

ChemLine

FoodLine

ShieldLine

FrictionLine

Splitting Multigates made of ShieldLine Materials



STM 24/10

STM 24/10 Splitting Twinseal Multigate

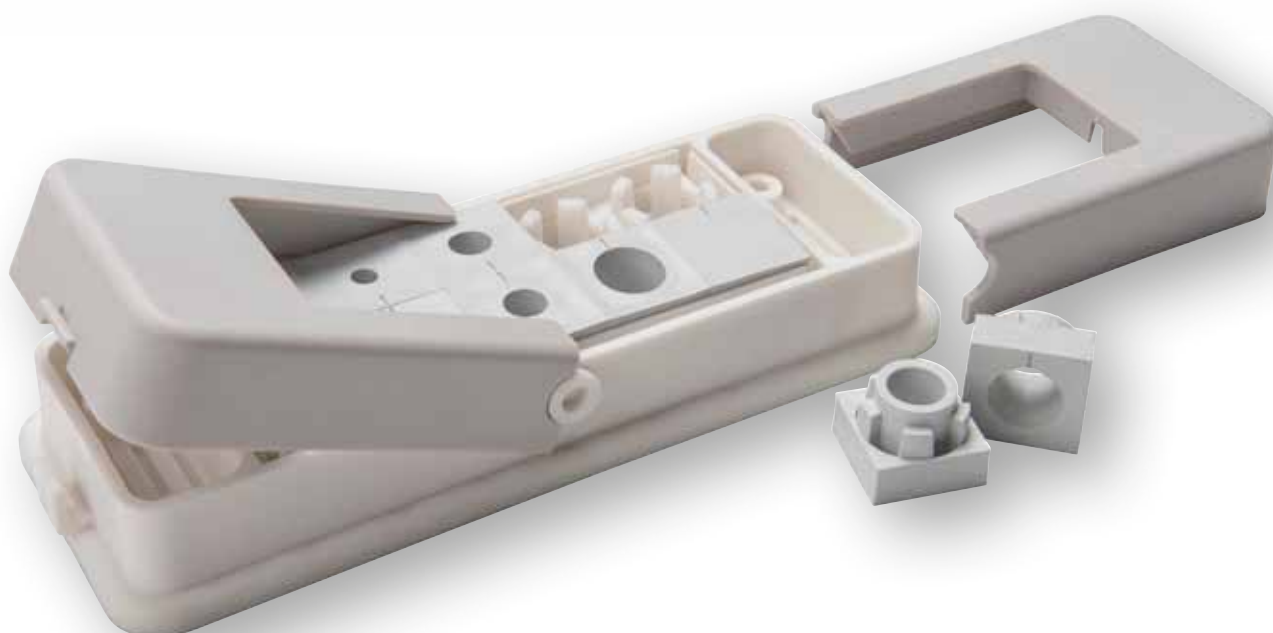
designed to meet a mixture of demands in leadthrough solutions.

The STM 24 is designed to fit in to the popular Harting dimensioned cut out for 24-poled connector, it can be customized for up to 10 cables or tubes of various dimensions.

The Splitting feature of the STM enables the use of large bulky connectors, the patent pending Twinseal solution brings a double sealing which ensures a tight and secure sealing in two steps that keeps humidity and dust out of the enclosure this innovative new type of variable shielding solution complements the Multigate product family. The Quickblock- system is developed to meet the demand of quick assembly time with a minimum of tools and wide variety of cabling sizes.

The material selection have been done to meet various demands from protecting environmental effects; outdoor-, indoor-assemblies, fire protection, to mechanical stress; IP enclosure class 65 (test in progress), size-optimizing, reinforced plastic materials.





MC 2x8-67



MC 2x8-67 Multigate is suitable for leading through both low and medium power current cables as well as various types of tubing. It fits directly to a C-standard aperture (or FL 21).

MC 2x8-67 Multigate is plastic reinforced new type of cable gland plate made of various types of polymers. It meets the respective IP enclosure classes as it does not need separate gaskets or glands which make it very easy to use, providing innumerable advantages in a single assembly unit.

MC 2x8-67 Multigate is suitable for both outdoor and indoor use.

MC 2x8-67 Multigate is inspected and certified by: SGS CSTC the Chinese authority in charge of electrical equipment safety standards.

Multigate will lead through and seal cables as follows:

| | |
|-----------|-------|
| 8 - 67 mm | 2 pcs |
|-----------|-------|

Total of 2 cables

| Code | Colour | Electrical number | Delivery time | Service temperature *) | Special |
|--------|--------|-------------------|---------------|------------------------|-----------------------------|
| 100074 | Black | 1732349 | From Stock | -40 - +100 | Material UL 94 V-0 approved |

SCG 2x3-35



SCG splitting cable gland is suitable for leading through both low and medium power current cables as well as various types of tubing.

SCG splitting cable gland is plastic reinforced new type of cable gland plate made of various types of polymers. It meets the respective IP enclosure classes as it does not need separate gaskets or glands which makes it very easy to use, providing innumerable advantages in a single assembly unit.

SCG splitting cable gland is suitable for both outdoor and indoor use.

SCG splitting cable gland is inspected and certified by:
SGS CSTC the Chinese authority in charge of electrical equipment safety standards

SCG will lead through and seal cables as follows:

| | |
|-----------|-------|
| 3 - 35 mm | 2 pcs |
|-----------|-------|

Total of 2 cable

| Code | Colour | Electrical number | Delivery time | Service temperature *) | Special |
|--------|--------|-------------------|---------------|------------------------|-----------------------------|
| 105929 | Black | | | -40 - +100 | Material UL 94 V-0 approved |

SCG 1x3-35



SCG splitting cable gland is suitable for leading through both low and medium power current cables as well as various types of tubing.

SCG splitting cable gland is plastic reinforced new type of cable gland plate made of various types of polymers. It meets the respective IP enclosure classes as it does not need separate gaskets or glands which makes it very easy to use, providing innumerable advantages in a single assembly unit.

SCG splitting cable gland is suitable for both outdoor and indoor use.

SCG splitting cable gland is inspected and certified by: SGS CSTC the Chinese authority in charge of electrical equipment safety standards.



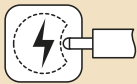
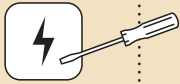

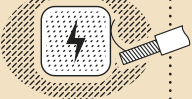

| | |
|---|-------|
| Multigate will lead through and seal cables as follows: | |
| 3 - 35 mm | 1 pcs |
| Total of 1 cables | |

| Code | Colour | Electrical number | Delivery time | Service temperature *) | Special |
|--------|--------|-------------------|---------------|------------------------|-----------------------------|
| 105928 | Black | | | -40 - +100 | Material UL 94 V-0 approved |

IP codes






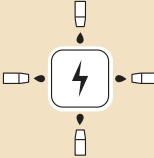
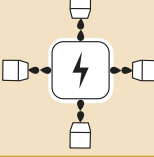


First numeral

Protection against ingress of solid foreign objects

| IP | Requirements | Example | Meaning protection of persons against access to hazardous parts with: |
|----|--|---|---|
| 0 | No protection |  | No protection provided |
| 1 | Full penetration of 50.0 mm diameter sphere not allowed and shall have adequate clearance from hazardous parts. Contact with hazardous parts not permitted |  | Back of hand |
| 2 | Full penetration of 12.5 mm diameter sphere not allowed. The jointed test finger shall have adequate clearance from hazardous parts |  | Finger |
| 3 | The access probe of 2.5 mm diameter shall not penetrate |  | Tool |
| 4 | The access probe of 1.0 mm diameter shall not penetrate |  | Wire |
| 5 | Limited ingress of dust permitted (no harmful deposit, refer to standard) |  | Wire |
| 6 | Totally protected against ingress of dust |  | Wire |
| | | | |
| | | | |

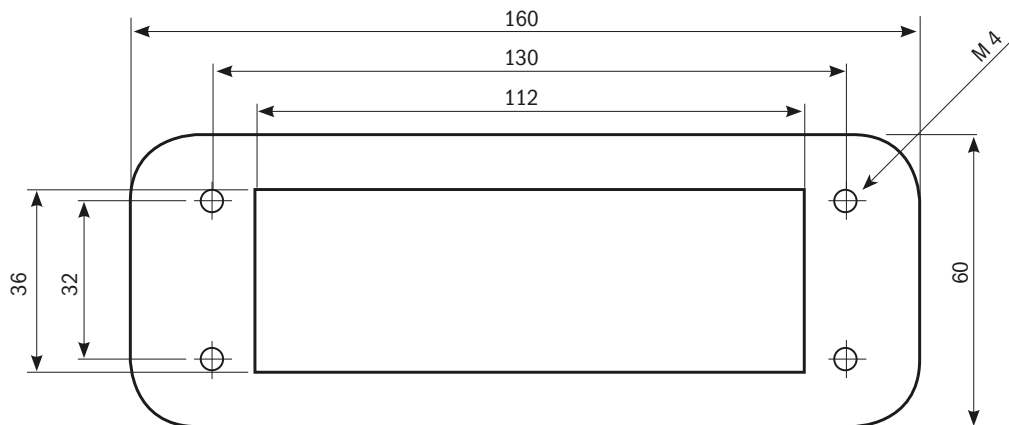
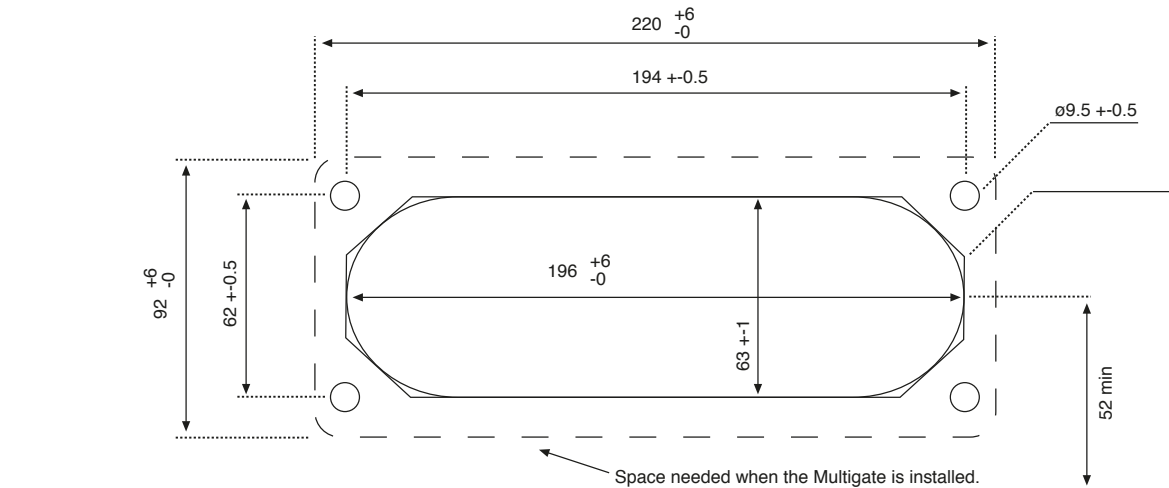
Second numeral

Protection against harmful ingress of water

| IP | Requirements | Example | Meaning for protection from ingress of water: |
|----|--|---|---|
| 0 | No protection |  | No protection provided |
| 1 | Protected against vertically falling drops of water |  | Vertically dripping |
| 2 | Protected against vertically falling drops of water with enclosure tilted 15° from the vertical. |  | Enclosure tilted 15° from the vertical |
| 3 | Protected against sprays to 60° from the vertical |  | Limited spraying |
| 4 | Protected against water splashed from all directions |  | Splashing from all directions |
| 5 | Protected against lowpressure jets of water from all directions |  | Hosing jets from all directions |
| 6 | Protected against strong jets of water |  | Strong hosing jets from all directions |
| 7 | Protected against the effects of immersion between 15.0 cm and 1.0 m |  | Temporary immersion |
| 8 | Protected against longer periods of immersion under pressure |  | Immersion |

Fixing details

Size C (FL 21)

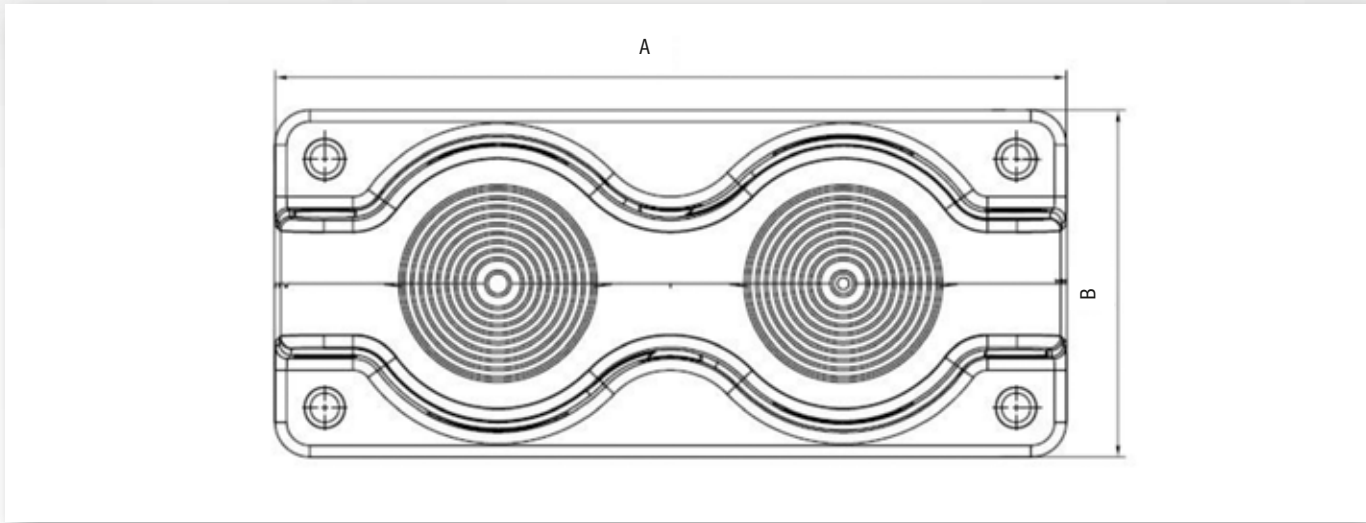
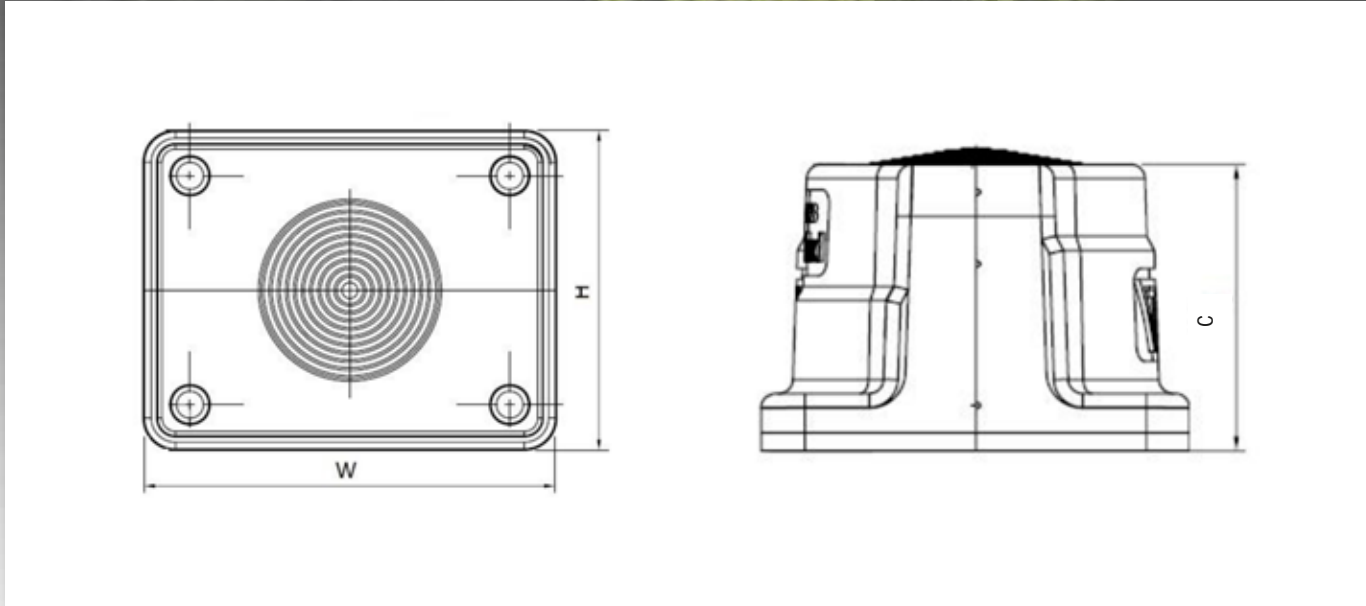


Bolt and nut

Always for outdoor and EMC applications or with large cable sizes, recommended torque 2Nm



Dimensions



| Product name | Item | Width (A) | Length (B) | Height (C) |
|---|--------|-----------|------------|------------|
| SCG 1 x 3 - 35 Splitting Grommet | 105928 | 77 | 60 | 40 |
| SCG 2 x 3 - 35 Splitting Grommet | 105929 | 136 | 60 | 40 |
| Multigate MC 2 x 8 - 67 Splitting Grommet | 100074 | 222 | 92 | 219 |
| STM 24/10 Splitting Twinseal Multigate | 106157 | 160 | 60 | 26 |

Shield Lines

Trelleborg have developed in long co-operations with customers a line of materials Shield line especially suitable for the electrical-, electric-, and telecom industries with excellent shielding performance in demanding environments. The material selection and development have been done in order to meet customer and application requirements for long term performance of gasket, lead trough's, grommet's, gaskets and various solutions of shielding electro technical equipment from external stress, weather, dust, UV-light, humidity or mechanical effect.

All Shield line materials fulfills REACH and RoHS latest requirements and are constantly monitored to fulfill any regulations that is requested by authorities.

Below is listed some key performance and properties of material groups within shield line material selection with typical application examples.

The right material solution is recommended to each customer application and optimized to meet the technical and other requirements.

ShieldLine

Thermoplastic Elastomer

T

Excellent resistance to weathering, ozone and UV exposure provides good chemical resistance, and electrical properties

Typically used for high volume items with request of high precision, low tolerances high quality combined with low-price of end product, especially suitable for fully automated production. Shield line T materials are fully recyclable and easy to customize by color and hardness in a range from 25° to 70° ShA . Major applications are cable seals, gaskets or cable lead troughs that are assembled outside in harsh environments and have to stand for some long terms mechanical stress such as stressing the shielding grommet or membrane.

Grades with limited resistance for oils, flame retardant grades UL 94 V-0, halogen free, FDA approved and EMC- shielding grades are available.

ShieldLine

Thermoplastic Urethane

U

Shield line U have basically the same properties as Shield line T but with excellent abrasive and mechanical properties.

Typically used where the items have to stand for abrasive stress combined with environmental conditions. Full recyclability and customized coloring is possible, hardness range is slightly limited by the materials physical properties but is still fairly wide 50° to 90° ShA
Grades with limited resistance for oils, FDA grades are available.

ShieldLine

Thermoplastic Vulcanizate

V

Shield line V have similar properties as Shield line T the special performance is in color stability in UV-light, the color does not change even in years of direct sunlight and in various temperatures. Also the chemical resistance properties are superior to other materials, oils petroleum, automotive fluids acids, solvents etc. have no or minor effect on Shield line V materials

Shield line V is very similar in feel and looks as traditional rubbers, but can be produced in high performance automated production lines, the hardness and temperature range is very wide, 15° ShA to 50° ShD and from -60°C to up to 150°C in short term exposure.

Typically used where the items have to stand for extreme environmental stress in elevated temperatures and harsh conditions, such as equipment parts for industrial use, automotive parts and visible parts with high visual standards on colors.

Special grades with FDA medical/ food contacts approval are available as well as flame retardant and other special grades.



REACH ✓

ShieldLine

Ethylene Propylene Diene Monomer

E

Basic performance is as for any EPDM material, these Shield line E grades have superior resistance to weathering, ozone and UV exposure they provides excellent chemical resistance, and good electrical properties and also resists animal and vegetable oils, steam, water and oxygenated solvents.

Shield line E is typically used when the solution requires rubber to be used; this can come from a moderate size of production series or low cost at low volumes when visual issues are not important since black is the main color for the material, still with good sealing properties. Cable grommets and single gates are produced out of Shield line E

There are some grades with EMC attenuation of 40 dB – 60 dB

ShieldLine

Nitrile Butadiene Rubber

N

Material mostly used for indoor or shielded applications due to limited weathering resistance, but excellent oil fuel and other chemical resistance. Gas permeability and water resistance are excellent as well as adhesion to metal and vibration damping performance.

Typical application would be a gasket, grommet, lead trough in automotive industry where oil or water sealing performance is important or gas tightness. Also vibration dampers are produced out of this materials due to wide hardness range that is available 20° to 95° ShA

ShieldLine

Chloroprene Rubber

C

Shield line C is used when rubber like performance is required with a wide temperature range -45... +120 °C and moderate fire protection or with chemical stability in the temperature range.

ShieldLine

Silicone

Q

Shield line Q offer excellent resistance to weathering, ozone and UV exposure also provides excellent chemical resistance and good electrical properties while resisting oil splashes.

Shield line Q is typically used in most demanding applications, with wide temperature range -50... + 200°C, and high quality performance and visual requirements, Shield line Q natural color is transparent or white so customized coloring is easy to obtain, it's a very flexible material and with high range of hardness 25° – 90° ShA which makes it very usable in sealing, grommet, cable lead troughs and terminal covers or plugs.

Special EMC/RFI/EMI grades are available with an attenuation of up to 120 dB, various fillers can be used such as silver or nickel graphite to fulfill the conductivity requirement. UL94 V-0 flame retardant grades are available and halogen free versions.



We seal, damp and protect in demanding industrial environments throughout the world.

Trelleborg is a global industrial group whose leading positions are based on advanced polymer technology and in-depth applications know-how.

Trelleborg Industrial Products Finland Oy is a part of Product Area Trelleborg Electrical Protection. We are the leading, flexible developer and manufacturer of elastomer-based innovative custom designed solutions that address the demanding pass-thru and sealing needs of the global telecom, electronics, power and HVAC industries. We serve the customers with fast, high quality product development and rapid prototyping. Our global presence supports multinational co-operation with flexible manufacturing capabilities.

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