

# GigaLane 4.3-10 Connectors



www.gigalane.com

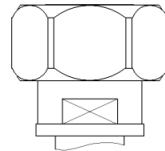
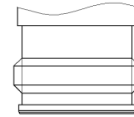
The **4.3-10 connector** system is designed for application in system such as RRU to antenna.

Very good PIM values independent of coupling torque. Three different coupling mechanisms of the plug connectors are screw, hand screw and push pull types.

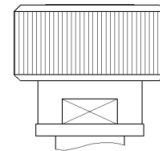
## ► Features

- Interface according IEC 61169-54
- Compact size (Minimum :  $\geq 25.4\text{mm}$ )
- Lower weight than 7/16
- Various coupling type
  - Screw, Hand Screw, Push-Full
- Low PIM

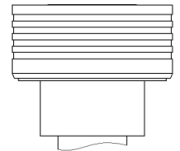
Female



Screw



Hand Screw



Push-Full

## ► Electrical Specifications

Frequency	DC ~ 12 GHz	
Impedance	50 $\Omega$	
Return Loss (interface only)	28dB @6GHz	20dB @12GHz
Insulation resistance(min.)	5,000 M $\Omega$ (initial)	
Proof Voltage	2,500 Vrms	
Working Voltage	500 Vrms	
PIMD (1.8GHz, 3 <sup>rd</sup> )	20W(43dBm) x2	160 dBc
Contact resistance(max.)	Center conductor	1 m $\Omega$ (initial)
	Outer conductor	1 m $\Omega$ (initial)
Screening effectiveness	Torque / screw type	120dB @6GHz
	Hand screw and quick lock	90dB @3GHz, 70dB @6GHz

## ► Mechanical Specification

Mating Durability	>100	
Center contact captivation (axial force)	30 N	
Coupling torque (screw)	>5Nm	
Mating Force (Push-Full)	Engagement	Typ. 100 N
	Disengagement	Typ. 80 N
Coupling nut retention force (Push-Full)	$\geq 450$ N	
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz	
Shock	981m/s <sup>2</sup> , 100g, 1/2 sin 6 ms	

## ► Environment Specification

Temperature range	-40°C / +85°C
Climatic category	40/85/21
Sealing	IPX8 2.5 bar, 1h, 25°C
Salt mist	Duration of spraying 48h
Thermal Shock	-40 to +125°C, 27 Cycle

# GigaLane 4.3-10 Connectors

www.gigalane.com

## ▶ Adapters

		DIN		N		SMA	
		Male	Female	Male	Female	Male	Female
4.3-10	Male	G45M08MSD001	G45M08FSD001	G45M07MSD001	G45M07FSD001	G45M06MSD001	G45M06FSD001
	Female	-	G45F08FSD001 G45F08FSD002(4H)	G45F07MSD001	G45F07FSD001	G45F06MSD001	-

## ▶ Connectors for Cable

		085	141	200
4.3-10	Male	G45SMC002	G45SMC001 G45SMC004(Push-Pull)	G45SMC005(Push-Pull)
	Female	G45SFC002	G45SFC001	-

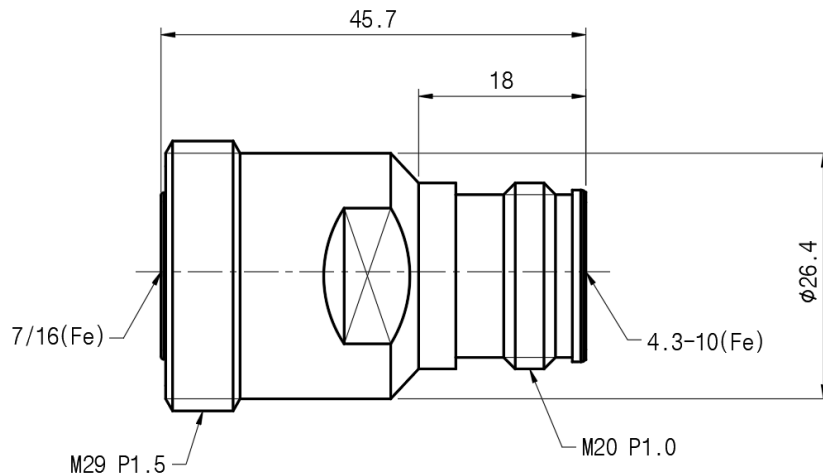
## ▶ Connectors

	Part No.	Remarker
1	G45SFA001	4Hole Panel mount
2	G45SFA002	4Hole Panel mount, Bulkhead

# 4.3-10(Fe) to DIN(Fe) Adapter(G45F08FSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	DIN
Frequency	DC ~ 6 GHz	
Impedance	50 Ω	
VSWR	1.20 : 1 @6GHz	
Dielectric Withstanding Voltage	Max. 2,500 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.5 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	DIN
Mating Cycle	100	500
Center contact captivation (axial force)	30 N	

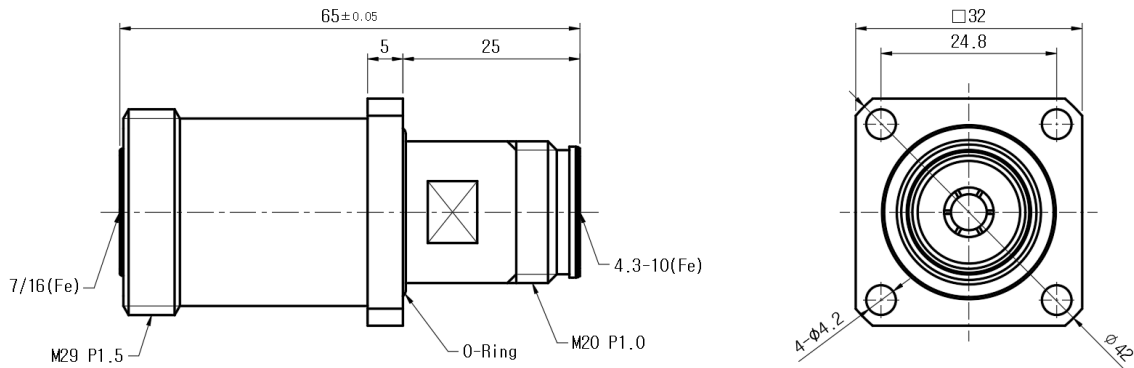
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40°C / 85% / 21days
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

Material	
BODY	Brass / BeCu (SUCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(Fe) to DIN(Fe) Adapter(G45F08FSD002)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	DIN
Frequency	DC ~ 3 GHz	
Impedance	50 Ω	
VSWR	1.20 : 1 @3GHz	
Dielectric Withstanding Voltage	Max. 2,500 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.5 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	DIN
Mating Cycle	100	500
Center contact captivation (axial force)	30 N	

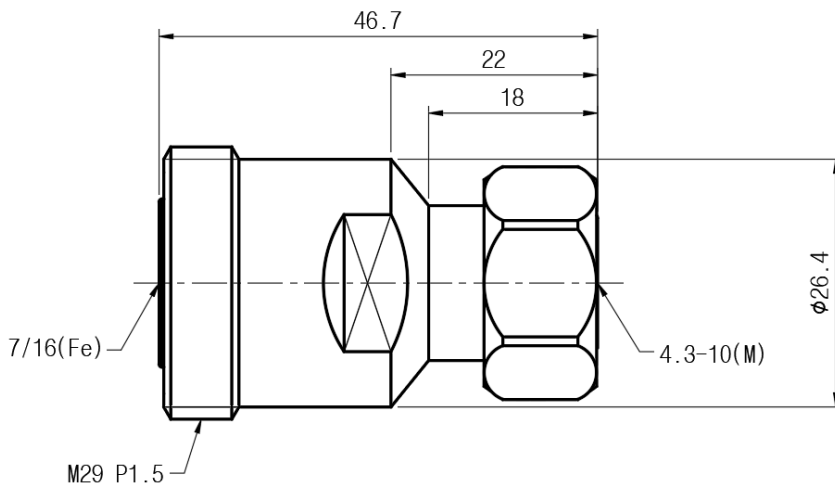
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40°C / 85% / 21days
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

Material	
BODY	Brass / BeCu (SUCCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(M) to DIN(Fe) Adapter(G45M08FSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	DIN
Frequency	DC ~ 6 GHz	
Impedance	50 Ω	
VSWR	1.20 : 1 @6GHz	
Dielectric Withstanding Voltage	Max. 2,500 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.5 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	DIN
Mating Cycle	100	500
Recommend Mating Torque	≥ 5 Nm	-
Center contact captivation (axial force)	30 N	

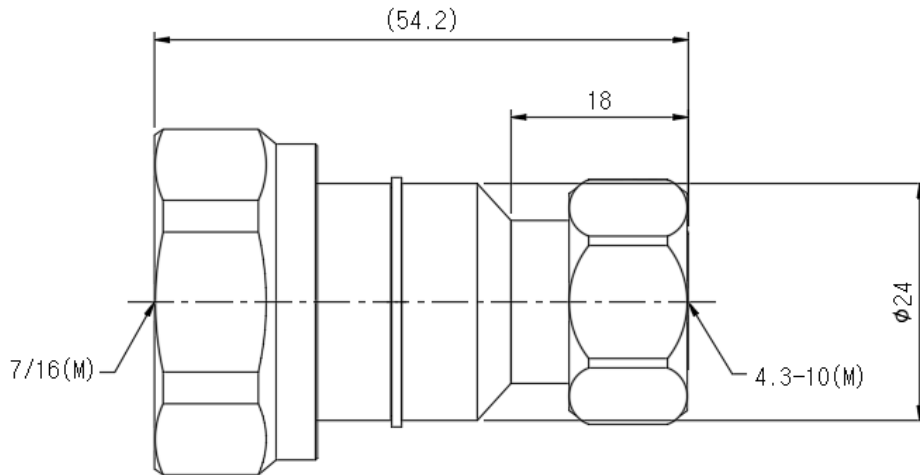
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40°C / 85% / 21days
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

Material	
BODY	Brass (SU00)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(M) to DIN(M) Adapter(G45M08MSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	DIN
Frequency	DC ~ 6 GHz	
Impedance	50 Ω	
VSWR	1.20 : 1 @6GHz	
Dielectric Withstanding Voltage	Max. 2,500 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.5 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	DIN
Mating Cycle	100	500
Recommend Mating Torque	≥ 5 Nm	30 Nm
Center contact captivation (axial force)	30 N	

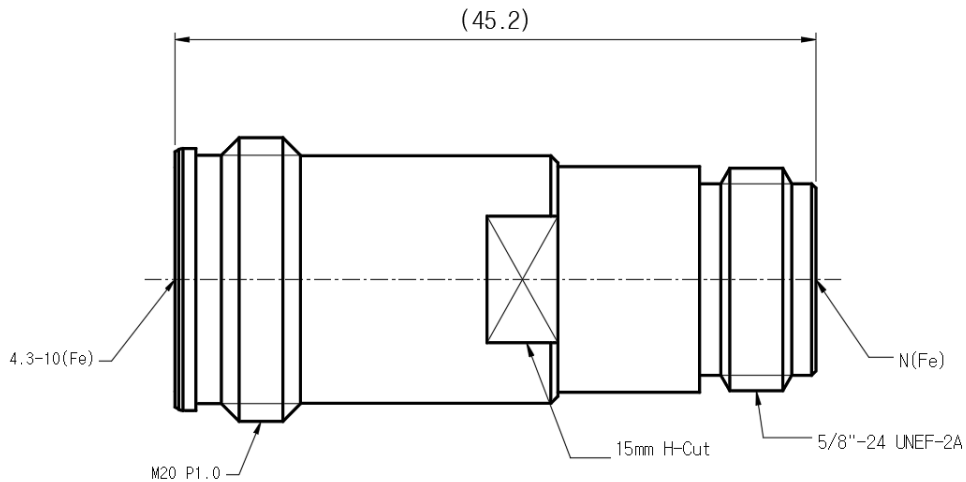
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40°C / 85% / 21days
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

Material	
BODY	Brass (SUCO)
PIN	Brass (Ag)
INSULATOR	PTFE

# 4.3-10(Fe) to N(Fe) Adapter(G45F07FSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	N
Frequency	DC ~ 12 GHz	
Impedance	50 Ω	
VSWR	1.09 : 1 @6GHz 1.20 : 1 @12GHz	
Dielectric Withstanding Voltage	Max. 2,000 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 2.0 mΩ Outer contact : Max. 2.0 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	N
Mating Cycle	100	500
Center contact captivation (axial force)	30 N	

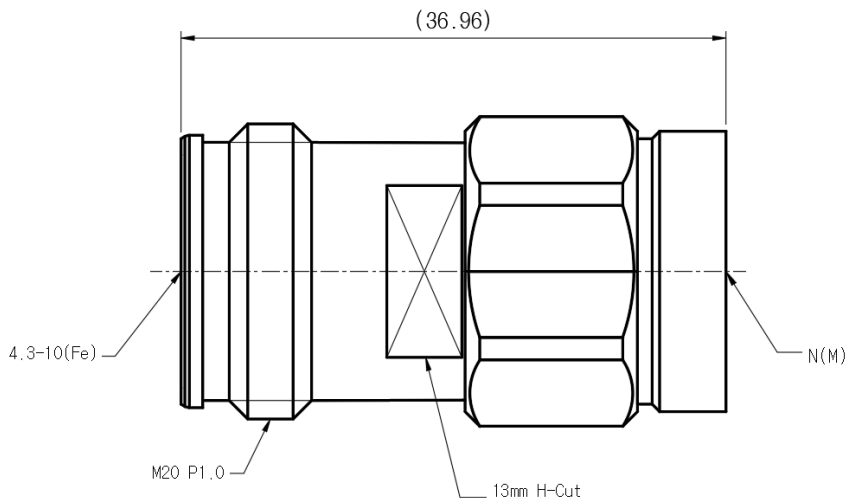
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40°C / 85% / 21days
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

Material	
BODY	Brass / BeCu (SUCCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(Fe) to N(M) Adapter(G45F07MSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	N
Frequency	DC ~ 12 GHz	
Impedance	50 Ω	
VSWR	1.09 : 1 @6GHz 1.20 : 1 @12GHz	
Dielectric Withstanding Voltage	Max. 2,000 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 2.0 mΩ Outer contact : Max. 2.0 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	N
Mating Cycle	100	500
Recommend Mating Torque	-	0.68~1.33 Nm
Center contact captivation (axial force)	30 N	

Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40°C / 85% / 21days
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

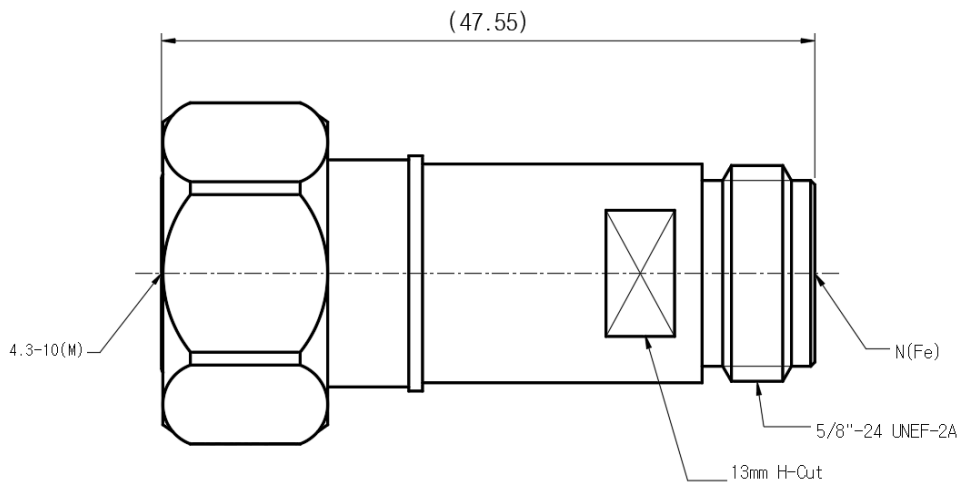
Material	
BODY	Brass / BeCu (SUCO)
PIN	BeCu (Ag)
INSULATOR	PTFE



# 4.3-10(M) to N(Fe) Adapter(G45M07FSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	N
Frequency	DC ~ 12 GHz	
Impedance	50 Ω	
VSWR	1.09 : 1 @6GHz 1.20 : 1 @12GHz	
Dielectric Withstanding Voltage	Max. 2,000 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 2.0 mΩ Outer contact : Max. 2.0 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	N
Mating Cycle	100	500
Recommend Mating Torque	≥ 5 Nm	-
Center contact captivation (axial force)	30 N	

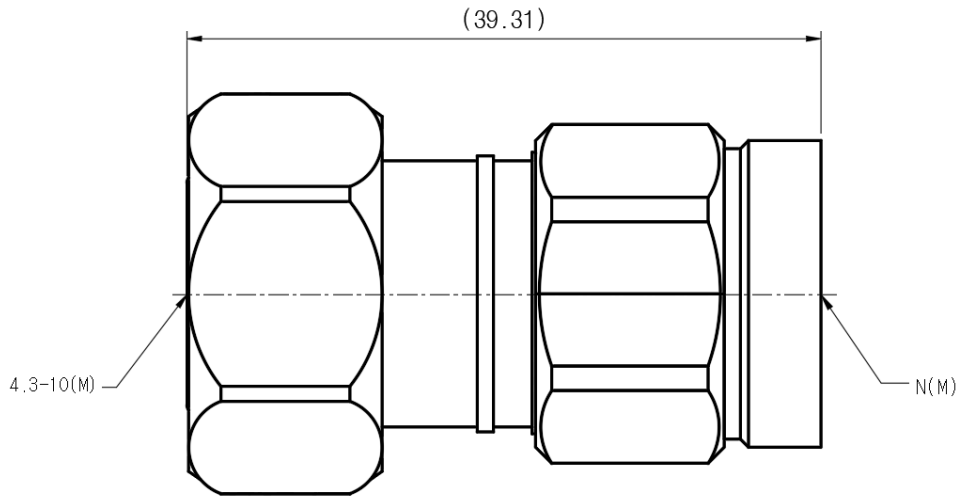
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40°C / 85% / 21days
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

Material	
BODY	Brass (SUCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(M) to N(M) Adapter(G45M07MSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	N
Frequency	DC ~ 12 GHz	
Impedance	50 Ω	
VSWR	1.09 : 1 @6GHz 1.20 : 1 @12GHz	
Dielectric Withstanding Voltage	Max. 2,000 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 2.0 mΩ Outer contact : Max. 2.0 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	N
Mating Cycle	100	500
Recommend Mating Torque	≥ 5 Nm	0.68~1.33 Nm
Center contact captivation (axial force)	30 N	

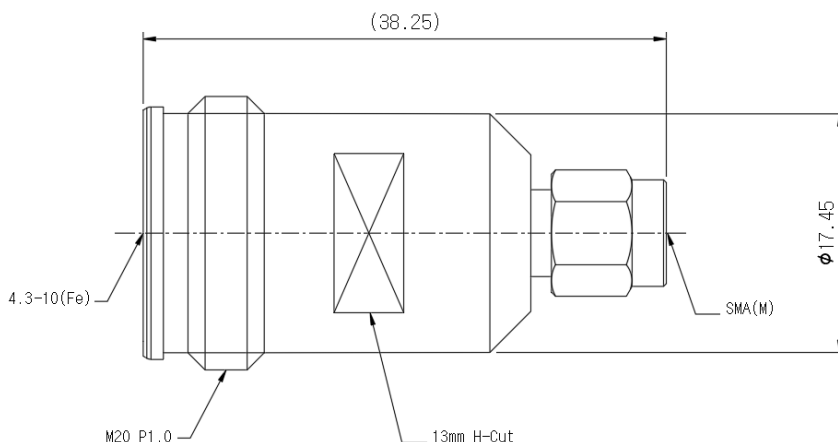
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40°C / 85% / 21days
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

Material	
BODY	Brass (SUCO)
PIN	Brass (Ag)
INSULATOR	PTFE

# 4.3-10(Fe) to SMA(M) Adapter (G45F06MSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	SMA
Frequency	DC ~ 12 GHz	
Impedance	50 Ω	
VSWR	1.09 : 1 @6GHz 1.20 : 1 @12GHz	
Dielectric Withstanding Voltage	Max. 1,000 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 3.0 mΩ Outer contact : Max. 2.0 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	SMA
Mating Cycle	100	500
Recommend Mating Torque	-	0.8~1.1 Nm
Center contact captivation (axial force)	30 N	

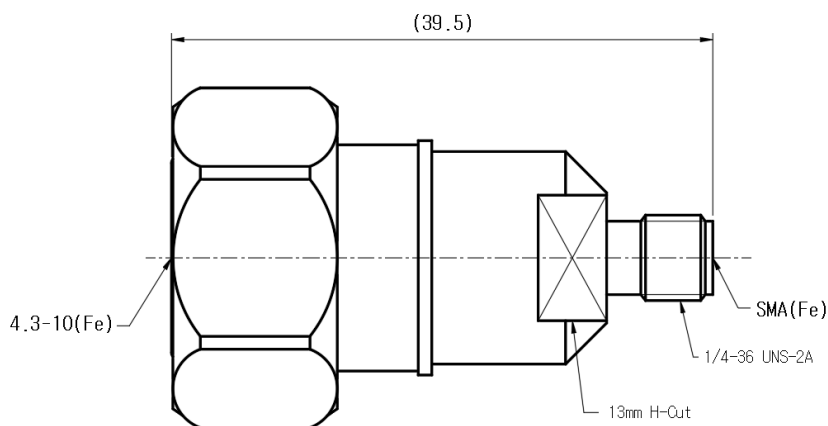
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40/85/21
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100mj <sup>2</sup> , 10g , 2 to 200Hz

Material	
BODY	Brass / BeCu (SUCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(M) to SMA(Fe) Adapter (G45M06FSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	SMA
Frequency	DC ~ 12 GHz	
Impedance	50 Ω	
VSWR	1.09 : 1 @6GHz 1.20 : 1 @12GHz	
Dielectric Withstanding Voltage	Max. 1,000 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 3.0 mΩ Outer contact : Max. 2.0 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	SMA
Mating Cycle	100	500
Recommend Mating Torque	≥ 5 Nm	-
Center contact captivation (axial force)	30 N	

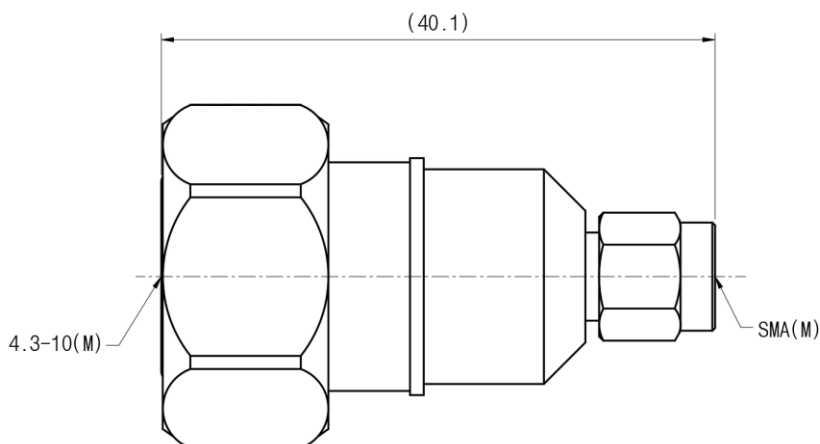
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40/85/21
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100ms <sup>2</sup> , 10g , 2 to 200Hz

Material	
BODY	Brass / BeCu (SUCCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(M) to SMA(M) Adapter (G45M06MSD001)

www.gigalane.com

## ▶ Drawing



Electrical	4.3-10	SMA
Frequency	DC ~ 12 GHz	
Impedance	50 Ω	
VSWR	1.09 : 1 @6GHz 1.20 : 1 @12GHz	
Dielectric Withstanding Voltage	Max. 1,000 V rms @ 60 Hz	
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ	Center contact : Max. 3.0 mΩ Outer contact : Max. 2.0 mΩ
Insulation resistance	Min. 5,000 MΩ	

Mechanical	4.3-10	SMA
Mating Cycle	100	500
Recommend Mating Torque	≥ 5 Nm	0.8~1.1 Nm
Center contact captivation (axial force)	30 N	

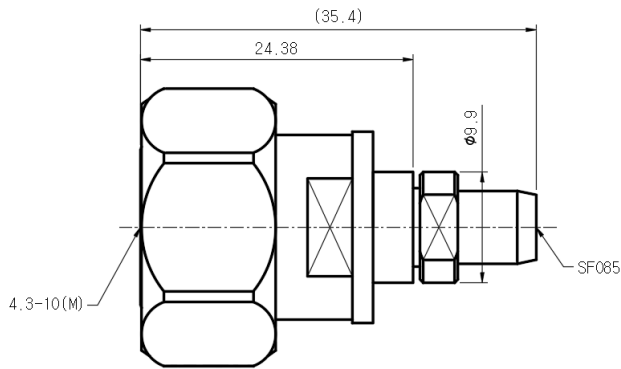
Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40/85/21
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100mj <sup>2</sup> , 10g , 2 to 200Hz

Material	
BODY	Brass / BeCu (SUCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

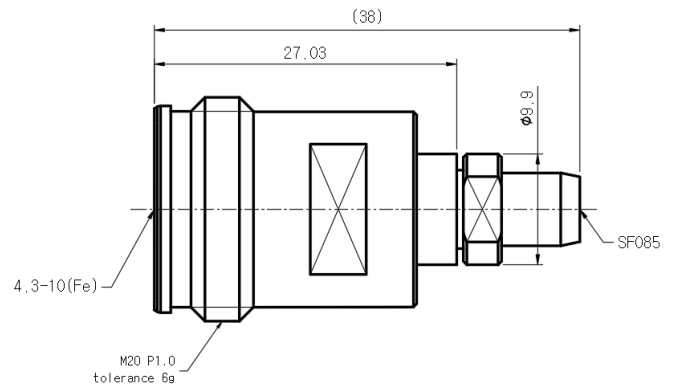
# 4.3-10(M, Fe) Connector for SF085 (G45SMC002, G45SFC002)

www.gigalane.com

## ▶ Drawing



**G45SMC002**



**G45SFC002**

### Electrical

Frequency	DC ~ 12 GHz
Impedance	50 Ω
VSWR	1.22 : 1 @6GHz 1.43 : 1 @12GHz
Dielectric Withstanding Voltage	Max. 1,000 V rms @ 60 Hz
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ
Insulation resistance	Min. 5,000 MΩ

### Mechanical

Mating Cycle	100
Recommend Mating Torque	≥ 5 Nm
Center contact captivation (axial force)	30 N

### Environmental

Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40/85/21
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100ms <sup>2</sup> , 10g, 2 to 200Hz

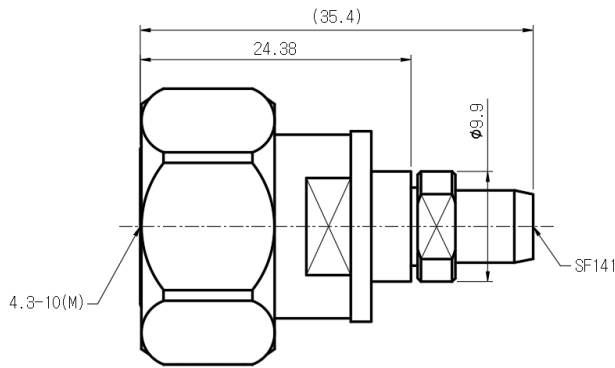
### Material

BODY	Brass / BeCu (SUCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

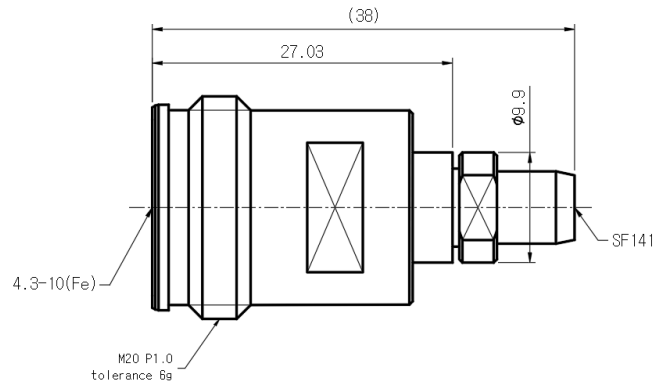
# 4.3-10(M, Fe) Connector for SF141 (G45SMC001, G45SFC001)

www.gigalane.com

## ▶ Drawing



**G45SMC001**



**G45SFC001**

### Electrical

Frequency	DC ~ 12 GHz
Impedance	50 Ω
VSWR	1.22 : 1 @6GHz 1.43 : 1 @12GHz
Dielectric Withstanding Voltage	Max. 1,000 V rms @ 60 Hz
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ
Insulation resistance	Min. 5,000 MΩ

### Mechanical

Mating Cycle	100
Recommend Mating Torque	≥ 5 Nm
Center contact captivation (axial force)	30 N

### Environmental

Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40/85/21
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100ms <sup>2</sup> , 10g, 2 to 200Hz

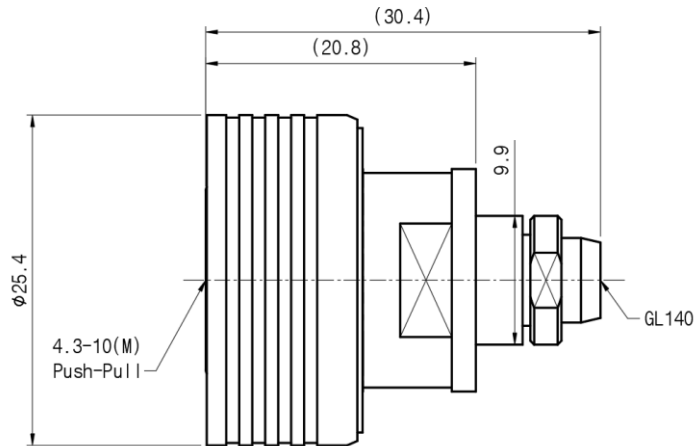
### Material

BODY	Brass / BeCu (SUCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(M) Push-Pull Connector for GL140 (G45SMC004)

www.gigalane.com

## ▶ Drawing



### Electrical

Frequency	DC ~ 3GHz
Impedance	50 Ω
VSWR	1.22 : 1 @3GHz
Dielectric Withstanding Voltage	Max. 1,000 V rms @ 60 Hz
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ
Insulation resistance	Min. 5,000 MΩ

### Mechanical

Mating Cycle	100
Engagement and separation force	Engagement : Typ. 100N Separation : Typ. 80N
Center contact captivation (axial force)	30 N

### Environmental

Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40/85/21
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100ms <sup>2</sup> , 10g, 2 to 200Hz

### Material

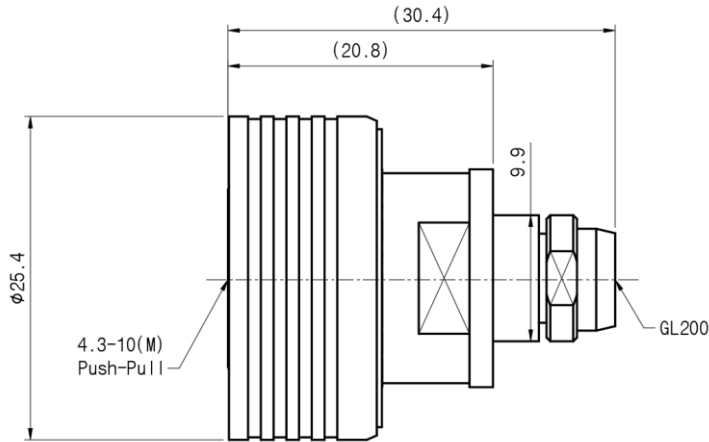
BODY	Brass / BeCu (SUCO)
PIN	BeCu (Ag)
INSULATOR	PTFE



# 4.3-10(M) Push-Pull Connector for GL200 (G45SMC005)

www.gigalane.com

## ▶ Drawing



### Electrical

Frequency	DC ~ 3GHz
Impedance	50 Ω
VSWR	1.22 : 1 @3GHz
Dielectric Withstanding Voltage	Max. 1,000 V rms @ 60 Hz
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ
Insulation resistance	Min. 5,000 MΩ

### Mechanical

Mating Cycle	100
Engagement and separation force	Engagement : Typ. 100N Separation : Typ. 80N
Center contact captivation (axial force)	30 N

### Environmental

Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40/85/21
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100ms <sup>2</sup> , 10g, 2 to 200Hz

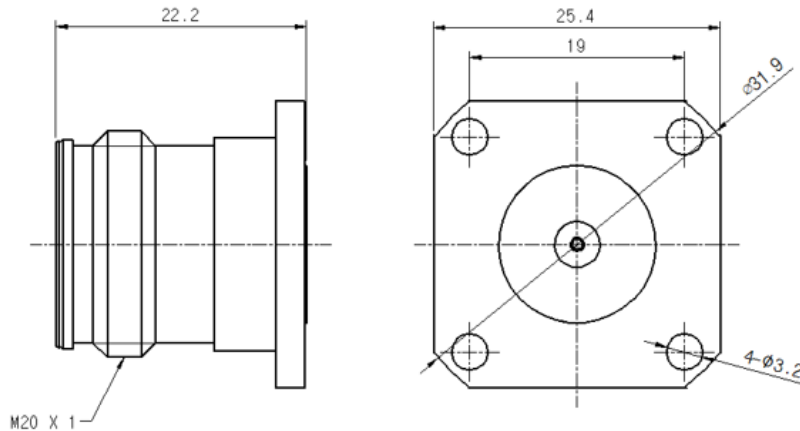
### Material

BODY	Brass / BeCu (SUCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(Fe) Connector (G45SFA001)

www.gigalane.com

## ▶ Drawing



### Electrical

Frequency	DC ~ 12 GHz
Impedance	50 Ω
VSWR	1.22 : 1 @12GHz
Dielectric Withstanding Voltage	Max. 1,000 V rms @ 60 Hz
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ
Insulation resistance	Min. 5,000 MΩ

### Mechanical

Mating Cycle	100
Center contact captivation (axial force)	30 N

### Environmental

Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40/85/21
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

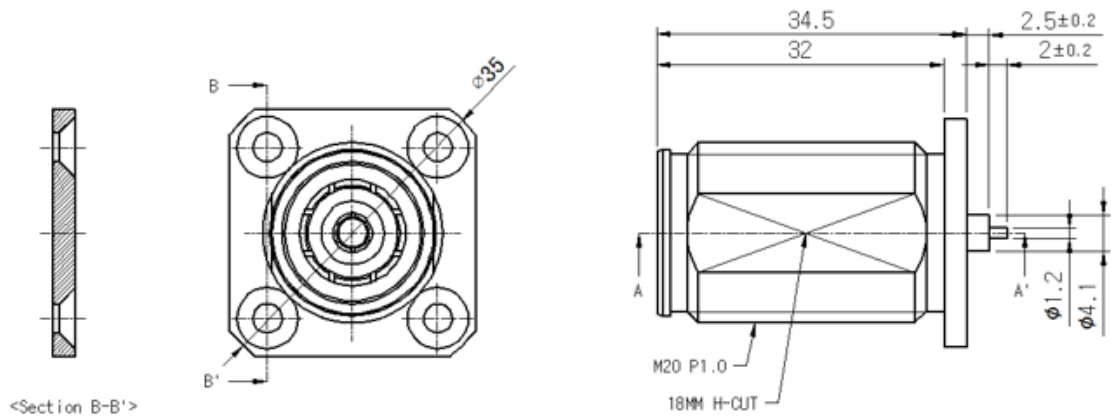
### Material

BODY	Brass / BeCu (SUCCO)
PIN	BeCu (Ag)
INSULATOR	PTFE

# 4.3-10(Fe) Connector (G45SFA002)

www.gigalane.com

## ▶ Drawing



Electrical	
Frequency	DC ~ 3 GHz
Impedance	50 Ω
VSWR	1.22 : 1 @3GHz
Dielectric Withstanding Voltage	Max. 1,000 V rms @ 60 Hz
Contact resistance	Center contact : Max. 1.0 mΩ Outer contact : Max. 1.0 mΩ
Insulation resistance	Min. 5,000 MΩ

Mechanical	
Mating Cycle	100
Center contact captivation (axial force)	30 N

Environmental	
Temperature range	-40°C / +85°C
Corrosion Salt Spray	Duration of spraying 48h
Moisture Resistance	40/85/21
Thermal Shock	-40 to +125°C, 27 Cycle
Vibration	100m/s <sup>2</sup> , 10g, 2 to 200Hz

Material	
BODY	Brass / BeCu (SOCU)
PIN	BeCu (Ag)
INSULATOR	PTFE