



Valve Connectors Type A

Build to Last, No Matter Where Your Applications
Take You

With hydraulic, pneumatic and electromagnetic actuators and sensors, the GDM and GAN series stands ready for any harsh environment. Rugged, highly impermeable design guarantees uncompromising reliability in the most demanding applications.



The Benefits

Long-lasting performance – state-of-the-art housing singularly engineered for mechanical challenges and vibrations, optionally with strain relief and UL2238 approval

Outstanding reliability – high IP67 and IP69 impermeability combined with an extraordinary resistance towards environmental impacts, oils and lubricants

Unmatched flexibility – choose from numerous configurations to match your individual application challenges

Markets

- Manufacturing Automation
- Machine Building
- Mobile Machinery
- Material Handling
- Transportation
- Process Automation

Technical Information

Type A Field Attachables	GDM Standard	GDM with cURus	GDMF Flat Line	GDMW High-Voltage Line
	General Data			
Standard	DIN EN 175301-803-A ISO 4400	DIN EN 175301-803-A ISO 4400	DIN EN 175301-803-A ISO 4400	DIN EN 175301-803-A ISO 4400
Housing Color	Black, Transparent, Grey	Black	Black, Transparent	Black, Grey
No. of Pins	2 + PE, 3 + PE	2 + PE, 3 + PE	2 + PE, 3 + PE	3 + PE
Cable Range	M16 & PG9: Ø 4.5 - 10 mm M20 & PG11: Ø 4.5 - 11 mm 1/2" NPTF: Ø 8 - 13.5 mm G1/2" (ISO 228): Ø 8 - 13 mm	M16 & PG9: Ø 6 - 8 mm M20 & PG11: Ø 8 - 10 mm 1/2" NPTF: Ø 8 - 10 mm G1/2" (ISO 228): Ø 8 - 10 mm	M16: Ø 4 - 8 mm	PG11: Ø 4.5 - 11 mm
Terminal Type	Screw	Screw	Screw	Screw
Conductor Size	0.25 - 1.5 mm ²	0.25 - 1.5 mm ²	0.34 - 1.5 mm ² 0.34 - 0.75 mm ² (with circuitry)	0.25 - 1.5 mm ²
Strain Relief	-	Clamping Cage	-	-
	Electrical Data			
Operating Voltage¹⁾	230 V AC/DC	300 V AC/DC	230 V AC/DC	400 V AC/DC
Current¹⁾	16 A	10 A	10 A	16 A
	Environmental Data			
Ambient Temperature²⁾	Black: -40°C to +125°C Transparent: -25°C to +90°C	-40°C to +125°C	Black: -40°C to +125°C Transparent: -25°C to +90°C	-40°C to +125°C
Protection Degree	IP65	IP65, IP67	IP65	IP65
Approvals	VDE, SEV	VDE, SEV, cURus (UL2238)	VDE	CSA, UL (1977)

1) In combination with circuitries values may deviate. Please review data sheet for more information.

2) Notice derating





Product Configurator

Type A Field Attachables

G D M 21 0 6 - A0 U - 1 0 F

Design

GDM = Type A, female connector, field attachable

Pin Assignment

21 = 2 + PE

31 = 3 + PE

Housing

0 = Black

A = Black (cURus)

F = Transparent

6 = Grey

Cable Gland

6 = M16

A = M20

9 = PG9

B = PG11

D = 1/2" NPTF

E = G1/2" (ISO 228)

J = M16 with strain relief (cURus)

M = M20 with strain relief (cURus)

L = PG9 with strain relief (cURus)

N = PG11 with strain relief (cURus)

Q = 1/2" NPTF with strain relief (cURus)

R = G1/2" (ISO 228) with strain relief (cURus)

Circuitry

Protection circuitry

A0 = No circuitry

V1 = Varistor

S1 = Suppressor diode

D1 = Recovery diode

With bridge rectifier

V3 = Varistor, bridge rectifier

S3 = Suppressor diode, bridge rectifier

D3 = Bridge rectifier only

C3 = Varistor, bridge rectifier, capacitor

With LED

L1 = LED only

V2 = Varistor, LED

S2 = Suppressor diode, LED

D2 = Recovery diode, LED

P1 = Dual LED (pressure switch)

With bridge rectifier and LED

V4 = Varistor, bridge rectifier, LED

S4 = Suppressor diode, bridge rectifier, LED

D4 = Bridge rectifier, LED

C4 = Varistor, bridge rectifier, capacitor, LED

Voltage

Without LED

Q = 24 V

K = 48 V

S = 110 V

U = 230 V

With LED (yellow)

4 = 24 V

8 = 48 V

1 = 110 V

Y = 230 V

With dual LED (red and green)

J = 24 V (pressure switch)

N = 230 V (pressure switch)

@ Further circuitries and LED colors upon request, please contact us at: icos-sales@belden.com

Central Screw

1 = Steel, Phillips combi slot

2 = Steel, torx head

3 = Steel, knurled head

4 = Stainless steel, Phillips combi slot

Gasket

Flat Gasket

A = NBR

B = EPDM

C = FKM

D = MPQ

Profile Gasket

E = NBR

F = EPDM

H = MPQ

Captive Gasket

K = NBR

L = EPDM

0 = Without gasket

Packaging

F = Collect packaging, 200 pieces (versions without circuitry)

D = Collect packaging, 50 pieces (versions with circuitry only)

P = Single packaging, 200 pieces (versions without circuitry)

M = Single packaging, 50 pieces (versions with circuitry only)

Please verify your configuration @ catalog.belden.com

Order Overview – Exemplary Configurations

Type A Field Attachables	24 V	48 V	110 V	230 V
<p>1. Choose Max. Voltage →</p> <p>2. Choose Design ↓</p>				
GDM Black Standard				
2 + PE, without circuitry, M16	–	–	–	GDM2106-A0U-10F
2 + PE, with varistor, M16	GDM2106-V1Q-10D	GDM2106-V1K-10D	GDM2106-V1S-10D	GDM2106-V1U-10D
2 + PE, with varistor and bridge rectifier, M16	GDM2106-V3Q-10D	GDM2106-V3K-10D	GDM2106-V3S-10D	GDM2106-V3U-10D
2 + PE, with suppressor diode, M16	GDM2106-S1Q-10D	–	–	–
2 + PE, with suppressor diode and bridge rectifier, M16	GDM2106-S3Q-10D	–	–	–
2 + PE, with recovery diode, M16	–	–	–	GDM2106-D1U-10D
2 + PE, with bridge rectifier, M16	–	–	–	GDM2106-D3U-10D
GDM Transparent Standard				
2 + PE, with LED, M16	GDM21F6-L14-10D	GDM21F6-L18-10D	GDM21F6-L11-10D	GDM21F6-L1Y-10D
2 + PE, with LED and bridge rectifier, M16	GDM21F6-D44-10D	GDM21F6-D48-10D	GDM21F6-D41-10D	GDM21F6-D4Y-10D
2 + PE, with LED and varistor, M16	GDM21F6-V24-10D	GDM21F6-V28-10D	GDM21F6-V21-10D	GDM21F6-V2Y-10D
2 + PE, with LED, varistor and bridge rectifier, M16	GDM21F6-V44-10D	GDM21F6-V48-10D	GDM21F6-V41-10D	GDM21F6-V4Y-10D
2 + PE, with LED and suppressor diode, M16	GDM21F6-S24-10D	–	–	–
2 + PE, with LED, suppressor diode and bridge rectifier, M16	GDM21F6-S44-10D	–	–	–
2 + PE, with LED and recovery diode, M16	GDM21F6-D24-10D	GDM21F6-D28-10D	GDM21F6-D21-10D	GDM21F6-D2Y-10D
GDM Black with cURus				
2 + PE, without circuitry, M16 with strain relief	–	–	–	GDM21AJ-A0U-10F
2 + PE, with bridge rectifier, M16 with strain relief	–	–	–	GDM21AJ-D3U-10D
2 + PE, with varistor, M16 with strain relief	GDM21AJ-V1Q-10D	GDM21AJ-V1K-10D	GDM21AJ-V1S-10D	GDM21AJ-V1U-10D
2 + PE, with varistor and bridge rectifier, M16 with strain relief	GDM21AJ-V3Q-10D	GDM21AJ-V3K-10D	GDM21AJ-V3S-10D	GDM21AJ-V3U-10D
2 + PE, with recovery diode, M16 with strain relief	–	–	–	GDM21AJ-D1U-10D
GDMF				
2 + PE, without circuitry, M16, flat line	–	–	–	GDMF 2016 DAAA
2 + PE, with LED, M16, flat line	GDMF 2016 DBAA	–	GDMF 2016 DCAA	GDMF 2016 DEAA
2 + PE, with LED and varistor, M16, flat line	–	–	GDMF 2016 DRAA	GDMF 2016 DLAA
2 + PE, with LED and recovery diode, M16	GDMF 2016 DGAA	–	–	–
2 + PE, with LED and suppressor diode, M16, flat line	GDMF 2016 DFAA	–	–	–
GDMW				
3 + PE, without circuitry, PG11, black housing	–	–	–	GDMW 3011 DF black
3 + PE, without circuitry, PG11, grey housing	–	–	–	GDMW 3011 DF grey

These articles are exemplary configurations. Please use our configurator on page 12 for more options.



Technical Information






Type A Receptacles	GSA / GSC	GSE	GSP	GSR
General Data				
Standard	DIN EN 175301-803-A ISO 4400	DIN EN 175301-803-A ISO 4400	DIN EN 175301-803-A ISO 4400	DIN EN 175301-803-A ISO 4400
No. of Pins	2 + PE, 3 + PE	2 + PE, 3 + PE	2 + PE, 3 + PE	2 + PE, 3 + PE
Conductor Size	Max. 1.5 mm ²	Max. 1.5 mm ²	Max. 1.5 mm ²	Max. 1.5 mm ²
Terminal Type	Solder (GSA), PE to screw Crimp (GSC), PE to screw	Solder, PE to screw	Solder, PE to screw	Solder
Installation	Screw	Screw	Thread	Overmolding
Electrical Data				
Operating Voltage	400 V AC/DC	400 V AC/DC	400 V AC/DC	400 V AC/230 V DC
Current	16 A	16 A	16 A	16 A
Environmental Data				
Ambient Temperature¹⁾	-40 °C to +125 °C	-40 °C to +125 °C	-40 °C to +125 °C	-40 °C to +125 °C
Protection Degree	IP65 IP67 (GSA-U)	IP65	IP65	IP65
Approvals	UL, VDE, SEV, CSA	UL, VDE, SEV, CSA	VDE, SEV	VDE

1) Notice derating

Order Overview

Type A Receptacles	2 + PE	3 + PE
<p>1. Choose Coding →</p> <p>2. Choose Design ↓</p>		
Rectangular, with oblong holes for optional front soldering	GSA 2000	GSA 3000
Rectangular, without oblong holes, solder contacts	GSA 2000 N	GSA 3000
Rectangular, crimp contacts	–	GSC 3000
Rectangular, for cylinder installation, solder contacts	GSAZ 200	GSAZ 300
Rectangular, molded, solder contacts	GSA-U 2000 N LO	GSA-U 3000 N LO
Rectangular, without oblong holes, round collar, solder contacts	GSE 2000 N4	GSE 3000 N4
Circular, solder contacts	GSR-U 2000 LO	GSR-U 3000 LO
Circular, with connection thread, solder contacts	GSP 211 PG11 GSP 212 1/2" NPTF Further threads upon request	GSP 311 PG11 GSP 312 1/2" NPTF Further threads upon request

Technical Information

Type A Molded	GAN	GAN with cULus approval
		
 General Data		
Standard	DIN EN 175301-803-A, ISO 4400	DIN EN 175301-803-A, ISO 4400
Housing Color	Grey translucent	Black
No. of Pins	2 + PE, 2 + 2 PE, 3 + PE, 2-poles, 3-poles	
Cable Material	PUR, PVC	PUR, PVC
Conductor Size	0.5 mm ² , 0.75 mm ²	0.5 mm ² , 0.75 mm ²
 Electrical Data		
Operating Voltage¹⁾	230 V AC/DC	230 V AC/DC
Current¹⁾	10 A (0.75 mm ²)/6 A (0.5 mm ²)	6 A (0.75 mm ²)/4 A (0.5 mm ²)
 Environmental Data		
Ambient Temperature²⁾	-25 °C to +85 °C -40 °C to +105 °C, with add-on gasket	-25 °C to +85 °C -40 °C to +105 °C, with add-on gasket
IP-Rating	IP65, IP67, IP68, IP69 (with PUR cable)	IP65, IP67, IP68, IP69 (with PUR cable)
Approvals	VDE, SEV	VDE, SEV, cULus (UL2238)

1) In combination with protection circuitries values may deviate. Please review data sheet for more information.

2) Notice derating





Product Configurator

Type A Cordsets

G A N 2 2 L U - A O U - 6 0 3 0 2 0 0 - 1 U C

Design

GAN = Type A, female cordset, molded

Pin Assignment

20 = 2-poles(without PE) 30 = 3-poles(without PE)
 21 = 2 + PE (PE across cable outlet) 31 = 3 + PE (PE across cable outlet)
22 = 2 + 2 PE 3Z = 3 + PE (PE at cable outlet)

Housing

LU = Grey translucent, molded **OU** = Black, molded

Protection Circuitry

Circuitry

A0 = No Circuitry
V1 = Varistor
S1 = Suppressor diode
D1 = Recovery diode

With bridge rectifier

V3 = Varistor, bridge rectifier
S3 = Suppressor diode, bridge rectifier
D3 = Bridge rectifier only
C3 = Varistor, bridge rectifier, capacitor

With LED

L1 = LED only
V2 = Varistor, LED
S2 = Suppressor diode, LED
D2 = Recovery diode, LED
P1 = Dual LED (pressure switch)

With bridge rectifier and LED

V4 = Varistor, bridge rectifier, LED
S4 = Suppressor diode, bridge rectifier, LED
D4 = Bridge rectifier, LED
C4 = Varistor, bridge rectifier, capacitor, LED

Voltage

Without LED

Q = 24 V
K = 48 V
S = 110 V
U = 230 V

With LED (yellow)

4 = 24 V
8 = 48 V
1 = 110 V
Y = 230 V

With dual LED (red, green)

J = 24 V (pressure switch)
N = 230 V (pressure switch)

Control Cable

PVC

212 = PVC 3G0.50 mm², Black
 205 = PVC 3G0.75 mm², Black
 609 = PVC 3G0.75 mm², Grey
 743 = PVC 4G0.50 mm², Black
 610 = PVC 4G0.75 mm², Grey
 611 = PVC 5G0.75 mm², Grey
 618 = PVC 2X0.75 mm², Grey

PUR

226 = PUR 3G0.50 mm², Black
603 = PUR 3G0.75 mm², Grey
 744 = PUR 4G0.50 mm², Black
 604 = PUR 4G0.75 mm², Grey
 606 = PUR 2X0.75 mm², Grey
 228 = PUR 5G0.5 mm², Black

X: Without PE
 G: With PE

@ Haven't yet found the cable or length you need? Please contact us at: icos-sales@belden.com

Length

0200 = 2 meter 0500 = 5 meter 1000 = 10 meter

Central Screw

1 = Steel, Phillips combi slot 4 = Stainless steel, Phillips combi slot

Gasket





U = Molded-on gasket **Q** = EPDM add-on gasket

Packaging

A - G = Collect packaging (5 - 200 units depending on length of control cable)
 H - P = Single packaging (5 - 200 units depending on length of control cable)

Please verify your configuration @ catalog.belden.com

Order Overview – Exemplary Configurations

Type A Cordsets	24 V	48 V	110 V	230 V
<p>1. Choose Max. Voltage →</p> <p>↓ 2. Choose Design</p>				
2 + 2 PE without circuitry, PUR	–	–	–	GAN22LU-A0U-6030200-1UC
2 + 2 PE with LED, PUR	GAN22LU-L14-6030200-1UC	GAN22LU-L18-6030200-1UC	GAN22LU-L11-6030200-1UC	GAN22LU-L1Y-6030200-1UC
2 + 2 PE with varistor, PUR	GAN22LU-V1Q-66030200-1UC	GAN22LU-V1K-6030200-1UC	GAN22LU-V1S-6030200-1UC	GAN22LU-V1U-6030200-1UC
2 + 2 PE with varistor and LED, PUR	GAN22LU-V24-66030200-1UC	GAN22LU-V28-6030200-1UC	GAN22LU-V21-6030200-1UC	GAN22LU-V2Y-6030200-1UC
2 + PE with varistor and bridge rectifier, PUR	GAN21LU-V3Q-66030200-1UC	GAN21LU-V3K-6030200-1UC	GAN21LU-V3S-6030200-1UC	GAN21LU-V3U-66030200-1UC
2 + PE with varistor, bridge rectifier and LED, PUR	GAN21LU-V44-6030200-1UC	GAN21LU-V48-6030200-1UC	GAN21LU-V41-6030200-1UC	GAN21LU-V4Y-6030200-1UC
2 + 2 PE with suppressor diode, PUR	GAN22LU-S1Q-6030200-1UC	–	–	–
2 + 2 PE with suppressor diode and LED, PUR	GAN22LU-S24-6030200-1UC	–	–	–
2 + PE with suppressor diode and bridge rectifier, PUR	GAN21LU-S3Q-6030200-1UC	–	–	–
2 + PE with suppressor diode, bridge rectifier and LED, PUR	GAN21LU-S44-6030200-1UC	–	–	–
2 + 2 PE with recovery diode, PUR	–	–	–	GAN22LU-D1U-6030200-1UC
2 + 2 PE with recovery diode and LED, PUR	GAN22LU-D24-6030200-1UC	GAN22LU-D28-6030200-1UC	GAN22LU-D21-6 030200-1UC	GAN22LU-D2Y-6030200-1UC
2 + PE with bridge rectifier, PUR	–	–	–	GAN21LU-D3U-6030200-1UC
2 + PE with bridge rectifier and LED, PUR	GAN21LU-D44-6030200-1UC	GAN21LU-D48-6030200-1UC	GAN21LU-D41-6030200-1UC	GAN21LU-D4Y-6030200-1UC

These articles are exemplary configurations. Please use our configurator on page 16 for more options.





Valve Connectors Accessories

Get the Most Out of Your Valve Connector

From low temperature gaskets up to stainless-steel non-corrosive screws, Belden offers the right accessories for almost every application.



The Benefits

More flexibility – Optimized for a large variety of challenges and environments

More functionality – Extraordinary impermeability and high environmental resistance

More comfort – Clever solutions ranging from captive gaskets up to toolless screws guarantee easy handling










Markets

- Manufacturing Automation
- Machine Building
- Mobile Machinery
- Material Handling
- Transportation
- Process Automation




Accessories Type A

Gaskets			GDM	GAN	GSA/GSC	GSAZ	GSE
							
Product Picture	Description	Temperature	Field Attachables	Cordsets	Receptacles		






Flat Gaskets

	GDM 3-7 NBR 50 pcs. per unit	-30 °C to +90 °C	●				
	GDM 3-21 EPDM 50 pcs. per unit	-40 °C to +125 °C	●				
	GDM 3-22 FKM 50 pcs. per unit	-15 °C to +125 °C	●				
	GDM 3-17 MPQ 50 pcs. per unit	-55 °C to +140 °C	●				
	GSA 200-4 NBR 50 pcs. per unit	-30 °C to +90 °C			●		
	GSA 200-7 EPDM 50 pcs. per unit	-40 °C to +125 °C			●		
	GSAZ 35/43 (40/62; 60/20) NBR 50 pcs. per unit	-30 °C to +90 °C				●	
	GSE 2000-2 NBR	-30 °C to +90 °C					●
	GSE 2000-3 EPDM	-40 °C to +125 °C					●



Profile Gaskets

	GDM 3-16 NBR 50 pcs. per unit	-30 °C to +90 °C	●				
	GDM 3-19 MPQ 50 pcs. per unit	-55 °C to +140 °C	●				
	GAN IP69 EPDM Gasket Package 50 pcs. per unit GAN Locking Clip 50 pcs. per Unit	-40 °C to +125 °C		●			



Accessories Type A

Gaskets & Central Screws			GDM	GAN	GSA / GSC	GSAZ	GSE
							
Product Picture	Description	Temperature	Field Attachables	Cordsets	Receptacles		



Captive Gaskets

	GDMF NBR 100 pcs. per unit	-30 °C to +90 °C	•				
	GDMF EPDM 100 pcs. per unit	-40 °C to +125 °C	•				

Steel Phillips combi slots

	GDM 3011-6 50 pcs. per unit	-55 °C to +125 °C	•				
	GAN-1 50 pcs. per unit	-55 °C to +125 °C		•			



Stainless Steel Phillips combi slots

	GDM 3011 RF-1 100 pcs. per unit	-55 °C to +125 °C	•				
	GAN RF-1 50 pcs. per unit	-55 °C to +125 °C		•			

Steel Torx-head



	GDM 3011-18 50 pcs. per unit	-55 °C to +125 °C	•				
---	---------------------------------	-------------------	---	--	--	--	--

Steel knurled PA-heads

	GDM 3011-7 grey 50 pcs. per unit	-55 °C to +125 °C	•				
	GDM 3011-7 black 50 pcs. per unit	-55 °C to +125 °C	•				



Accessories Type A

Other Accessories			GDM	GAN	GSA/GSC	GSAZ	GSE
							
Product Picture	Description	Temperature	Field Attachables	Cordsets	Receptacles		
Crimp Contacts							
	CuZn/CuSn RMC 480 100 pcs. per unit	-40 °C to +125 °C			•		
	CuZn/CuSn RMCB 480 3000 pcs. per unit	-40 °C to +125 °C			•		
Crimp Tool							
	XZC 0702 1 pcs. per unit				•		