

# PCR series 1.27 mm Pitch Connectors

#### Outline

PCR series provides bellows-contact type high-density connectors, which can support a wide variety of applications. The PCR is a sister series of PCS series connectors, since accessories such as backshell and termination tool can be shared between the PCR and PCS series.

#### **Features**

- Board-to-cable connectors provide a wide variety of contacts, 20 96 contacts.
- EMI-filtered design meets FCC and other standards.
- Board-to-board connectors also provide a wide variety of contacts, 20 128 contacts.
- Allows live wire connections for power terminals and signal terminals in three stages.
- Backshell with mating guide for preventing short circuit allows parallel mating.
- Best suited for parallel, horizontal, or vertical-stacked connections.

#### Principal Applications

Office automation equipment, instrumentation equipment, communications equipment, factory automation, etc.

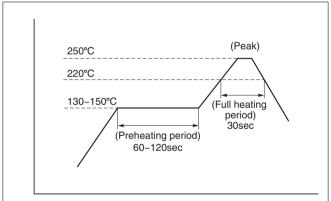
# **Electrical Characteristics**

	Board-to-board connector	Board-to-cable connector
Rated voltage	250V AC (r.m.s.)	250V AC (r.m.s.)
Rated current	1 A	1 A
Insulation resistance	Over 1000 megohms at 500V DC	Over 1000 megohms at 250V DC
Dielectric withstanding voltage	750V AC (r.m.s.) for up to one minute	500V AC (r.m.s.) for up to one minute
Contact resistance	35 milliohms or less	35 milliohms or less

#### **Document Disclaimer**

- When placing orders with us, minimum order quantities are set for every product.
- Be sure to contact us before starting preliminary design of PCBs using our connectors.
- The specifications and information shown in the catalog are subject to change without notice.

### Reflow temperature profile (for reference purposes)

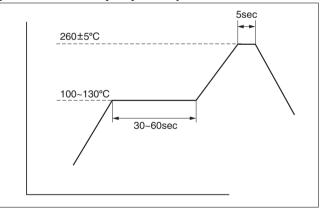


The reflow temperature profile shown in this drawing is for reference purposes. This profile depends on requirements such as reflow equipment, soldering paste, and PCB size. Thus, this profile may not meet with your specific situation. Please evaluate your PCB-mounting soldering and set your own reflow temperature profile.

#### Applicable products

PCR-E( )MY+ PCR-E( )MY-SLT

### Flow temperature profile (for reference purposes)



The flow temperature profile as shown above is for reference purposes. This profile depends on requirements such as the PCB size. Thus, this profile may not meet with your specific situation. Please evaluate your PCB-mounting soldering and set your own flow temperature profile.

#### ● Applicable products

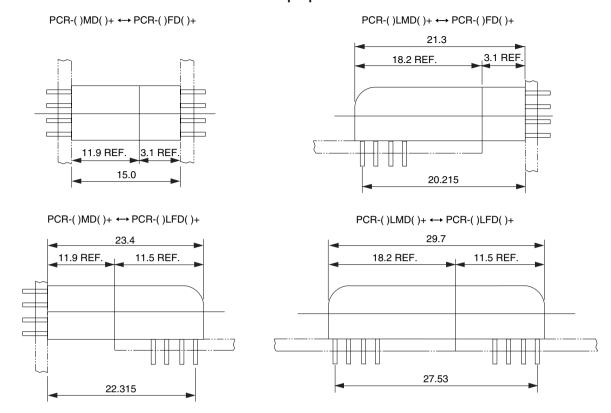
PCR series through hole type connector

The profile shown in this drawing is applicable only for those products shown above.

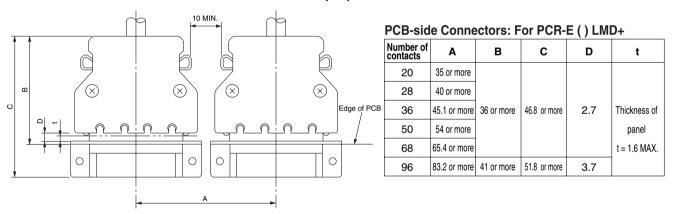
The profile shown in this drawing is applicable only for those products shown above.

#### Dimensions in combination of various connectors for reference purposes

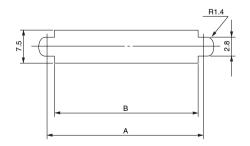
#### Board-to-board connector dimensions for reference purposes



#### Board-to-cable connector dimensions for reference purposes



### Panel mounting-hole dimensions for reference purposes



Number of contacts	Α	В
20	27.40	23.8
28	32.48	28.9
36	37.56	34.0
50	46.45	42.9
68	57.88	54.6
96	75.66	72.1

#### **Product List**



Right-angle through hole type female connector for PCB PCR-( )LFD( )+

**B-78** PCR series...6



Straight through hole type male connector for PCB PCR-E( )MD+

**B-82** PCR series...10



Cable-side IDC type female connector PCR-E( )F( )+

**B-86** PCR series...14



Straight through hole type female connector for PCB PCR-( )FD( )+

**B-79** PCR series...7



Straight through hole type male connector for PCB (with screw lock) PCR-E( )MD-SL+ **B-83** 

PCR series...11



Cable-side soldering type female connector PCR-E( )FS+

**B-87** PCR series...15



Straight SMT type male connector for PCB PCR-E(\_)MY+

Cable-side soldering type

female connector

PCR series...23

PCR-S()FS+

**B-91** PCR series...19



Right-angle SMT type male connector for PCB (with screw lock) PCR-E( )LMY-SL+ **B-94** PCR series...22



Right-angle through hole type male connector for PCB PCR-( )LMD( )+

**B-80** PCR series...8



Right-angle through hole type male connector for PCB PCR-E( )LMD( )+

**B-84** PCR series...12



Cable-side IDC type male connector for mounting on a panel PCR-E( )PM( ) B-88

B-88 PCR series...16



Straight SMT type male connector for PCB (with screw lock) PCR-E( )MY-SL+ **B-92** PCR series...20



Vertical type plastic backshell for cable extension PCR-S(\_)PMLA2+S

**B-96** PCR series...24



Straight through hole type male connector for PCB PCR-( )MD( )+

**B-81** PCR series...9



Right-angle through hole type male connector for PCB (with screw lock) PCR-E(\_)LMD-SL+ B-85

PCR series...13

Cable-side soldering type male connector for mounting on a panel PCR-E(\_)PMRS+ B-89 PCR series...17



Right-angle SMT type male connector for PCB PCR-E( )LMY+

**B-93** PCR series...21



Vertical type plastic backshell (without screw lock) PCR-V20L( )

**B-97** PCR series...25



Vertical type plastic backshell (with screw lock) PCR-LS( )LA( )

**B-98** PCR series...26



Vertical type plastic backshell (without screw lock) PCR-S20LA

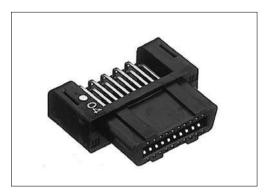
**B-99** PCR series...27

# Right-angle through hole type female connector for PCB PCR-( )LFD( )+

For PCB

**Right-angle Through hole** 

(RoHS)



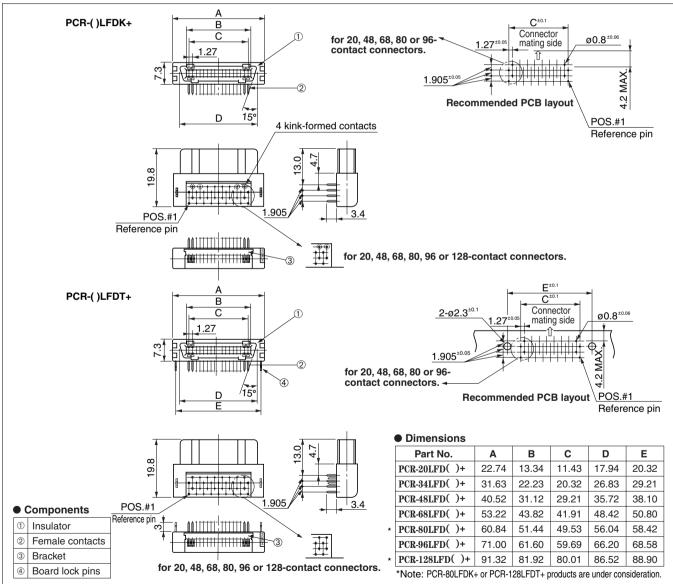
Configuration of product Part No.



- Series name
- 2 No. of contacts: 20, 34, 48, 68, 80, 96 or 128
- 3 Type of connector

LFD: Right-angle through hole type, female

- Board lock
  - K: With kink formed contacts
  - T: With board lock pins



 $\textbf{Mating connectors:} \ \mathsf{PCR-(\ )MD(\ )+,\ PCR-(\ )LMD(\ )+}$ 

## Straight through hole type female connector for PCB PCR-( )FD( )+

For PCB

**Straight Through hole** 

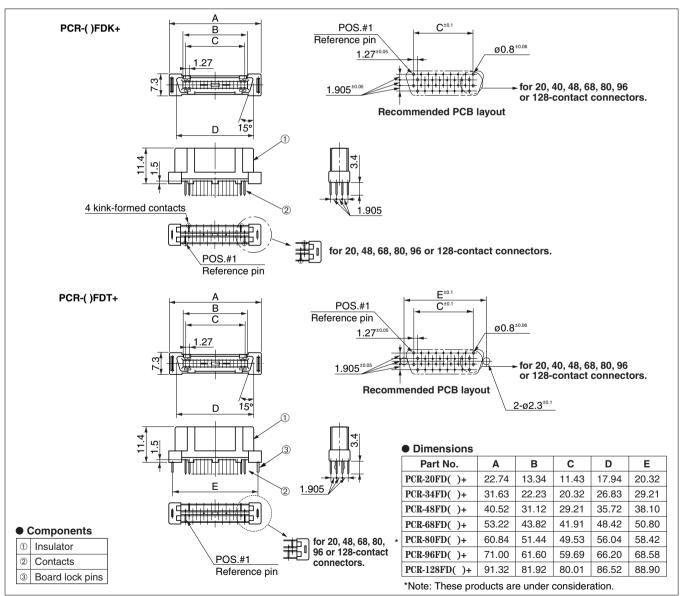
RoHS



Configuration of product Part No.



- ① Series name
- ② No. of contacts: 20, 34, 48, 68, 80, 96 or 128
- 3 Type of connector
  - FD: Straight through hole type, female
- Board lock
  - K: With kink-formed
  - T: With board lock pins contacts



Mating connectors: PCR-()MD()+, PCR-()LMD()+

## Right-angle through hole type male connector for PCB PCR-( )LMD( )+

For PCB

Right-angle Through hole

(RoHS)



Configuration of product Part No.



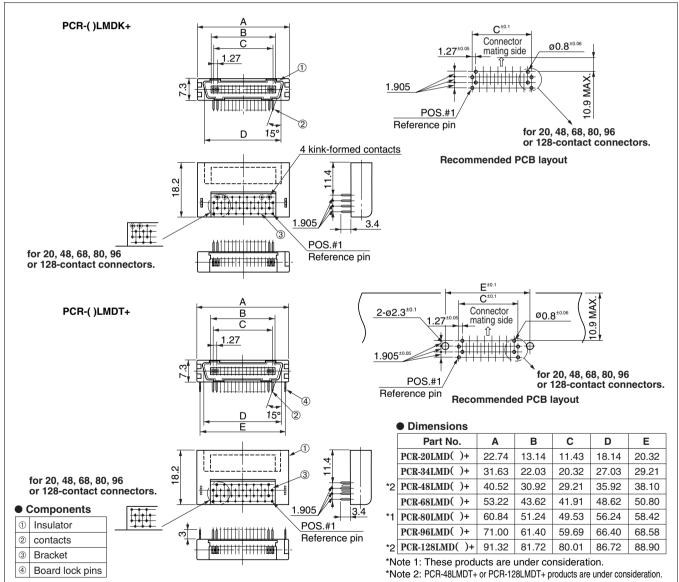
- Series name
- ② No. of contacts: 20, 34, 48, 68, 80, 96 or 128
- 3 Type of connector

LMD: Right-angle through hole type, male

Board lock

K: With kink formed contacts

T: With board lock pins



Mating connectors: PCR-( )FD( )+, PCR-( )LFD( )+

# Straight through hole type male connector for PCB PCR-( )MD( )+

For PCB

**Straight Through hole** 

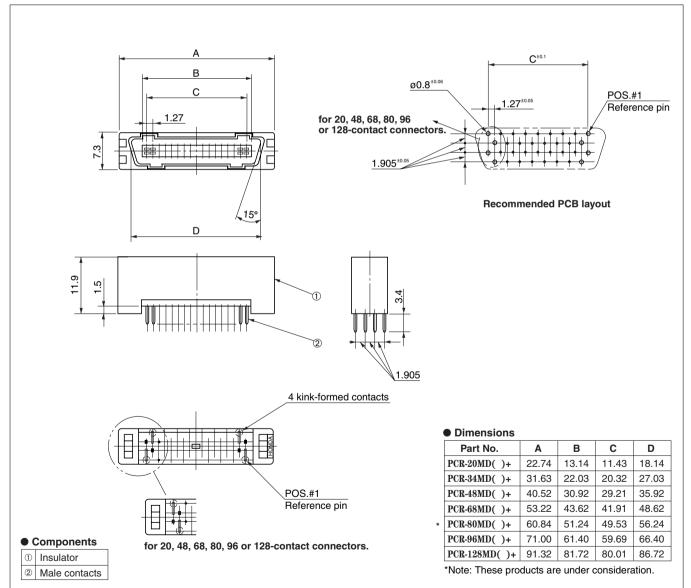
RoHS



Configuration of product Part No.



- ① Series name
- ② No. of contacts: 20, 34, 48, 68, 80, 96 or 128
- 3 Type of connector
  - MD: Straight through hole type, male
- Board lock
  - K: With kink-formed contacts



 $\textbf{Mating connectors:} \ \mathsf{PCR-(\ )} \mathsf{FD(\ )} +, \ \mathsf{PCR-(\ )} \mathsf{LFD(\ )} +$ 

# Straight through hole type male connector for PCB PCR-E( )MD+

For PCB

Straight Through hole

**EMI-filtered** 

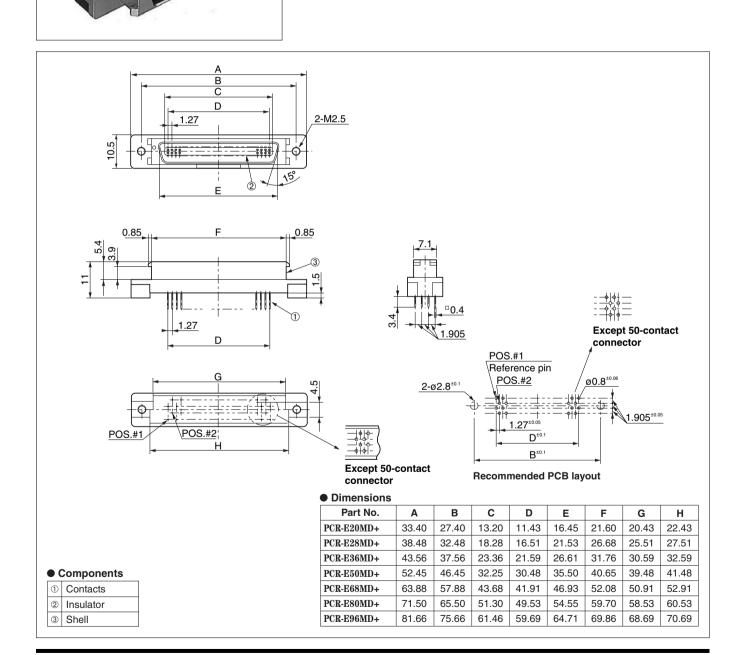
RoHS

• Configuration of product Part No.

 $\frac{\text{PCR-E}}{\text{O}} \underbrace{\text{O}}_{\text{O}} \frac{\text{MD}}{\text{O}} +$ 

- 1 Series name
- ② No. of contacts: 20, 28, 36, 50, 68, 80 or 96
- 3 Type of connector

MD: Straight through hole type, male



Mating connectors: PCR series cable-side IDC type female connector

PCR series cable-side soldering type female connector

Accessories: Dust-proof cap, PCS-E()C

# Straight through hole type male connector for PCB (with screw lock) PCR-E( )MD-SL+

For PCB

**Straight Through hole** 

**EMI-filtered** 

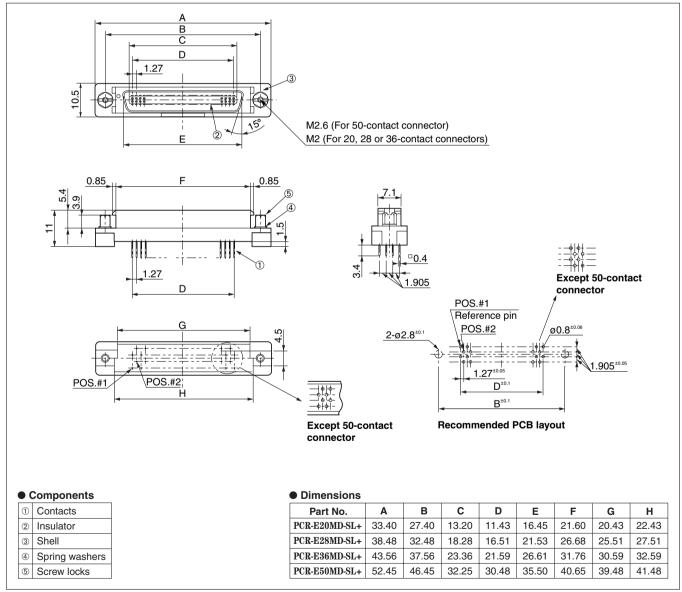
RoHS



Configuration of product Part No.

### $\underbrace{\mathbf{PCR-E}}_{\bigcirc} \underbrace{()}_{\bigcirc} \underbrace{\mathbf{MD-}}_{\bigcirc} \underbrace{\mathbf{SL}}_{\bigcirc} +$

- ① Series name
- 2 No. of contacts: 20, 28, 36, or 50
- 3 Type of connector
  - MD: Straight through hole type, male
- With screw locks



Mating connectors: PCR series cable-side IDC type female connector

PCR series cable-side soldering type female connector

Accessories: Dust-proof cap, PCS-E()C







Pı

SM

## Right-angle through hole type male connector for PCB PCR-E( )LMD( )+

For PCB

Right-angle Through hole

(RoHS)

**EMI-filtered** 



Configuration of product Part No.

 $\underbrace{\text{PCR-E}}_{\tiny\textcircled{\tiny 0}} \, \underbrace{\text{LMD}}_{\tiny\textcircled{\tiny 3}} \, \underbrace{\overset{\textbf{()}}{\tiny\textcircled{\tiny 4}}} +$ 

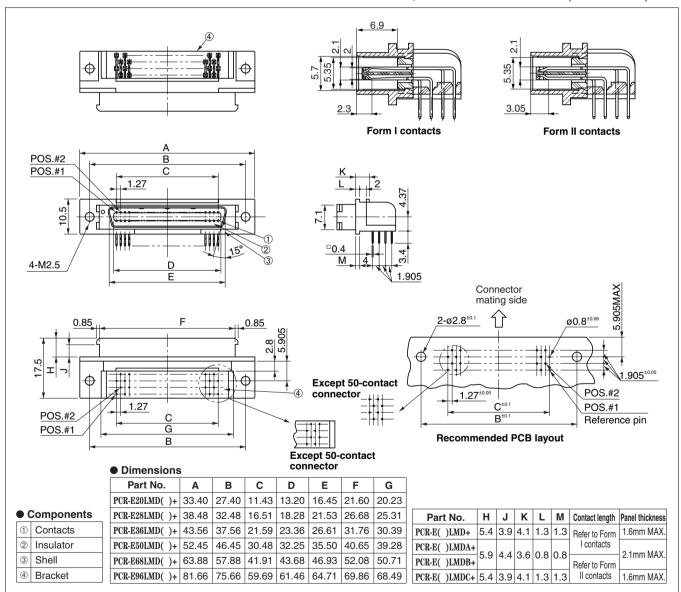
- 1 Series name
- 2 No. of contacts: 20, 28, 36, 50, 68 or 96
- 3 Type of connector

LMD: Right-angle through hole type, male connector

4 Thickness of panel

Blank: t = 1.6 mm MAX. A : t = 2.1 mm MAX.

B : t = 2.1 mm MAX., electrostatic noise resistant (ESD resistant)
C : t = 1.6 mm MAX., electrostatic noise resistant (ESD resistant)



Mating connectors: PCR series cable-side IDC type female connector

PCR series cable-side soldering type female connector

Accessories: Dust-proof cap, PCS-E()C

Others

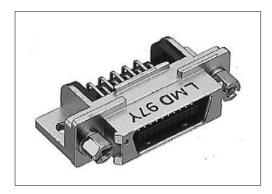
#### Right-angle through hole type male connector for PCB (with screw lock) PCR-E()LMD-SL+

For PCB

Right-angle Through hole

**EMI-filtered** 





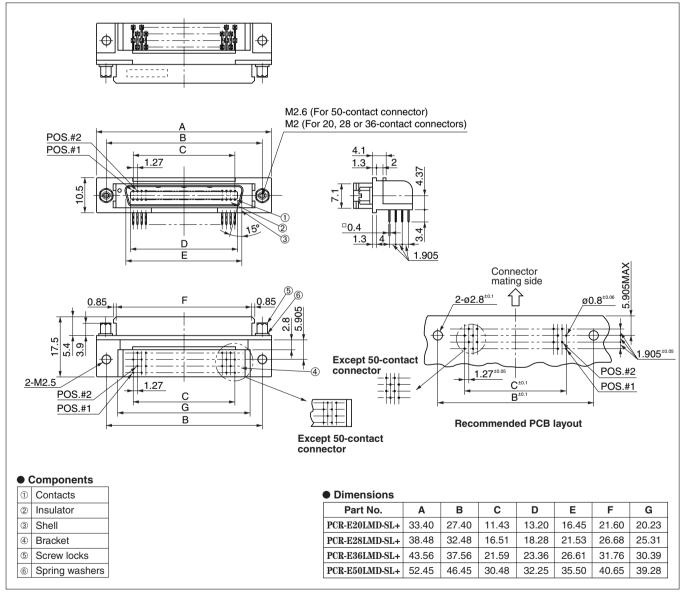
Configuration of product Part No.

### PCR-E ( ) LMD-SL+

- 1 Series name
- 2 No. of contacts: 20, 28, 36 or 50
- 3 Type of connector

LMD: Right-angle through hole type, male connector

With screw locks



Mating connectors: PCR series cable-side IDC type female connector

PCR series cable-side soldering type female connector

Accessories: Dust-proof cap, PCS-E()C

#### Cable-side IDC type female connector PCR-E()F()+

For cable

IDC

(RoHS)

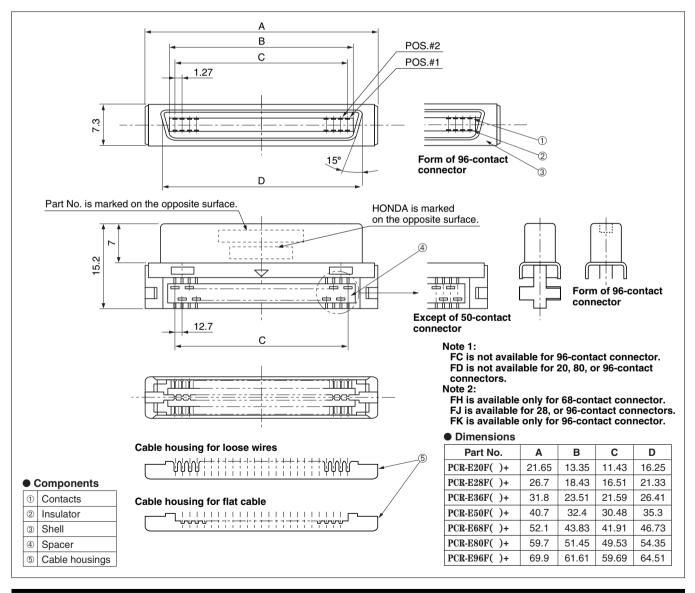


Configuration of product Part No.

### $\frac{\text{PCR-E}}{\text{O}} \underbrace{\text{C}}_{\text{D}} \underbrace{\text{F()}}_{\text{D}} +$

- 2 No. of contacts: 20, 28, 36, 50, 68, 80, or 96
- ③ Cable sizes for reference purposes (In case the cable sheath is made of PVC resin)
- F : AWG#28(7 / 0.127) or AWG#30(1 / 0.254). Outside diameter of wire is 0.8-1 mm. For loose wire. FA: AWG#28(7 / 0.127) or AWG#30(1 / 0.254). Outside diameter of wire is 0.5-0.65 mm. For loose wire.
- FB: AWG#30(7 / 0.1). Outside diameter of wire is 0.5-0.65 mm. For loose wire
- FC: AWG#28(7 / 0.127) or AWG#30(1 / 0.254). For flat cable, t = 1.0 mm MAX. (See Note #1)
- FD: AWG#30(7 / 0.1). For flat cable, t = 1.0 mm MAX. (See Note #1)
- FH: AWG#32(7 / 0.08). Outside diameter of wire is 0.35-0.5 mm. For loose wire. (See Note #2)
- FJ: AWG#28(7 / 0.127) or AWG#30(1 / 0.254). Outside diameter of wire is 0.65-0.8 mm. For loose wire.

FK: AWG#30(7 / 0.1). Outside diameter of wire is 0.65-0.8 mm. For loose wire. (See Note #2)



Mating connectors: PCR-E series PCB-side right-angle through hole type or SMT type connector

PCR-E series PCB-side straight through hole type or SMT type connector

Tool: (Refer to page Tool-12)



# Cable-side soldering type female connector PCR-E( )FS+

For cable

**Soldering** 

RoHS

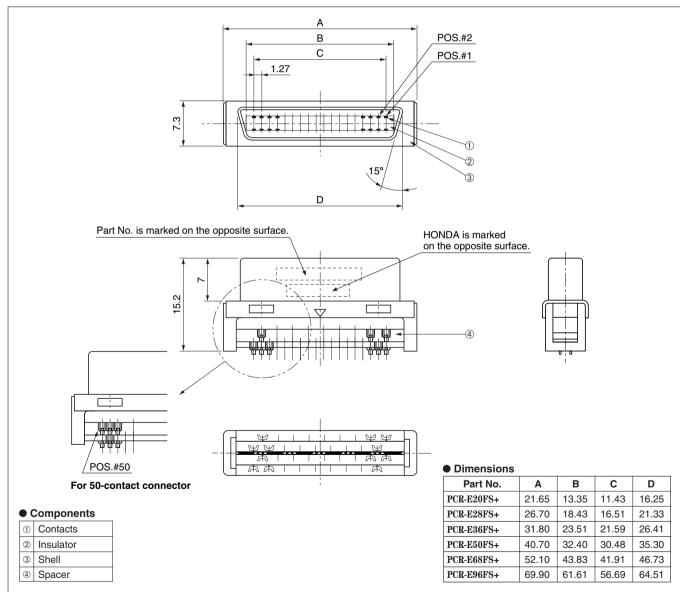


Configuration of product Part No.

### $\frac{\text{PCR-E}}{0} \stackrel{\text{()}}{=} \frac{\text{FS}}{0} +$

- ① Series name
- 2 No. of contacts: 20, 28, 36, 50, 68 or 96
- 3 Type of connector

FS: Soldering type, female, AWG#20 MAX.



Mating connectors: PCR-E series PCB-side right-angle through hole type or SMT type connector

PCR-E series PCB-side straight through hole type or SMT type connector

#### Cable-side IDC type male connector for mounting on a panel PCR-E()PM()

For panel

IDC

**EMI-filtered** 

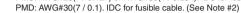


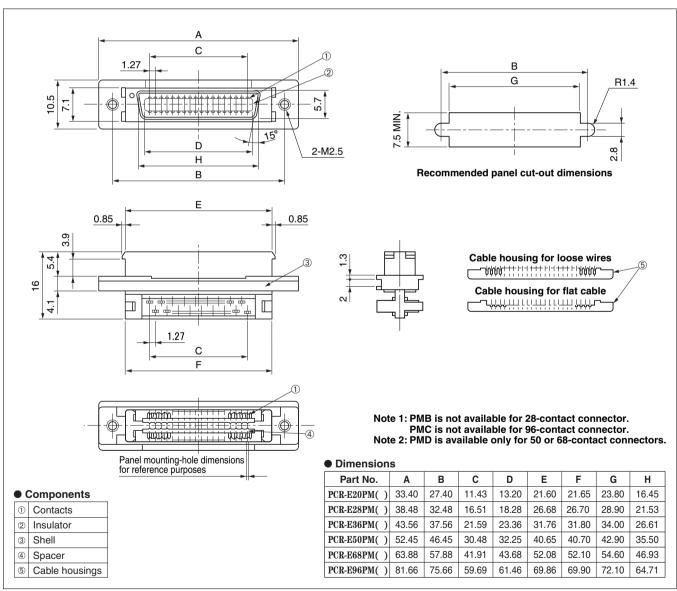


#### Configuration of product Part No.

### PCR-E()PM()

- ① Series name
- ② No. of contacts: 20, 28, 36, 50, 68 or 96
- 3 Type of connector: Panel mount type, male
- Cable sizes for reference purposes (In case the cable sheath is made of PVC resin)
  - PM : AWG#28(7 / 0.127) or AWG#30(1 / 0.254). Outside diameter of wire is 0.8-1 mm. For loose wire. PMA: AWG#28(7 / 0.127) or AWG#30(1 / 0.254). Outside diameter of wire is 0.5-0.65 mm. For loose wire.
- PMB: AWG#30(7 / 0.1). Outside diameter of wire is 0.5-0.65 mm. For loose wire. (See Note #1) PMC: AWG#28(7 / 0.127) or AWG#30(1 / 0.254). IDC for fusible cable. (See Note #1)





Mating connectors: PCR series cable-side IDC type or soldering type female connector

Accessories: Dust-proof cap, PCS-E()C

Tool: (Refer to page Tool-12)

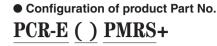
# Cable-side soldering type male connector for mounting on a panel PCR-E()PMRS+

For panel

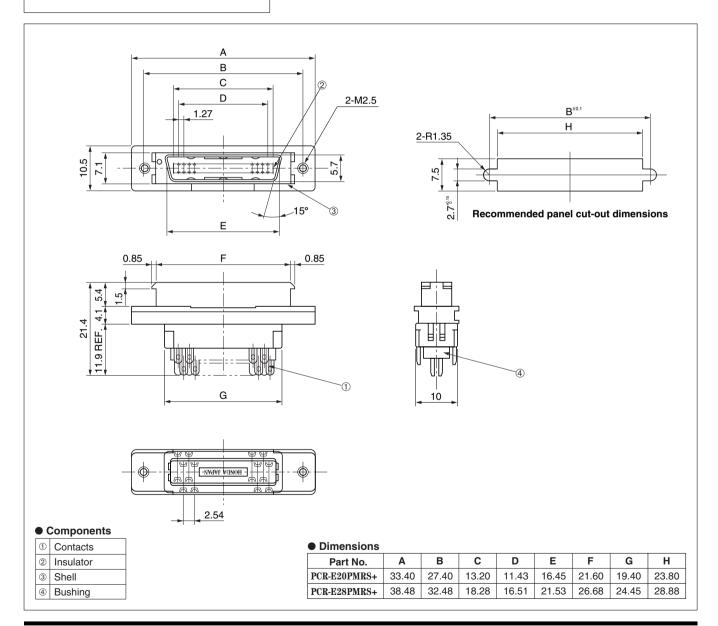
Soldering

**EMI-filtered** 





- ① Series name
- 2 No. of contacts: 20 or 28
- ③ Type of connector: Panel mount type, male Outside diameter of wire is 2.2 mm MAX.



Mating connectors: PCR series cable-side IDC type or soldering type female connector

Accessories: Dust-proof cap, PCS-E()C

# Straight SMT type male connector for PCB PCR-E( )MY+

For PCB

**Straight SMT** 

**EMI-filtered** 



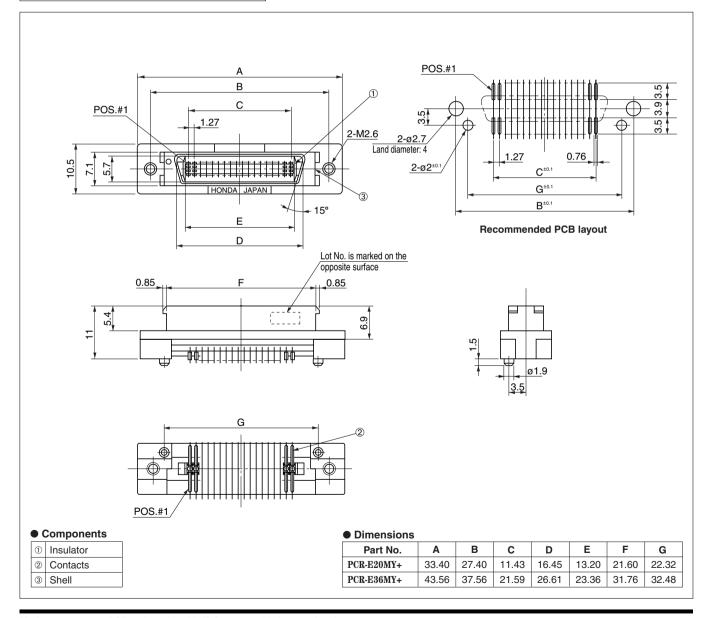


Configuration of product Part No.

### <u>PCR-E</u> () <u>MY</u>+

- ① Series name
- 2 No. of contacts: 20 or 36
- ③ Type of connector

MY: Straight SMT type, male



Mating connectors: PCR series cable-side IDC type or soldering type female connector

Accessories: Dust-proof cap, PCS-E( )CP

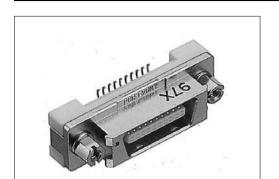
# Straight SMT type male connector for PCB (with screw lock) PCR-E( )MY-SL+

For PCB

Straight SMT

EMI-filtered





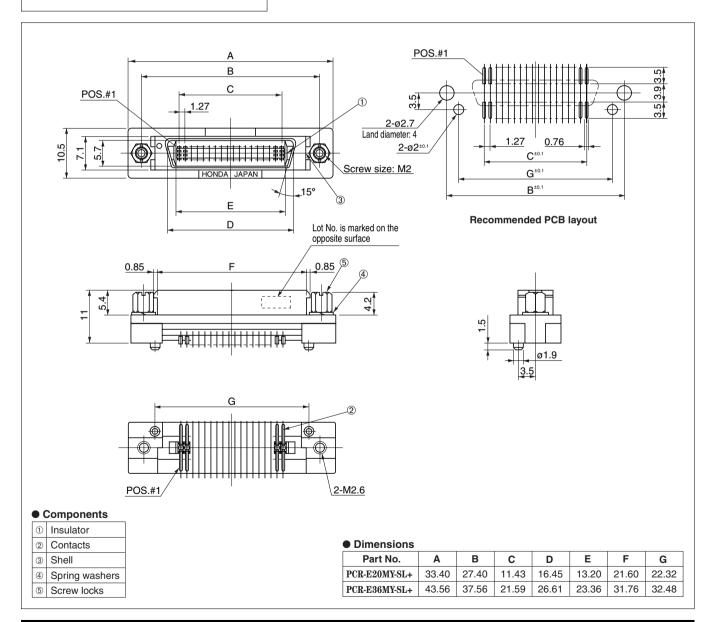
Configuration of product Part No.

### <u>PCR-E ()</u> <u>MY-</u> <u>SL</u>+

- 1 Series name
- 2 No. of contacts: 20 or 36
- ③ Type of connector

MY: Straight SMT type, male

With screw locks



Mating connectors: PCR series cable-side IDC type or soldering type female connector

Accessories: Dust-proof cap, PCS-E()CP

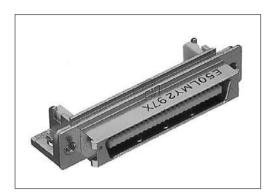
# Right-angle SMT type male connector for PCB PCR-E( )LMY+

For PCB

**Right-angle SMT** 

**EMI-filtered** 

RoHS

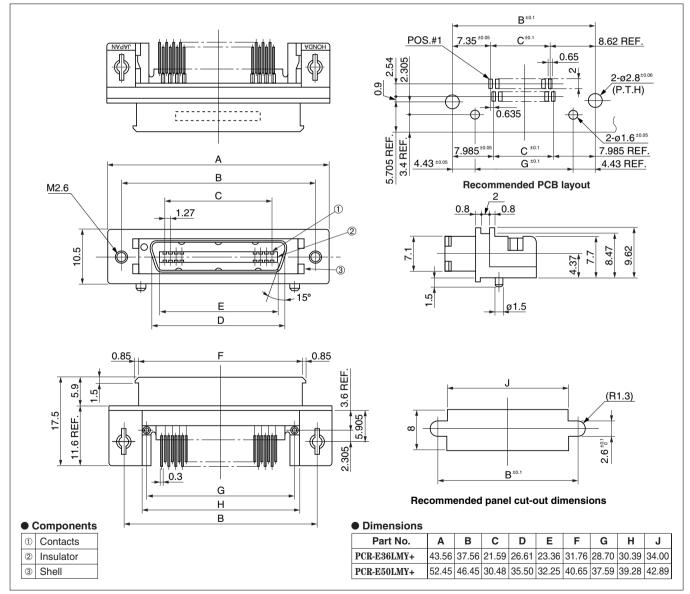


Configuration of product Part No.

### $\underline{\underline{PCR-E}}$ $\underline{\underline{()}}$ $\underline{\underline{LMY}}$ +

- ① Series name
- 2 No. of contacts: 36 or 50
- 3 Type of connector

LMY: Right-angle SMT type, male



Mating connectors: PCR series cable-side IDC type or soldering type female connector

Accessories: Dust-proof cap, PCS-E()CP

# Right-angle SMT type male connector for PCB (with screw lock) PCR-E( )LMY-SL+

For PCB

Right-angle SMT

**EMI-filtered** 



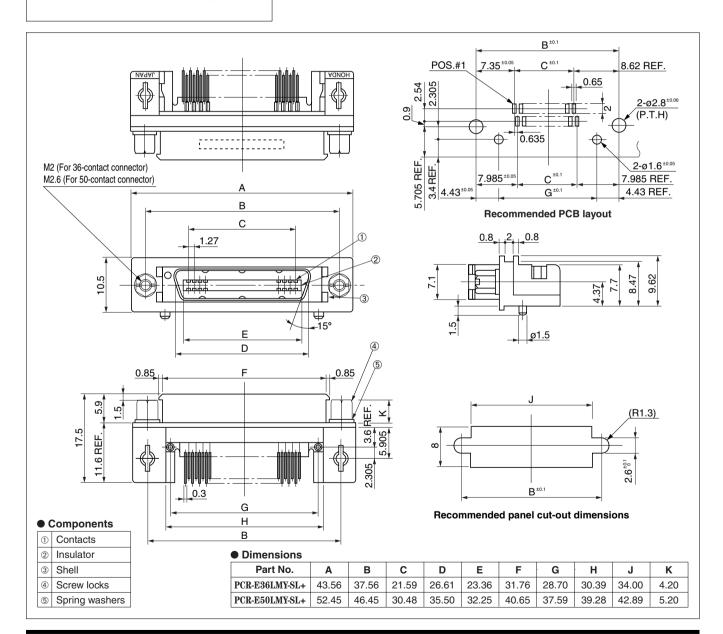
Configuration of product Part No.

### $\frac{\text{PCR-E}}{\text{O}} \stackrel{\text{()}}{\text{()}} \frac{\text{LMY-}}{\text{()}} \frac{\text{SL+}}{\text{(4)}}$

- ① Series name
- 2 No. of contacts: 36 or 50
- 3 Type of connector

LMY: Right-angle SMT type, male

4 With screw locks



Mating connectors: PCR series cable-side IDC type or soldering type female connector

Accessories: Dust-proof cap, PCS-E()CP

# Cable-side soldering type female connector PCR-S( )FS+

For cable

**Soldering** 

(RoHS)

**EMI-Filtered** 

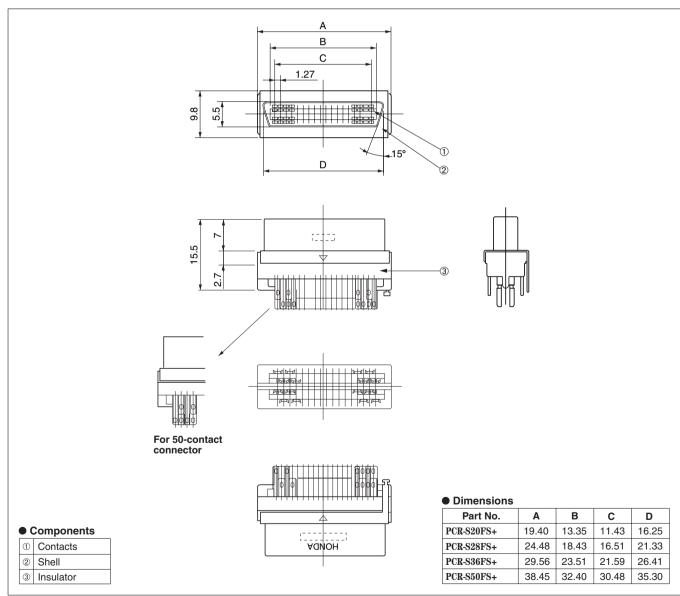


Configuration of product Part No.

 $\frac{\text{PCR-S}}{0} \underbrace{()}_{2} \frac{\text{FS}}{3} +$ 

- ① Series name
- ② No. of contacts: 20, 28, 36 or 50
- 3 Type of connector

FS: Soldering type, female, AWG#20 MAX.



Mating connectors: PCR-E series PCB-side right-angle through hole type or SMT type connector

PCR-E series PCB-side straight through hole type or SMT type connector

# Vertical type plastic backshell for cable extension PCR-S( )PMLA2+S

**Backshell** 

**Vertical** type

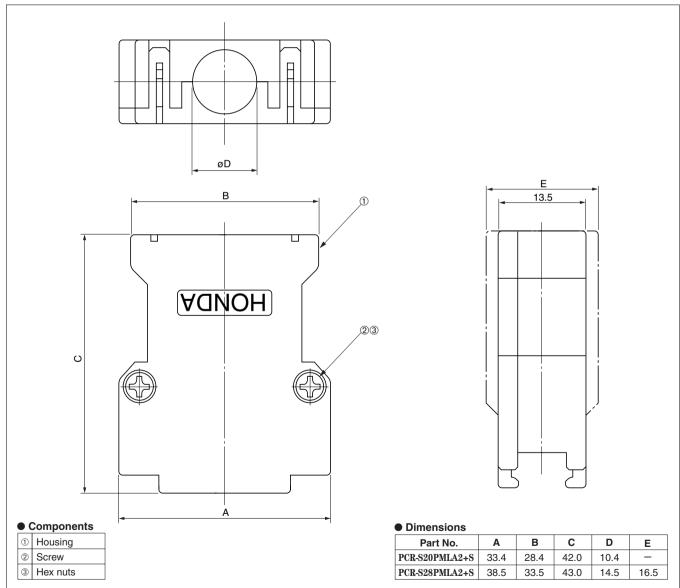
RoHS



Configuration of product Part No.

### $\underline{PCR-S}$ () $\underline{PMLA2}+S$

- ① Series name
- 2 No. of contacts: 20 or 28
- 3 Vertical type backshell for PCR-E()PMRS-SL+



Mating connectors: PCR-E( )PMRS-SL+

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# Vertical type plastic backshell (without screw lock) PCR-V20L( )

**Backshell** 

**Vertical type** 

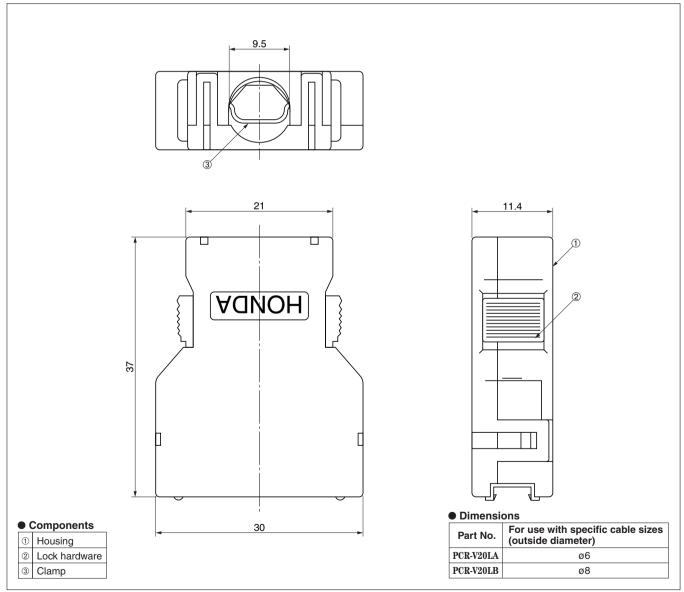
(RoHS)



Configuration of product Part No.

### PCR-V 20 L ()

- ① Series name
- ② No. of contacts: 20
- 3 For use with specific cable sizes
  - A: Outside diameter of cable is 6 mm.
  - B: Outside diameter of cable is 8 mm.



Mating connectors: PCR-E20F( )+, PCR-E20FS+

Others

Wire wrapping imping

ldering

Press-ii

SMT

hrough hole

# Vertical type plastic backshell (with screw lock) PCR-LS( )LA( )

**Backshell** 

**Vertical type** 



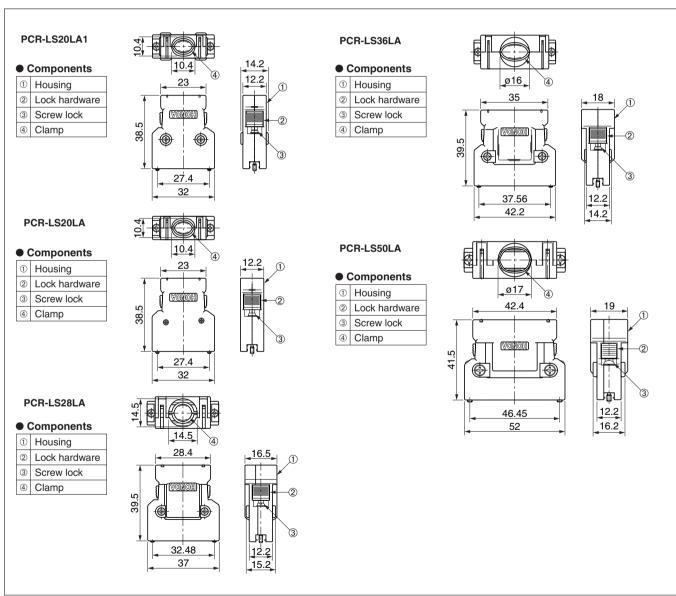


Configuration of product Part No.

### <u>PCR-LS</u> () <u>LA()</u>

- 1 Series name
- 2 No. of contacts: 20, 28, 36 or 50
- 3 Vertical type backshell for PCR-S()FS+

PCR-LS20LA1: Max outside diameter of cable is 10 mm. PCR-LS20LA: Max outside diameter of cable is 10 mm. PCR-LS28LA: Max outside diameter of cable is 14.5 mm. PCR-LS36LA: Max outside diameter of cable is 15 mm. PCR-LS50LA: Max outside diameter of cable is 16 mm.



Mating connectors: PCR-S( )FS+

# Vertical type plastic backshell (without screw lock) PCR-S20LA

**Backshell** 

**Vertical type** 

(RoHS)

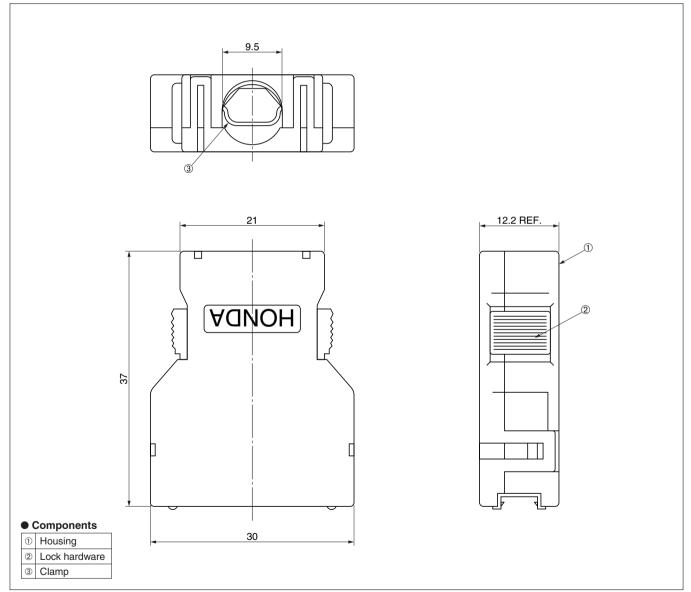


Configuration of product Part No.

#### **PCR-S 20 L A**

1 2

- ① Series name
- ② No. of contacts: 20
- ③ For use with specific cable sizes A: Outside diameter of cable is 8.5 mm.



Mating connectors: PCR-S20FS+

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