Main Feature

1. One Form A (SPST) Contact Form.
2. 1 Pole power relay for using on P.C.B suitable for air conditioner.
3. Employment of suitable plastic materials to be applied to high temperature and various chemical solutions.
4. GI-H are available for applicable option.

Contact Rating

Load Type	**GI (DM)**
Rated Load (Resistive)	20A 250VAC
	23A 277VAC
	15A 250VAC (CosØ=0.4)
Rated Carrying Current	23A
Max. Allowable Voltage	AC 277V
Max. Allowable Current	23A
Max. Allowable Power Force	6370VA
Contact Material	Ag Alloy
Contact Form	SPST

Application

Domestic and Industrial Appliances, General Control use, etc..

Performance (at Initial Value)

- Contact Resistance ..... 100 mΩ Max1A,6VDC
- Operate Time..... 20 mSec. Max.
- Release Time ..... 10 mSec. Max.
- Dielectric Strength :
  Between Coil & Contact ..... 4,000VAC at 50/60 Hz
  Between Contacts ..... 1,000VAC at 50/60 Hz for one minute.
- Surge Strength ..... 10,000V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC
- Max. On/Off Switching:
  Electrical..... 15 Cycles per Minute.
  Mechanical ..... 300 Cycles per Minute.

- Temperature Range..... -20～60°C
- Humidity Range..... 45～90% RH.
- Coil Temperature Rise .....55°C Max.
- Vibration:
  Endurance ..... 10 to 55 Hz dual amplitude width 1.5mm.
  Error Operation..... 10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
  Endurance ..... 1,000 m/S^2 .
  Error Operation..... 100 m/S^2 .
- Life Expectancy :
  Mechanical ..... 10^7 Operations at No Load condition.
  Electrical ..... 10^5 Operations at Rated Resistive Load.
- Weight..... About 26.6 g.

Safety Standard & Its File Number

- UL & C-UL……E175730
- TÜV……R50019872

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GI	6	150	40	Abt. 0.9	70% Maximum	10% Minimum	110%
	12	75	160				
	24	37.5	640				
	48	18.8	2,560				

Ordering Information

GI - S - 1 12 D M F H

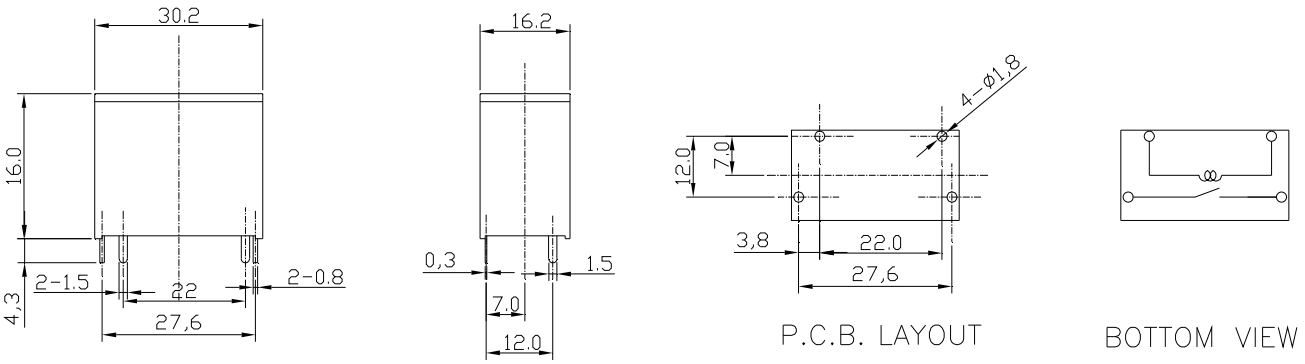
Contact Rating:	**H**: 23A/277VAC(With Insulator Inside)
Terminal Type:	**F**: With PC Board & Plug In Terminal
	P: PC Board Terminal Only
Contact Form:	**M**: One Form A
Coil Type:	**D**: Standard DC Coil
Coil Voltage:	**06**: 6V, **12**: 12V, **24**: 24V, **48**: 48V
Number of Pole:	**1**: One Pole
Type of Sealing:	**S**：RT Ⅰ Dust Protected Relays
Type:	**GI**

Classification

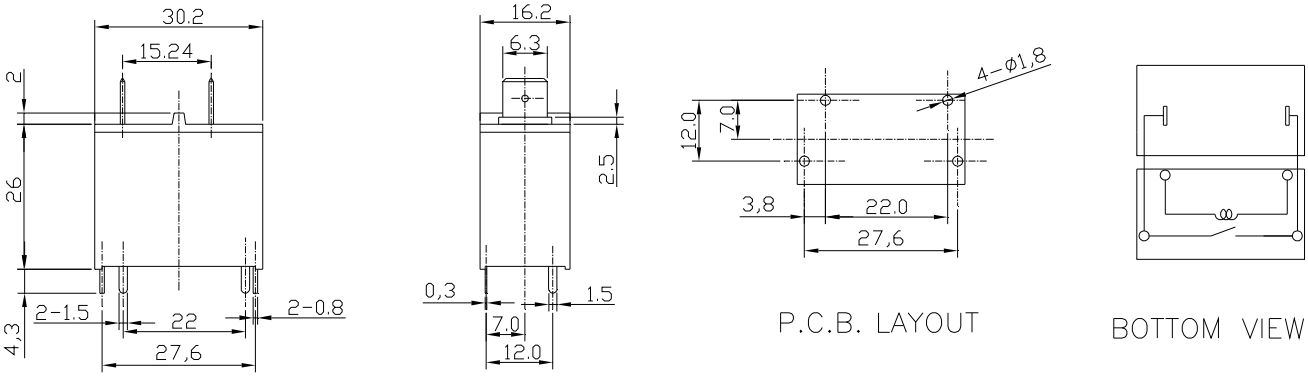
Model	GI					
Terminal Type	PC Board Terminal Only			With PC Board & Plug In Terminal		
Contact Rating			23A/277VAC(Insulator)			23A/277VAC(Insulator)
Hand Soldered Type			GI-S-1□□DMPH			GI-S-1□□DMFH

Dimension (≦ 5mm± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)

GI-S-P



GI-S-F



Main Feature

1. Quick terminal is available.
2. High resistance to noise.
3. High contact capacity 30A
4. High dielectric strength.

Contact Rating

Load Type	GL-1P (DM/AM)	GL-2P (DM/AM)
Rated Load (Resistive)	30A 250VAC	25A 250VAC
	30A 277VAC	25A 277VAC
Rated Carrying Current	30A	25A
Max. Allowable Voltage	AC 277V	AC 277V
Max. Allowable Current	30A	30A
Max. Allowable Power Force	8,300VA	6,900VA
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	DPST

Application

Home Appliance, Air Conditioner, Audio Equipment, Domestic Appliances, Controlling Equipment…etc..

Performance (at Initial Value)

- Contact Resistance ..... 100mΩ Max. @1A,6VDC
- Operate Time..... 30 mSec. Max.
- Release Time ..... 30 mSec. Max.
- Dielectric Strength :
  Between Coil & Contact ..... 4,000VAC at 50/60 Hz for one minute.
  Between Contacts ..... 2,000VAC at 50/60 Hz for one minute.
  Different Polarity……..3,000VAC at 50/60 Hz for one minute.
- Surge Strength ..... 10,000V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
  Electrical..... 15 Cycles per Minute.
  Mechanical ..... 300 Cycles per Minute.
- Temperature Range..... -25～60°C
- Humidity Range..... 5～85% RH.
- Coil Temperature Rise..... 55°C Max.
- Vibration:
  Endurance ..... 10 to 55 Hz dual amplitude width 1.5mm.
  Error Operation..... 10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
  Endurance ..... 1,000 m/S^2 .
  Error Operation..... 100 m/S^2 .
- Life Expectancy :
  Mechanical ..... 10^7 Operations at No Load condition.
  Electrical ..... 10^5 Operations at Rated Resistive Load.
- Weight ..... About 90 g.

Safety Standard & Its File Number

- UL & C-UL ……..E175730
  E141060
- TÜV ……..R50028914
  R50019870
- CQC……07001018736

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC/VAC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption	Pull-In Voltage	Drop-Out Voltage	Maximum Allowable Voltage
GL DC Coil	6	317	18.9	Abt. 1.90 W	75% Maximum	10% Minimum	110%
	9	211	42.6				
	12	158	75.8				
	24	79.0	303				
	48	40.0	1,220				
	60	31.7	1,895				
	100	19.0	5,260				
	110	17.0	6,400				
GL AC Coil	12	142	-	Abt. 1.7~2.5 VA			
	24	71.0	-				
	48	34.0	-				
	100~120	17.0 ~ 20.4	-				
	200~240	8.5 ~ 10.2	-				

Ordering Information

GL - S - 1 12 D M P F C

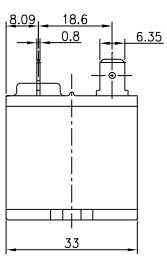
Internal Form:	**Nil**: PC Board **C**: PC Board + Capacitor for AC model
Case Type:	**Nil**: Standard Square Shape **F**: Flanged Case
Terminal Type:	**Nil**: Quick Connect Tabs **P**: PC Board terminal
Contact Form:	**M**: Form A
Coil Type:	**D**: DC Coil **A**: AC Coil
Coil Voltage:	DCV (**06**: 6V, **09**: 9V, **12**: 12V, **24**: 24V **48**: 48V, **60**: 60V, **100**: 100V, **110**: 110V) ACV (**12**: 12V, **24**: 24V, **48**: 48V, **110**: 100~120V **220**: 200~240V)
Number of Pole:	**1**: One Pole **2**: Two Poles
Type of Sealing:	**S**：RT Ⅰ Dust Protected Relays
Type:	**GL**

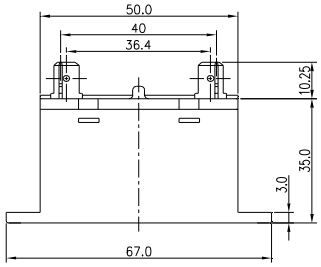
Classification

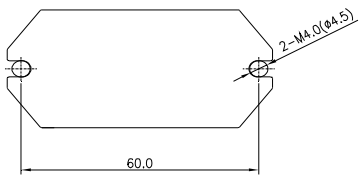
Model	GL			
Coil Type	DC Coil		AC Coil	
Number of Pole	1 Pole	2 Poles	1 Pole	2 Poles
Terminal Type	GL-S-1□□DM/DMP	GL-S-2□□DM/DMP	GL-S-1□□AM/AMP	GL-S-2□□AM/AMP
Case Type	GL-S-1□□DM/DMF	GL-S-2□□DM/DMF	GL-S-1□□AM/AMF	GL-S-2□□AM/AMF
Internal Form	NIL	NIL	GL-S-1□□AMPC/AMFC	GL-S-2□□AMPC/AMFC

Dimension (≦ 5mm± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)

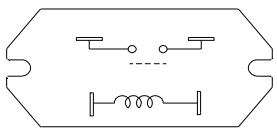
GL-S-1





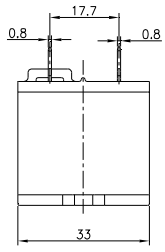


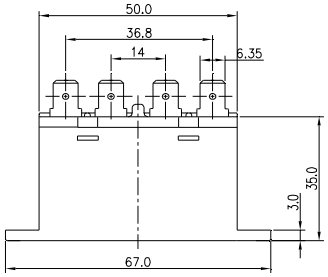
Top View

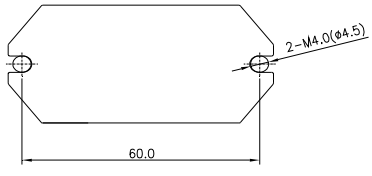


Bottom View

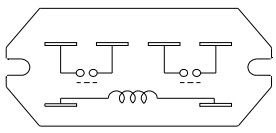
GL-S-2



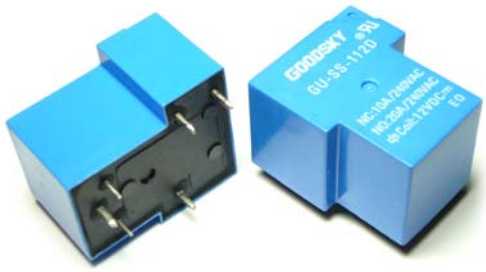




Top View



Bottom View



Main Feature

1. GU Single contact Form (SPST) series Relay offers switching capacity by 30 Amps in small size for various kinds of applications.
2. Simple magnetic circuit to meet mass production for low cost offer. Standard type is open type without duct cover. In addition, dust cover and sealed cover types are available to meet customer's various requirements.
3. SS Flow Solder Type (Dust Cover) is available for PC Board processing.
4. PC Board mounting & quick connect terminals can be used for various application.
5. Flanged Cover can be fixed by screw or by snap-in mounting track.

Contact Rating

Load Type	GU (DM)	GU (DB)	GU (D)
Rated Load (Resistive)	30A 120VAC	10A 240VAC	NC: 10A 240VAC
	30A 240VAC	10A 30VDC	10A 30VDC
	30A 30VDC	-	NO: 20A 240VAC
	-	-	20A 30VDC
Contact Capacity	1-1/2HP 240VAC	1-1/2HP 240VAC	1-1/2HP 240VAC
	1/2HP 240VAC	1/2HP 240VAC	1/2HP 240VAC
Rated Carrying Current	30A	10A	20A
Max. Allowable Voltage	AC 250V	AC 250V	AC 250V
Max. Allowable Current	30A	10A	20A
Max. Allowable Power Force	7,200VA	2,400VA	4,800VA
	900W	300W	600W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST	SPDT

Application

Domestic Appliances, Heating, Ventilating and Conditioning System, Car Control Switching Box, General Power Switching Applications.

Performance (at Initial Value)

- Contact Resistance ..... 100mΩMax.@1A,6VDC
- Operate Time..... 15 mSec. Max.
- Release Time ..... 10 mSec. Max.
- Dielectric Strength :
  Between Coil & Contact ..... 1,500VAC at 50/60 Hz for one minute.
  Between Contacts ..... 1,500VAC at 50/60 Hz for one minute.
- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
  Electrical..... 6 Cycles per Minute.
  Mechanical ..... 300 Cycles per Minute.
- Temperature Range ..... -30～155°C
- Humidity Range..... 45～85% RH.
- Coil Temperature Rise..... 60°C Max.
- Vibration:
  Endurance ..... 10 to 55 Hz dual amplitude width 1.5 mm.
  Error Operation..... 10 to 55 Hz dual amplitude width 1.5 mm.
- Shock:
  Endurance ..... 1,000 m/S^2.
  Error Operation..... 50 m/S^2.
- Life Expectancy :
  Mechanical ..... 10^7 Operations at No Load condition.
  Electrical ..... 10^5 Operations at Rated Resistive Load.
- Weight ..... Flow Solder Type: 27.2g
  Open Type:21.6g.

Safety Standard & Its File Number

- C-UL E141060
- CQC……07001018733

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GU-D	5	185	27	Abt. 0.93	80% Maximum	5% Minimum	150% but for short time carrying current
	6	150	40				
	9	93	97				
	12	77	155				
	15	59	255				
	18	47	380				
	24	36	660				
	48	19.4	2,480				
	110	8.5	13,000				

Ordering Information

GU - SS - 1 12 D M

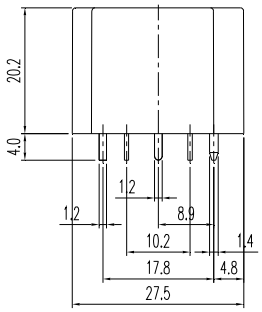
Contact Form:	**Nil**: One Form C **M**: One Form A **B**: One Form B
Coil Type:	**D**: Standard DC Coil
Coil Voltage:	**05**: 5V, **06**: 6V, **09**: 9V, **12**: 12V, **15**: 15V **18**: 18V, **24**: 24V, 48: 48V, **110**: 110V
Number of Pole:	**1**: One Pole
Type of Sealing:	**Nil**：RT 0 Unclosed Relays **SS**：RT Ⅱ Flux Proofed Relays **SH**：RT Ⅲ Wash Tight Relays
Type:	**GU**

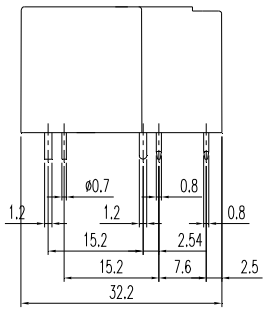
Classification

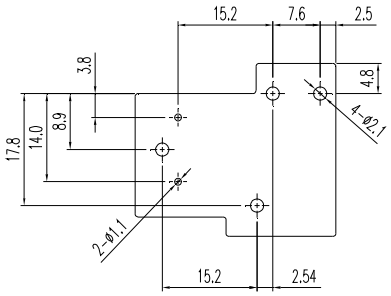
Model	GU		
Contact Form	1C	1A	1B
Unclosed Relay	GU-1□□D	GU-1□□DM	GU-1□□DB
Flux Proofed Type	GU-SS/SH-1□□D	GU-SS/SH-1□□DM	GU-SS/SH-1□□DB

Dimension (≤ 5mm+ 0.2mm, > 5mm + 0.3mm, the tolerance of PCB thru hole: +0.1mm)

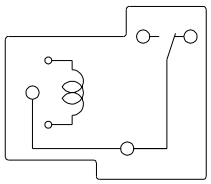
GU





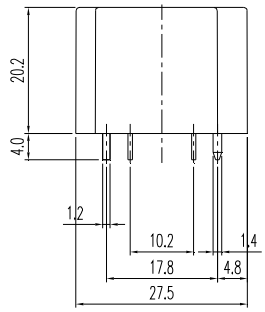


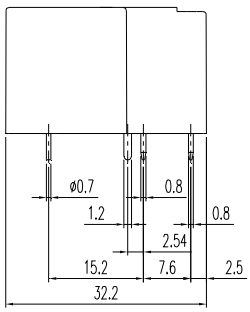
P.C.B. Layout

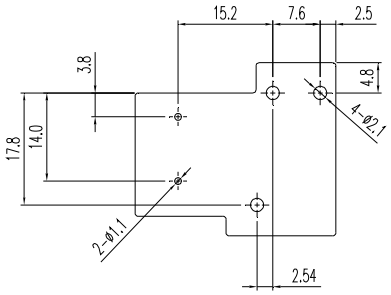


BOTTOM VIEW

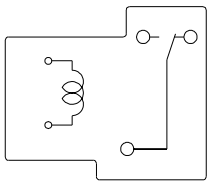
GU(Single Common)





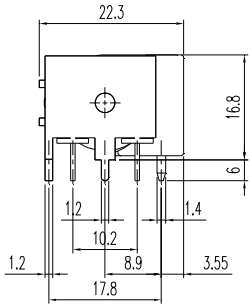


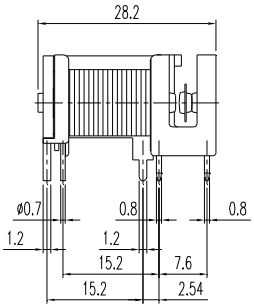
P.C.B. Layout

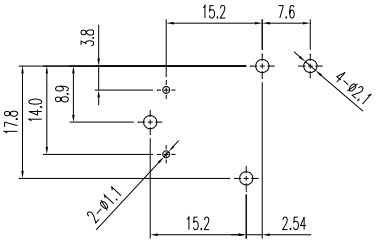


BOTTOM VIEW

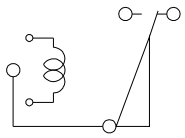
GU Unclosed







P.C.B. Layout



BOTTOM VIEW

GU (Quick Contact Tab)

Main Feature

1. GU Single contact Form (SPST) series Relay offers switching capacity by 30 Amps in small size for various kinds of applications.
2. Simple magnetic circuit to meet mass production for low cost offer. Standard type is open type without duct cover. In addition, dust cover and sealed cover types are available to meet customer's various requirements.
3. SS Flow Solder Type (Dust Cover) is available for PC Board processing.
4. PC Board mounting & quick connect terminals can be used for various application.
5. Flanged Cover can be fixed by screw or by snap-in mounting track.

Contact Rating

Load Type	GU (DM)	GU (DB)	GU (D)
Rated Load (Resistive)	30A 120VAC	10A 240VAC	NC: 10A 240VAC
	30A 240VAC	10A 30VDC	10A 30VDC
	30A 30VDC	-	NO: 20A 240VAC
	-	-	20A 30VDC
Contact Capacity	1-1/2HP 240VAC	1-1/2HP 240VAC	1-1/2HP 240VAC
	1/2HP 240VAC	1/2HP 240VAC	1/2HP 240VAC
Rated Carrying Current	30A	10A	20A
Max. Allowable Voltage	AC 250V	AC 250V	AC 250V
Max. Allowable Current	30A	10A	20A
Max. Allowable Power Force	7,200VA	2,400VA	4,800VA
	900W	300W	600W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST	SPDT

Application

Domestic Appliances, Heating, Ventilating and Conditioning System, Car Control Switching Box, General Power Switching Applications.

Performance (at Initial Value)

- Contact Resistance ..... 100mΩMax.@1A,6VDC
- Operate Time..... 15 mSec. Max.
- Release Time ..... 10 mSec. Max.
- Dielectric Strength :
  Between Coil & Contact ..... 1,500VAC at 50/60 Hz for one minute.
  Between Contacts ..... 1,500VAC at 50/60 Hz for one minute.
- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC.
- Max. On/Off Switching :
  Electrical..... 6 Cycles per Minute.
  Mechanical ..... 300 Cycles per Minute.
- Temperature Range..... -30～155°C
- Humidity Range..... 45～85% RH.
- Coil Temperature Rise..... 60°C Max.
- Vibration:
  Endurance ..... 10 to 55 Hz dual amplitude width 1.5 mm.
  Error Operation..... 10 to 55 Hz dual amplitude width 1.5 mm.
- Shock:
  Endurance ..... 1,000m/S^2.
  Error Operation..... 50 m/S^2.
- Life Expectancy :
  Mechanical ..... 10^7 Operations at No Load condition.
  Electrical ..... 10^5 Operations at Rated Resistive Load.
- Weight ..... About DMF : 34 g.
  DMFS : 34.6g.
  DMQ : 32.6g.

Safety Standard & Its File Number

- C-UL E141060
- TÜV (12/24DMQ only)..... R2057813
- CQC 07001018733

GU (Quick Contact Tab)

Coil Specification (at 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GU	5	185	27	Abt. 0.93	80% Maximum	5% Minimum	150% but for short time carrying current
	6	150	40				
	9	93	97				
	12	77	155				
	15	59	255				
	18	47	380				
	24	36	660				
	48	19.4	2,480				
	110	8.5	13,000				

Ordering Information

GU - SS - 1 12 D M F S

Case Type:	**Nil**: Standard **S**: With Flanged Case
Terminal Type:	**F**: Both PCB Terminal & Quick Contact Tabs (Case height: 28.0mm) **Q**: Both PCB Terminal & Quick Connect Tabs (Case height: 21.0mm) **J**: Quick Connect Tabs (Case height: 21.0mm)
Contact Form:	**Nil**: One Form C **M**: One Form A **B**: One Form B
Coil Type:	**D**: Standard DC Coil
Coil Voltage:	**05**: 5V, **06**: 6V, **09**: 9V, **12**: 12V, **15**: 15V, **18**: 18V **24**: 24V, **48**: 48V, **110**: 110V
Number of Pole:	**1**: One Pole
Type of Sealing:	**SS** : RT Ⅱ Flux Proofed Relays **SH :** RT Ⅲ Wash Tight Relays
Type:	**GU** (Quick Contact Tab)

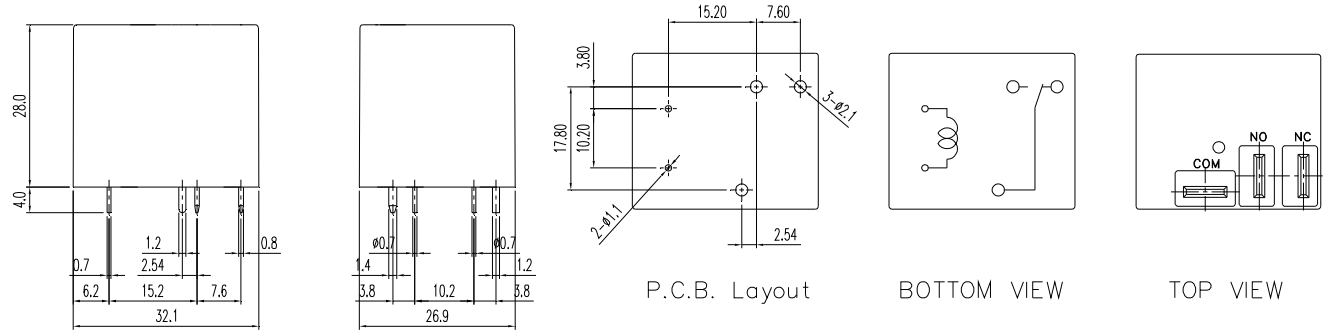
Classification

Model	GU (Q-C-T)					
Terminal Type	F : PCB terminal & Quick Connect Tabs Case Height:28mm			Q : PCB terminal & Quick Connect Tabs Case Height:21mm		
Case Type	Nil : Standard Case	S : (With Flanged Case)		Nil : Standard Case		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed Relay	GU-SS-1□□DF(S)	GU-SS-1□□DMF(S)	GU-SS-1□□DBF(S)	GU-SS-1□□DQ	GU-SS-1□□DMQ	GU-SS-1□□DBQ
Wash Tight Relay	GU-SH-1□□DF(S)	GU-SH-1□□DMF(S)	GU-SH-1□□DBF(S)	GU-SH-1□□DQ	GU-SH-1□□DMQ	GU-SH-1□□DBQ

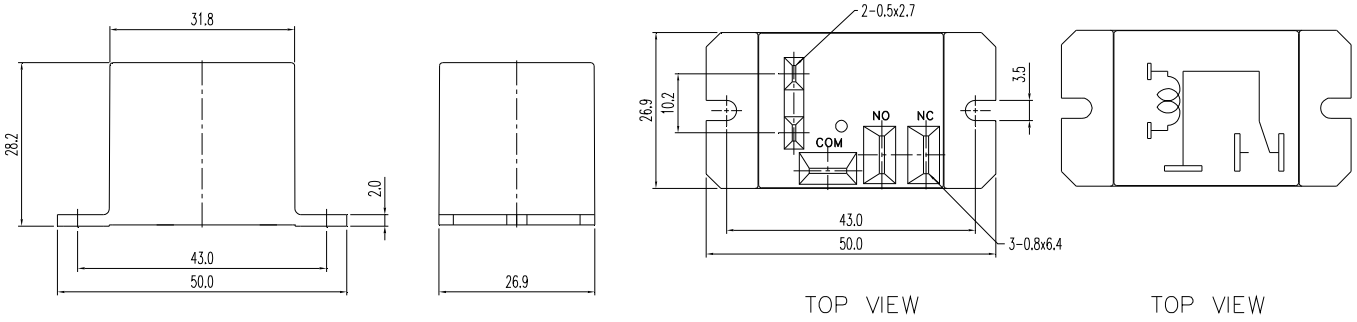
GU (Quick Contact Tab)

Dimension (≦ 5mm± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)

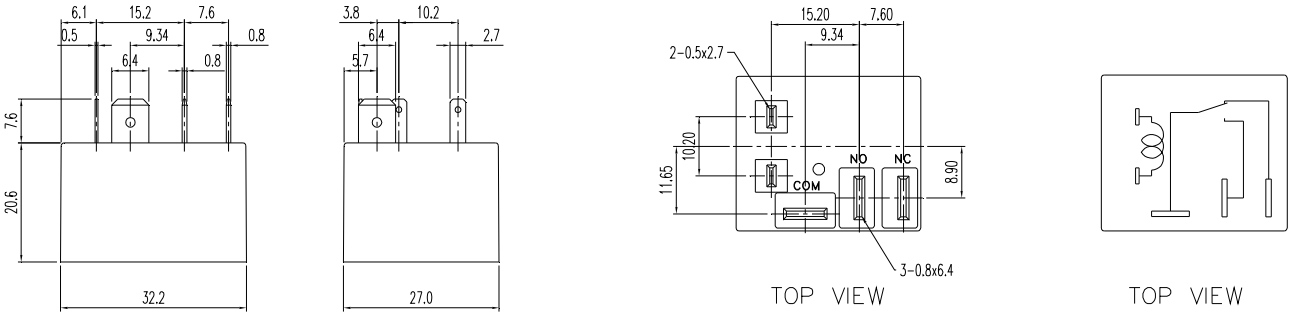
GU－DF



GU－DFS



GU－DJ



GU－DQ