with lift clamps with protection against missplacing, upright         pitch 5.0 mm (0.197")         KRE with screws M2, 0.4 Nm         KREG with screws M3, 0.5 Nm         pitch 10.0 mm (0.394"), for mains supply, with imprint PE N L1         KREN with screws M3, 0.5 Nm         15 A · 250 V AC (KREN, KRENG 500 V AC) · poles 2–18 (KREN, KRENG	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197") upright         KRESS         KRM with dovetail joint         angular         KRESW 45°         KRESL 90°         3)         15 A · 250 V AC · poles 2–16 (KRESW 2–12, KRM 2–12, 6)	KB Socket boards upright KB solder pins single row KBQ solder pins single row KBWO KBW with retaining hooks 10 A · 250 V AC · poles 2–10
KRE         Screw terminal blocks, with lift clamps with protection against missplacing, upright pitch 5.0 mm (0.197")         KRE with screws M2, 0.4 Nm KREG with screws M3, 0.5 Nm         pitch 10.0 mm (0.394"), for mains supply, with imprint PE N L1         KREN with screws M2, 0.4 Nm KRENG with screws M3, 0.5 Nm         15 A • 250 V AC (KREN, KRENG 500 V AC) • poles 2–18 (KREN, KRENG         632         Miniature screw terminal blocks, with lift	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197")         upright         KRESS         KRM with dovetail joint         angular         KRESL 90°         33         15 A · 250 V AC · poles 2–16 (KRESW 2–12, KRM 2–12, 6)         KRES03/02         Screw terminal blocks, clamps with wire	KB Socket boards upright KB solder pins single row KBQ solder pins single row KBWO KBW with retaining hooks 10 A · 250 V AC · poles 2–10
KRE         Screw terminal blocks, with lift clamps with protection against missplacing, upright         pitch 5.0 mm (0.197")         KRE with screws M2, 0.4 Nm         KREG with screws M3, 0.5 Nm         pitch 10.0 mm (0.394"), for mains supply, with imprint PE N L1         KREN with screws M2, 0.4 Nm         KRENG with screws M3, 0.5 Nm         15 A • 250 V AC (KREN, KRENG 500 V AC) • poles 2–18 (KREN, KRENG         632         Miniature screw terminal blocks, with lift clamps and with test holes	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197") upright         KRESS         KRM with dovetail joint         angular         KRESL 90°         3)         15 A · 250 V AC · poles 2–16 (KRESW 2–12, KRM 2–12, 6)         KRES03/02         Screw terminal blocks, clamps with wire protector	KB Socket boards upright KB solder pins single row KBQ solder pins single row KBWO KBW with retaining hooks 10 A · 250 V AC · poles 2–10
KRE         Screw terminal blocks, with lift clamps with protection against missplacing, upright         pitch 5.0 mm (0.197")         KRE with screws M2, 0.4 Nm         KREG with screws M3, 0.5 Nm         pitch 10.0 mm (0.394"), for mains supply, with imprint PE N L1         KREN with screws M3, 0.5 Nm         15 A · 250 V AC (KREN, KRENG 500 V AC) · poles 2–18 (KREN, KRENC         G32         Miniature screw terminal blocks, with lift clamps and with test holes         pitch 5.0 mm (0.197")	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197") upright         KRESS         KRM with dovetail joint         angular         KRESW 455°         KRESL 90°         3 3)         15 A · 250 V AC · poles 2–16 (KRESW 2–12, KRM 2–12, 6)         KRES03/02         Screw terminal blocks, clamps with wire protector         pitch 10.0 mm (0.394")	KB Socket boards upright KB solder pins single row KBQ solder pins single row KBWO KBW with retaining hooks 10 A + 250 V AC + poles 2–10
KRE         Screw terminal blocks, with lift clamps with protection against missplacing, upright         pitch 5.0 mm (0.197")         KRE with screws M2, 0.4 Nm         KREG with screws M3, 0.5 Nm         pitch 10.0 mm (0.394"), for mains supply, with imprint PE N L1         KREN with screws M2, 0.4 Nm         KREN with screws M3, 0.5 Nm         15 A • 250 V AC (KREN, KRENG 500 V AC) • poles 2–18 (KREN, KRENG         632         Miniature screw terminal blocks, with lift clamps and with test holes         pitch 5.0 mm (0.197")         6320 upright         6322 as 5° angular	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197")         pitch 5.0 mm (0.197")         upright         KRESS         KRM with dovetail joint         angular         KRESW 45°         KRESL 90°         3)         15 A · 250 V AC · poles 2–16 (KRESW 2–12, KRM 2–12, 6)         KRES03/02         Screw terminal blocks, clamps with wire protector         pitch 10.0 mm (0.394")         upright         KRESS 03/02-09/05	KB Socket boards upright KB solder pins single row KBWO KBW with retaining hooks 10 A · 250 V AC · poles 2–10
KRE         Screw terminal blocks, with lift clamps with protection against missplacing, upright         pitch 5.0 mm (0.197")         KRE with screws M2, 0.4 Nm         KREG with screws M3, 0.5 Nm         pitch 10.0 mm (0.394"), for mains supply, with imprint PE N L1         KRENG with screws M2, 0.4 Nm         KRENd with screws M3, 0.5 Nm         15 A • 250 V AC (KREN, KRENG 500 V AC) • poles 2–18 (KREN, KRENG <b>632</b> Miniature screw terminal blocks, with lift clamps and with test holes         pitch 5.0 mm (0.197") <b>6320</b> upright <b>6322</b> 35° angular <b>6324</b> 90° angular	KRES · KRM         Screw terminal blocks, clamps with wire protector         pitch 5.0 mm (0.197") upright         KRESS         KRM with dovetail joint         angular         KRESW 45°         KRESL 90°         3)         15 A · 250 V AC · poles 2–16 (KRESW 2–12, KRM 2–12, 6)         KRES03/02         Screw terminal blocks, clamps with wire protector         pitch 10.0 mm (0.394") upright         KRESS 03/02-09/05         accular	KB Socket boards upright KB solder pins single row KBW of KBW with retaining hooks 10 A · 250 V AC · poles 2–10

15 A • 630 V AC • poles KRESS... 2–5, KRESW... 2, 4 and KRESL... 2–4,





Pluggable terminal blocks on pin headers oitch 5.08 mm (0.200")

Connectors with screw terminals and insulation displacement termination for automated harnessing, many versions. Compatible mating with many products in the market.

For signal and load currents up to 16 A.

#### 6770

Puggable terminal block, insulation displacement technology, with locking and test holes

6770 cable departure straight or angular



6 A • 250 V AC • poles 2–7

#### MC...-508

Puggable screw terminal blocks, with locking, with lift clamp

cable departure angular, 90° MC 200-508 on side of locking

cable departure straight, 180° MC 100-508 screw 90° for mating direction MC 310-508 screw 180° for mating direction, with combined screw



16 A • 300 V AC (MC 100-508 400 V AC) • poles 2–8 (MC 100-508 2–12)

ME...-508

Pin headers

upright **ME 020-508** without sidewalls ME 040-508 with sidewalls

angular ME 010-508 without sidewalls ME 030-508 with sidewalls



16 A • 300 V AC • poles 2–8 (**ME 030-508** 2–12)



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## passion for connections



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System Overview

# Micromodul · Minimodul · Multimodul

Insulation Displacement and Crimp Technology · Screw Terminal Blocks