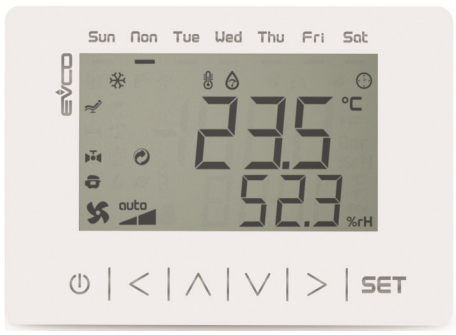
EPJ LCD

Remote user interfaces (with CAN port)



device for **INDOOR APPLICATIONS**

PLEASE READ CAREFULLY and save this document

CONSIDER THE ENVIRONMENT

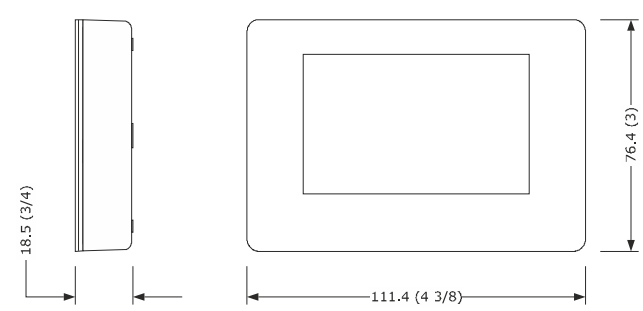
EN ENGLISH

- wall mounting with or without back-slot for in-wall box (according to the model)
- 12-24 VAC/DC power supply not insulated or 115... 230 VAC power supply (according to the model)
- one or two NTC external analog inputs (according to the model)
- two digital outputs rated 1 res. A @ 250 VAC (according to the model)
- alarm buzzer
- incorporated temperature and humidity sensor (according to the model)
- CAN port
- **device for indoor applications**.

Purchasing codes	Installation mode	Power supply	External analog inputs	Digital outputs	Incorporated temperature and humidity sensor
EPJD900N3VW	wall mounted	12-24 VAC/DC	1	no	no
EPJD920N3VW			1		yes
EPJD902N9VP	wall mounted with back-slot for flush mounting box	115... 230 VAC	2	2	no
EPJD922N9VP			2		yes

1 MEASUREMENTS AND INSTALLATION | Measurements in mm (in)

1.1 Models for wall mounting



Wall mounting (with bolts and fastening screws) or in the most common flush mounting boxes (with fastening screws).

1. Unhook the back shell from the front through a screwdriver and the proper seat.

2.1 In case of wall mounting:

2.1.1 Lean the back shell against the wall in a position suitable to get the connecting cable to pass through the proper opening.

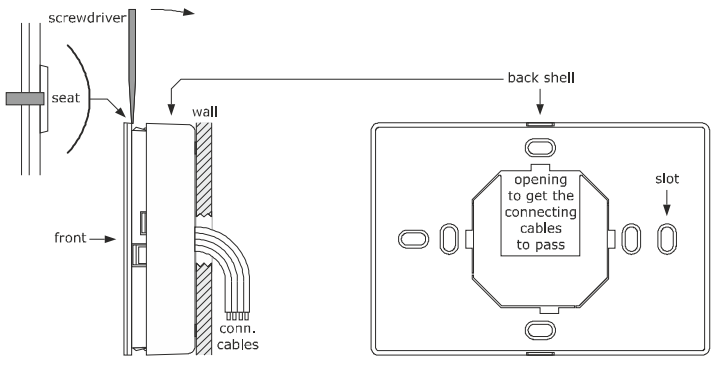
2.1.2 Use the slots of the back shell as template to drill 4 holes having a diameter suitable to the bolt.
5.0 mm (3/16 in) diameter bolts are suggested.

2.1.3 Insert the bolts in the holes drilled in the wall.

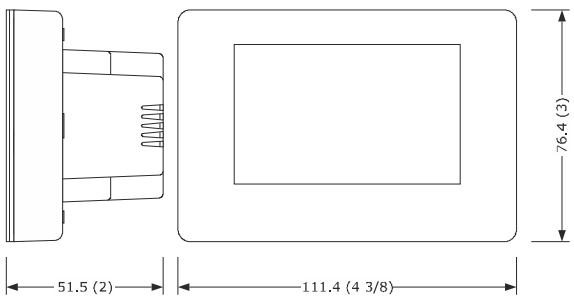
2.1.4 Fasten the back shell at the wall with 4 screws.
Countersunk head screws are suggested.

2.2 In case of flush mounting box, fasten the back shell at the box with 4 screws.
Countersunk head screws are suggested.

3. Make the electrical connection as shown in the section *ELECTRICAL CONNECTION* without powering up the device.
4. Fasten the front of the device at the back shell.

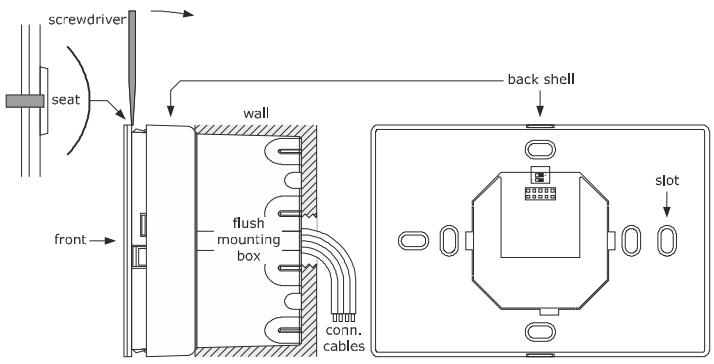


1.2 Models for wall mounting with back-slot for in-wall box



Wall mounting in the most common flush mounting boxes (with fastening screws).

1. Unhook the back shell from the front through a screwdriver and the proper seat.
2. Fasten the back shell at the box with 4 screws.
Countersunk head screws are suggested.
3. Make the electrical connection as shown in the section *ELECTRICAL CONNECTION* without powering up the device.
4. Fasten the front of the device at the back shell.



INSTALLATION PRECAUTIONS

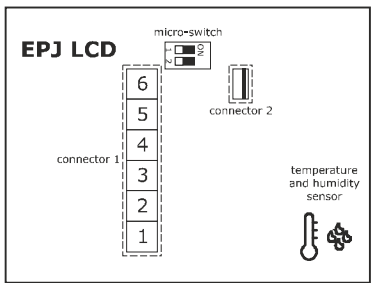
- Ensure that the working conditions are within the limits stated in the *TECHNICAL SPECIFICATIONS* section
- Do not install the device close to heat sources, equipment with a strong magnetic field, in places subject to direct sunlight, rain, damp, excessive dust, mechanical vibrations or shocks
- In compliance with safety regulations, the device must be installed properly to ensure adequate protection from contact with electrical parts. All protective parts must be fixed in such a way as to need the aid of a tool to remove them.

2 ELECTRICAL CONNECTION

N.B.
- Use cables of an adequate section for the current running through them
- To reduce any electromagnetic interference connect the power cables as far away as possible from the signal cables and connect to a CAN network by using a twisted pair.

2.1 Models for wall mounting

2.1.1 Connectors and parts



Connector 1

No.	DESCRIPTION
1	CAN port reference -
2	CAN port reference +
3	device power supply (12-24 VAC/DC). If the device is fed by DC power, connect terminal minus
4	device power supply (12-24 VAC/DC). If the device is fed by DC power, connect terminal plus
5	AI4 analog input (NTC)
6	AI4 analog input reference (GND)

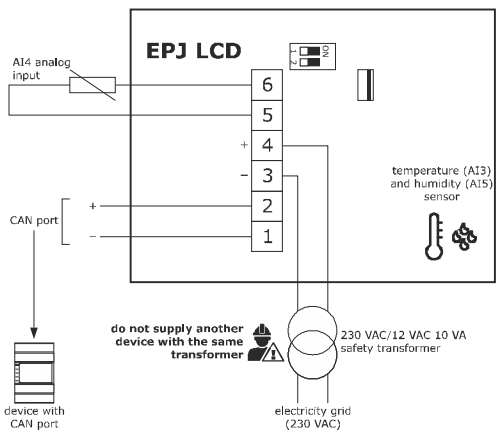
Connector 2: reserved EVCO.

Micro-switch to insert the CAN port termination resistor.

Temperature (AI3) and humidity (AI5) sensor: according to the model.

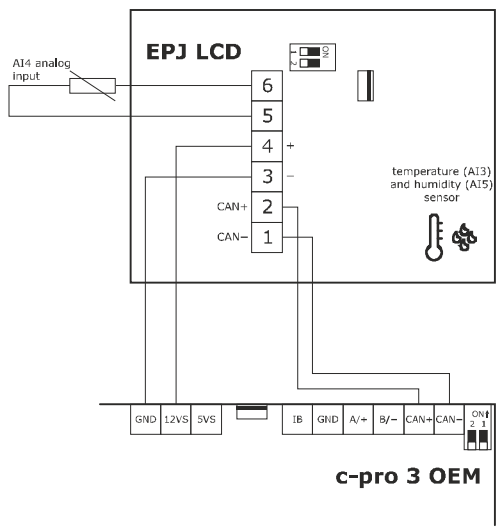
2.1.2 Electrical connection with independent power supply

N.B.
Do not supply another device with the same transformer.



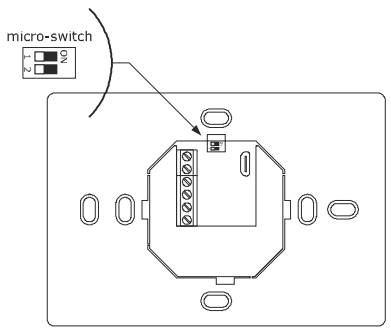
2.1.3 Electrical connection with device powered by a controller (for example c-pro 3 OEM)

N.B.
Make sure that the current supplied by the controller is within the limits stated in the *TECHNICAL SPECIFICATIONS* section.



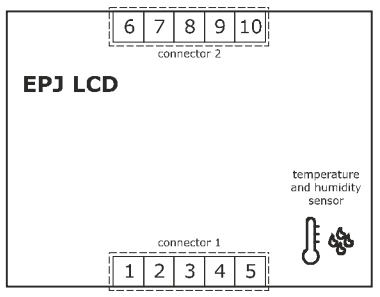
2.1.4 Pre-setting for the programming and insertion of the CAN port termination resistor

To insert the CAN port termination resistor, place micro-switch 2 in position ON.
Micro-switch 1 is reserved EVCO.
The micro-switch is at the back of the device.



2.2 Models for wall mounting with back-slot for in-wall box

2.2.1 Connectors and parts



Connector 1

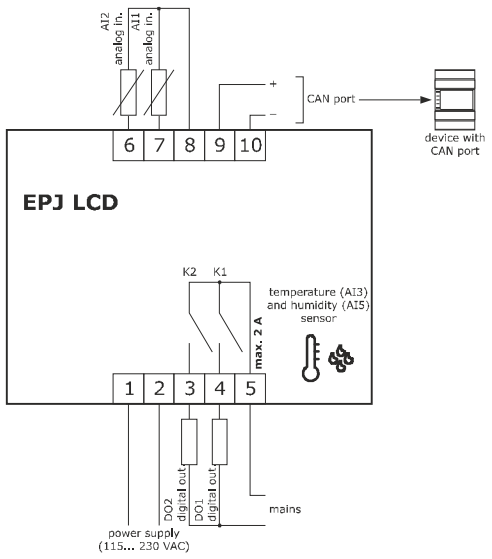
No.	DESCRIPTION
1	device power supply (115... 230 VAC)
2	device power supply (115... 230 VAC)
3	DO2 digital output normally open contact (1 A res. @ 250 VAC)
4	DO1 digital output normally open contact (1 A res. @ 250 VAC)
5	DO1 and DO2 digital outputs common contact (max. 2 A)

Connector 2

No.	DESCRIPTION
6	AI2 analog input (NTC)
7	AI1 analog input (NTC)
8	AI1 and AI2 analog inputs reference (GND)
9	CAN port reference +
10	CAN port reference -

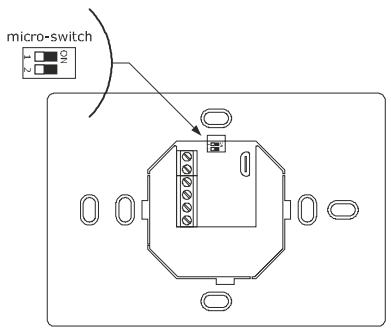
Temperature (AI3) and humidity (AI5) sensor: according to the model.

2.2.2 Electrical connection



2.2.3 Pre-setting for the programming and insertion of the CAN port termination resistor

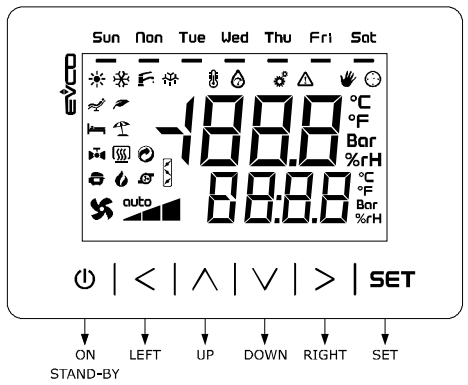
To insert the CAN port termination resistor, place micro-switch 2 in position ON.
Micro-switch 1 is reserved EVCO.
The micro-switch is at the back of the device (remove the back-slot for in-wall box with a screwdriver before).



PRECAUTIONS FOR ELECTRICAL CONNECTION

- If using an electrical or pneumatic screwdriver, adjust the tightening torque
- If the device has been moved from a cold to a warm place, the humidity may have caused condensation to form inside. Wait about an hour before switching on the power
- Make sure that the supply voltage, electrical frequency and power are within the set limits. See the section *TECHNICAL SPECIFICATIONS*
- Disconnect the power supply before doing any type of maintenance
- Do not use the device as safety device
- For repairs and for further information, contact the EVCO sales network; possible returns without label data will not be accepted.

3 USER INTERFACE



3.1 Device configuration

N.B.
Turn off the power after changing the configuration.

Accessing the procedure.

1.	∨	Touch the DOWN key for 6 s.
	The display will show:	
	Upper line	**Can**
	Lower line	**StAt**

Showing the CAN address of the device.

2.	∨	Touch the DOWN key.
	The display will show:	
	Upper line	**Loc**
	Lower line	CAN address of the device (0... 127).

Showing the device status.

3.	∨	Touch the DOWN key.
	The display will show:	
	Upper line	**Loc**
	Lower line	device status (OK... Err).

Setting the CAN address of a device in the network.

4.	∧ ∨	Touch the UP or DOWN key to select a node.
	The display will show:	
	Upper line	node (n1... n32)
	Lower line	CAN address of the device (0... 127).
5.	SET	Touch the SET key.
	The display will show:	
	Upper line	node (n1... n32)
	Lower line	CAN address of the device flashing (1... 127).
6.	∧ ∨	Touch the UP or DOWN key to set the value.
7.	SET	Touch the SET key.

Showing the status of a device in the network.

5.	∧ ∨	Touch the UP or DOWN key to select a node.
	The display will show:	
	Upper line	node (n1... n32)
	Lower line	device status (OK... Err).

Accessing the menu.

4.	SET	Touch the SET key when the upper line shows "**Loc**" and the lower one shows "**OK**".
	The display will show:	
	Upper line	off
	Lower line	**EPJD**
5.	∧ ∨	Touch the UP or DOWN key to select a menu.
	The display will show:	
	Upper line	**Menu**
	Lower line	menu name (PAr, nEt, diAG, InFo, IO or ConF).
6.	SET	Touch the SET key.

Setting the password.

7.	SET	Touch the SET key.
	The display will show:	
	Upper line	**PU6**
	Lower line	**0**
8.	SET	Touch the SET key.
	The display will show:	
	Upper line	**PU6**
	Lower line	the parameter value flashing
9.	∧ ∨	Touch the UP or DOWN key to set "**-19**".
10.	SET	Touch the SET key.

Setting configuration parameters of menu "PAr".

11a.	∧ ∨	Touch the UP or DOWN key to select a parameter.
	The display will show:	
	Upper line	the parameter name
	Lower line	the parameter name
12a.	∨	Touch the DOWN key.
	The display will show:	
	Upper line	none
	Lower line	the parameter value
13a.	SET	Touch the SET key.
	The display will show:	
	Upper line	none
	Lower line	the parameter value flashing
14a.	∧ ∨	Touch the UP or DOWN key to set the value.
15a.	SET	Touch the SET key.

Setting configuration parameters of other menu.

11b.	∧ ∨	Touch the UP or DOWN key to select a parameter.
	The display will show:	
	Upper line	the parameter
	Lower line	the parameter value
12b.	SET	Touch the SET key.
	The display will show:	
	Upper line	the parameter
	Lower line	the parameter value flashing
13b.	∧ ∨	Touch the UP or DOWN key to set the value.
14b.	SET	Touch the SET key.

Returning to the previous displays.

16.	⏻	Touch the ON/STAND-BY key a few times.

4 CONFIGURATION PARAMETERS

N.	PAR.	DEF.	"PAr" MENU	MIN... MAX.
1	Bkl VAl	**15**	backlight intensity	0... 100 fixed value 15 in the models with incorporated temperature and humidity sensor
2	Bkl timE	**30**	backlight timeout	0... 255 s fixed value 30 in the models with incorporated temperature and humidity sensor
3	bKl Mode	**tiME**	backlight mode	off = off on = on (not used in the models with incorporated temperature and humidity sensor) tiME = with bKt
4	BLE Acti	**-**	reserved	-
5	IO tOut	**60**	remote I/O disable delay from lack of CAN communication	0... 100 s
6	BuZ KEY	**nO**	enable buzzer touching the keys	nO YES
7	PSV tOut	**240**	password timeout	10... 240 s
8	tOu rEFr	**0**	pages refresh timeout	0... 100 s
9	PPd tX1	**YES**	enable compatibility with c-pro series	nO YES
10	Frc	**nO**	system forced to CAN communication	nO (all) neW (new system) Old (old system)

N.	PAR.	DEF.	"nEt > CAN" MENU	MIN... MAX.
11	nod	**98**	CAN address	1... 127
12	MSt	**YES**	enable operation as master	nO YES
13	BAu	**Auto**	CAN baud rate	20K 50K 125K 500K Auto
14	tOu	**60**	exclusion of a CAN network device delayed from lack of communication	0... 240 s
15	ntn	**1**	logic node	1... 32
16	nnd	**1**	physical node linked to the logic node	0... 127
17	MorE	**-**	reserved	-

N.	PAR.	DEF.	"MorE" SUBMENU (READ ONLY)	MIN... MAX.
18	nrH	**-**	number of received packages	0... 9999
19	ntH	**-**	number of transmitted packages	0... 9999
20	nOu	**-**	number of intercepted overflow	0... 9999
21	Npa	**-**	number of intercepted passive	0... 9999
22	bOF	**-**	number of intercepted bus off	0... 9999
23	rOY	**-**	number receipts ok	0... 9999
24	tOY	**-**	number of transmissions ok	0... 9999
25	tEr	**-**	number of transmissions in error	0... 9999
26	rEr	**-**	number of receipts in error	0... 9999
27	StF	**-**	number stuff errors	0... 9999
28	Frm	**-**	number form errors	0... 9999
29	AcK	**-**	number ack errors	0... 9999
30	Bt1	**-**	number bit1 errors	0... 9999
31	Bt0	**-**	number bit0 errors	0... 9999
32	CrC	**-**	number CRC errors	0... 9999
33	Mor Bt in	**-**	riservato	-

N.	PAR.	DEF.	"Bit timing" SUBMENU (READ ONLY)	MIN... MAX.
34	BrP	**-**	reserved	-
35	SJW	**-**	reserved	-
36	tS1	**-**	reserved	-
37	tS2	**-**	reserved	-

N.	PAR.	DEF.	"nEt > bLE" MENU (RESERVED)	MIN... MAX.
38	BAu	**-**	reserved	-
39	StB	**-**	reserved	-
40	Pty	**-**	reserved	-
41	nrX	**-**	reserved	-
42	ntX	**-**	reserved	-
43	nEr	**-**	reserved	-

N.	PAR.	DEF.	"diAG" MENU (READ ONLY)	MIN... MAX.
44	E2	**-**	EEPROM memory status	OK... Err

N.	PAR.	DEF.	"InFo" MENU (READ ONLY)	MIN... MAX.
45	VEr	**-**	firmware version	-
46	rEv	**-**	firmware revision	-
47	Sub	**-**	firmware subversion	-
48	FVv	**-**	firmware version	-
49	FVr	**-**	firmware revision	-
50	PrJ	**-**	project number	-
51	VAr	**-**	project variation	-

N.	PAR.	DEF.	"IO dbg" MENU	MIN... MAX.
52	AI1	**-**	AI1 analog input reading	-
53	AI2	**-**	AI2 analog input reading	-
54	AI3	**-**	incorporated sensor temperature reading (AI3)	-
55	AI4	**-**	AI4 analog input reading	-
56	AI5	**-**	incorporated sensor humidity reading (AI5)	-
57	dO1	**-**	DO1 digital output status	On... OFF
58	dO2	**-**	DO2 digital output status	On... OFF

N.	PAR.	DEF.	"CnF EPJd" MENU (READ ONLY)	MIN... MAX.
59	bLE	**-**	reserved	-
60	iPb	**-**	incorporated sensor	t rH = temperature and humidity none = no sensor
61	EHt	**-**	back-slot for flush mounting box	On... OFF

5 TECHNICAL SPECIFICATIONS

Purpose of the control device:		Function controller.
Construction of the control device:		Built-in electronic device.
Container:		White, self-extinguishing.
Category of heat and fire resistance:		D.
Measurements:	Models for wall mounting	111.4 x 76.4 x 18.5 mm (4 3/8 x 3 x 3/4 in)
	Models for wall mounting with back-slot for flush mounting box	111.4 x 76.4 x 51.5 mm (4 3/8 x 3 x 2 in).
Mounting methods for the control device:		Wall mounting (with bolts and fastening screws) or in the most common flush mounting box (with fastening screws).
Degree of protection provided by the covering:		IP30.
Connection method:		Fixed screw terminal blocks for wires up to 1 mm².
Maximum permitted length for connection cables:		
Power supply: 10 m (32.8 ft)		Analogue inputs: 10 m (32.8 ft)
Digital outputs: 10 m (32.8 ft)		CAN port: - 1,000 m (3,280 ft) with baud rate 20.000 baud - 500 m (1,640 ft) with baud rate 50.000 baud - 250 m (820 ft) with baud rate 125.000 baud - 50 m (164 ft) with baud rate 500.000 baud. Over 10 m (32.8 ft) use a shielded cable
Operating temperature:		From 0 to 40 °C (from 32 to 104 °F).
Storage temperature:		From -20 to 70 °C (from -4 to 158 °F).
Operating humidity:		Relative humidity without condensate from 5 to 95%.
Pollution status of the control device:		2.
Compliance:		
RoHS 2011/65/EC		WEEE 2012/19/EU
REACH (EC) Regulation no. 1907/2006		EMC 2014/30/UE; RED 2014/53/UE.
Power supply:	Models for wall mounting	12-24 VAC (±15%), 50/60 Hz (±3 Hz), max. 2 VA not insulated or 12-24 VDC (±15%), max. 1 W not insulated (independent power supply or by a controller).
	Models for wall mounting with back-slot for flush mounting box	115... 230 VAC (+10% -15%), 50/60 Hz (±3 Hz), max. 3 VA insulated.
Earthing methods for the control device:		None.
Rated impulse-withstand voltage:	Models for wall mounting	330 V
	Models for wall mounting with back-slot for flush mounting box	2.5 KV.
Over-voltage category:	Models for wall mounting	I
	Models for wall mounting with back-slot for flush mounting box	II.
Software class and structure:		A.
Analogue inputs:	Models for wall mounting	1 for NTC probes
	Models for wall mounting with back-slot for flush mounting box	2 for NTC probes.
NTC probes:	Measurement field:	from -40 to 110 °C (from -58 to 230 °F)
	Resolution:	0.1 °C (1 °F).
Digital outputs:	Models for wall mounting	none
	Models for wall mounting with back-slot for flush mounting box	2 with electromechanical relay (K1 and K2 relay).
K1 relay		SPST, 1 res. A @ 250 VAC
K2 relay		SPST, 1 res. A @ 250 VAC.
Type 1 or Type 2 Actions:		Type 1.
Additional features of Type 1 or Type 2 actions:		C.
Displays:		Two rows and function icons LCD display.
Alarm buzzer:		Built-in.
Incorporated sensors:		temperature and humidity (according to the model).
Working range incorporated temperature and humidity sensor:		
0... 40 °C (32... 104 °F)		10... 70 % of relative humidity.
Communications ports:		1 CAN port.

N.B.
The device must be disposed of according to local regulations governing the collection of electrical and electronic waste.

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