Cable glands and cable entries

For demanding environments
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Data subject to change without notice.
PLASTIC CABLE GLANDS AND ACCESSORIES
Plastic cable gland

GPAQF M

Technical details

- Dome nut: Polyamide PA6 V-2
- Sealing ring: Polychloroprene-Nitrile rubber CR/NBR
- Gland body: Polyamide PA6 V-2
- Mounting nut: Polyamide PA6 GF30
- Moulded sealing ring: Nitrile-Polytetrafluorethylene rubber NBR/PTFE

Properties

- Quick and easy installation without special tools
- Trouble-free mounting and dismounting from one side
- Locknut on the inner side dispensable
- Advantageous for installation in areas with limited space
- Installation in clearance holes with dimensions according to EN 50262
- No inner thread required
- Continuously adjustable in wall thickness from 1 - 4 mm
- Integrated anchorage
- Wide sealing and clamping range

Temperature range: -20...+100 °C
Protection grade: IP68

Order symbol | Code | EAN | A | D/mm | T/mm | øC/mm | SW1/mm | SW2/mm | H/mm | Pack |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
RAL 7035 GPAQF M16 | 7016860 | 6418074090577 | M16 | 16,1 – 16,3 | 1 – 4 | 5 – 10 | 24 | 20 | 38,5 | 100 |
GPAQF M20 | 7016861 | 6418074090584 | M20 | 20,1 – 20,4 | 1 – 4 | 8 – 13 | 26 | 24 | 42,5 | 100 |
GPAQF M25 | 7016862 | 6418074090591 | M25 | 25,1 – 25,4 | 1 – 4 | 11 – 17 | 32 | 29 | 48 | 50 |
GPAQF M32 | 7016863 | 6418074090607 | M32 | 32,1 – 32,4 | 1 – 4 | 15 – 21 | 42 | 36 | 58,5 | 25 |
Plastic cable gland

GPA M/ML

Technical details
- Dome nut
- Sealing ring
- Gland body
- Connecting thread

Properties
- Integrated anchorage
- Wide sealing and clamping range
- Easy-to-install

Temperature range -20...+100 °C
Protection grade IP68 – 5 bar
Test standard EN 50262 / UL 514B

Order symbol Code EAN A ØC mm L mm SW1 mm SW2 mm H mm Pack

RAL 7035: Connecting thread: standard length
GPA M12 7016400 6418074054845 M12 x 1,5 3 – 6 8 15 15 31 100
GPA M16 7016401 6418074054852 M16 x 1,5 5 – 10 8 20 20 35,5 100
GPA M20 7016402 6418074054869 M20 x 1,5 8 – 13 8 24 24 36 100
GPA M25 7016403 6418074054876 M25 x 1,5 11 – 17 8 29 29 43 50
GPA M32 7016404 6418074054883 M32 x 1,5 15 – 21 10 36 36 50 25
GPA M40 7016405 6418074054890 M40 x 1,5 19 – 28 10 46 46 51 10
GPA M50 7016406 6418074054906 M50 x 1,5 27 – 35 12 55 55 61,5 5
GPA M63 7016407 6418074054913 M63 x 1,5 32 – 42 12 68 68 65,5 5

RAL 7035: Connecting thread: long
GPA M12L 7016533 6418074056337 M12 x 1,5 3 – 6 15 15 15 38 100
GPA M16L 7016534 6418074056344 M16 x 1,5 5 – 10 15 20 20 42,5 100
GPA M20L 7016535 6418074056351 M20 x 1,5 8 – 13 15 24 24 43 100
GPA M25L 7016536 6418074056368 M25 x 1,5 11 – 17 15 29 29 50 50
GPA M32L 7016537 6418074056375 M32 x 1,5 15 – 21 15 36 36 55 25
GPA M40L 7016538 6418074056382 M40 x 1,5 19 – 28 18 46 46 59 10
GPA M50L 7016539 6418074056399 M50 x 1,5 27 – 35 18 55 55 67,5 5
GPA M63L 7016540 6418074056405 M63 x 1,5 32 – 42 18 68 68 71,5 5

RAL 9005: Connecting thread: standard length
GPA M12 9005 7016950 6418074093295 M12 x 1,5 3 – 6 8 15 15 31 100
GPA M16 9005 7016951 6418074093301 M16 x 1,5 5 – 10 8 20 20 35,5 100
GPA M20 9005 7016952 6418074093318 M20 x 1,5 8 – 13 8 24 24 36 100
GPA M25 9005 7016953 6418074093325 M25 x 1,5 11 – 17 8 29 29 43 50
GPA M32 9005 7016954 6418074093332 M32 x 1,5 15 – 21 10 36 36 50 25
GPA M40 9005 7016955 6418074093349 M40 x 1,5 19 – 28 10 46 46 51 10
GPA M50 9005 7016956 6418074093356 M50 x 1,5 27 – 35 12 55 55 61,5 5
GPA M63 9005 7016957 6418074093363 M63 x 1,5 32 – 42 12 68 68 65,5 5
Plastic cable gland

GPA MR

Technical details
Dome nut: Polyamide PA6 V-2
Sealing ring / outer part: Polychloroprene-Nitrile rubber CR/NBR
Sealing ring / inner part: Evoprene TPE
Gland body: Polyamide PA6 V-2
Connecting thread: metric as per EN 60423

Properties
- Reducing sealing ring for small cable diameter
- Integrated anchorage
- Wide sealing and clamping range
- Easy-to-install

Temperature range: -20...+100 °C
Protection grade: IP68 – 5 bar
Test standard: EN 50262 / UL 514B

Order symbol | Code | EAN | A | øC | L | SW1 | SW2 | H | Pack
---|---|---|---|---|---|---|---|---|---
RAL 7035: Connecting thread: standard length
GPA M12R | 7016750 | 6418074029768 | M12 x 1,5 | 2 - 5* | 8 | 15 | 15 | 31 | 100
GPA M16R | 7016780 | 6418074091222 | M16 x 1,5 | 3 - 10 | 8 | 20 | 20 | 35,5 | 100
GPA M20R | 7016781 | 6418074091239 | M20 x 1,5 | 5 - 13 | 8 | 24 | 24 | 36 | 100
GPA M25R | 7016782 | 6418074091246 | M25 x 1,5 | 8 - 17 | 8 | 29 | 29 | 43 | 50
GPA M32R | 7016783 | 6418074091253 | M32 x 1,5 | 12 - 21 | 10 | 36 | 36 | 50 | 25
GPA M40R | 7016784 | 6418074091260 | M40 x 1,5 | 16 - 28 | 10 | 46 | 46 | 51 | 10
GPA M50R | 7016785 | 6418074091277 | M50 x 1,5 | 21 - 35 | 12 | 55 | 55 | 61,5 | 5
GPA M63R | 7016786 | 6418074091284 | M63 x 1,5 | 27 - 48 | 12 | 68 | 68 | 65,5 | 5

* sealing ring one-piece
Plastic cable gland
GPA PG/PGL

Technical details
- Dome nut: Polyamide PA6 V-2
- Sealing ring: Polychloroprene-Nitrile rubber CR/NBR
- Gland body: Polyamide PA6 V-2
- Connecting thread: Pg as per DIN 40430

Properties
- Integrated anchorage
- Wide sealing and clamping range
- Easy-to-install
- Temperature range: -20...+100 °C
- Protection grade: IP68 – 5 bar
- Test standard: UL 514B

Order symbol | Code | EAN | A | øC (mm) | L (mm) | SW1 (mm) | SW2 (mm) | H (mm) | Pack |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
RAL 7035: Connecting thread: standard length
- GPA PG7 7016416 6418074055002 Pg 7 3 - 6,5 8 15 15 30,5 100
- GPA PG9 7016417 6418074055019 Pg 9 4 - 8 8 19 19 34 100
- GPA PG11 7016418 6418074055026 Pg 11 5 - 10 8 22 22 37 100
- GPA PG13.5 7016419 6418074055033 Pg 13,5 6 - 12 9 24 24 39 100
- GPA PG16 7016420 6418074055040 Pg 16 10 - 14 10 27 27 42,5 50
- GPA PG21 7016421 6418074055057 Pg 21 13 - 18 11 33 33 47,5 50
- GPA PG29 7016422 6418074055064 Pg 29 18 - 25 11 42 42 53 25
- GPA PG36 7016423 6418074055071 Pg 36 22 - 32 13 53 53 61 10
- GPA PG42 7016424 6418074055088 Pg 42 30 - 38 13 60 60 65 5
- GPA PG48 7016425 6418074055095 Pg 48 34 - 44 14 65 65 67 5

RAL 9005: Connecting thread: standard length
- GPA PG7 9005 7016577 6418074062284 Pg 7 3 - 6,5 8 15 15 30,5 100
- GPA PG9 9005 7016578 6418074062291 Pg 9 4 - 8 8 19 19 34 100
- GPA PG11 9005 7016579 6418074062307 Pg 11 5 - 10 8 22 22 37 100
- GPA PG13.5 9005 7016580 6418074093455 Pg 13,5 6 - 12 9 24 24 39 100
- GPA PG16 9005 7016581 6418074093462 Pg 16 10 - 14 10 27 27 42,5 50
- GPA PG21 9005 7016582 6418074093479 Pg 21 13 - 18 11 33 33 47,5 50
- GPA PG29 9005 7016583 6418074093486 Pg 29 18 - 25 11 42 42 53 25
- GPA PG36 9005 7016584 6418074093493 Pg 36 24 - 32 13 53 53 61 10
- GPA PG42 9005 7016585 6418074093509 Pg 42 30 - 38 13 60 60 65 5
- GPA PG48 9005 7016586 6418074093516 Pg 48 34 - 44 14 65 65 67 5

RAL 7035: Connecting thread: long
- GPA PG7L 7016541 6418074056412 Pg 7 3 - 6,5 15 15 15 37,5 100
- GPA PG9L 7016542 6418074056429 Pg 9 4 - 8 15 19 19 41 100
- GPA PG11L 7016543 6418074056436 Pg 11 5 - 10 15 22 22 44 100
- GPA PG13.5L 7016544 6418074056443 Pg 13,5 6 - 12 15 24 24 45 100
- GPA PG16L 7016545 6418074056450 Pg 16 10 - 14 15 27 27 47,5 50
- GPA PG21L 7016546 6418074056467 Pg 21 13 - 18 15 33 33 51,5 50
- GPA PG29L 7016547 6418074056474 Pg 29 18 - 25 15 42 42 57 25
- GPA PG36L 7016548 6418074056481 Pg 36 22 - 32 18 53 53 66 10
Plastic cable gland

GBP M

Technical details
- Dome nut: Polyamide PA6 V-2
- Sealing ring: Polychloroprene-Nitrile rubber CR/NBR
- Gland body: Polyamide PA6 V-2
- Connecting thread: Metric thread as per EN 60423

Properties
- With spiral top
- For movable flexible cables
- Integrated anchorage
- Wide sealing and clamping range,
- Easy-to-install

Temperature range: -20...+100 °C
Protection grade: IP68 – 5 bar
Test standard: EN 50262 / UL 514B

Order symbol | Code | EAN | A | ØC | L | SW1 | SW2 | H | Pack
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
RAL 7035
GBP M12 | 7016940 | 6418074090492 | M12 x 1,5 | 3 – 6,5 | 8 | 15 | 15 | 63,5 | 100
GBP M16 | 7016941 | 6418074090560 | M16 x 1,5 | 5 – 10 | 15 | 22 | 22 | 94,5 | 100
GBP M20 | 7016942 | 6418074092595 | M20 x 1,5 | 6 – 12 | 11 | 24 | 24 | 101,5 | 50
GBP M25 | 7016943 | 6418074093707 | M20 x 1,5 | 10 – 14 | 15 | 27 | 27 | 116 | 50
GBP M32 | 7016944 | 6418074093714 | M25 x 1,5 | 13 – 18 | 15 | 33 | 33 | 132,5 | 50
## Technical details

**Hexagonal locknut**

**Connecting thread**

Polyamide PA6 GF30

metric as per EN 60423

## Properties

- For secure tightening of cable glands and accessories

Temperature range: -20...+100 °C

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Hexagonal locknut, plastic

Technical details
Hexagonal locknut
Internal thread
Polyamide PA6 GF30
Pg as per DIN 40430

Properties
- For secure tightening of cable glands and accessories
Temperature range
-20...+100 °C

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Screw plug, plastic

GSP M/MS

Technical details
Screw plug: Polyamide PA6 GF30
Connecting thread: Metric as per EN 60423

Properties
- For secure sealing of unused threaded or clearance hole
- Temperature range: -30...+100 °C
- Protection grade: IP54/IP65*
  Higher protection grade IP65, if assembled with sealing ring

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</table>
Screw plug, plastic

GSP PG

Technical details
Screw plug: Polyamide PA6 GF30
Connecting thread: Pg as per DIN 40430

Properties
- For secure sealing of unused
- Threaded or clearance hole

Temperature range: -30...+100 °C
Protection grade: IP54
Higher protection grade possible if assembled with sealing ring

Order symbol  Code  EAN  A  L mm  H mm  Da mm  Pack

RAL 7035
- GSP PG7 slot  7016515  6418074056153  Pg 7  6  10  15  100
- GSP PG9 slot  7016516  6418074056160  Pg 9  6  10  19  100
- GSP PG11 slot  7016517  6418074056177  Pg 11  6  10  22  100
- GSP PG13.5 slot  7016518  6418074056184  Pg 13.5  6  10  25  100
- GSP PG16 slot  7016519  6418074056191  Pg 16  6  10  27  100
- GSP PG21 slot  7016520  6418074056207  Pg 21  8  12.5  33  100
- GSP PG29 slot  7016521  6418074056214  Pg 29  8  13  44.5  100
- GSP PG36 slot  7016522  6418074056221  Pg 36  10  15  55.5  50
- GSP PG42 slot  7016523  6418074056238  Pg 42  10  15.5  62.5  50
- GSP PG48 slot  7016524  6418074056245  Pg 48  12  17  69.5  50
Adapter, plastic

GPAPM PG/M

Technical details
Adapter
Polyamide PA6 GF30

External thread
Pg as per DIN 40430

Internal thread
metric as per EN 60423

Properties
- Adapter from Pg to metric threaded holes

Temperature range
-30...+100 °C

Protection grade
dependent on the combination with other components

Order symbol | Code  | EAN           | A      | B      | L mm | SW1 mm | H mm | Di mm | Pack |
-------------|-------|---------------|--------|--------|------|--------|------|-------|------|
RAL 7035
GPAPM PG7/M12 | 7016720 | 6418074091758 | Pg 7   | M12 x 1,5 | 8    | 15    | 20   | 7,5   | 100  |
GPAPM PG7/M16 | 7016721 | 6418074091765 | Pg 7   | M16 x 1,5 | 8    | 20    | 20   | 7,5   | 100  |
GPAPM PG9/M12 | 7016722 | 6418074091772 | Pg 9   | M12 x 1,5 | 8    | 19    | 20   | 10,5  | 100  |
GPAPM PG9/M16 | 7016723 | 6418074091789 | Pg 9   | M16 x 1,5 | 8    | 20    | 20   | 10,5  | 100  |
GPAPM PG9/M20 | 7016724 | 6418074091796 | Pg 9   | M20 x 1,5 | 8    | 24    | 20   | 10,5  | 100  |
GPAPM PG11/M16 | 7016725 | 6418074091802 | Pg 11  | M16 x 1,5 | 8    | 22    | 20   | 13,5  | 100  |
GPAPM PG11/M20 | 7016726 | 6418074091819 | Pg 11  | M20 x 1,5 | 8    | 24    | 20   | 13,5  | 100  |
GPAPM PG13.5/M16 | 7016727 | 6418074091826 | Pg 13,5 | M16 x 1,5 | 9    | 24    | 21   | 15    | 100  |
GPAPM PG13.5/M20 | 7016728 | 6418074091833 | Pg 13,5 | M20 x 1,5 | 9    | 24    | 21   | 15    | 100  |
GPAPM PG13.5/M25 | 7016729 | 6418074091840 | Pg 13,5 | M25 x 1,5 | 9    | 30    | 21,5 | 15    | 100  |
GPAPM PG16/M20 | 7016730 | 6418074091857 | Pg 16  | M20 x 1,5 | 10   | 27    | 22   | 17,5  | 100  |
GPAPM PG16/M25 | 7016731 | 6418074091864 | Pg 16  | M25 x 1,5 | 10   | 30    | 22,5 | 17,5  | 50   |
GPAPM PG21/M25 | 7016732 | 6418074091871 | Pg 21  | M25 x 1,5 | 11   | 33    | 23,5 | 22,5  | 50   |
GPAPM PG21/M32 | 7016733 | 6418074091888 | Pg 21  | M32 x 1,5 | 11   | 37    | 25,5 | 22,5  | 50   |
GPAPM PG29/M32 | 7016734 | 6418074091895 | Pg 29  | M32 x 1,5 | 11   | 42    | 25,5 | 30,5  | 50   |
GPAPM PG29/M40 | 7016735 | 6418074091901 | Pg 29  | M40 x 1,5 | 11   | 45    | 25,5 | 30,5  | 50   |
Blanking plug, plastic

GCP M

Technical details
Blanking plug
Polyamide PA6 GF30

Properties
- Single part for use in combination with plastic cable gland

Temperature range
-30...+100 °C

Comment
blanking plug only suitable for application with GPA cable gland of polyamide

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<tr>
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<th>H mm</th>
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Brass is an alloy made of the metals copper and zinc. Brass types containing small proportions of lead as a third component with a view to improving machining properties are also known as free cutting or machining brass. For our cable glands, we use the alloy CuZn39Pb3.

Brass has good mechanical characteristic values, is resistant to water, vapour, various saline solutions and many organic fluids.

Brass is an exemplary recycling material.

The surface of cable glands and accessories made of brass is coated by galvanisation. The electro nickel plating lends the brass a hard surface and protects it from corrosion, wear and possible stress cracking. The shiny nickel plated surface has a decorative effect and can be polished.
Metal cable gland

GMS M/ML

Technical details

Dome nut 
Brass CuZn39Pb3, nickel-plated

Lamellar insert 
Polyamide PA6 V-2

Sealing ring 
Polychloroprene-Nitrile rubber CR/NBR

Gland body 
Brass CuZn39Pb3, nickel-plated

O-ring 
Nitrile rubber NBR

Connecting thread 
metric as per EN 60423

Properties

- Integrated anchorage
- Protection against twisting
- Wide sealing and clamping range
- Easy-to-install

Temperature range 
-20...+100 °C

Protection grade 
IP68 – 5 bar / IP69K*

Test standard 
EN 50262 / UL 514B

Order symbol | Code | EAN | A | dE mm | L mm | SW1 mm | SW2 mm | H mm | Pack
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---

Connecting thread: standard length

GMS M12 | 7016312 | 6418074055286 | M12 x 1,5 | 3 – 6 | 5 | 14 | 14 | 25 | 100

GMS M16 | 7016315 | 6418074055293 | M16 x 1,5 | 5 – 9 | 5 | 17 | 17 | 30 | 100

GMS M20 | 7016320 | 6418074055309 | M20 x 1,5 | 9 – 13 | 6 | 22 | 22 | 33,5 | 100

GMS M25 | 7016325 | 6418074055316 | M25 x 1,5 | 11 – 16 | 7 | 27 | 27 | 36,5 | 50

GMS M32 | 7016332 | 6418074055323 | M32 x 1,5 | 14 – 21 | 8 | 34 | 34 | 38 | 25

GMS M40 | 7016340 | 6418074055330 | M40 x 1,5 | 19 – 27 | 8 | 43 | 43 | 41 | 10

GMS M50 | 7016350 | 6418074055347 | M50 x 1,5 | 24 – 35 | 9 | 55 | 55 | 49,5 | 5

GMS M63 | 7016363 | 6418074055354 | M63 x 1,5 | 32 – 42 | 10 | 65 | 65 | 52,5 | 5

GMS M63 | 7016364 | 6418074090614 | M63 x 1,5 | 38 – 48 | 10 | 65 | 65 | 52,5 | 5

Connecting thread: long

GMS M12L | 7016365 | 6418074090621 | M12 x 1,5 | 3 – 6 | 10 | 14 | 14 | 30 | 100

GMS M16L | 7016372 | 6418074090645 | M16 x 1,5 | 5 – 9 | 10 | 17 | 17 | 35 | 100

GMS M20L | 7016322 | 6418074092465 | M20 x 1,5 | 9 – 13 | 10 | 22 | 22 | 37,5 | 100

GMS M25L | 7016366 | 6418074090638 | M25 x 1,5 | 11 – 16 | 11 | 27 | 27 | 40,5 | 50

GMS M32L | 7016367 | 6418074090652 | M32 x 1,5 | 14 – 21 | 13 | 34 | 34 | 43 | 25

GMS M40L | 7016368 | 6418074090669 | M40 x 1,5 | 19 – 27 | 13 | 43 | 43 | 46 | 10

GMS M50L | 7016369 | 6418074090676 | M50 x 1,5 | 24 – 35 | 14 | 55 | 55 | 54,5 | 5

GMS M63L | 7016370 | 6418074090683 | M63 x 1,5 | 32 – 42 | 14 | 65 | 65 | 56,5 | 5

GMS M63L | 7016371 | 6418074090690 | M63 x 1,5 | 38 – 48 | 14 | 65 | 65 | 56,5 | 5

with Viton sealing ring and Viton O-ring on request

* IP69K tested for M12 – M25, M50, M63

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Metal cable gland

GMS MR/MRL

Technical details
- Dome nut: Brass CuZn39Pb3, nickel-plated
- Lamellar insert: Polyamide PA6 V-2
- Sealing ring / outer part: Polychloroprene-Nitrile rubber CR/NBR
- Sealing ring / inner part: Evoprene TPE
- Gland body: Brass CuZn39Pb3, nickel-plated
- O-ring: Nitrile rubber NBR
- Connecting thread: metric as per EN 60423

Properties
- Reducing sealing ring for small cablediameter
- Integrated anchorage,
- Wide sealing and clamping range,
- Protection against twisting
- Easy-to-install

Temperature range: -20...+100 °C
Protection grade: IP68 – 5 bar / IP69K*
Test standard: EN 50262 / UL 514B

Order symbol | Code     | EAN             | A       | L mm | øC mm | SW1 mm | SW2 mm | H mm | Pack
--------------|-----------|-----------------|---------|------|-------|--------|--------|------|------
Connecting thread: standard
GMS M12R     | 7016840   | 6418074090706  | M12 x 1.5 | 5    | 2 – 5 | 14     | 14     | 25   | 100
GMS M16R     | 7016841   | 6418074090713  | M16 x 1.5 | 5    | 3 – 9 | 17     | 17     | 30   | 100
GMS M20R     | 7016842   | 6418074090720  | M20 x 1.5 | 6    | 5 – 13| 22     | 22     | 33.5 | 100
GMS M25R     | 7016843   | 6418074090737  | M25 x 1.5 | 7    | 8 – 16| 27     | 27     | 36.5 | 50
GMS M32R     | 7016844   | 6418074090744  | M32 x 1.5 | 8    | 12 – 21| 34     | 34     | 38   | 25
GMS M40R     | 7016845   | 6418074090751  | M40 x 1.5 | 8    | 16 – 27| 43     | 43     | 41   | 10
GMS M50R     | 7016846   | 6418074090768  | M50 x 1.5 | 9    | 21 – 35| 55     | 55     | 49.5 | 5
GMS M63R     | 7016847   | 6418074090775  | M63 x 1.5 | 10   | 27 – 48| 65     | 65     | 52.5 | 5

Connecting thread: long
GMS M12RL    | 7016848   | 6418074090782  | M12 x 1.5 | 10   | 2 – 5  | 14     | 14     | 30   | 100
GMS M16RL    | 7016849   | 6418074090799  | M16 x 1.5 | 10   | 3 – 9  | 17     | 17     | 35   | 100
GMS M20RL    | 7016850   | 6418074090805  | M20 x 1.5 | 10   | 5 – 13 | 22     | 22     | 37.5 | 100
GMS M25RL    | 7016851   | 6418074090812  | M25 x 1.5 | 11   | 8 – 16 | 27     | 27     | 40.5 | 50
GMS M32RL    | 7016852   | 6418074090829  | M32 x 1.5 | 13   | 12 – 21| 34     | 34     | 43   | 25
GMS M40RL    | 7016853   | 6418074090836  | M40 x 1.5 | 13   | 16 – 27| 43     | 43     | 46   | 10
GMS M50RL    | 7016854   | 6418074090843  | M50 x 1.5 | 14   | 21 – 35| 55     | 55     | 54.5 | 5
GMS M63RL    | 7016855   | 6418074090850  | M63 x 1.5 | 14   | 27 – 48| 65     | 65     | 56.6 | 5

* IP69K tested for M12 – M25, M50, M63
**Metal cable gland**

**GMS PG/PGL**

**Technical details**
- **Dome nut**: Brass CuZn39Pb3, nickel-plated
- **Lamellar insert**: Polyamide PA6 V-2
- **Sealing ring**: Polychloroprene-Nitrile rubber CR/NBR
- **Gland body**: Brass CuZn39Pb3, nickel-plated
- **O-ring**: Nitrile rubber NBR
- **Connecting thread**: Pg as per DIN 40430

**Properties**
- Integrated anchorage
- Protection against twisting
- Wide sealing and clamping range
- Easy-to-install

**Temperature range**: -20...+100 °C
**Protection grade**: IP68 – 5 bar

### Order symbol | Code | EAN | A | øC mm | L mm | SW1 mm | SW2 mm | H mm | Pack
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
**Connecting thread: standard length**
GMS PG7 | 7016444 | 6418074055446 | Pg 7 | 3 – 6,5 | 5 | 14 | 14 | 24 | 100
GMS PG9 | 7016445 | 6418074055453 | Pg 9 | 4 – 8 | 6 | 17 | 17 | 29 | 100
GMS PG11 | 7016446 | 6418074055460 | Pg 11 | 5 – 10 | 6 | 20 | 20 | 29,5 | 50
GMS PG13,5 | 7016447 | 6418074055477 | Pg 13,5 | 6 – 12 | 6,5 | 22 | 22 | 31,5 | 50
GMS PG16 | 7016448 | 6418074055484 | Pg 16 | 10 – 14 | 6,5 | 24 | 24 | 31,5 | 50
GMS PG21 | 7016449 | 6418074055491 | Pg 21 | 13 – 18 | 7 | 30 | 30 | 34 | 50
GMS PG29 | 7016450 | 6418074055507 | Pg 29 | 18 – 25 | 8 | 40 | 40 | 39 | 25
GMS PG36 | 7016451 | 6418074055514 | Pg 36 | 24 – 32 | 9 | 50 | 50 | 45 | 10
GMS PG42 | 7016452 | 6418074055521 | Pg 42 | 30 – 38 | 10 | 57 | 57 | 49 | 5
GMS PG48 | 7016453 | 6418074055538 | Pg 48 | 34 – 44 | 10 | 64 | 64 | 52 | 5

**Connecting thread: long**
GMS PG7L | 7016744 | 6418074091918 | Pg 7 | 3 – 6,5 | 15 | 14 | 14 | 34 | 100
GMS PG9L | 7016745 | 6418074012364 | Pg 9 | 4 – 8 | 15 | 17 | 17 | 38 | 100
GMS PG11L | 7016746 | 6418074091925 | Pg 11 | 5 – 10 | 15 | 20 | 20 | 38,5 | 50
GMS PG13,5L | 7016747 | 6418074091932 | Pg 13,5 | 6 – 12 | 15 | 22 | 22 | 40 | 50
GMS PG16L | 7016748 | 6418074091949 | Pg 16 | 10 – 14 | 15 | 24 | 24 | 40 | 50
GMS PG21L | 7016749 | 6418074012371 | Pg 21 | 13 – 18 | 15 | 30 | 30 | 42 | 50
GMS PG29L | 7016750 | 6418074091956 | Pg 29 | 18 – 25 | 15 | 40 | 40 | 46 | 25
Hexagonal locknut, metal

GMS MB/B

Technical details
Hexagonal locknut
Internal thread
Brass CuZn39Pb3, nickel-plated
metric as per EN 60423 and ISO 965

Properties
- For secure tightening of cable glands and accessories
Temperature range: up to +200 °C

<table>
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<th>A</th>
<th>SW1</th>
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Technical details
Hexagonal locknut
Internal thread
Brass CuZn39Pb3, nickel-plated
Pg as per DIN 40430

Properties
- For secure tightening of cable glands and accessories
Temperature range: -60...+200 °C

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Screw plug, metal

GSM M/PG

**Technical details**

- Screw plug: Brass CuZn39Pb3, nickel-plated
- O-ring: Nitrile rubber NBR
- Connecting thread: Metric as per EN 60423

**Properties**

- For secure sealing of unused threaded or clearance holes
- Temperature range: -30...+100 °C
- Protection grade: IP68
- Type: 4X
- Test standard: UL 514A, 25 / UL 50, 35.2 / UL 746C, 14

### Technical details

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Adapter, metal

GMSPM PG/M

Technical details
Adapter
External thread
Internal thread
Brass CuZn39Pb3, nickel-plated
Pg as per DIN 40430
metric as per EN 60423

Properties
- Adapter from Pg to metric threaded holes
Temperature range
up to +200 °C
Protection grade
dependent on the combination with other components

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Fundamentals, assembly instruction

One important quality characteristic 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 EMC cable glands meets these requirements in an outstanding way.

The assembly of cable gland type GMS EMC/M/ML 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 page 25 - 26.
**EMC cable gland**

**GMS EMC M/ML**

**Technical details**
- Dome nut: Brass CuZn39Pb3, nickel-plated
- Lamellar insert: Polyamide PA6 V-2
- Sealing ring: Polychloroprene-Nitrile rubber CR/NBR
- Contact spring: Stainless steel
- Gland body: Brass CuZn39Pb3, nickel-plated
- O-ring: Nitrile rubber NBR
- Connecting thread: metric as per EN 60423

**Properties**
- For cables with shielding, quick and easy EMC connection of the cable shield via the contacting spring with the Gland body and the housing potential
- Integrated anchorage
- Wide sealing and clamping range

**Temperature range**: -20...+100 °C
**Protection grade**: IP68
**Test standard**: UL 514B

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| Connecting thread: long |
| GMS EMC2 M16L | 7016827 | 6418074090935        | M16 x 1.5 | 5 - 9 | 10  | 17     | 17     | 35   | 100  |
| GMS EMC2 M20L | 7016828 | 6418074090942        | M20 x 1.5 | 9 - 13 | 10  | 22     | 22     | 37.5 | 100  |
| GMS EMC2 M25L | 7016829 | 6418074090959        | M25 x 1.5 | 11 - 16 | 11  | 27     | 27     | 40.5 | 50   |
| GMS EMC2 M32L | 7016830 | 6418074090966        | M32 x 1.5 | 14 - 21 | 13  | 34     | 34     | 43   | 25   |
| GMS EMC2 M40L | 7016831 | 6418074090973        | M40 x 1.5 | 19 - 27 | 13  | 43     | 43     | 46   | 10   |
**EMC cable gland**

**Fundamentals, assembly instruction**

Our EMC cable gland type GMS EMC/M/ML/MW 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.

**EMC test report**

Our EMC cable glands type GMS/M/ML/MW have been tested to the VG standard for transfer 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.
**EMC cable gland**

**GMS EMC M/ML/MW**

**Technical details**
- **Dome nut**: Brass CuZn39Pb3, nickel-plated
- **Lamellar insert**: Polyamide PA6 V-2
- **Sealing ring**: Polychloroprene-Nitrile rubber CR/NBR
- **Gland body**: Brass CuZn39Pb3, nickel-plated
- **O-ring**: Nitrile rubber NBR
- **Connecting thread**: metric as per EN 60423

**Properties**
- For cables with shielding
- Integrated anchorage
- Protection against twisting
- Wide sealing and clamping range

**Temperature range**
-20...+100 °C

**Protection grade**
- IP68 – 5 bar / IP69K*

**Test standard**
EN 50262 / UL 514B

**Order symbol**

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<th>L (mm)</th>
<th>SW1 (mm)</th>
<th>SW2 (mm)</th>
<th>H (mm)</th>
<th>Pack</th>
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<tbody>
<tr>
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<td>7016806</td>
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<td>14</td>
<td>14</td>
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<th>aC (mm)</th>
<th>L (mm)</th>
<th>SW1 (mm)</th>
<th>SW2 (mm)</th>
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<td>65</td>
<td>65</td>
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</tbody>
</table>

* IP69K tested for M12-M25, M50, M63

---

**CABLE_GLANDS_catalogue.indd** 23

19.3.2015 12.39
EMC cable gland

GMS EMC

Technical details

<table>
<thead>
<tr>
<th>dome nut</th>
<th>Brass CuZn39Pb3, nickel-plated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lamellar insert</td>
<td>Polyamide PA6 V-2</td>
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<tr>
<td>Sealing ring</td>
<td>Polychloroprene-Nitrile rubber CR/NBR</td>
</tr>
<tr>
<td>Gland body</td>
<td>Brass CuZn39Pb3, nickel-plated</td>
</tr>
<tr>
<td>O-ring</td>
<td>Nitrile rubber NBR</td>
</tr>
<tr>
<td>Connecting thread</td>
<td>Pg as per DIN 40430</td>
</tr>
</tbody>
</table>

Properties

- For cables with shielding
- Integrated anchorage
- Protection against twisting
- Wide sealing and clamping range

Temperature range: -20...+100 °C
Protection grade: IP68 – 5 bar

Order symbol | Code         | EAN             | A     | øC mm | L mm | SW1 mm | SW2 mm | H mm | Pack |
--------------|--------------|-----------------|-------|-------|------|--------|--------|------|------|
GMS EMC PG7   | 7016551      | 6418074056559   | Pg 7  | 3–6.5 | 5    | 14     | 14     | 24   | 100  |
GMS EMC PG9   | 7016552      | 6418074056566   | Pg 9  | 4–8   | 6    | 17     | 17     | 29   | 100  |
GMS EMC PG11  | 7016553      | 6418074056573   | Pg 11 | 5–10  | 6    | 20     | 20     | 29.5 | 100  |
GMS EMC PG13.5| 7016554      | 6418074056580   | Pg 13.5 | 6–12 | 6.5  | 22     | 22     | 31.5 | 50   |
GMS EMC PG16  | 7016555      | 6418074056597   | Pg 16 | 10–14 | 6.5  | 24     | 24     | 31.5 | 50   |
GMS EMC PG21  | 7016556      | 6418074056603   | Pg 21 | 13–18 | 7    | 30     | 30     | 34   | 25   |
GMS EMC PG29  | 7016557      | 6418074056610   | Pg 29 | 18–25 | 8    | 40     | 40     | 39   | 25   |
GMS EMC PG36  | 7016558      | 6418074056627   | Pg 36 | 24–32 | 9    | 50     | 50     | 45   | 10   |
GMS EMC PG42  | 7016559      | 6418074056634   | Pg 42 | 30–38 | 10   | 57     | 57     | 49   | 5    |
GMS EMC PG48  | 7016560      | 6418074056641   | Pg 48 | 34–44 | 10   | 64     | 64     | 52   | 5    |

Connecting thread: standard length
**Hexagonal locknut, EMC**

**GMS EMC MB**

**Technical details**
- Hexagonal locknut
- Internal thread
- Brass CuZn39Pb3, nickel-plated metric as per EN 60423

**Properties**
- With cutting edges for secure tightening of EMC-cable glands
- To cut through paint layers or powder coatings ensuring optimal contact for equipotential bonding
- Increased vibration resistance

Temperature range: up to +200 °C

<table>
<thead>
<tr>
<th>Order symbol</th>
<th>Code</th>
<th>EAN</th>
<th>A</th>
<th>L (mm)</th>
<th>SW1 (mm)</th>
<th>H (mm)</th>
<th>Pack</th>
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<tbody>
<tr>
<td>With cutting edges</td>
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<td>6418074091406</td>
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<td>5.5</td>
<td>100</td>
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<td>6418074091413</td>
<td>M16 x 1,5</td>
<td>4.5</td>
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<td>M20 x 1,5</td>
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<td>50</td>
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<td>M63 x 1,5</td>
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<td>70</td>
<td>7</td>
<td>50</td>
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</table>
Hexagonal locknut, EMC

GMS EMC PGB

Technical details
Hexagonal locknut
Internal thread
Brass CuZn39Pb3, nickel-plated
Pg as per DIN 40430

Properties
- With cutting edges for secure tightening of EMC-cable glands
- To cut through paint layers or powder coatings ensuring optimal contact for equipotential bonding
- Increased vibration resistance

Temperature range -60...+200 °C

Order symbol | Code | EAN | A | L (mm) | SW1 (mm) | H (mm) | Pack |
--- | --- | --- | --- | --- | --- | --- | --- |
**With cutting edges**
GMS EMC PG7B | 7016930 | 6418074093721 | Pg 7 | 3.7 | 15 | 4.7 | 100 |
GMS EMC PG9B | 7016931 | 6418074093738 | Pg 9 | 3.7 | 18 | 4.7 | 100 |
GMS EMC PG11B | 7016932 | 6418074093745 | Pg 11 | 3.7 | 21 | 4.7 | 100 |
GMS EMC PG13,5B | 7016933 | 6418074093752 | Pg 13,5 | 3.7 | 23 | 4.7 | 100 |
GMS EMC PG16B | 7016934 | 6418074093769 | Pg 16 | 3.7 | 26 | 4.7 | 100 |
GMS EMC PG21B | 7016935 | 6418074093776 | Pg 21 | 4.2 | 32 | 5.2 | 100 |
GMS EMC PG29B | 7016936 | 6418074093783 | Pg 29 | 4.7 | 41 | 5.7 | 100 |
GMS EMC PG36B | 7016937 | 6418074093790 | Pg 36 | 5 | 51 | 6 | 50 |
GMS EMC PG42B | 7016938 | 6418074093806 | Pg 42 | 5 | 60 | 6 | 50 |
GMS EMC PG48B | 7016939 | 6418074093813 | Pg 48 | 5.5 | 64 | 6.5 | 50 |
EX CABLE GLANDS AND ACCESSORIES
Ex cable gland, plastic

GPA ExM

Technical details

- Dome nut: Polyamide PA6
- Dust cap: Polychloroprene-Nitrile rubber CR/NBR
- Sealing ring/outer part: Evoprene TPE (from M20 x 1.5)
- Gland body: Polyamide PA6
- Connecting thread: metric, as per EN 60423

Properties

- Wide sealing and clamping range
- Integrated anchorage
- Easy-to-install

Equipment group

- II

Category / Zone

- 2G, 2D and 3G/ 1, 2, 21, 22

Type of protection

- Ex e, increased safety
- Ex tD A21 – Protection by enclosures

Cable installation

- fixed

Temperature range

- -20...+70 (M12 and M16) °C
- -30...+70 (M20 to M63) °C

Protection grade

- IP66

Test standard

- EN 60079-0 / EN 60079-7
- EN 61241-0 / EN 61241-1

Order symbol | Code | EAN | A | øC mm | L mm | SW1 mm | SW2 mm | H mm | Pack
---|---|---|---|---|---|---|---|---|---
**RAL 9005: Connecting thread: standard length**
GPA Ex M12 9005 | 7016436 | 6418074055200 | M12 x 1.5 | 4 – 7 | 8 | 15 | 15 | 31 | 100
GPA Ex M16 9005 | 7016437 | 6418074055217 | M16 x 1.5 | 5.5 – 10 | 8 | 20 | 20 | 35.5 | 100
GPA Ex M20 9005 | 7016438 | 6418074055224 | M20 x 1.5 | 5.5 – 13 | 8 | 24 | 24 | 37 | 100
GPA Ex M25 9005 | 7016439 | 6418074055231 | M25 x 1.5 | 8 – 17 | 8 | 29 | 29 | 43 | 50
GPA Ex M32 9005 | 7016440 | 6418074055248 | M32 x 1.5 | 12 – 21 | 10 | 36 | 36 | 50 | 25
GPA Ex M40 9005 | 7016441 | 6418074055255 | M40 x 1.5 | 17 – 28 | 10 | 46 | 46 | 51 | 10
GPA Ex M50 9005 | 7016442 | 6418074055262 | M50 x 1.5 | 22 – 35 | 12 | 55 | 55 | 61.5 | 5
GPA Ex M63 9005 | 7016443 | 6418074055279 | M63 x 1.5 | 27 – 48 | 12 | 68 | 68 | 65.5 | 5

**RAL 5015: Connecting thread: standard length**
GPA Ex M12 5015 | 7016636 | 6418074015921 | M12 x 1.5 | 4 – 7 | 8 | 15 | 15 | 31 | 100
GPA Ex M16 5015 | 7016637 | 6418074015938 | M16 x 1.5 | 5.5 – 10 | 8 | 20 | 20 | 35.5 | 100
GPA Ex M20 5015 | 7016638 | 6418074015945 | M20 x 1.5 | 5.5 – 13 | 8 | 24 | 24 | 37 | 100
GPA Ex M25 5015 | 7016639 | 6418074015952 | M25 x 1.5 | 8 – 17 | 8 | 29 | 29 | 43 | 50
GPA Ex M32 5015 | 7016640 | 6418074015969 | M32 x 1.5 | 12 – 21 | 10 | 36 | 36 | 50 | 25
GPA Ex M40 5015 | 7016641 | 6418074015976 | M40 x 1.5 | 17 – 28 | 10 | 46 | 46 | 51 | 10
GPA Ex M50 5015 | 7016642 | 6418074015983 | M50 x 1.5 | 22 – 35 | 12 | 55 | 55 | 61.5 | 5
GPA Ex M63 5015 | 7016643 | 6418074015990 | M63 x 1.5 | 27 – 48 | 12 | 68 | 68 | 65.5 | 5
Ex screw plug, plastic

GSP MSEx

Metric thread

Technical details

Screw plug
Polyamide PA6 GF30 V-0

O-ring
Choice from three materials possible:
01: Silicone rubber VMQ
02: Ethylene-Propylene rubber EPDM
03: Nitrile rubber NBR

Connecting thread
metric, as per EN 60423

Properties

- For secure sealing of unused threaded or clearance hole

Equipment group
II

Category / Zone
2G, 2D and 3G/ 1, 2, 21, 22

Type of protection
Ex e, increased safety
Ex tD A21 – Protection by enclosures

Temperature range
01: -55 °C/ +95 °C
depending on the material of O-ring
02 und 03: -40 °C/ +95 °C

Protection grade
IP66 / IP68
10 (6h) bar
IP69K

Test standard
EN 60079-0 / EN 60079-7
EN 61241-0 / EN 61241-1

Order symbol | Code  | EAN           | A     | L mm | SW1 mm | H mm | O-ring | Pack |
-------------|-------|---------------|-------|------|--------|------|--------|------|
RAL 9005     |       |               |       |      |        |      |        |      |
GSP M12S Ex hexagonal | 7016690 | 6418074092380 | M12 x 1,5 | 10   | 16     | 15   | VMQ    | 100  |
GSP M16S Ex hexagonal | 7016691 | 6418074092397 | M16 x 1,5 | 10   | 21     | 21   | VMQ    | 100  |
GSP M20S Ex hexagonal | 7016692 | 6418074092403 | M20 x 1,5 | 11   | 25     | 16   | VMQ    | 100  |
GSP M25S Ex hexagonal | 7016693 | 6418074092410 | M25 x 1,5 | 11,5 | 30     | 17,5 | VMQ    | 100  |
GSP M32S Ex hexagonal | 7016694 | 6418074092427 | M32 x 1,5 | 13   | 37     | 20   | VMQ    | 50   |
GSP M40S Ex hexagonal | 7016695 | 6418074092434 | M40 x 1,5 | 13   | 46     | 20   | VMQ    | 25   |
GSP M50S Ex hexagonal | 7016696 | 6418074092441 | M50 x 1,5 | 15   | 56     | 23   | VMQ    | 25   |
GSP M63S Ex hexagonal | 7016697 | 6418074092458 | M63 x 1,5 | 15   | 69     | 23   | VMQ    | 25   |
# Ex blanking plug, plastic

**GCP MEx**

**Technical details**
- **Blanking plug**
  - Polyamide PA6, red

**Properties**
- Protective closure for uninstalled EX cable glands
- Application only in Ex cable glands GPA Ex

<table>
<thead>
<tr>
<th>Equipment group</th>
<th>Category / Zone</th>
<th>Type of protection</th>
<th>Temperature range</th>
<th>Protection grade</th>
<th>Test standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>II</td>
<td>Ex e, increased safety</td>
<td>+20...+70 °C (M12 and M16)</td>
<td>IP66</td>
<td>EN 60079-0 / EN 60079-7</td>
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<tr>
<td></td>
<td>2G, 2D and 3G/ 1, 2, 21, 22</td>
<td>Ex tD A21 – Protection by enclosures</td>
<td>-55...+70 °C (M20 to M32) °C</td>
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<td>EN 61241-0 / EN 61241-1</td>
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</table>

**Order symbol**

<table>
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<tr>
<th>Code</th>
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<th>Size</th>
<th>H mm</th>
<th>Da mm</th>
<th>Da1 mm</th>
<th>Pack</th>
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<td>6418074092533</td>
<td>32</td>
<td>39.5</td>
<td>20</td>
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</table>
Ex cable gland, metal

GMS Ex M/ML

Technical details
- Dome nut: Brass CuZn39Pb3, nickel-plated
- Dust cap: Polyethylene PE-LD
- Lamellar insert: Polyamide PA6 V-2
- Sealing ring: Polychloroprene-Nitrile rubber CR/NBR
- Gland body: Brass CuZn39Pb3, nickel-plated
- O-ring: Nitrile rubber
- Connecting thread: metric, as per EN 60423

Properties
- Integrated anchorage
- Wide sealing and clamping range
- Easy-to-install

Equipment group: II
Category / Zone: 2G, 2D and 3G/ 1, 2, 21, 22
Type of protection: Ex e, increased safety
- Protection by enclosures: Ex tD A21

Cable installation: fixed
Temperature range: -20...+80 °C
Protection grade: IP68

Test standard:
- EN 60079-0 / EN 60079-7
- EN 61241-0 / EN 61241-1

Order symbol | Code | EAN | A | dC (mm) | L (mm) | SW1 (mm) | SW2 (mm) | H (mm) | Pack
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
Connecting thread: standard length
GMS Ex M12 | 7016644 | 6418074092069 | M12 x 1.5 | 3 – 6.5 | 5 | 14 | 14 | 24 | 100
GMS Ex M16 | 7016645 | 6418074092076 | M16 x 1.5 | 5 – 9 | 5 | 17 | 17 | 29 | 100
GMS Ex M20 | 7016646 | 6418074092083 | M20 x 1.5 | 9 – 13 | 6 | 22 | 22 | 33 | 100
GMS Ex M20R | 7016647 | 6418074092090 | M20 x 1.5 | 6 – 12 | 6 | 22 | 22 | 31 | 100
GMS Ex M25 | 7016648 | 6418074092106 | M25 x 1.5 | 11 – 16 | 7 | 27 | 27 | 36.5 | 50
GMS Ex M32 | 7016649 | 6418074092113 | M32 x 1.5 | 14 – 21 | 8 | 34 | 34 | 38 | 25
GMS Ex M40 | 7016650 | 6418074092120 | M40 x 1.5 | 19 – 27 | 8 | 43 | 43 | 41 | 10
GMS Ex M50 | 7016651 | 6418074092137 | M50 x 1.5 | 24 – 35 | 9 | 55 | 55 | 47.5 | 5
GMS Ex M63R | 7016652 | 6418074092144 | M63 x 1.5 | 32 – 42 | 10 | 65 | 65 | 54.5 | 5
GMS Ex M63 | 7016653 | 6418074092151 | M63 x 1.5 | 38 – 48 | 10 | 65 | 65 | 54.5 | 5

Connecting thread: long
GMS Ex M12L | 7016654 | 6418074092168 | M12 x 1.5 | 3 – 6 | 10 | 14 | 14 | 30 | 100
GMS Ex M16L | 7016655 | 6418074092175 | M16 x 1.5 | 5 – 9 | 10 | 17 | 17 | 34 | 100
GMS Ex M20L | 7016656 | 6418074092182 | M20 x 1.5 | 9 – 13 | 10 | 22 | 22 | 37 | 100
GMS Ex M25L | 7016657 | 6418074092199 | M25 x 1.5 | 11 – 16 | 11 | 27 | 27 | 40.5 | 50
GMS Ex M32L | 7016658 | 6418074092205 | M32 x 1.5 | 14 – 21 | 13 | 34 | 34 | 43 | 25
GMS Ex M40L | 7016659 | 6418074092212 | M40 x 1.5 | 19 – 27 | 13 | 43 | 43 | 46 | 10
GMS Ex M50L | 7016660 | 6418074092229 | M50 x 1.5 | 24 – 35 | 14 | 55 | 55 | 52.5 | 5
GMS Ex M63RL | 7016661 | 6418074092236 | M63 x 1.5 | 32 – 42 | 14 | 65 | 65 | 58.5 | 5
GMS Ex M63L | 7016662 | 6418074092243 | M63 x 1.5 | 38 – 48 | 14 | 65 | 65 | 58.5 | 5
Ex screw plug, metal

GSM ExM

Metric thread

Technical details

- Screw plug: Brass CuZn39Pb3, nickel-plated
- O-ring: Nitrile rubber
- Connecting thread: metric, as per EN 60423

Properties

- For secure sealing of unused threaded or clearance hole

Equipment group: II
Category / Zone: 2G, 2D and 3/1, 2, 21, 22
Type of protection: Ex e, increased safety
Ex tD A21 – Protection by enclosures
Temperature range: -30...+80 °C
Protection grade: IP68
Test standard: EN 60079-0 / EN 60079-7
EN 61241-0 / EN 61241-1

Order symbol | Code | EAN | A | L (mm) | H (mm) | Da (mm) | Pack
--- | --- | --- | --- | --- | --- | --- | ---
GSM Ex M12 slot | 7016670 | 6418074092250 | M12 x 1,5 | 5 | 8 | 16 | 100
GSM Ex M16 slot | 7016671 | 6418074092267 | M16 x 1,5 | 6 | 9 | 20 | 100
GSM Ex M20 slot | 7016672 | 6418074092274 | M20 x 1,5 | 6,5 | 9,5 | 24 | 100
GSM Ex M25 slot | 7016673 | 6418074092281 | M25 x 1,5 | 7 | 11 | 28 | 100
GSM Ex M32 slot | 7016674 | 6418074092298 | M32 x 1,5 | 8 | 12 | 35 | 50
GSM Ex M40 slot | 7016675 | 6418074092304 | M40 x 1,5 | 8 | 12 | 45 | 50
GSM Ex M50 slot | 7016676 | 6418074092311 | M50 x 1,5 | 9 | 15 | 55 | 25
GSM Ex M63 slot | 7016677 | 6418074092328 | M63 x 1,5 | 10 | 16 | 68 | 10
Ex EMC cable gland

GMS Ex EMC M

Technical details

- Dome nut: Brass CuZn39Pb3, nickel-plated
- Dust cap: Polyethylene PE-LD
- Lamellar insert: Polyamide PA6 V-2
- Sealing ring: Polychloroprene-Nitrile rubber CR/NBR
- Gland body: Brass CuZn39Pb3, nickel-plated
- O-ring: Nitrile rubber
- Connecting thread: Metric, as per EN 60423

Properties

- For cables with shielding
- Integrated anchorage
- Wide sealing and clamping range

Equipment group: II
Category / Zone: 2G, 2D and 3G/1, 2, 21, 22
Type of protection: Ex e, increased safety
Ex tD A21 – Protection by enclosures
Cable installation: fixed
Temperature range: -20°C to +80°C
Protection grade: IP68
Test standard: EN 60079-0 / EN 60079-7
EN 61241-0 / EN 61241-1

Order symbol | Code | EAN | A | ØC (mm) | L (mm) | SW1 (mm) | SW2 (mm) | H (mm) | Pack
---|---|---|---|---|---|---|---|---|---
GMS Ex EMC M12 | 7016910 | 6418074093592 | M12 x 1,5 | 3 – 6 | 5 | 14 | 14 | 25 | 100
GMS Ex EMC M16 | 7016911 | 6418074093608 | M16 x 1,5 | 5 – 9 | 5 | 17 | 17 | 29 | 100
GMS Ex EMC M20 | 7016912 | 6418074093615 | M20 x 1,5 | 6 – 12 | 6 | 22 | 22 | 33 | 100
GMS Ex EMC M25 | 7016913 | 6418074093622 | M25 x 1,5 | 11 – 16 | 7 | 22 | 22 | 31 | 50
GMS Ex EMC M32 | 7016914 | 6418074093639 | M32 x 1,5 | 14 – 21 | 8 | 34 | 34 | 38 | 25
GMS Ex EMC M40 | 7016915 | 6418074093646 | M40 x 1,5 | 19 – 27 | 8 | 43 | 43 | 41 | 10
GMS Ex EMC M50 | 7016916 | 6418074093653 | M50 x 1,5 | 24 – 35 | 9 | 55 | 55 | 47,5 | 5
GMS Ex EMC M63 | 7016917 | 6418074093660 | M63 x 1,5 | 32 – 42 | 10 | 65 | 65 | 54,5 | 5

33
Application

Waterproof enclosures with high protection grades for outdoor use are not automatically sealed against vapour and humid air. To avoid negative pressure, high humidity and condensation inside the enclosure, a continuous ventilation and pressure equilibrium is necessary.

This protective function can be achieved by using a venting element, quick and easy to install.

The body of the venting element is made from a flameproof polyamide. Inside is a high-quality, breathable and watertight membrane, which provides a continuous pressure exchange and ventilation between the enclosure and its surroundings and ensures protection against humidity.

The high level of water intrusion point of the membrane enables the high protection grade of IP66, IP67 and IP69K.

The achieved air flow ventilation of the membrane was determined by flow control measuring.

Ventilation test setup

A mass flow control and a pressure gauge are coupled consecutively and the venting element is connected with the measuring system via a thread adapter.

In the following air is being admitted. The flow rate has been set up for all measuring points so that the desired primary pressure is being applied to the test object.

The achieved flow measurement data has been converted to standardised conditions.

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<thead>
<tr>
<th>Absolute pressure (bar)</th>
<th>Overpressure (bar)</th>
<th>Airflow (average) (l/min)</th>
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</tr>
<tr>
<td>1.0536</td>
<td>0.05</td>
<td>0.3</td>
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<tr>
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<td>0.07</td>
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<td>0.66</td>
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<tr>
<td>1.2036</td>
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<td>0.4</td>
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<tr>
<td>2.0036</td>
<td>1</td>
<td>8.9</td>
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</table>

Pressure calibration and measuring data converted to standardised conditions.
Venting element

GVPPA M/ML

Metric thread

Technical details
Body: Polyamide PA6 V-0
Membrane: Polyether sulphone PES
O-ring: Nitrile rubber NBR
Connecting thread: metric as per EN 60423

Properties
- Protection for hermetically sealed electro-technical and electronic enclosures against condensation water from alternating temperature and pressure
- Continuous ventilation and adaption of the inner pressure
- Hydrophobic and oleophobic PES-membrane

Typical air flow: $90 - 130 \text{ ml/min/cm}^2$ at $p = 0,01 \text{ bar}$
Water entry pressure: $> 1 \text{ bar}$
Temperature range: $-40...+100 \text{ °C}$
Protection grade: IP66 / IP67 / IP69K

Order symbol | Code | EAN | A | L (mm) | SW1 (mm) | H (mm) | Pack |
--- | --- | --- | --- | --- | --- | --- | --- |
RAL 7035: Connecting thread: short
GVPPA M12 | 7016702 | 6418074091314 | M12 x 1,5 | 6 | 17 | 13,8 | 100 |
RAL 7035: Connecting thread: standard length
GVPPA M12L | 7016700 | 6418074091291 | M12 x 1,5 | 10 | 17 | 17,8 | 100 |
RAL 9005: Connecting thread: standard length
GVPPA M12L 9005 | 7016701 | 6418074091307 | M12 x 1,5 | 10 | 17 | 17,8 | 100 |
Venting element

GVPPA M/ML

Technical details
Body: PA6
Sealing: Nitrile rubber NBR
Membrane: PA6.6

Properties
- Temperature range: -35 to +70 °C
- Protection grade: IP66 / IPX9K
- Air permeability: 1200 l/h at a pressure difference of min.70 mbar

Order symbol | Code | EAN | A | L (mm) | Da (mm) | H (mm) | Pack
---|---|---|---|---|---|---|---
Light grey | GVPPA M40 SET | 8818223 | 6418074012197 | M40 x 1.5 | 18 | 60 | 37 | 2

Technical details
Body: PA66
Sealing: Nitrile rubber NBR
Membrane: PA6.6

Properties
- Weather proof and UV light resistant according to UL746C (f1)
- Temperature range: -35 to +70 °C
- Protection grade: IP66 / IPX9K
- Air permeability: 1200 l/h at a pressure difference of min.70 mbar

Order symbol | Code | EAN | A | L (mm) | Da (mm) | H (mm) | Pack
---|---|---|---|---|---|---|---
Light grey | GVPPA M40 UL SET | 9801129 | 6418074305077 | M40 x 1.5 | 18 | 60 | 37 | 2
**Technical details**

**O-ring**  
Nitrile rubber NBR

**Properties**  
- For improved sealing on the connecting thread

Temperature range: -30...+100 °C
Comment: higher protection grade possible if assembled with o-ring

<table>
<thead>
<tr>
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<th>Code</th>
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<th>D (mm)</th>
<th>Da (mm)</th>
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**Technical details**

**O-ring**  
Nitrile rubber NBR

**Properties**  
- For improved sealing on the connecting thread

Temperature range: -30...+100 °C
Comment: assembled o-ring enables higher protection grades

<table>
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<tr>
<th>Order symbol</th>
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</table>
Dust cap

GDC M/PG

**Technical details**
- Dust cap
- Polyethylene PE-LD
- Sold as single piece

**Properties**
- Applicable as dust protection for cable glands during transport or storage
- Temperature range: -30...+90 °C

<table>
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**MEMBRANE CABLE GLANDS**

**FIBOX FEM membranes**

FIBOX FEM membranes are very simple to use and demand no tools, which in turn means lower work cost. The assembly requires no screwdriver or scissors to make the hole, which otherwise would endanger the IP-class seal. FEM membranes are tested for IP67 internally and externally. Two material versions are available: EPDM and Chloroprene. FEM membranes have a very high finish and the automatic method of production guarantees the same even and high quality on all products.

Push the grommet into the hole.

Pierce the grommet with the cable.

The grommet is then locked in position by pulling it back.

- IP Class: IP67 (external)
- All metric sizes + Pg 16 (external)
- Internal / External holes IP67
- Produced in halogene-free EPDM or Chloroprene.
- Hardness: 60 ± 5 (Shore density)
- "Pushout" membrane with 0,25 mm thickness
- Internal / External holes IP67
- FEM can be assembled from either end depending upon the application.
- Suits material thickness 1 - 5 mm both in plastic and metal.

Suits material thickness 1 - 5 mm both in plastic and metal.
Membrane cable gland

**FEM/FEM-C/MFM**

### Technical Properties

- **Material**: EPDM
- **Protection class**: IP67 acc. to EN 60529
- **Temperature range**: -40 °C...+110 °C*

*Unstressed material.

### Properties

- Suitable for holes in materials of 1 – 5 mm thickness.
- Easy assembly without tools.
- Outstanding heat, ozone and weather resistance.

### Order symbol

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<th>øC mm</th>
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### Technical Properties

- **Material**: Chloroprene
- **Protection class**: IP67 acc. to EN 60529
- **Temperature range**: -30 °C...+100 °C*

*Unstressed material.

### Properties

- Suitable for holes in materials of 1 – 5 mm thickness.
- Comply with 'Det Norske Veritas' rules for Classification of Ships, High Speed & Light Craft and 'Det Norske Veritas' Offshore Standards.
- Quick and simple assembly without the use of tools.
- Resistant to chemicals.
- Outstanding heat, ozone and weather resistance.

### Order symbol

<table>
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<tr>
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<th>EAN</th>
<th>Size</th>
<th>øC mm</th>
<th>A mm</th>
<th>B mm</th>
<th>Da mm</th>
<th>H mm</th>
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</table>
The FEM SL is the latest addition to the FIBOX FEM membrane range.

What makes the FEM SL different from existing products on the market are the built-in features that you do not find in this otherwise relatively simple product.

FEM SL handles an exceptionally large cable span. It is the only “simple” grommet manufactured in a rubber-like material, and the only TPE-based end-plug. With the “pushout” membrane you always have a round opening and are guaranteed to have IP67.

The FEM SL is equipped with a sock that closes tight around the cable and allows for it to be moved around like a “joy-stick” in the opening without endangering the IP-classification. So it works extremely well with cables passing through at an angle.

The design makes sure that the membrane stays in place, even when large cables are installed.

These are some of the features that creates a lot of value added in the FEM SL, and makes it a unique product.

Product features FIBOX FEM SL

- End-plug/membrane for all applications
- Self-adjusting to cable diameter
- Significant timesaving
- IP67 = Waterproof
- Secure installation in opening
- Easy and fast installation
- “Joy-stick” effect thanks to built-in sock
- Not for temporary use
- “Pushout” membrane
- Temperature range -50 °C...+125 °C
- Suits material thickness 0,5 – 4,5 mm
- Handles exceptionally large cablespan 5 – 24 mm
- Ergonomic installation

Membrane cable glands
Membrane cable gland

FEM SL

Properties

Material: TPE – Thermoplastic Elastomer - Halogen Free. UL approved material
Mode of protection: IP67
Temperature range: -50 °C....+125 °C
Test standard: EN60529:1991+A1, EMKO-TUI (03-SEC) FI001/84

Quick and simple assembly without the use of tools
Handles exceptionally large cable span
An end-plug for all applications

Order symbol | Code  | EAN        | Size     | aC (mm) | A (mm) | B (mm) | D* (mm) | D1 (mm) | H (mm) | H1 (mm) | H2* (mm) | Pac |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
RAL 7035
FEM SL 5-10 3545224 | 6418074004925 | M16 | 5 – 10 | 16.5 | 0.5 – 3 | 23.5 | 4 | 11 | 4 | 6.75 | 50 |
FEM SL 6-13 3545225 | 6418074004932 | M20 | 6 – 13 | 20.5 | 0.5 – 3 | 27.5 | 5 | 11 | 4 | 6.75 | 50 |
FEM SL B-17 3545228 | 6418074049278 | M25 | 8 – 17 | 25.5 | 0.5 – 3.5 | 32.5 | 7 | 11 | 4 | 6.75 | 50 |
FEM SL 12-24 3545229 | 6418074049285 | M32 | 12 – 24 | 32.5 | 0.5 – 4.5 | 39.5 | 11 | 11 | 4 | 6.75 | 25 |
RAL 9005
FEM SL 5-10 9005 3545226 | 6418074049887 | M16 | 5 – 10 | 16.5 | 0.5 – 3 | 23.5 | 4 | 11 | 4 | 6.75 | 50 |
FEM SL 6-13 9005 3545227 | 641807404994 | M20 | 6 – 13 | 20.5 | 0.5 – 3 | 27.5 | 5 | 11 | 4 | 6.75 | 50 |
FEM SL B-17 9005 3545230 | 6418074049292 | M25 | 8 – 17 | 25.5 | 0.5 – 3.5 | 32.5 | 7 | 11 | 4 | 6.75 | 50 |
FEM SL 12-24 9005 3545231 | 6418074049308 | M32 | 12 – 24 | 32.5 | 0.5 – 4.5 | 39.5 | 11 | 11 | 4 | 6.75 | 25 |
Cable entry plates and entry sets

Properties
Material: Polycarbonate (PC); Membrane TPE
RAL 7035
Flame resistance: UL 94-V1 (PC)
UL 94HB (TPE)

Order symbol | Code | EAN | Size | Description
--- | --- | --- | --- | ---
**Metric flange plates**
MB 10860 | 3530860 | 6418074052124 | 85x216 | Metric flange plate, size 2
5xM25+6xM20, PUR gasket,
IP 65
MB 10861 | 3530861 | 6418074052131 | 85x216 | Metric flange plate, size 2
2xM50+4xM20, PUR gasket,
IP 65
MB 10862 | 3530862 | 6418074052148 | 85x216 | Metric flange plate, size 2
2xM16+3xM20+2xM25+2xM32,
PUR gasket,
IP 65

**Membrane flange plates**
FMC 3F | 3550795 | 6418074056528 | 85x217 | Membrane flange plate, size 2
Lead-through 7 (3-55 mm),
IP 65
FMC 25F | 3550796 | 6418074056535 | 85x217 | Membrane flange plate, size 2
Lead-through 29 (3-26 mm)
Optional RJ-45 lead-through,
IP 65
FMC 35F | 3550797 | 6418074056542 | 85x217 | Membrane flange plate, size 2
Lead-through 43 (3-30 mm)
Optional RJ-45 lead-through,
IP 65

**Cable entry sets**
EPA 1130 SET | 3550055 | 6418074033130 | 1 cable, 1x10-31 mm | Cable entry set, size 1
1 cable, 1x10-31 mm
EPA 1230 SET | 3550049 | 6418074033154 | 2 cable, 2x10-31 mm | Cable entry set, size 1
2 cable, 2x10-31 mm
EPA 2160 SET | 3550056 | 6418074033147 | 1 cable, 1x28-60 mm | Cable entry set, size 2
1 cable, 1x28-60 mm
EPA 2260 SET | 3550052 | 6418074033161 | 2 cables, 2x28-60 mm | Cable entry set, size 2
2 cables, 2x28-60 mm

**Accessories**
MB 10346 | 3570346 | 6418074031204 | Plastic head screw (MBx25) for size 2 flange
MB-8 | 3570577 | 6418074031389 | Lock nut for plastic head screws MB
MB 10670 | 3570670 | 6418074030788 | Connector set, size 2; incl. 4 screws
Cable glands
and cable entries

For demanding environments