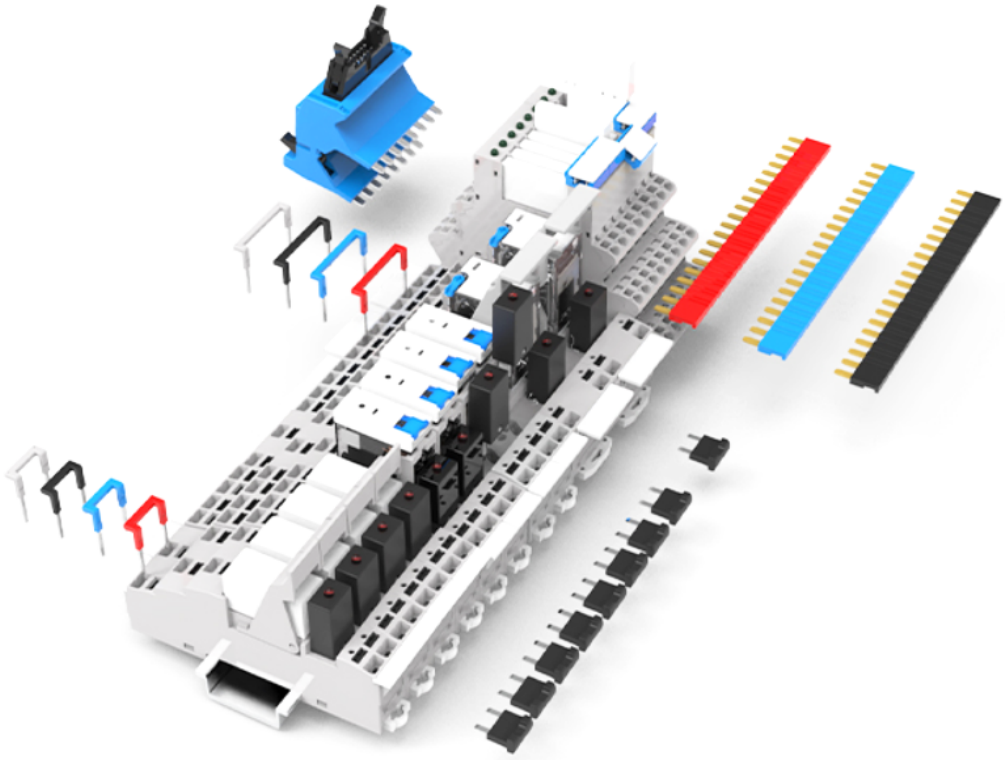
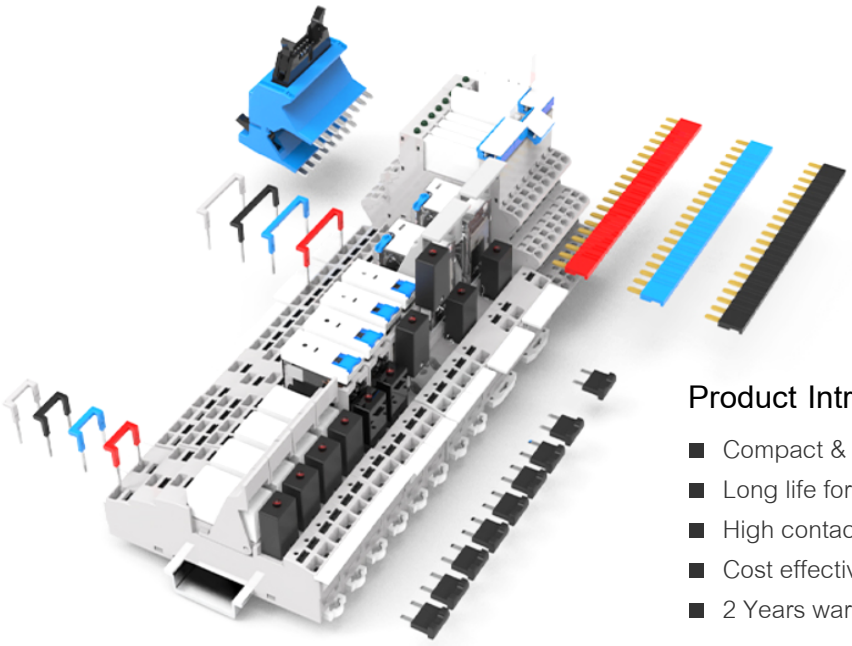
VELMA Industrial relay

Miniature & General purpose relay



www.velma-automation.com



Product Introduction :

- Compact & Small design
- Long life for coil & contact operating
- High contact current up to 16A
- Cost effective product
- 2 Years warranty

VELMA
BRAND OF THAILAND

Industrial relay

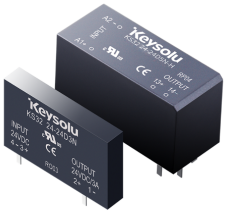
Solid state relay (SSR) KS32

Contact: 1NO

Product Introduction

KS32 Series ultra-thin optocoupler.

It is composed of a standard base terminal and solid state relay without mechanical contact and control circuit, used for isolation and amplification of AC and DC signals, suitable for various protection and automatic control systems, with the following characteristics



Order code information

KS32/	24	-	24D	4	N	-H	XXX
Type SSR Series	Control voltage 5: 5VDC 12: 12VDC 24: 24VDC 48: 48VDC 60: 60VDC		Load voltage 24D: 24VDC 48D: 48VDC	Load current 3: Load 3A 4: Load 4A 5: Load 5A	RC Snubber N: Not including	Mounting Mode H: Horizontal Nil: Vertical	Customer special code

SSR Specification

Output specification (Ta = 25'C)

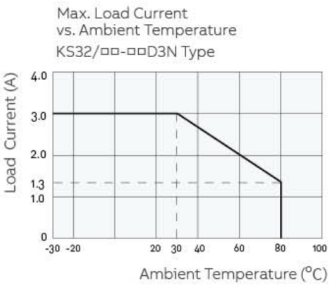
Input high level range	5VDC	4-6 Vdc
	12VDC	9.6-14Vdc
	24VDC	19.-28Vdc
	48VDC	38-58Vdc
	60VDC	48-72Vdc
Max. Turn-on time	50 micro.sec	
Max. Turn-off time	300 micro.sec	

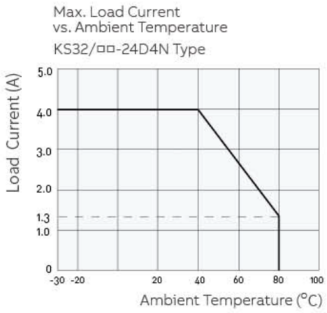
Output parameters (Ta = 25'C)

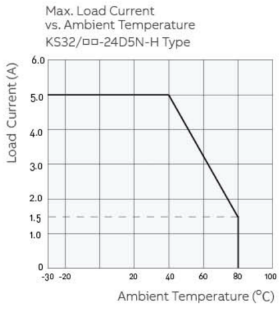
Output (load) voltage range	3 - 28.8VDC
Output leakage current (OFF)	<1mA
output voltage drop	<2.3V
On-delay at UN	<0.1ms
Turn-off delay at UN	<12ms
Surge immunity	2KV
Group pulse immunity	4KV

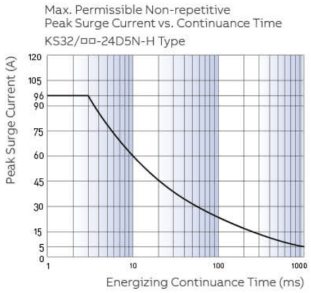
Specification (Ta = 25'C)

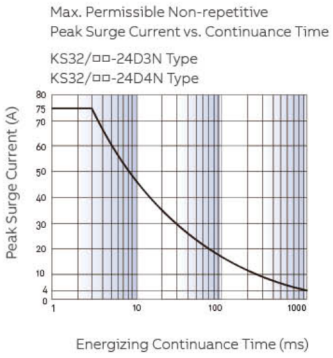
Working temperature	-25 - 80'C
stored temperature	-30 - 100'C
Working Environment Humidity	45%...85% RH
Protection type	IP20
Insulation material type	Nylon
Color	Black
Flammability rating	UL94
Compliance	CE

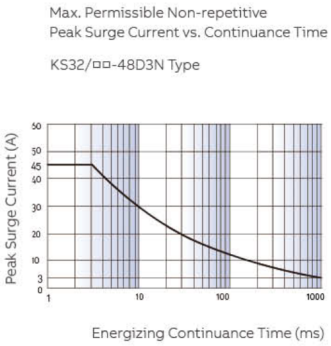




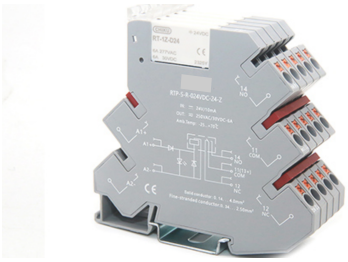








Interface Relay RTP-Series



Product Introduction

For PLC's and process control high power contact AgNi
with cage clamp terminals RTP-series Recommended
Max. load 250V 6 A resistive link option.

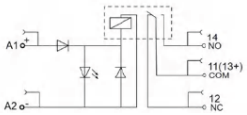
Product Feature

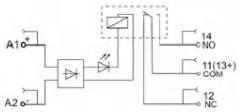
Relay module up to 6 A 250V, different contact materials
Solid state modules for most loads DC and AC up to 2 A. Coil UC = AC/DC,
no protection circuit required LED status display, Screw terminals or push-in terminals
Jumper link and Super small mounting: 6.2 mm..

Ultra-thin relay (Socket base)

RTP - T - 1 - C 24 - D - ...

- Special Requirements: Other: Customer code
- DC coil (Only DC coil is optional for this relay)
- Coil voltage:05:5V,12:12V,24:24V,60:60V
- C: switching contact
- Number of C (max:1C for option)
- T: screw type S: spring type
- Ultra-thin relay (base)





Coding of relay for ultra-thin modules (Coil)

ART - 1 C 24 D

- DC coil (Only DC coil is optional for this relay)
- Coil voltage ： 05: 5V, 12: 12V, 24: 24V, 60: 60V
- C ： switching contact
- Number of C (max:1C for option)
- Ultra-thin relay (relay)

Interface relay specification

Input (control) parameters (Ta = 25'C)

Rated input voltageUN	5Vdc 4.4...6.0V DC	12Vdc 9.6...16V DC	24Vdc 19...30V DC	110Vac 88...136V AC/DC	230Vac 176...264V AC/DC
Typical input current at input	0...0.7V DC	0...1.2V DC	0...2V DC	0...6V AC/DC	0...12V AC/DC
Low range UN	<30mA	<15mA	<9mA	<4.5mA	<4.5mA
Control level status display	Green light emitting diode				

Dielectric and Electromagnetic Compatibility (Ta = 25'C)

Power frequency voltage between input and output	4KV AC(50 Hz,1min)
Power frequency withstand voltage open circuit contacts	1KV AC(50 Hz,1min)
Surge immunity	2KV
Group pulse immunity	4KV
Electrostatic discharge immunity	8KV

Interface Relay RTP-Series

Interface relay specification

Output (load) parameters (Ta = 25'C)

Rated input voltageUN	5Vdc 4.4...6.0V DC	12Vdc 9.6...16V DC	24Vdc 19...30V DC	110Vac 88...136V AC/DC	230Vac 176...264V AC/DC
Contact type	One set of changeover/A pair of normally open contacts				
Contact material (relay)	Silver alloy				
Rated switching voltage	250V AC/30V DC				
Max. continuous current (resistive)	6A				
Maximum switching power	1500VA ,180W				
On-delay at UN	< 6ms				
Turn-off delay at UN	< 6.5ms				
Mechanical life	10,000,000 times				
Electrical life	60,000 times				

Specification (Ta = 25'C)

Working temperature	-25'C...+70'C
stored temperature	-40'C...+85'C
Dimensions H × W ×THK	94×90×6.2mm
Working Environment Humidity	5%...95% RH
Overvoltage category	III
Protection type	IP20
Insulation material type	Nylon
Flammability rating	V0 (UL94)
Compliance	CE
Rigid/Flexible Conductors	0.14...4 / 0.34...2.5
Wiring form	Push-in spring terminal block
Stripping length	9-10 mm.

Miniature relay HF157

File No.:E133481

File No.:R50403813

File No.:CQC18002189443

Product Introduction

- High capacity (1Pole 16A, 2Pole 10A)
- Varius type available
- 1/2 Pole configuration.
- 5Kv dielectric strength

Contact data

General specification (Ta = 25'C)

Contact arrangement	1CO (1NO/1NC), 2CO (2NO/2NC)
Contact resistance	100 MOhm (1A 6VDC)
Contact Material	AgSno2 Alloy (Load R, & L)
Contact rating (Resistance load)	1P 12A 250Vac/30Vdc 2P 8A 250Vac/30Vdc
Max.switching voltage	250Vac / 30Vdc
Max.switching current	1Z: 16A, 2Z 10A
Max.switching power	1Z 4000VA 480W, 2Z 2500VA 300W
Machanical endurance	>50,000,000 times

Coil data

Coil power			DC 0.53W AC0.9VA	
Nomonal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ohms
5	3.5	0.5	5.5	47.2x(1 ± 10%)
6	4.2	0.6	6.6	67.9x(1 ± 10%)
12	8.4	1.2	13.2	271x(1 ± 10%)
24	16.8	2.4	26.4	1080x(1 ± 10%)
36	25.2	3.6	39.6	2445x(1 ± 10%)
48	33.6	4.8	52.8	4340x(1 ± 10%)
60	42	6	66	6792x(1 ± 10%)
100-110	77	11	110-121	18870x(1 ± 10%)

Nomonal Voltage VAC	Pick-up Voltage VAC	Drop-out Voltage VAC	Max. Allowable Voltage VAC	Coil Resistance Ohms
6	4.8	1.8	6.6	16x(1 ± 10%)
12	9.6	3.6	13.2	62.5x(1 ± 10%)
24	19.2	7.2	26.4	243x(1 ± 10%)
48	38.4	14.4	52.8	1085x(1 ± 10%)
60	48	18	66	1750x(1 ± 10%)
110	88	33	121	5270x(1 ± 10%)
220	176	66	242	21530x(1 ± 10%)
230	192	72	264	25570x(1 ± 10%)

Miniature relay HF157

Characteristics

Insulation resistance		1000 MOhm 500Vdc
Dielectric Strength	Coil & contact	5000VAC 1 min.
	Open contact	1000VAC 1 min.
	Contact sets	3000VAC 1 min.
Operating time		15ms Max.
Release time		20ms Max.
Shock resistance	Functional	90m/s^2
	Destructive	980m/s^2
Vibration resistance		10Hz to 55Hz 1.5mm. DA.
Humidity		5% - 85% RH
Ambient temperature		-40 - 70'C
Temp.operating / storage		-40 - 65'C / -40 - 85'C
Weight		23.5g
Socket		157F Series

Order code information

HF157F / A - 24 1Z 2 5 F D 2 xxx

Type

Form
A: AC
Nil: DC

Coil voltage
AC: 6 - 240Vac
DC: 5 - 110Vdc

Contact arrangement
1Z: 1 FORM C
2Z: 2 FORM C

Termination
2: QC
D: With diode

Contact material
5:AgSno2

Insulation standard
F: Class F

Component code
D: With LED DJ1: With diode (1: +) DJ: With LED & diode (1: -)
DE: LED, RC circuit

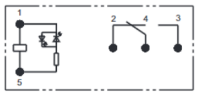
Mounting Termination
1: Button type
2: Without button type

Customer special code
XXX: Customer special requested

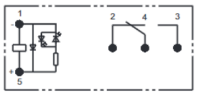
Wiring diagram

1Z (16A)

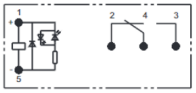
HF157F/□□□□-1Z25FD2(□□□)
(With LED)



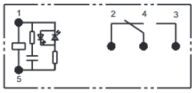
HF157F/□□□□-1Z25FDJ2(□□□)
(With LED,fly-wheel diode1:"-")

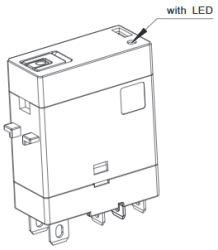


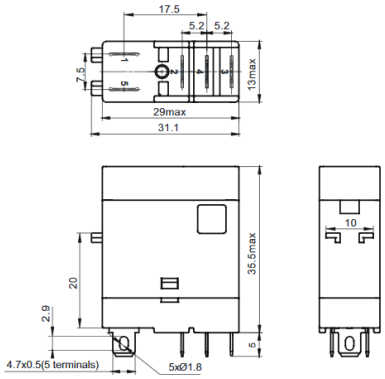
HF157F/□□□□-1Z25FDJ12(□□□)
(With LED,fly-wheel diode1:"+")



HF157F/□□□□-1Z25FDE2(□□□)
(With LED,RC circuit)

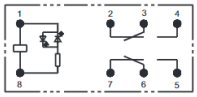




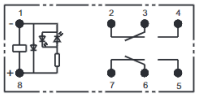


2Z (10A)

HF157F/□□□□-2Z25FD1(□□□)
(With LED)



HF157F/□□□□-2Z25FDJ1(□□□)
(With LED,fly-wheel diode1:"-")



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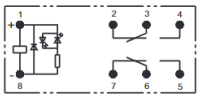
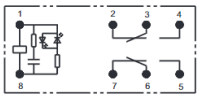
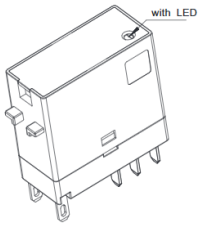
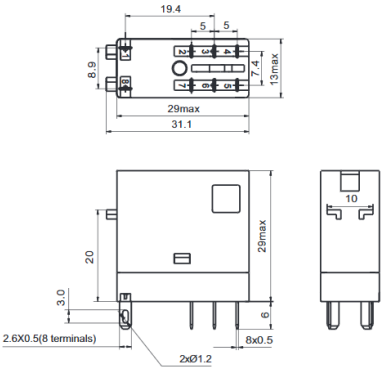
(With LED,fly-wheel diode1:"+")



HF157F/□□□□-2Z25FDE1(□□□)
(With LED,RC circuit)







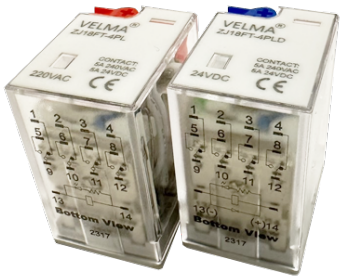
HF157

COMPACT & SLIM Design

Miniature relay VM36FT

Product Feature

- Relay module up to 10 A 250V, different contact materials
- Lockable test button models available
- Built-in mechanical operation indicator
- LED status display
- High switching power (2-CO: 10 A) (4-CO: 5A)
- Relays with AC and DC coils have different
- RoHS complaint



Type

VM36FT | LS | 2Z | D | 24 – 1

Voltage

Contact Material
1: AgSnO2
2: AgNi

Option
L: LED D: Diode
S: Lockable Button

Contact
2Z: 2NO/2NC Form C
4Z: 4NO/4NC Form C

Voltage Type
D: DC
A: AC

Order number:

VM36FT-LS2ZD24-1	Coil 24Vdc 2-CO with lockable button
VM36FT-LS2ZA220-1	Coil 220Vac 2-CO with lockable button
VM36FT-LS4ZD24-1	Coil 24Vdc 4-CO with lockable button
VM36FT-LS4ZA220-1	Coil 220Vac 4-CO with lockable button

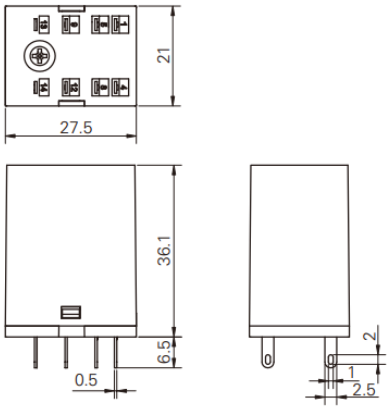
SPECIFICATION

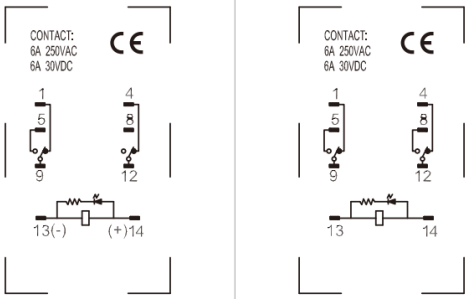
Technical data

Contact	2 Pole (2-CO)	4 Pole (4-CO)
Load	Resistive load	Resistive load
Contact configutaion	2C Form C	4C Form C
Contact material	AgSnO2	AgSnO2
Rate current	10 A	5 A
Maximum switching capacity	2500VA 300W	660VA 72W
Contact resistance	50 mOhms	100 mOhm
Operating time	20ms max	20ms max
Release time	20ms max	20ms max
Dielectric strength	AC2000V 50/60Hz 1min	AC2000V 50/60Hz 1min
Vibration resistance	10 to 55 to 10 Hz,	10 to 55 to 10 Hz,
Shock resistance	200m/s (approx.20g)	200m/s (approx.20g)
Endurance	50,000,000 operations	50,000,000 operations
Ambient humidity	5~85%RH	5~85%RH
Weight	35g	35g
Coil support (Customer order)	12, 24, 48, 60VDC / 24, 250VAC	12, 24, 48, 60VDC / 24, 250VAC

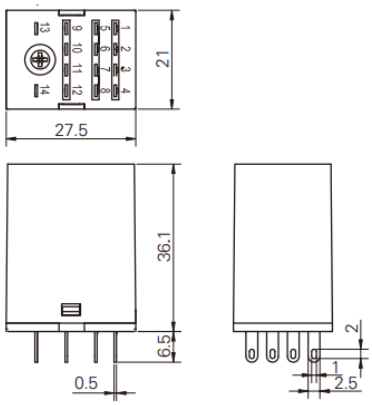
Wiring diagram

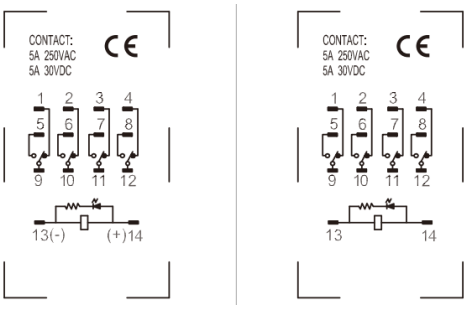
2Z (10A)

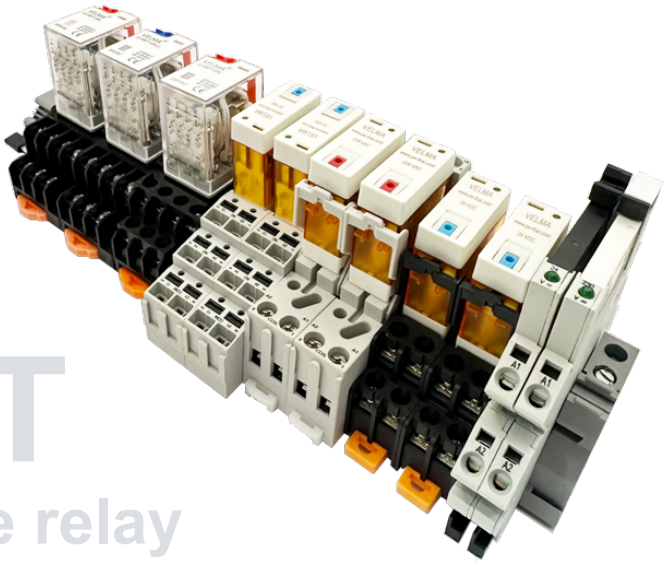




4Z (5A)



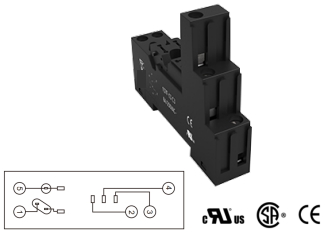
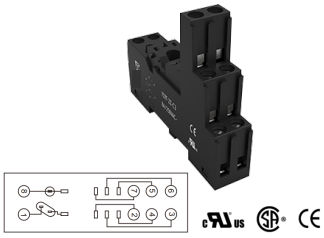
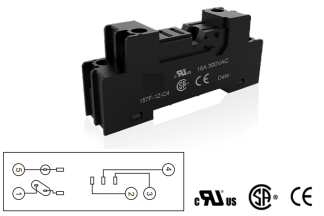
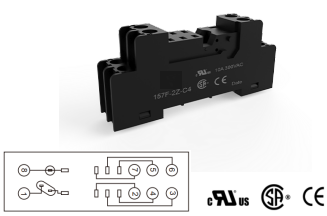
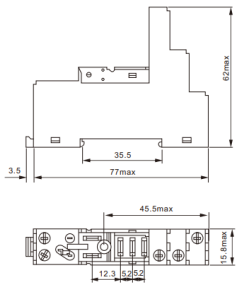
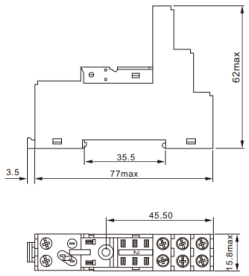
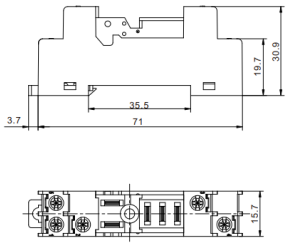
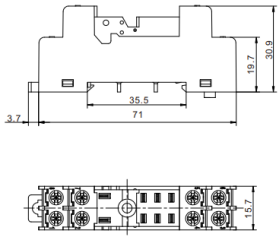


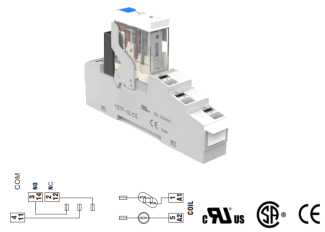
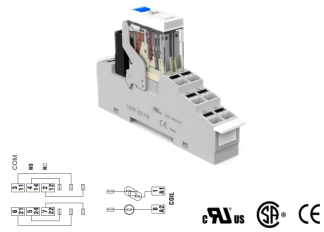
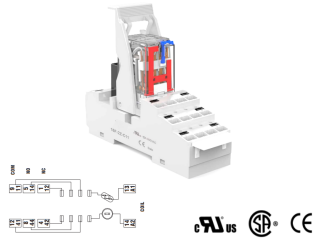
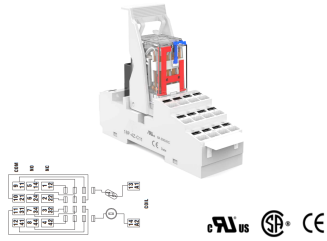
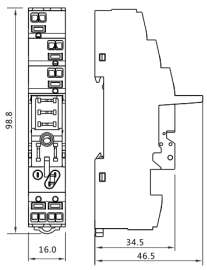
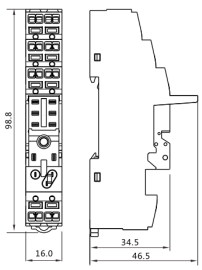
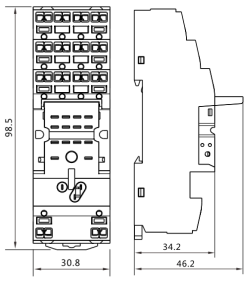
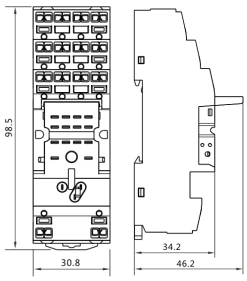


VM36FT

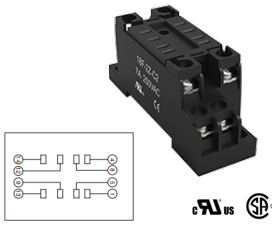
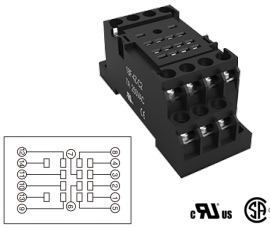
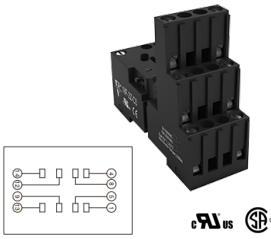
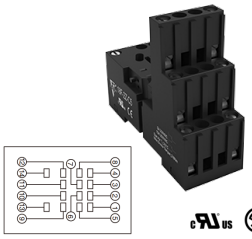
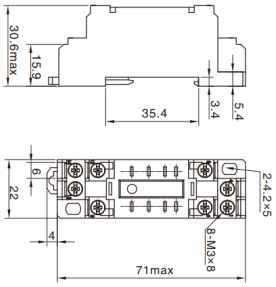
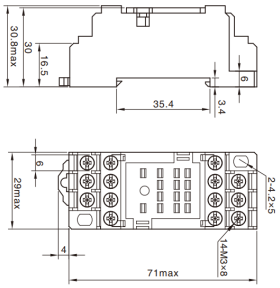
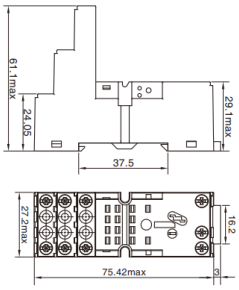
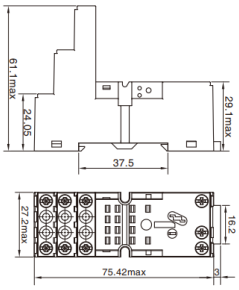
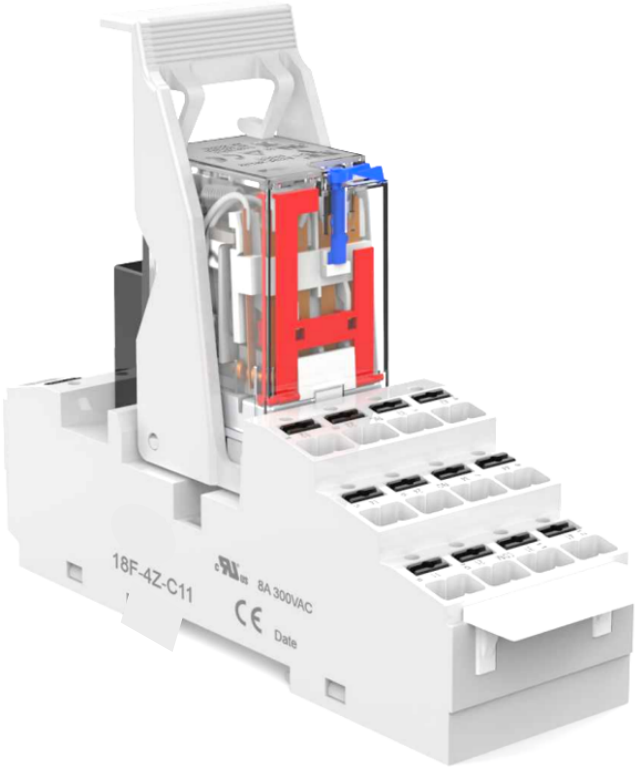
General purpose relay

Miniature socket relay 157F

157F-1Z-C3		157F-2Z-C3		157F-1Z-C4		157F-2Z-C4	
							
Current	16A	Current	10A	Current	16A	Current	10A
Voltage	300V	Voltage	300V	Voltage	300V	Voltage	300V
Material	PA66	Material	PA66	Material	PA66	Material	PA66
Wire strip length	7 mm.	Wire strip length	7 mm.	Wire strip length	7 mm.	Wire strip length	7 mm.
Wire cross section	2x2.5 mm^2	Wire cross section	2x2.5 mm^2	Wire cross section	2x2.5 mm^2	Wire cross section	2x2.5 mm^2
Casing wire	2x1.5 mm^2	Casing wire	2x1.5 mm^2	Casing wire	2x1.5 mm^2	Casing wire	2x1.5 mm^2
							

157F-1Z-C5		157F-2Z-C5		157F-2Z-C11		157F-4Z-C11	
							
Current	16A	Current	10A	Current	12A	Current	8A
Voltage	300V	Voltage	300V	Voltage	300V	Voltage	300V
Material	PA66	Material	PA66	Material	PA66	Material	PA66
Wire strip length	8 mm.	Wire strip length	8 mm.	Wire strip length	8 mm.	Wire strip length	8 mm.
Wire cross section	1x2.5 mm^2	Wire cross section	1x2.5 mm^2	Wire cross section	1x2.5 mm^2	Wire cross section	1x2.5 mm^2
Casing wire	1x1.5 mm^2	Casing wire	1x1.5 mm^2	Casing wire	1x1.5 mm^2	Casing wire	1x1.5 mm^2
							

Miniature socket relay 18F

18F-2Z-C2		18F-4Z-C2		18F-2Z-C5		18F-4Z-C5	
							
Current	12A	Current	10A	Current	12A	Current	10A
Voltage	300V	Voltage	300V	Voltage	300V	Voltage	300V
Material	PA66	Material	PA66	Material	PA66	Material	PA66
Wire strip length	7 mm.	Wire strip length	7 mm.	Wire strip length	7 mm.	Wire strip length	7 mm.
Wire cross section	2x2.5 mm.^{2}	Wire cross section	2x2.5 mm.^{2}	Wire cross section	2x2.5 mm.^{2}	Wire cross section	2x2.5 mm.^{2}
Casing wire	2x1.5 mm.^{2}	Casing wire	2x1.5 mm.^{2}	Casing wire	2x1.5 mm.^{2}	Casing wire	2x1.5 mm.^{2}