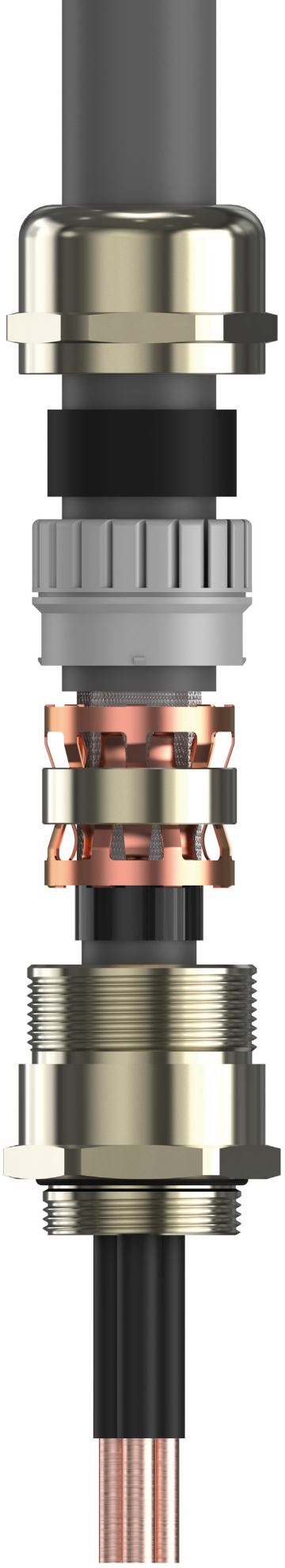
EMC Servo Ampacity Cable Glands
Brass

Ampacity is defined as the maximum amount of electrical current a conductor or device can carry before sustaining immediate or progressive deterioration. The ampacity of a device depends on:

- its temperature rating
- its electrical resistance
- the frequency of the current
- its ability to dissipate heat
- the ambient temperature

Applications where the above parameters are critical for the equipment's function, are railway systems and systems using VFD (Variable Frequency Drives) or PWM (Pulse Width Modulation), which use high-frequency control signals. These control signals generate an induced current in the cable shielding, which must be grounded to avoid overheating, which in the worst case will lead to malfunction of the system.

EMC cable glands, as they are known today, are sufficient for grounding/ earthing of small fault currents on the cable shielding. However, cable glands need a redesign to meet high amperage (up to hundreds of Amps) requirements with maximum fault ampacity, which exist in servo control cables.



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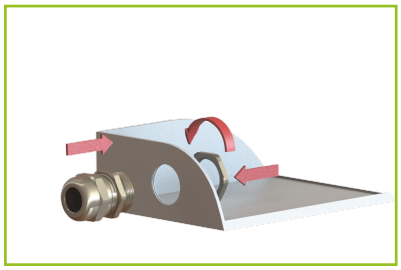
Installation instructions for EMC Servo Ampacity cable glands

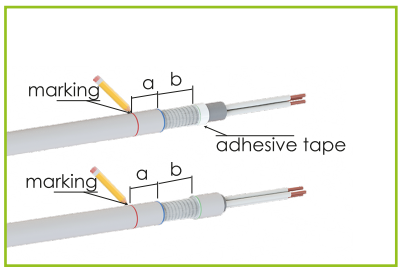
In order to avoid electromagnetic interference EMC cable glands include a special EMC component that enlarges the contact with the cable shield . Assembly must be done by trained people only.

Under clamping pressure the outer sheath of a cable can shrink. We recommend to choose cable glands whose lower clamplng range Is sufficiently smaller than the cable's outer dimension.

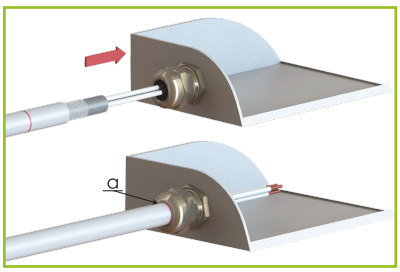
The shield diameter must fit.



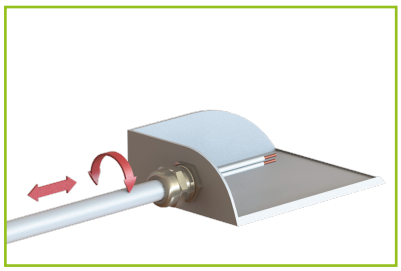
1. Install cable gland to the enclosure with the indicated "torque body". In order to increase contact quality EMC locknut utilization is recommended.



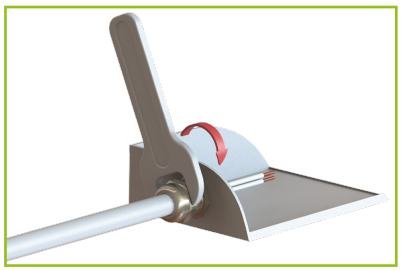
2. ***a.***Remove the outer sheath of the coble carefully and don't cut into the shielding (braiding).
b.Use adhesive tape (preferred: adhesive copper band with conductive adhesive) or part of the outer sheath to protect the end part of the wires. See diagram above.
c.For required exposed length of shielding "b" please see diagram and table in products manual.
d.Mark dimension "a" on outer sheath accordingly. (See table.)



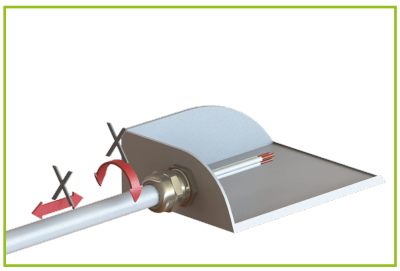
3. Insert cable Into cable gland until marking "a" aligns with cap.



4. As long as the cap is not tightened, you can easily pull push or rotate the cable.



5. Tighten cap and apply indicated "torque cap". EMC component will contact shielding.



6. Do not pull or rotate cable after cap has been tightened. It will damage cable gland and shielding.

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EMC cable glands with high current proof, open moving spring contact

- For metal machines and housings.
- Vibration proof EMC performance.
- For high current proof applications.
- Specially designed EMC protective cable glands.
- Long-lasting contact by high definition contact spring.
- Moving spring contact offers reduced risk of sheath damage.
- Easy movement of cable as long as not fastened.
- Easy assembly: install cable gland - prepare cable sheath - insert cable - tighten cap.
- Easy assembly and disassembly of cable. Spring closes and opens according to fastening of the cap.
- High quality strain relief and sealing, reliable performance for EMC applications.
- Up-to-date international approvals.

Technical Details			
Material	Body, Cap	Nickel plated Brass, Stainless Steel	
	Seal	CR (Chloroprene)	
	Clamping Insert	PA 6 (Polyamide 6)	
	Contact Springs	Special Copper Alloy	
	O-Ring	NBR	
Ingress Protection Rating		IP 68 - 5 Bar, 30 min	
Flammability		V2 according to UL94	
Operating Temperature		Permanent	Intermittent
		-20 °C to +100 °C	-40 °C to +150 °C
Thread Type		• Metric EN 60423 • NPT ANSI B1.20.1	
Cable Type		Shielded	
Accessories		• EMC Locknuts • Dome plugs • Gaskets (Washers)	
Remarks		• Manufactured according to DIN EN 62444/50262. • We recommend the use of lock nuts and gaskets to ensure IP rating for rough surfaces or through holes. • Some approvals do not cover all sizes. • O-ring is available in Metric thread as a standard. For NPT threads O-ring available upon request. • Accessories must be ordered separately. • Other lock nut types also available upon request.	

Approvals	Certificate Number	Standards
VDE	40039349	In progress
UL	E-199260	In progress

For more approvals: see our webpage.

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Thread Type **METRIC** acc. to EN 60423

Outer Thread Size (Male)	Clamping Range Ø min-max mm	Shield Diameter Ø min-max mm	Outer Thread Length TL mm	Spanner Width Cap SW Cap mm	Spanner Width Body SW Body mm	Outer Ø D mm	max. Height H mm	Part Number
M16x1,5	5,0 – 10,0	3,5 – 8,0	6,0	20	20	22,0	41,0	**BMEM-51**
M20x1,5	6,0 – 12,0	4,5 – 10,0	8,0	22	22	24,5	42,5	**BMEM-52S**
	7,5 – 14,0	5,5 – 11,0	8,0	24	24	27,0	47,0	**BMEM-52**
M25x1,5	10,0 – 18,0	7,0 – 14,0	8,0	30	30	33,0	52,0	**BMEM-53**
M32x1,5	16,0 – 25,0	12,0 – 20,0	9,0	40	40	44,5	60,0	**BMEM-54**
M40x1,5	22,0 – 32,0	18,0 – 27,0	9,0	50	50	64,0	66,5	**BMEM-55**
M50x1,5	30,0 – 38,0	26,0 – 34,0	9,0	58	58	64,0	64,0	**BMEM-56**
M63x1,5	34,0 – 44,0	30,0 – 40,0	14,0	64	68	75,0	65,0	**BMEM-57**
	37,0 – 53,0	33,0 – 49,0	14,0	75	75	83,0	76,5	**BMEM-57L**

Thread Type **NPT** acc. to ANSI B1.20.1

Outer Thread Size (Male)	Clamping Range Ø min-max mm	Shield Diameter Ø min-max mm	Outer Thread Length TL mm	Spanner Width Cap SW Cap mm	Spanner Width Body SW Body mm	Outer Ø D mm	max. Height H mm	Part Number
NPT 3/8"	5,0 – 10,0	3,5 – 8,0	11,5	20	20	22,0	40,5	**BNEM-51**
NPT 1/2"	6,0 – 12,0	4,5 –10,0	15,0	22	24	27,0	46,5	**BNEM-5S2**
	7,5 – 14,0	5,5 – 11,0	15,0	24	24	27,0	43,0	**BNEM-52**
NPT 3/4"	10,0 – 18,0	7,0 – 14,0	15,0	30	30	33,0	51,5	**BNEM-53**
NPT 1"	16,0 – 25,0	12,0 – 20,0	20,0	40	40	44,5	60,0	**BNEM-54**
NPT 1 1/4"	22,0 – 32,0	18,0 – 27,0	20,0	50	50	64,0	66,5	**BNEM-55**
NPT 1 1/2"	30,0 – 38,0	26,0 – 34,0	20,0	58	58	64,0	63,5	**BNEM-56**
NPT 2"	34,0 – 44,0	30,0 – 40,0	22,0	64	64	75,0	72,0	**BNEM-57**
	37,0 – 53,0	33,0 – 49,0	22,0	75	75	83,0	74,0	**BNEM-57L**