



SPDT Electromechanical Relay Failsafe Switch, Terminated, DC to 26.5 GHz, up to 90W, 2M Lifecycles, 28V, TTL, Indicators, SMA

Electromechanical Relay Switches Technical Data Sheet

PE71S6469

Features

- Single Pole Double Throw Electromechanical Relay Switch
- DC to 26.5 GHz Frequency Range
- Failsafe Actuator
- TTL Logic Control
- Indicators
- 2M Lifecycle Rating
- Insertion Loss 0.3 dB typ
- Isolation > 80 dB typ
- Internally Terminated
- VSWR as low as 1.2:1 max
- +28 Volt DC Bias
- Solder Terminal Pins for DC Command Control
- SMA Female Connectors
- -25°C to +65°C Operating Temperature
- Up to 90 Watt Average Power Handling
- 50 Ohm Design
- Hot Switching Capability - Consult Factory
- S-Parameter Data available upon request
- Rugged Design meets Mil-STD-202 Test Conditions

Applications

- Aerospace & Defense
- Test & Measurement
- Microwave Radio Systems
- Military & Commercial Communication Systems
- Research & Development
- SATCOM
- Wireless Communications
- Enterprise
- IoT

Description

The PE71S6469 is a Single Pole Double Throw (SP2T) electromechanical relay switch that operates across a wide frequency range of DC to 26.5 GHz and can handle up to 90W of Average power in a break before make condition. The design is rated for 2 million lifecycles and features a Failsafe Actuator. The output port is terminated in 50 ohms when switched in the isolation (off) state. Additional features include TTL control logic, and indicators. Impressive typical performance includes 0.3 dB insertion loss and isolation greater than 80 dB. This switch requires +28Vdc bias voltage and operates over a temperature range of -25°C to +65°C. The rugged and compact package assembly supports SMA female connectors and solder terminal pins for DC command control functions. And for highly reliable operation, the model is guaranteed to meet MIL-STD-202 environmental test conditions for shock and random vibration.

Electrical Specifications

Switch Type	SPDT, Terminated
Actuator Type	Failsafe
Switching Sequence	Break Before Make
Actuator Options	Indicators, TTL Logic
TTL Control	on: 2.4 to 5.5 Volts off: 0 to 0.8 Volts

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		26.5	GHz
Impedance		50		Ohms
Operating Voltage	26	28	30	Volts
Actuating Set Current @ 28 Volts			200	mA
VSWR		1.3:1	1.7:1	

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [SPDT Electromechanical Relay Failsafe Switch, Terminated, DC to 26.5 GHz, up to 90W, 2M Lifecycles, 28V, TTL, Indicators, SMA PE71S6469](#)



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Insertion Loss		0.3	0.6	dB
Isolation	50	80		dB
Switching Time			20	ms Max

Performance by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency Range	DC to 6	6 to 12	12 to 18	18 to 26.5		GHz
VSWR, Max	1.2:1	1.3:1	1.4:1	1.7:1		
Insertion Loss, Max	0.15	0.25	0.35	0.6		dB
Isolation, Min	80	70	60	50		dB

Mechanical Specifications

Size

Length	1.85 in [46.99 mm]
Width/Diameter	2.25 in [57.15 mm]
Height	0.56 in [14.22 mm]
Finish	NICKEL
Package Type	Connectorized
Operating Life	2,000,000 Cycles

Connectors

RF Connector Type	SMA Female
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Environmental Specifications

Temperature

Operating Range	-25 to +65 deg C
Storage Range	-55 to +100 deg C

Humidity	Moisture resistant or immersion sealing available
Shock	MIL-STD-202 Method 213, Condition D, 500G (non oper)
Vibration	MIL-STD-202 Method 214, Condition D, 10G RMS (non oper)

Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

Notes:

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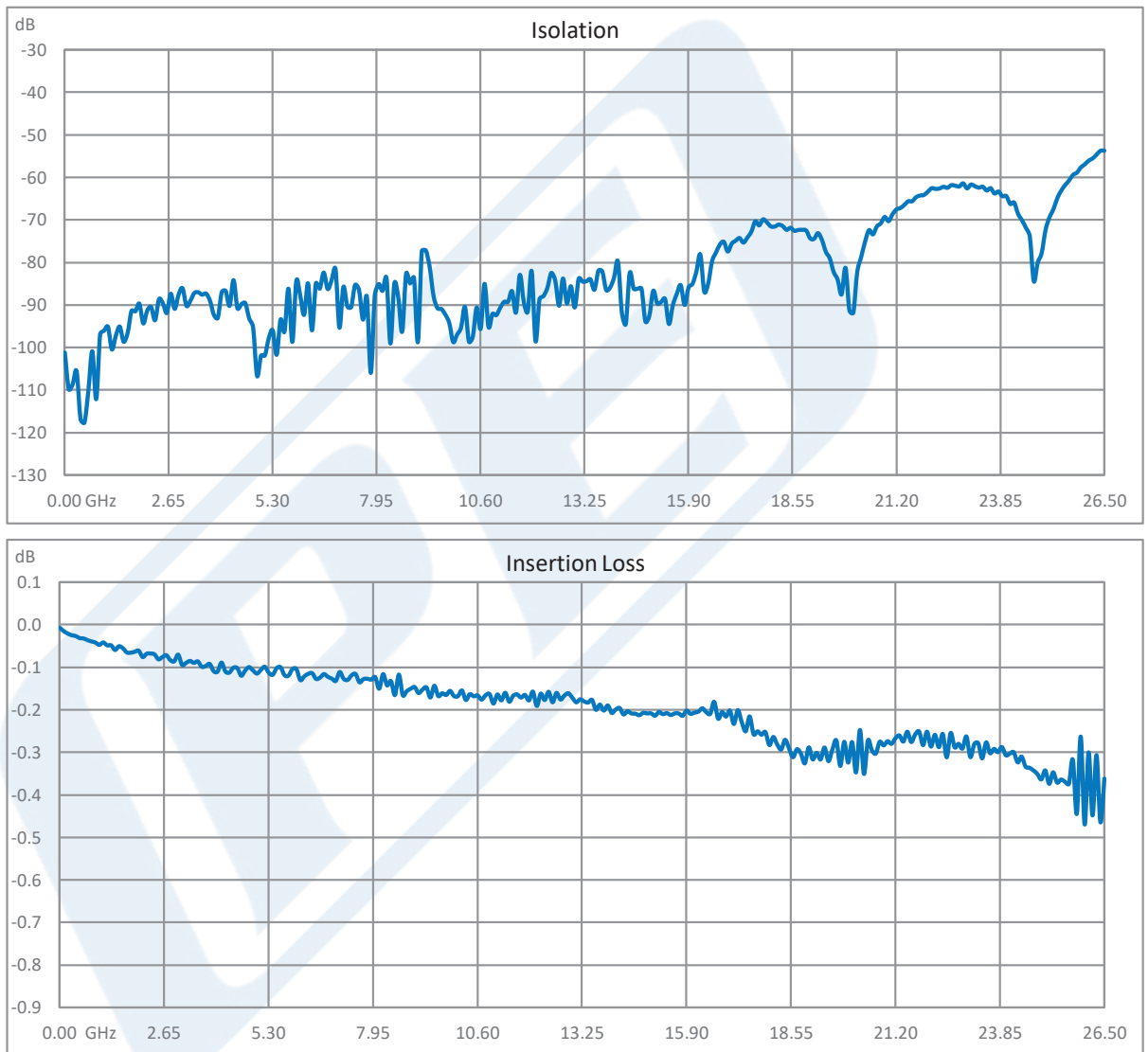


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Typical Performance Data



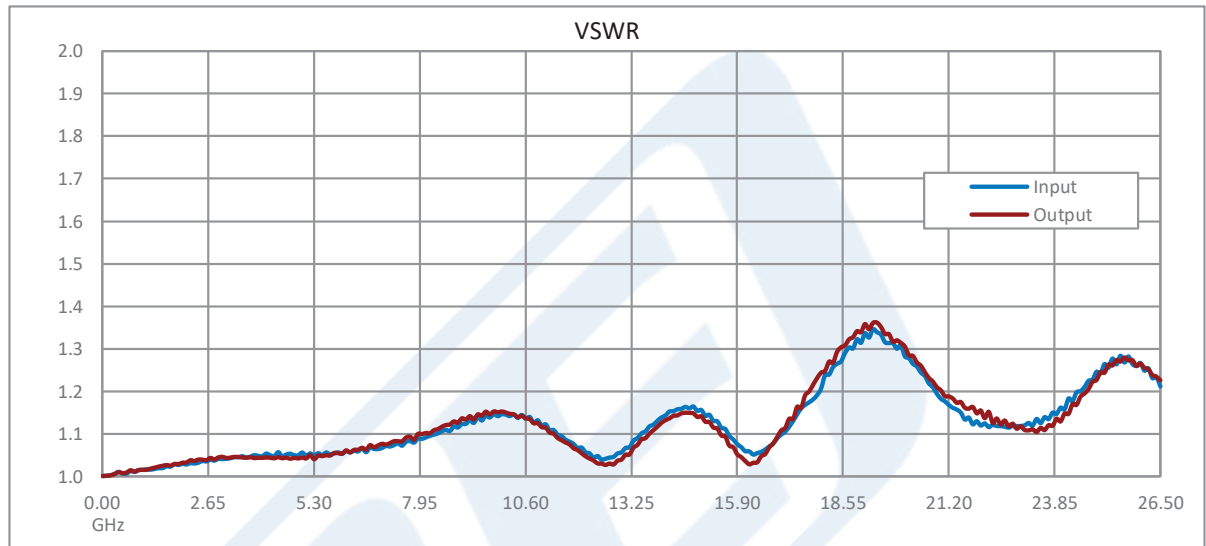
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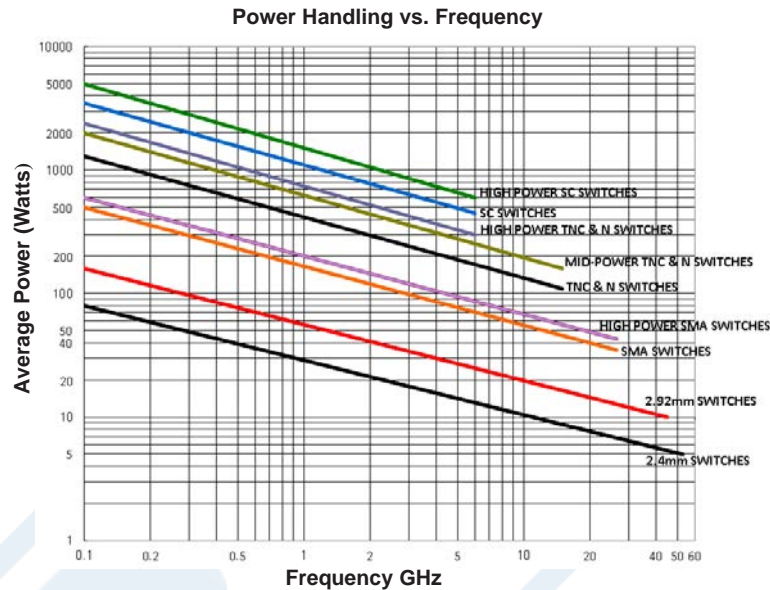
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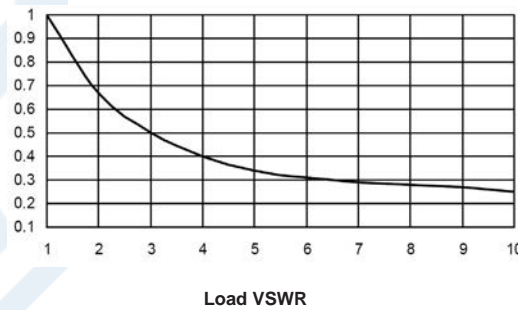
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Power Handling De-rating vs. Load VSWR



Power Handling Chart and Derating Curves based on the following Test and Environmental Conditions:
 Ambient temperature: 20 - 25°C
 Altitude: Sea Level to 1,000 feet
 Relative Humidity: 50 - 55%
 Load VSWR: $\leq 1.20:1$
 Operation: Cold Switching

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SPDT Electromechanical Relay Failsafe Switch, Terminated, DC to 26.5 GHz, up to 90W, 2M Lifecycles, 28V, TTL, Indicators, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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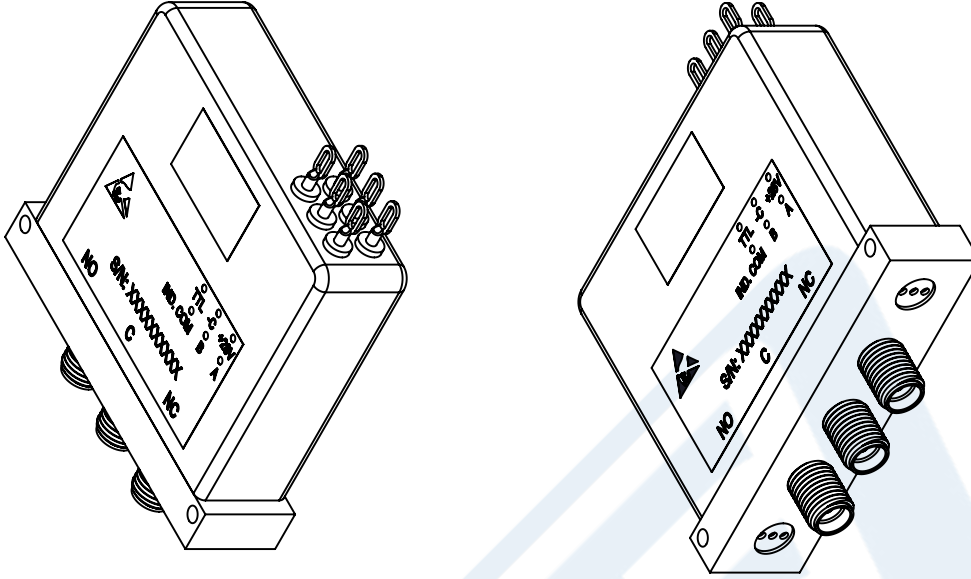
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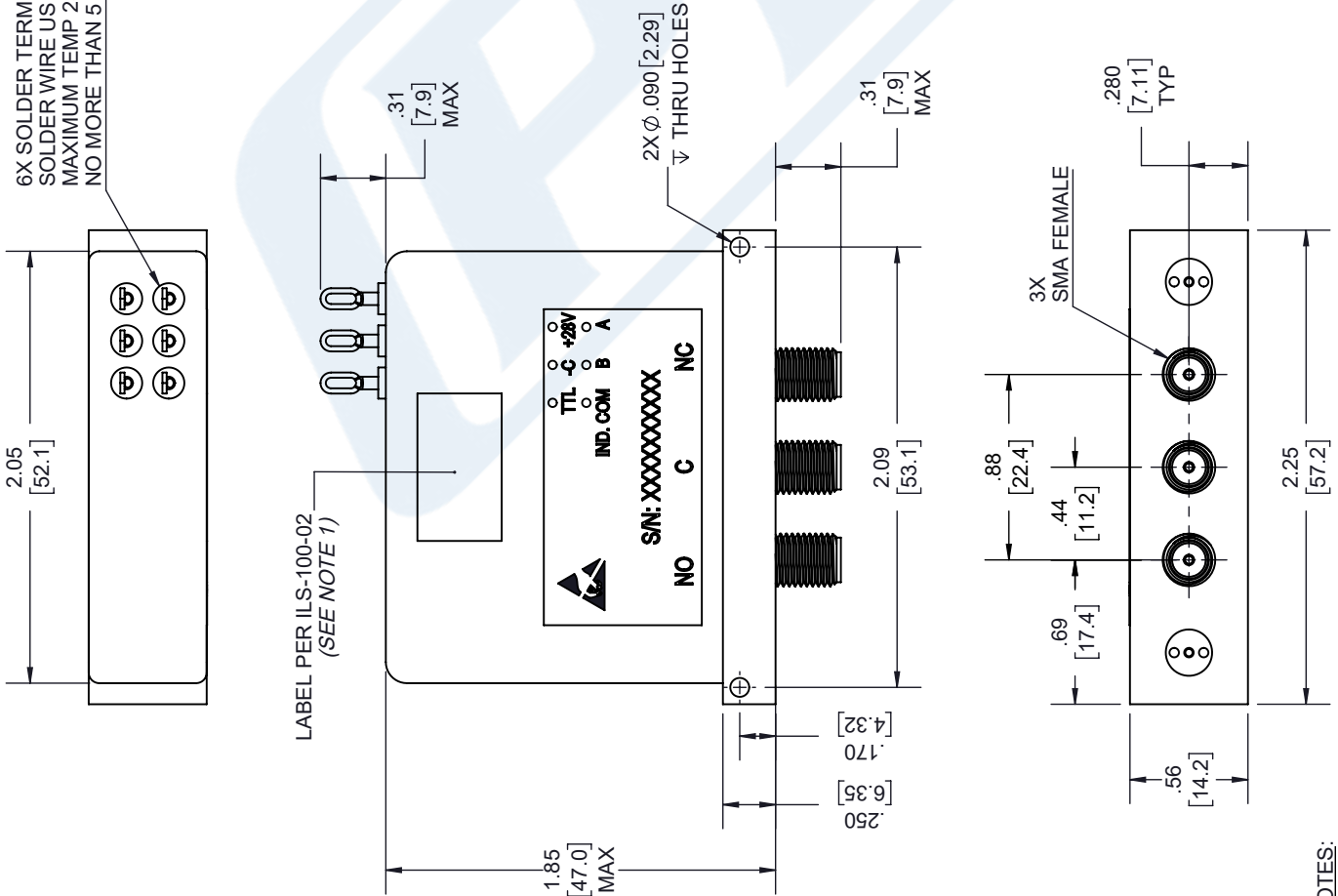
PE71S6469 CAD Drawing

SPDT Electromechanical Relay Failsafe Switch, Terminated, DC to 26.5 GHz, up to 90W, 2M Lifecycles, 28V, TTL, Indicators, SMA

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	2/2/2021	T.GALLA



6X SOLDER TERMINALS,
SOLDER WIRE USING SN96
MAXIMUM TEMP 250 °C FOR
NO MORE THAN 5 SEC.



NOTES:

- LABEL PER ILS-100-02. FOR INTERNAL REFERENCE ONLY. LABEL LOCATION FOR REFERENCE ONLY.

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TOLERANCES:
 .X = ±.2 [5.08] FRACTIONS
 .XX = ±.02 [.51] ±.102
 .XXX = ±.005 [.13] ANGLES ± 1°
 CABLE LENGTH (L), TOLERANCES:
 L ≤ 12 [305] = +1 [25] / -0
 12 [305] < L ≤ 60 [1524] = +2 [51] / -0
 60 [1524] < L ≤ 120 [3048] = +4 [102] / -0
 120 [3048] < L ≤ 300 [7620] = +6 [152] / -0
 300 [7620] < L = +5% / -0

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THIRD-ANGLE PROJECTION

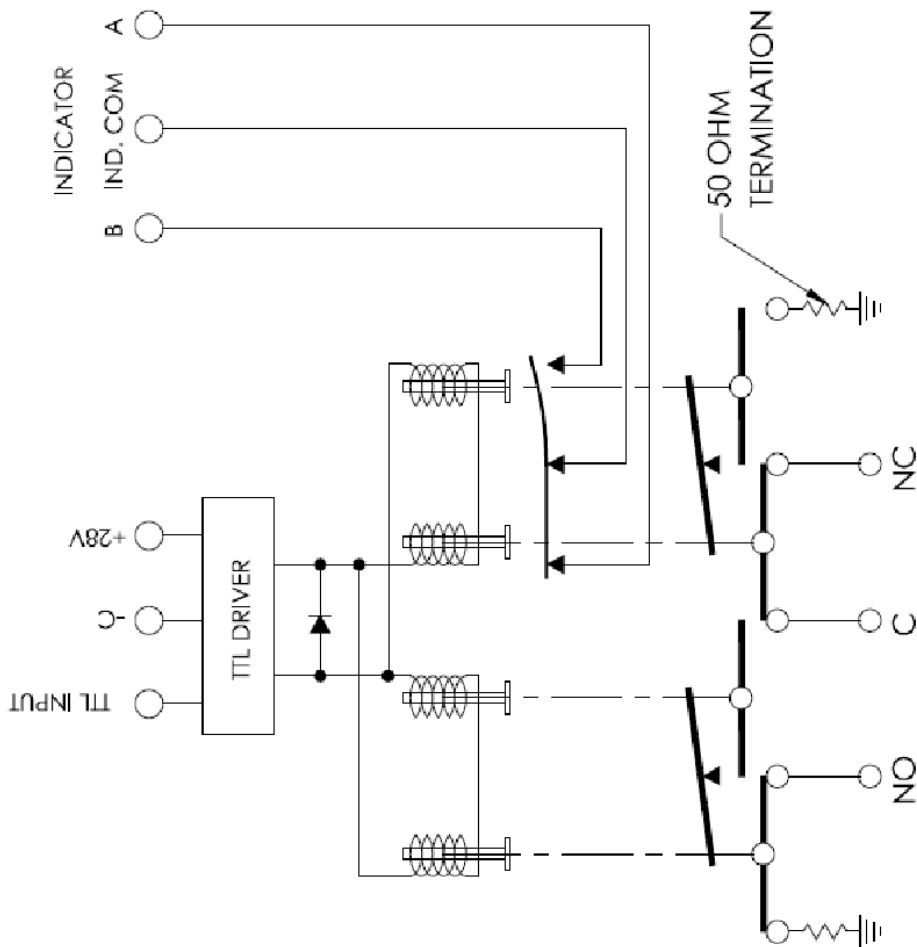
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PE71S6469 CAD Drawing

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SCHEMATIC (FAILSAFE POSITION)

OPERATIONAL			
LOGIC TABLE			
TERMINALS	RF PORTS	INDICATOR	
1	NO	NC	B-IND. COM A-IND. COM
0	OFF	ON	OFF ON
1	ON	OFF	ON OFF

POS	RF PATH	TERMINATION
NC	C-NC	NO TERMINATED
NO	C-NO	NC TERMINATED

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THIRD-ANGLE PROJECTION

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