

Fundamentals and assembly instruction PERFECT EMVD (BN 22011 /BN 22012)

Fundamentals, assembly instruction

One important quality characteristics of electrical and electronic products is their electromagnetic compatibility (EMC). To ensure trouble-free operation of electrical appliances, systems and plants, the basic EMC requirements must be met, i.e. electrical devices must be protected from interference and must not themselves interfere with other appliances and equipment. In the field of plant engineering arise special problems due to enormous cable lengths for energy supply and data transmission. Cables and leads from a certain size on have a similar behaviour like an antenna and are therefore a considerable coupling source for interference. Due to the antenna-like action electromagnetic interference is received and heterodynes the wanted signal. The result may be a malfunction of the appliance up to a total breakdown of the machines or production lines.

An effective protection in such cases is the use of cables and leads with shielding, that consists of a dense wire gauze or a thin metal foil. The function of the shielding is to trap and cushion interferences. Cable glands play an important part in safeguarding EMC requirements where cables and leads enter into a shielding system. They have to ensure a permanent connection with very low ohmic or inductive resistance between the cable shield and the housing potential.

Our PERFECT EMC-cable glands meets these requirements in an outstanding way. The assembly of cable gland type 50.6xx M/EMVD is quick and easy:

1. Partially expose the braided screen by removing the outer sheath of the cable at a length of approx. 10 mm
2. Insert the cable through the dome nut and the gland body until the contact spring is pressed against the braided screen.
3. Firmly screw on dome nut – finished!

Due to this principle it is possible to conduct the braided screen of the EMC cable through the entire gland body up to the clamping area of the inner wires.

The equipotential bonding and the vibration protection can be improved further by using our hexagonal locknut with cutting edges – see BN 22035.

(Source: Jacob GmbH)



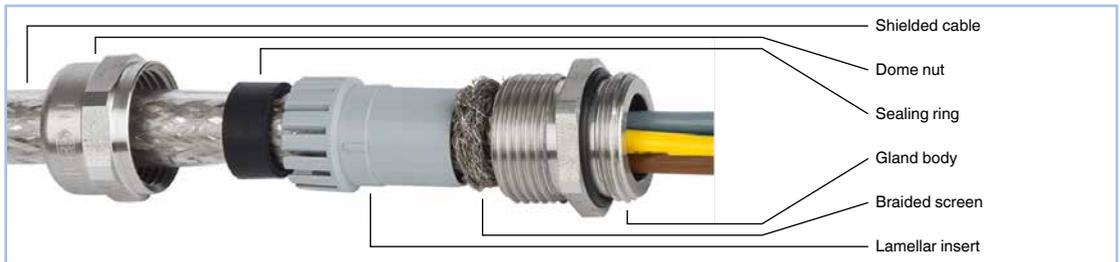
Fundamentals and assembly instruction PERFECT EMV (BN 22013/BN 22014/BN 22154/BN 22155)

Fundamentals, assembly instruction

Our PERFECT EMC cable gland type 50.6xx M/EMV ensures continuous contacting without gaps. The dome nut and the lamellar insert are simply pushed onto the lead. The exposed cable shield is folded around the lamellar insert, and the gland body is then pushed on. The screw-fitting of the dome nut ensures that the cable shield is pressed over a large surface between the torsion-protected lamellar insert and the gland body. The result is a very good metal contact area of the cable shield via the gland body to the housing protected from external environmental influences.

Assembly instruction

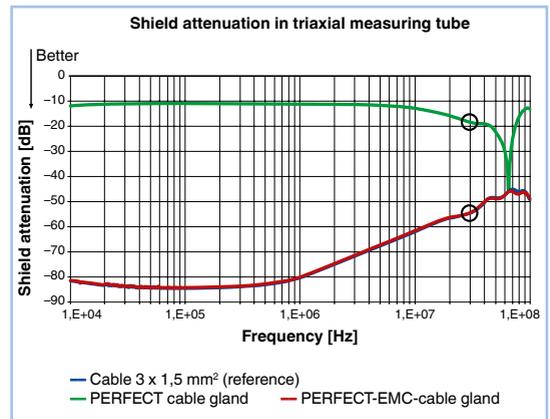
1. Cut off outer cable sheath and expose braided screen over a length of approx. 10–15 mm, depending on the cable diameter.
2. Push dome nut and lamellar insert with sealing ring on to the cable.
3. Bend braided screen outwards at a right angle (90°).
4. Fold braided screen towards outer sheath, i.e. by another 180°.
5. Push gland body up to braided screen and turn briefly around both sides of the cable axis.
6. Push lamellar insert with sealing ring into gland body and snap anti-rotation element into place.
7. Firmly screw on dome nut. Our PERFECT EMC cable gland type 50.6xx M/EMV ensures continuous contacting without gaps.



EMC test report

Our PERFECT EMC cable glands type 50.6xx M/EMV have been tested and certified by the VDE according to the VG standard 95373 Part 40 for transfer impedance and shield attenuation. On request, we will be pleased to provide you with a copy of the complete test report.

(Source: Jacob GmbH)



PERFECT EMC-cable gland, PERFECT cable gland and reference cable up to 30 MHz logarithmic frequency scaling. The 30 MHz point is marked.

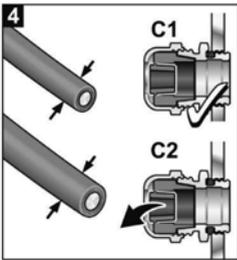
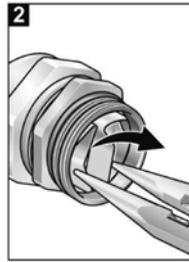
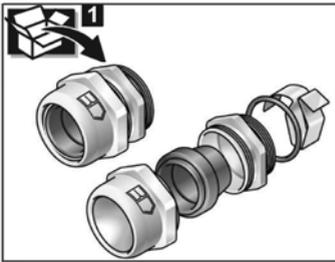
Assembly instruction: WADI EMV one (BN 22313)/PERFECT EMV plus (BN 22337, BN 22338)

Assembly instruction

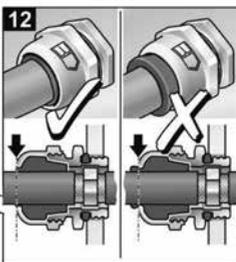
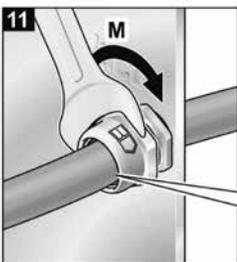
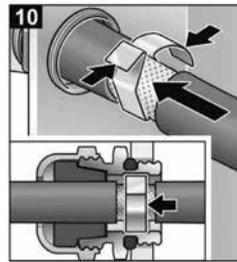
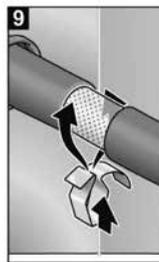
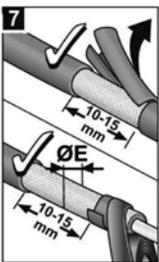
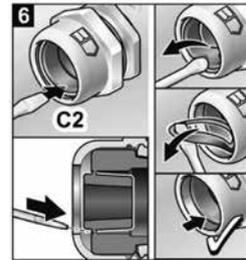
1. Remove the EMV-contacting spring from the gland body of the cable gland. (2)
2. Install the cable gland on the provided housing. (3)
3. Select the type of installation, with or without inner sealing ring, due to the cable diameter of the used cable. (4/5)
4. If you install without an inner sealing ring, remove the inner sealing ring with a screwdriver. (6)

This assembly step is omitted when you use a two-part sealing ring installation.

5. Partially expose the braided screen by removing the outer sheath of the cable at a length of approx. 10–15 mm. (7)
6. Installation of the contact spring on the exposed braided screen. (9)
7. Cable insertion including contact spring through the cable gland. Engaging the contact spring on the nozzle. (10)
8. Firmly screw on dome nut – finished!



	ØE	ØC1	ØC2	Mmax.	
	mm	mm	mm	Nm	
M12x1,5	3,5-5,5	3-5	5-8	5	
M16x1,5	5,5-8	5-7,5	7,5-10,5	7	
M20x1,5	8-11	8-10,5	10,5-15	12	
M25x1,5	10-15	12,5-15,5	15,5-20,5	12	
M32x1,5	13-20	17-20,5	20,5-25,5	15	
M40x1,5	20-27	24-29	29-33	15	
M50x1,5	26-34	31-37,5	37,5-42	30	
M63x1,5	34-44	40-46	46-53	60	



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(Source: Jacob GmbH)

