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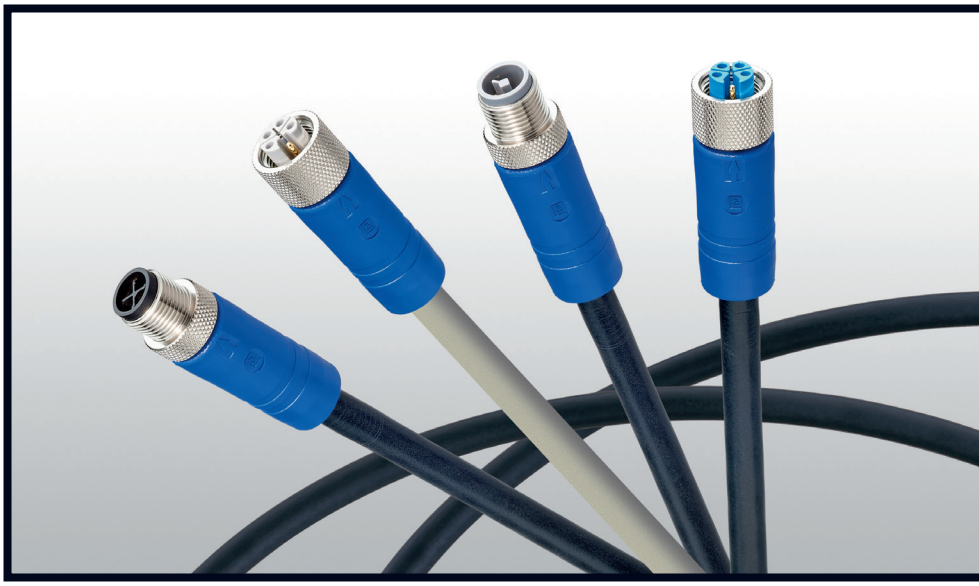
Product Bulletin

PB00115

M12 Power Connector

The latest offering of Lumberg Automation M12 power connectors is the market's strongest connection in such compact housing.



The M12 Power Connector opens the world of conventional M12 to high power transmission. With up to 5 Pins and 2.5mm², it is able to carry 16 A at max. 630 V. Thanks to the innovative design, it has the highest reliability, even in harsh environments.

- **Secure –** outstanding performance in power transmission while fulfilling global standards (UL, VDE); designed according to DIN EN 61076-2-111.
- **Operational reliability –** transmitting high power even at high ambient temperatures; higher derating grants maximum uptime in production.
- **Comprehensive –** a wide range of codings (S-, L-, K- & T-) molded, attachable and receptacle, combined with a strong diversity of cables; an ideal solution for nearly all markets and applications.

The M12 Power is your answer to the increasing demand for reliable and powerful connectivity in the smallest possible housings.

This also follows the "miniaturization" trend of Industrie 4.0/IIoT.

Applications

All M12 Power Connectors are designed for permanent usage, even within harsh environments. The special connection design allows for use in high temperatures and in demanding applications. The M12's K- and S-codings are designed for AC power supplies with 630 V AC/16 A, making it the ideal solution as a power connection for AC motors and drives, frequency inverters, motor control switches, auxiliary power distribution for control systems and direct wiring of LED and conventional lighting fixture systems.

The L- and T-coding versions are designed for DC power supplies with 63 V DC/16 A, which works well for low-voltage applications, such as power supplies for fieldbus Ethernet components, network devices, motors and drives and direct wiring of LED and conventional lighting fixture systems.

With its PNO-conformity, the L-coding meets the strictest industry standards for the new generation of I/O boxes (in combination with gray jacket and FE = functional earth).

Your Benefits

The Lumberg Automation M12 Power Connector is the best choice when transmitting high power in space restricted areas. The high voltage and current ratings, combined with the high derating in harsh environmental conditions, make this product portfolio unique in today's competitive market.

With all available variants (attachable, molded, receptacle), cable diversity from 0.75 mm² up to 2.5 mm², shielding and different cable materials, this series offers the best products for every environment. The robust and compact design plus its VDE/UL approval opens a variety of new applications for using M12 Power.

A new product to serve your needs.
Be certain.

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M12 Power Connectors

RKCCS 5L/11 1.5 (female connector)

RSCCS 5L/11 1.5 (male connector)

M12 Power technology in four different codings fulfills the needs of almost all applications.

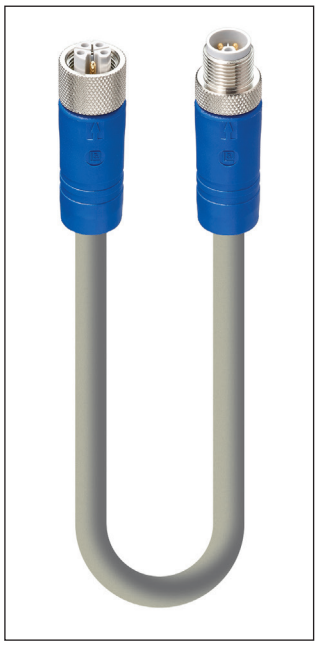
The M12 Power Connector features the well-known and proven Lumberg Automation M12 technology, meeting all the requirements for higher power consumption of sensors and actuators in automation control systems. Its four different codings fulfill the needs of several applications, while preventing mismatching connectors with different voltages.

The new generation meets the industry demand for miniaturized connectivity solutions. This enables engineers to minimize their devices, in situations where they were previously limited by connectivity demands. Plus, it's all in accordance with the trends of Industrie 4.0/IIoT. Already in compliance with new PNO guidelines, Lumberg Automation's LioN-Power active I/O modules combine with innovative M12 Power L-coded technology and M8 5-pole B-coded cordsets to provide a complete connection solution – all with reduced weight and size.

Benefits at a Glance

- Comprehensive product portfolio - your one-stop solution
- Market's strongest M12-connector with ratings for 16 A up to 630 V
- Safe machine communication thanks to optional 360° shieldings
- Flexible for any application with temperature range from -40°C to +125°C
- Suitable for every purpose with its conductor size from 0.75 mm² up to 2.5 mm²
- Conductor size of 2.5 mm² enables power supply over the longest distances (L & K)
- Ruggedized for performance – protection class IP65, IP67, IP69K
- Colored contact bearer for easy identification of the coding
- Latest crimp-technology for highest reliability

RST(S) 4S-RKT(S) 4S

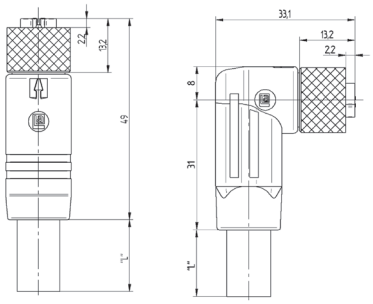
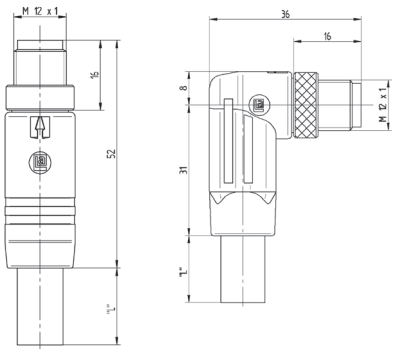


RST(S) 5L-RKT(S) 5L

RST(S) 5K-RKT(S) 5K

RST(S) 4T-RKT(S) 4T

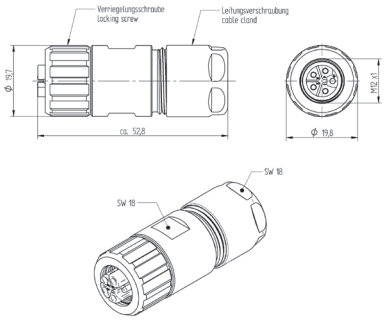
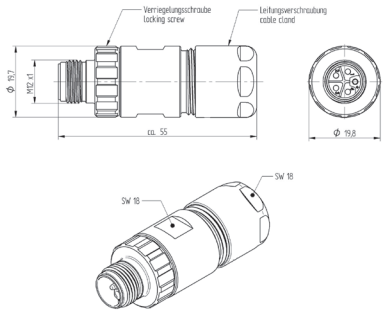
Technical Information

Product Description		
Type	**RK(W)T(S) .../... M**	**RS(W)T(S) .../... M**
		
Description	M12 female shielded/unshielded connector with threaded joint and molded cable, knurled nut with self-locking threaded joint, 360° shielding connected to knurled nut	M12 male shielded/unshielded connector with threaded joint and molded cable, knurled nut with self-locking threaded joint, 360° shielding connected to knurled nut
RoHS-compliant (2011/65/EU)	–	
(Construction Type) Standard	IEC 61076-2-111; S-, L-, K- or T-coded	
Approvals	UL/VDE	
Technical Data		
Ambient Temperature	-40 °C to +125 °C	
Housing Material/Grip	TPE	
Contact Holder Material	PBT GF	
Contact Material/Surface Finish	Cu/Au	
Screw Coupling Material	CuZn	
Mechanical Data		
Degree of Protection	IP65, IP67, IP69K	
Electrical Data		
Contact Resistance	≤10 mΩ	
Rated Voltage	630 V: S and K-coding; 63 V: L and T-coding	
Rated Current	16 A: 1.5 mm² and 2.5 mm²; 10 A: 0.75 mm²	
Pollution Degree	3 acc. to DIN EN 60664-1 (VDE 0110-1)	
Technical Drawing		
		

Pin Assignment

	RKT(S) 4S...	RKT(S) 5L...	RKT(S) 5K...	RKT(S) 4T...
	 1 = black 1 2 = black 2 3 = black 3 PE = green/yellow	 1 = brown 2 = white 3 = blue 4 = black FE = gray	 1 = black 1 2 = black 2 3 = black 3 4 = black 4 PE = green/yellow	 1 = brown 2 = white 3 = blue 4 = black
Coding	S	L	K	T
Number of Poles	4 (3 + PE)	5 (4 + FE)	5 (4 + PE)	4

Technical Information

Product Description		
Type	**RKC(W)C(S)**	**RSC(W)C(S)**
		
Description	M12 female field attachable shielded/unshielded connector with self-locking threaded joint and knurled nut	M12 male field attachable shielded/unshielded connector with self-locking threaded joint and knurled nut
RoHS-compliant (2011/65/EU)	–	
(Construction Type) Standard	IEC 61076-2-111; S-, L-, K- or T-coded	
Approvals	UL, VDE	
Technical Data		
Ambient Temperature	-40 °C to +125 °C	
Housing Material/Grip	CuZn/Ni, die-cast	
Contact Holder Material	PBT	
Contact Material/Surface Finish	Cu/Au	
Screw Coupling Material	CuZn/Ni	
Mechanical Data		
Degree of Protection	IP67	
Cable Range	Ø 3.0 mm to 11.0 mm	
Electrical Data		
Contact Resistance	≤3 mΩ	
Rated Voltage	630 V: S and K-coding; 63 V: L and T-coding	
Rated Current	16 A	
Pollution Degree	3	
Technical Drawing		
		

Pin Assignment

	RKT(S) 4S...	RKT(S) 5L...	RKT(S) 5K...	RKT(S) 4T...
	 1 = black 1 2 = black 2 3 = black 3 PE = green/yellow	 1 = brown 2 = white 3 = blue 4 = black FE = gray	 1 = black 1 2 = black 2 3 = black 3 4 = black 4 PE = green/yellow	 1 = brown 2 = white 3 = blue 4 = black
Coding	S	L	K	T
Number of Poles	4 (3 + PE)	5 (4 + FE)	5 (4 + PE)	4
Crimp Range	0.5 to 1.5 mm²; 20 to 16 AWG	0.75 to 2.5 mm²; 18 to 14 AWG	0.75 to 2.5 mm²; 18 to 14 AWG	0.5 to 1.5 mm²; 20 to 16 AWG