

FUJI ED & C TIMES

New Products

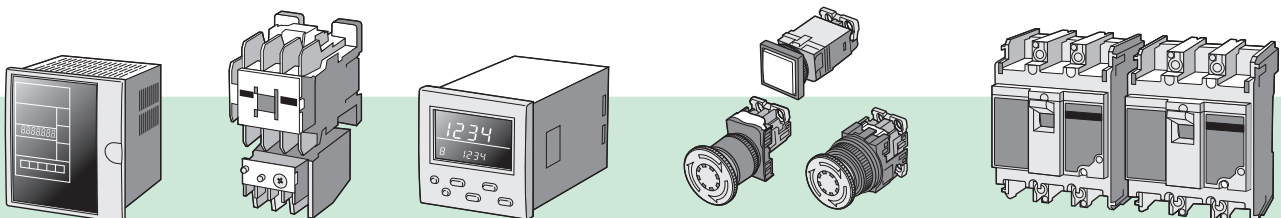
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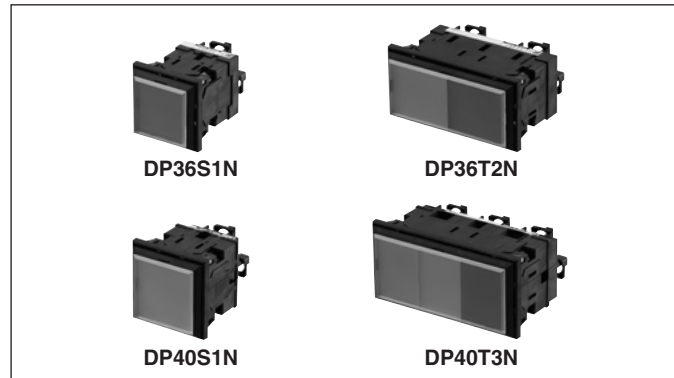


DP36 and DP40 LED illuminated short-body pilot lights





Short-body with depth of 50mm pilot lights added

■ Features

- The new type pilot lights employ high-brightness LED.
- For rectangular 2-split or 3-split model, the unitization of LED facilitates change of colors and change of color layout.
- Lettering can be made on legend film.
- Terminal cover is provided as standard.







■ DP36 series (LED illuminated, full voltage, short-body)

	Illuminated face	Illumination type	LED lamp voltage	Illuminated color code	Type
	36mm square	Full-face single color	24V AC/DC	Red (R) Green (G) Yellow (Y) Orange (A) White (W) Blue (S) Pure-white (P)	DP36S1N-□ES
	Rectangular 36mm x 72mm	Full-face single color	24V AC/DC	Red (R) Green (G) Yellow (Y) Orange (A) White (W)	DP36T1N-□ES
		2-split 2-color	24V AC/DC	Blue (S) Pure-white (P)	DP36T2N-□□ES
		3-split 3-color	24V AC/DC		DP36T3N-□□□ES

Note: Replace the □ marks by the illuminated color codes.

• DP40 series (LED illuminated, full voltage, short-body)

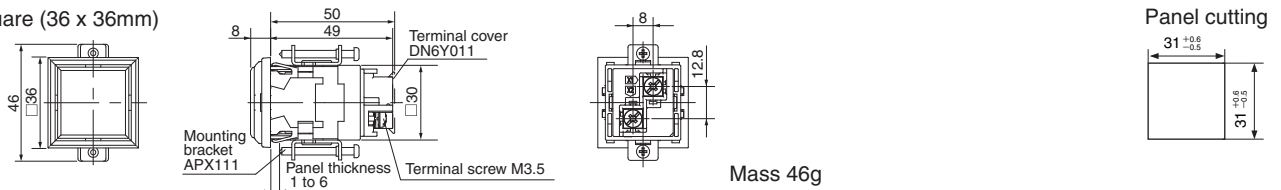
	Illuminated face	Illumination type	LED lamp voltage	Illuminated color code	Type
	40mm square	Full-face single color	24V AC/DC	Red (R) Green (G) Yellow (Y) Orange (A) White (W) Blue (S) Pure-white (P)	DP40S1N-□ES
	Rectangular 40mm x 80mm	Full-face single color	24V AC/DC	Red (R) Green (G) Yellow (Y) Orange (A) White (W) Blue (S) Pure-white (P)	DP40T1N-□ES
		2-split 2-color	24V AC/DC	Blue (S) Pure-white (P)	DP40T2N-□□ES
		3-split 3-color	24V AC/DC		DP40T3N-□□□ES

Note: Replace the □ marks by the illuminated color codes.

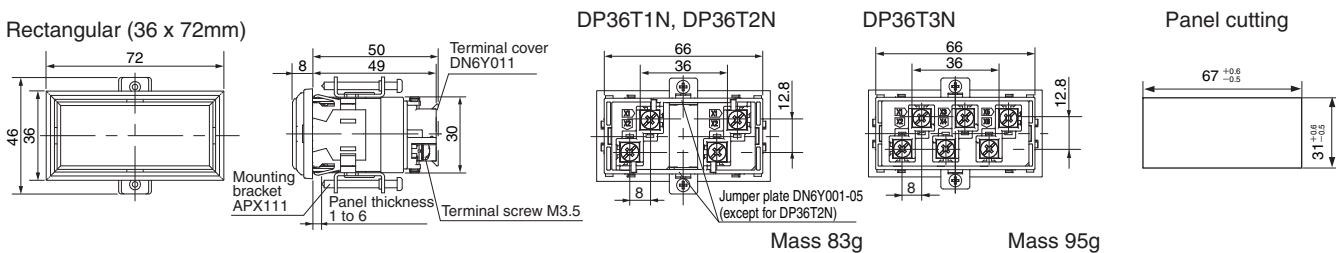
■ Dimensions, mm

• DP36 series

• Square (36 x 36mm)

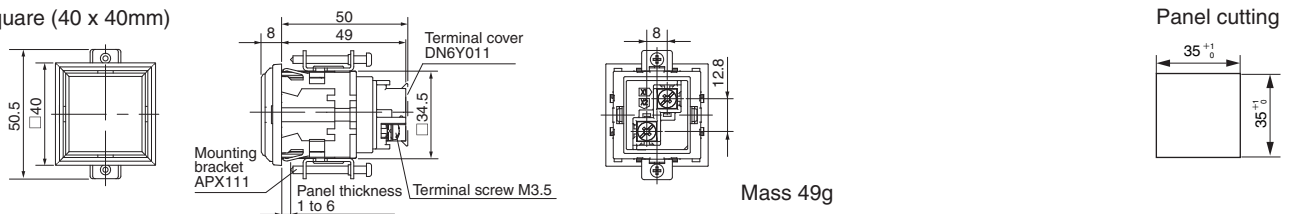


• Rectangular (36 x 72mm)

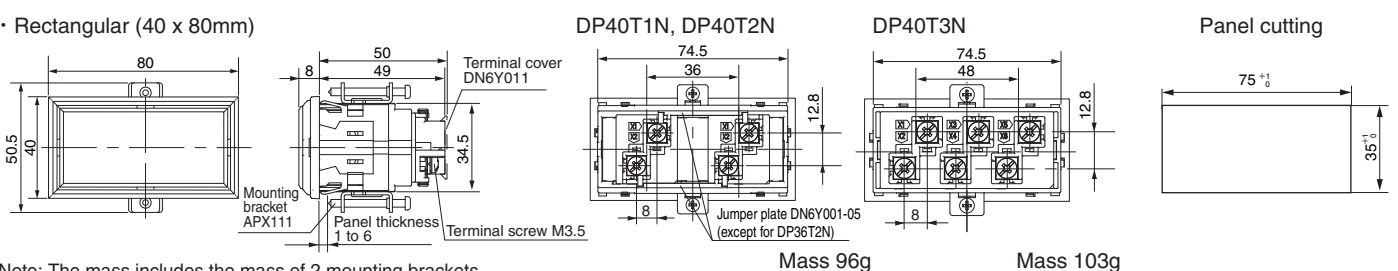


• DP40 series

• Square (40 x 40mm)



• Rectangular (40 x 80mm)



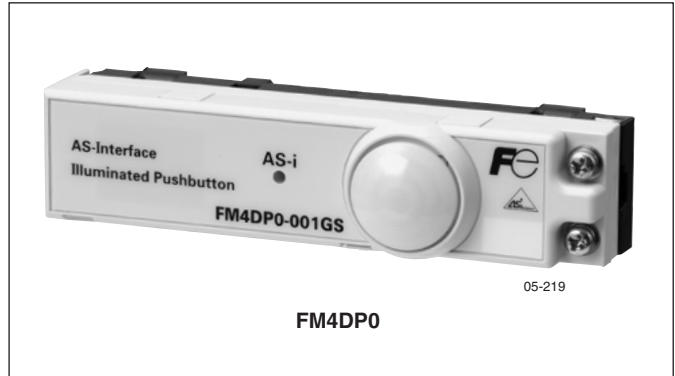
Note: The mass includes the mass of 2 mounting brackets.

AS-Interface Digital picking slave FM4DP

Digital picking slaves with spotlight and without 7-segment display

■ Features

- The spotlight improves visibility by illuminating objects to be picked in dark environments, thus helping to raise the quality of picking work.
- A new type with no 7-segment display expands applications
- An excellent user interface achieved with a dedicated FB (function block) combining FUJI's PLC MICREX-SX.
- Ideal for small- and medium-scale digital picking systems
- A 2-core type made possible with AS-interface communications.
- Communication signals can be transmitted through the power supply cable.
- Layout changes can be made using the AS-i's flexible wiring method without requiring manufacturer-authorized engineers, thus contributing to a considerable reduction in total costs during the life cycle total of customer's product.
- Like other slaves, advanced piercing technology is used for AS-i cable connection, allowing the cable to be crimped and connected with ease.
- The pushbutton switch has a positive clicking feel and distinctive coloring.



FM4DP2 with 7-segment display and spotlight

- The addition of the spotlight to the 7-segment display helps reduce errors by turning on the spotlight together with pushbutton illumination.
- Up to 31 units can be connected per segment.



FM4DP0 with illuminated pushbutton and spotlight

- Slave with illuminated pushbutton switch and spotlight
- Ideal for simple picking from component racks.
- Up to 62 units can be connected per segment.



■ Types

7-segment display color		Illuminated pushbutton color	Spotlight (Red)	Slave type	Type
10's digit	1's digit				
Green	Red	Green Red	Provided	Standard slave	FM4DP2-GR1GS FM4DP2-GR1RS FM4DP2-RR1GS FM4DP2-RR1RS
Red	Red	Green Red			
—	—	Green Red	Not provided	A/B slave	FM4DP0-001GS FM4DP0-001RS
		Green Red		A/B slave	FM4DP0-001G FM4DP0-001R

■ Ratings and specifications

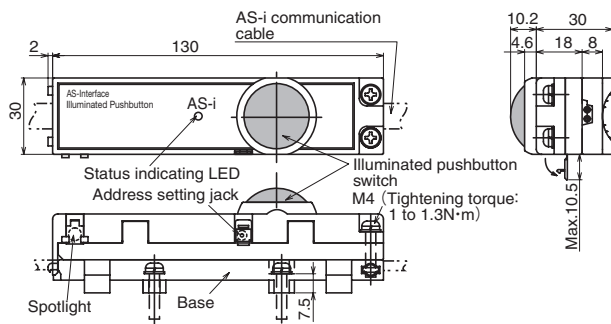
Type	FM4DP2-□1□S		FM4DP0-001□S	FM4DP0-001□
Slave type	Standard slave		A / B slave	
AS-i profile (IO, ID, ID2)	7, F, 7		7, A, E (ID1: Variable between 0 to 7. Default is 7.)	
Current consumption	75mA max. (with "88" displayed on 7-segment display and illuminated pushbutton switch ON) 45mA max. (with 7-segment display and illuminated pushbutton switch turned OFF)		65mA max. (with illuminated pushbutton switch ON) 45mA max. (with illuminated pushbutton switch OFF)	
Display	AS-i	Green LED ON: AS-i power supply turned ON (Normal operation) Red LED and orange (red mixed with green) LED lit alternately: address 0 Red LED lit: Communications error Illuminated pushbutton switch		
	7-segment 2 digits display	Provided	Not provided	
	Spotlight (red)	Provided (Character height: 13 to 14mm)		Not provided
Input signal	1NO contact (pushbutton switch)			
Output signal	• Illuminated pushbutton switch ON • 7-segment display		Illuminated pushbutton switch ON and connector on the side of the unit *3	
Logic allocations	Input *1	Pushbutton switch: Data bit D0		
	Output	Pushbutton switch ON, spotlight,*2 7-segment display: Data bit: D0 to D3		
Degree of protection	IP40			
Pushbutton switch	Operation force	1.1 to 1.7N		
	Durability	3 millions (at switching speed of 3,600 times/h with a maximum operation force of 2N)		
	Control structure strength	Operating direction 30N (with no deformation of the control structure or operation errors)		
Temperature	Operating temperature range	-10°C to +40°C (with no condensation or no icing)		
	Storage temperature range	-25°C to +70°C (with no condensation or no icing)		
Operating ambient humidity	35 to 85% RH (with no condensation)			
Electrical protection for AS-i connection	Reverse polarity protection	Built in		
	Electrostatic discharge resistance	Contact discharge method: ±4kV; Aerial discharge method: ±8kV; IEC61000-4-2 (Class A)		
	Electromagnetic field noise	80 to 1000MHz, electric field strength: 10V/m; IEC61000-4-3 (Class A)		
	Burst noise	2kV (Class B) / 1kV (class A), IEC61000-4-4		
Shock resistance	Screw mounting: 300m/s ² (18ms), IEC68-2-27			
Vibration resistance	Screw mounting: 10 to 55Hz, 1.0mm one-way amplitude, IEC68-2-6			
Mounting pipe diameter	27 to 30mm dia.			

*1 An input signal with a minimum duration of 150ms is accepted normally. If the duration is less than 150ms, the input will not always be accepted.
*2 The spotlight operates together with the illuminated pushbutton switch.

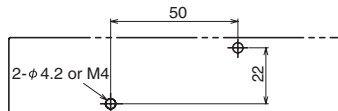
*3 The two-pin connector on the side of the unit is available on the FM4DP0-001 □ only. The illuminated pushbutton switch and two-pin connector are connected in parallel.

■ Dimensions, mm

• FM4DP0

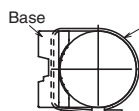


Panel drilling (Base screw mounting)

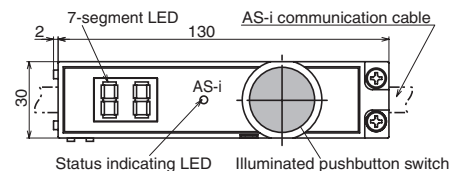


Pipe mounting

Secure with cable-tie (two points)
Available cable-tie: 4mm wide



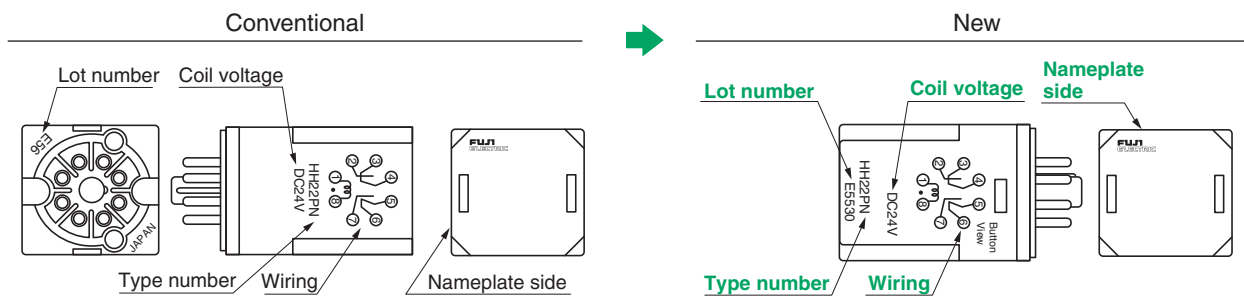
• FM4DP2



General purpose relays/HH22, 23, 24 series

Change in the position of nameplates

- Nameplate position:
Changed so that the nameplate information can be identified when the product is mounted (including dense mounting).
- Lot number configuration:
Changed to clarify the date of production.

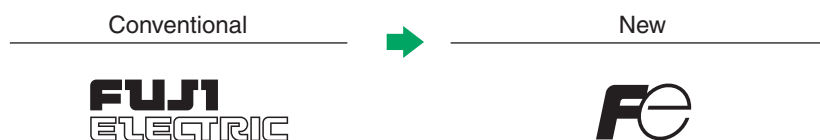


■ Time of modification: October 2005

Industrial control relays/HH52, 53, 54 and HH62 series

Change in company logo of enclosures

- Miniature control relays:
HH52, 53, 54
- Miniature power relays:
HH62

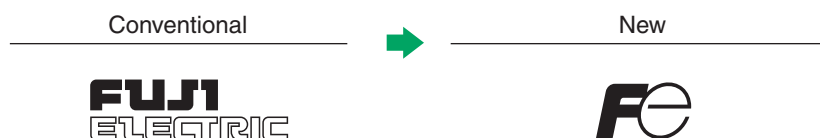


■ Time of modification: May 2005

Phase sequence protective relays/QE series

Change in company logo of enclosures

- Protective relays: QE-20N
QE-20NL
QE-40N

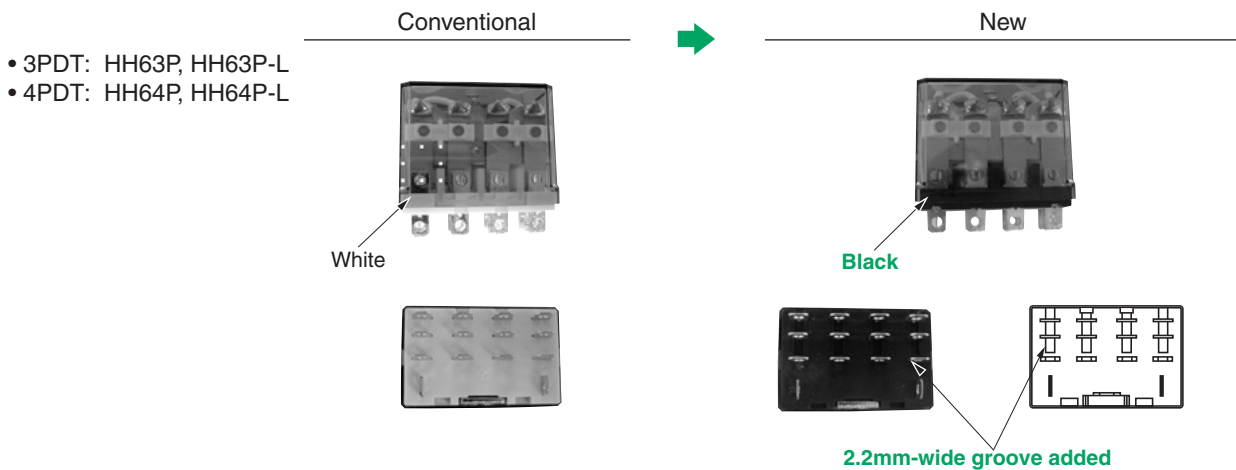


■ Time of modification: May 2005

Miniature power relays/HH63, 64 series

Change in the color of the terminal base

The color of the terminal base has been changed to black for uniformity with the HH5□-series miniature control relays.

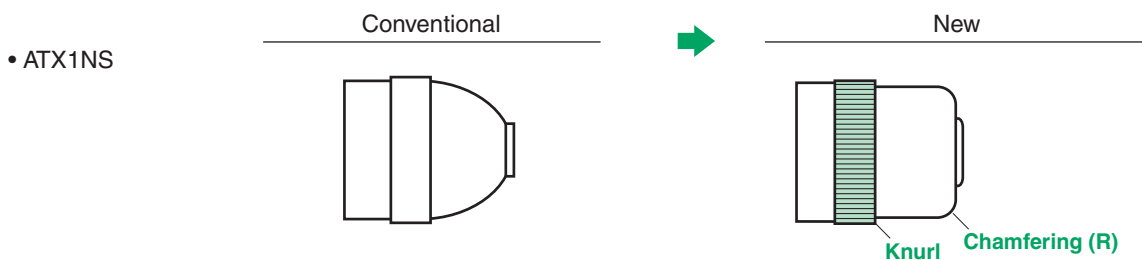


■ Time of modification: June 2005

Time delay relays/Socket for flush mounting

Change in shape of soldering socket

Knurling has been added around part of the socket. Also, the chamfer (R) on the bottom has been reduced.



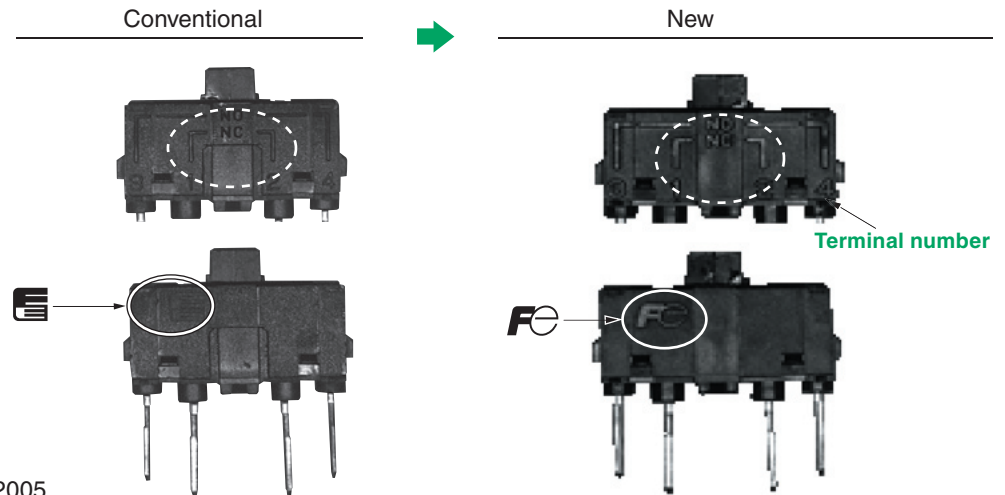
■ Time of modification: June 2005

Pushbuttons, selectors/AH164, AH165, AH165-2, AG22, AG23 series

Change in shape and logo mark of contact blocks, AGX001

The terminal number indication (typeface and size) has been changed to improve visibility.

- Contact blocks
Solder/tab terminal: AGX001
Wire-wrap terminal: AGX001-W

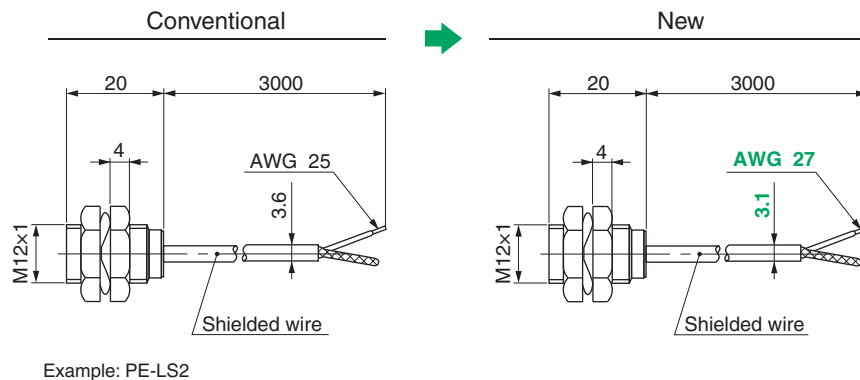


■ Time of modification: September 2005

Inductive proximity switches/Sensor and amplifier separated PE-L

Change of cable specifications

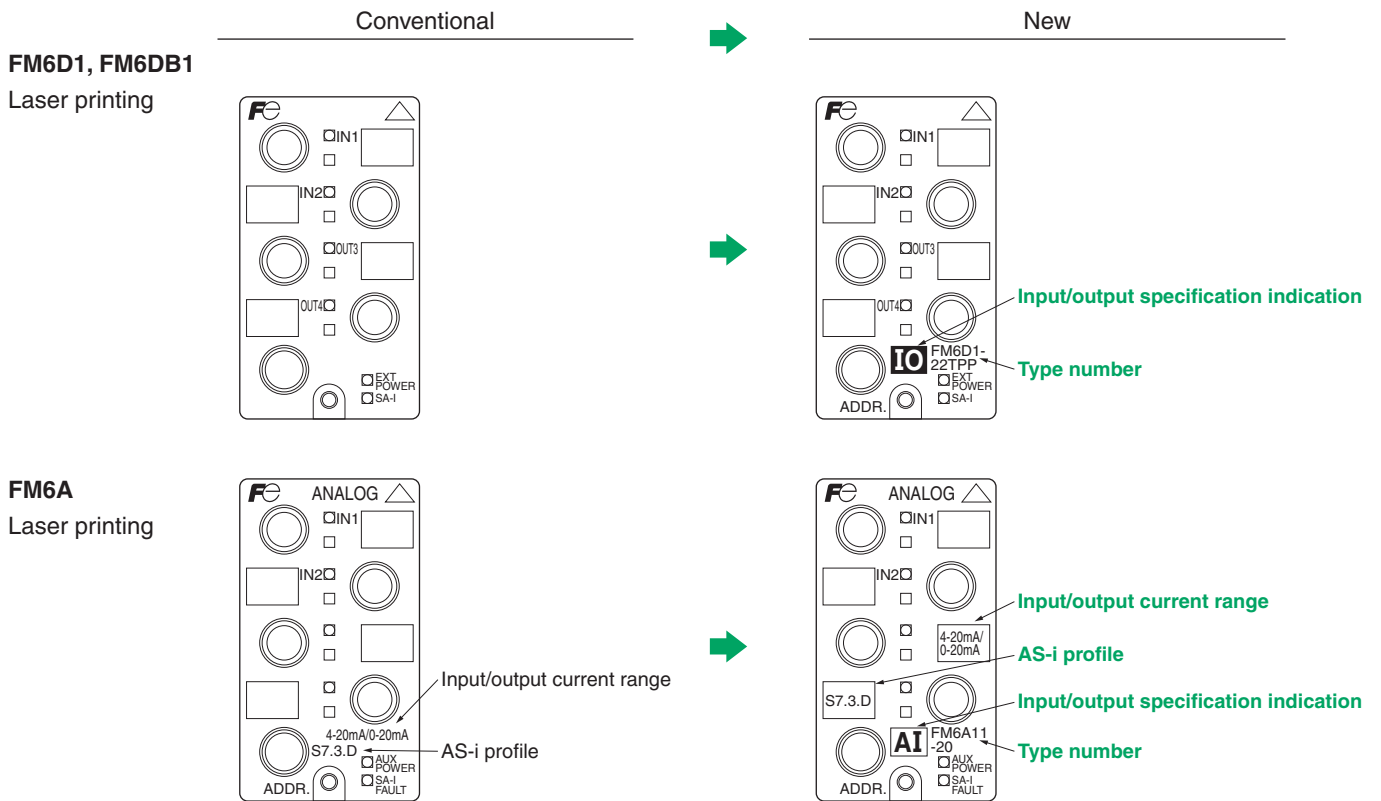
- Analog output type sensor
External dia. M12: PE-LS2
M18: PE-LS5
M30: PE-LS10



■ Time of modification: October 2005

AS-Interface/FM6D, FM6A

Flat waterproof slave change



Input/output specification indication

- | | | |
|------------------------------|------------------------------|---------------------------|
| I : NPN input | I : PNP input | AI : Analog input |
| O : NPN output | O : PNP output | AO : Analog output |
| IO : NPN input/output | IO : PNP input/output | |

■ Time of modification: July 2005

Limit switches/AL-S series

Changes in materials and colors of actuator and cover

Top push rod plunger: **AL-SP11**
 Top roller lever plunger: **AL-SK11**
 Reversing top roller lever plunger: **AL-SK21**

	Conventional	→	New
• Color of actuator	Dark green		Grey
• Color of cover	Ivory		Black
• Name plate material	Aluminum plate		Printed on the cover
• Screw material for cover and actuator	Galvanized Hexavalent chromate treatment		Galvanized RoHs compliant Trivalent chromate treatment
• Screw material for terminals	Brass (Nickel-plated)		Steel (Nickel-plated) Strong engagement
• Cable sealing parts	Seal affixed		Plastic cover
• Approval	None		TÜV marking, IEC 60947-5-1

Roller lever: **AL-SN11**
 Adjustable length roller lever: **AL-SN21**
 Adjustable length rod lever: **AL-SN31**

	Conventional	→	New
• Color of actuator	Dark green		Grey
• Color of cover	Ivory		Black
• Name plate material	Aluminum plate		Printed on the cover
• Screw material for cover and actuator	Galvanized Hexavalent chromate treatment		Galvanized RoHs compliant Trivalent chromate treatment
• Screw material for lever	Black colored		Galvanized RoHs compliant Trivalent chromate treatment
• Screw material for terminals	Brass (Nickel-plated)		Steel (Nickel-plated) Strong engagement
• Cable sealing parts	Seal affixed		Plastic cover
• Lubricating oil of actuator	Grease		Fluoro oil
• Approval	None		TÜV marking, IEC 60947-5-1

■ Time of modification: October 2005

α-TWIN series MCCBs EA62C/□-CE, 63C/□-CE, 63CM/□-CE

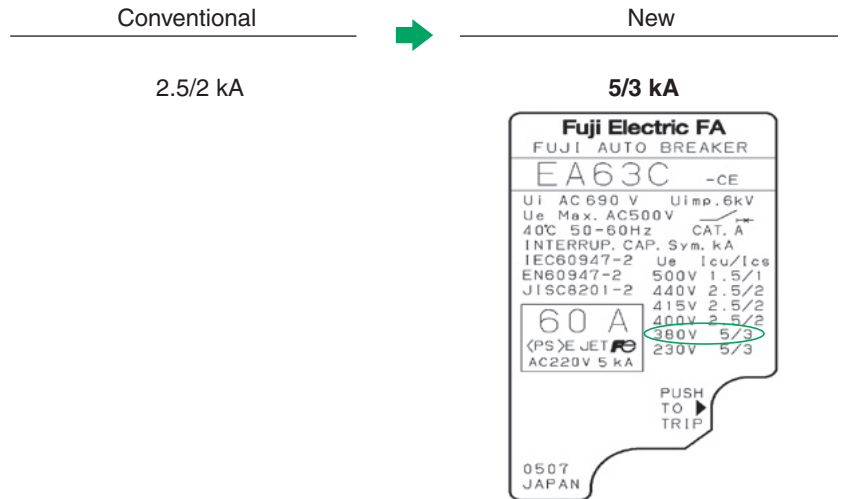
Nameplate change in the interrupting capacity

E series

EA62C/□-CE, 63C/□-CE, 63CM/□-CE

Interrupting capacity: 380V AC
IEC 60947-2, JIS C8201-2 (Icu/Ics)

■ Time of modification: January 2006



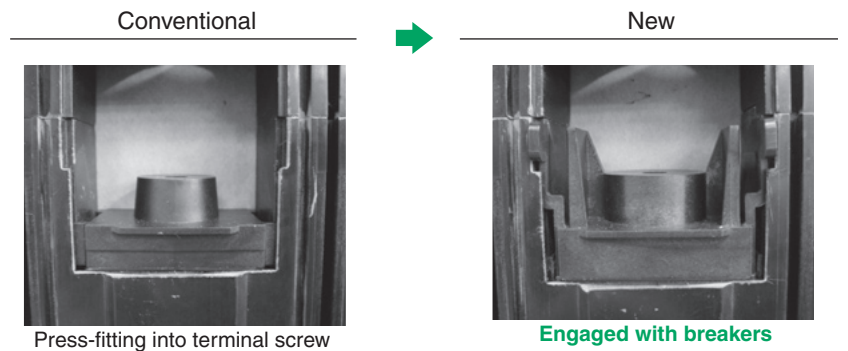
MCCBs and ELCBs

Terminal cover change in shape, long and short types

- Front mounting, rear connection
Flush mounting

For SA603RC/□-CE, SA803RC/□-CE
EA603C/□-CE, EA803C/□-CE
H603B, H603R
H803B, H803R

For SG603RC/□-CE, SG803RC/□-CE
EG603C/□-CE, EG803C/□-CE
HG603B
HG803B



■ Time of modification: October 2005

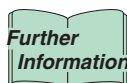
Discontinued Products

The production of the following products has or will soon be discontinued. Please use substituting models.

Display lights AP24, 30, 35, 36, 48 series

• AP24 series, 24 x 48 mm	Discontinued	→	Substitute
	Full face, LED:	AP24-T1□E3 AP24-T1□H3 AP24-T1□M3 AP24-T1□CE3	
Full face 2-color, LED:	AP24-T4RGE3		DP24T4N-FE3
• AP30 series, 35 x 70 mm	Discontinued	→	Substitute
	Full face, LED:	AP30-T1□-E3 AP30-T1□-H3 AP30-T1□-M3	
2-split face, LED:	AP30-T2□-E3 AP30-T2□-H3 AP30-T2□-M3		None None None
3-split face, LED:	AP30-T3□-E3 AP30-T3□-H3 AP30-T3□-M3		None None None
Full face, incandescent:	AP30-T1□-E AP30-T1□-H AP30-T1□-M		None None None
2-split face, incandescent:	AP30-T2□-E AP30-T2□-H AP30-T2□-M		None None None
3-split face, incandescent:	AP30-T3□-E AP30-T3□-H AP30-T3□-M		None None None
• AP35 series, 40 x 40 mm	Discontinued	→	Substitute
	Full face, LED:	AP35-S1□-E3 AP35-S1□-H3 AP35-S1□-M3 AP35-S1□-H7	
Full face, incandescent:	AP35-S1□-E AP35-S1□-H AP35-S1□-M		DP40S1N-□E4 DP40S1N-□H4 DP40S1N-□M4

■ Time of discontinuation: December 2005

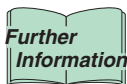


Contact FUJI for details of substituting models.

• AP35 series 40 x 80 mm	Discontinued	➔	Substitute
Full face, LED:	AP35-T1□-E3 AP35-T1□-H3 AP35-T1□-M3 AP35-T1□-H7		DP40T1N-□E3 DP40T1N-□H3 DP40T1N-□M3 DP40T1N-□H3
2-split face, LED:	AP35-T2□□-E3 AP35-T2□□-H3 AP35-T2□□-M3 AP35-T2□□-H7		DP40T2N-□□E3 DP40T2N-□□H3 DP04T2N-□□M3 DP40T2N-□□H3
3-split face, LED:	AP35-T3□□□-E3 AP35-T3□□□-H3 AP35-T3□□□-M3 AP35-T3□□□-H7		DP40T3N-□□□E3 DP40T3N-□□□H3 DP40T3N-□□□M3 DP40T3N-□□□H3
Full face, incandescent:	AP35-T1□E AP35-T1□H AP35-T1□M		DP40T1N-□E4 DP40T1N-□H4 DP40T1N-□M4
2-split face, incandescent:	AP35-T2□□E AP35-T2□□H AP35-T2□□M		DP40T2N-□□E4 DP40T2N-□□H4 DP40T2N-□□M4
3-split face, incandescent:	AP35-T3□□□E AP35-T3□□□H AP35-T3□□□M		DP40T3N-□□□E4 DP40T3N-□□□H4 DP40T3N-□□□M4

• AP36 series, 36 x 36 mm	Discontinued	➔	Substitute
Full face, LED:	AP36-S1□E3 AP36-S1□H3 AP36-S1□M3 AP36-S1□H7 AP36-S1□E3C AP36-S1□E3FA AP36-S1□E3FD AP36-S1□CE3		DP36S1N-□E3 DP36S1N-□H3 DP36S1N-□M3 DP36S1N-□H3 None DP36S1N-□EA DP36S1N-□ED DP36S1N-□E3C
Full face 2-color, LED	AP36-S4RGE3		DP36S4N-FE3
Full face, incandescent:	AP36-S1□E AP36-S1□H AP36-S1□M AP36-S1□H6		DP36S1N-□E4 DP36S1N-□H4 DP36S1N-□M4 None

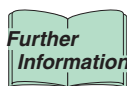
■ Time of discontinuation: December 2005



Contact FUJI for details of substituting models.

• AP36 series 36 x 72 mm	Discontinued	→	Substitute
Full face, LED:	AP36-T1□E3 AP36-T1□H3 AP36-T1□M3 AP36-T1□H7 AP36-T1□E3C AP36-T1□CE3		DP36T1N-□E3 DP36T1N-□H3 DP36T1N-□M3 DP36T1N-□H3 None DP36T1N-□E3C
2-split face, LED:	AP36-T2□□E3 AP36-T2□□H3 AP36-T2□□M3 AP36-T2□□H7 AP36-T2□□E3C AP36-T2□□CE3		DP36T2N-□□E3 DP36T2N-□□H3 DP36T2N-□□M3 DP36T2N-□□H3 None DP36T2N-□□E3C
3-split face, LED:	AP36-T3□□□E3 AP36-T3□□□H3 AP36-T3□□□M3		DP36T3N-□□□E3 DP36T3N-□□□H3 DP36T3N-□□□M3
Full face 2-color, LED:	AP36-T4RGE3		DP36T4N-FE3
Full face, incandescent:	AP36-T1□E AP36-T1□H AP36-T1□M AP36-T1□H6		DP36T1N-□E4 DP36T1N-□H4 DP36T1N-□M4 None
2-split face, incandescent:	AP36-T2□□E AP36-T2□□H AP36-T2□□M AP36-T2□□H6		DP36T2N-□□E4 DP36T2N-□□H4 DP36T2N-□□M4 None
3-split face, incandescent:	AP36-T3□□□E AP36-T3□□□H AP36-T3□□□M		DP36T3N-□□□E4 DP36T3N-□□□H4 DP36T3N-□□□M4
• AP48 series, 48 x 48 mm	Discontinued	→	Substitute
Full face, LED:	AP48-S1□E3 AP48-S1□H3 AP48-S1□M3 AP48-S1□H7 AP48-S1□E3C AP48-S1□E3FA AP48-S1□E3FD AP48-S1□CE3		DP48S1N-□E3 DP48S1N-□H3 DP48S1N-□M3 DP48S1N-□H3 None DP48S1N-□EA DP48S1N-□ED DP48S1N-□E3C
2-split face, LED:	AP48-S2□□E3		DP48S2N-□□E3
Full face 2-color, LED:	AP48-S4RGE3		DP36S4N-FE3
Full face, incandescent:	AP48-S1□E AP48-S1□H AP48-S1□M AP48-S1□H6		DP48S1N-□E4 DP48S1N-□H4 DP48S1N-□M4 None

■ Time of discontinuation: December 2005

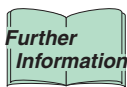


Contact FUJI for details of substituting models.

• AP36 series 48 x 96 mm	Discontinued	Substitute
Full face, LED:	AP48-T1□E3	DP48T1N-□E3
	AP48-T1□H3	DP48T1N-□H3
	AP48-T1□M3	DP48T1N-□M3
	AP48-T1□H7	DP48T1N-□H3
	AP48-T1□E3C	None
	AP48-T1□CE3	DP48T1N-□E3C
2-split face, LED:	AP48-T2□□E3	DP48T2N-□□E3
	AP48-T2□□H3	DP48T2N-□□H3
	AP48-T2□□M3	DP48T2N-□□M3
	AP48-T2□□H7	DP48T2N-□□H3
	AP48-T2□□E3C	None
	AP48-T2□□CE3	DP48T2N-□□E3C
3-split face, LED:	AP48-T3□□□E3	DP48T3N-□□□E3
	AP48-T3□□□H3	DP48T3N-□□□H3
	AP48-T3□□□M3	DP48T3N-□□□M3
	AP48-T3□□□H7	DP48T3N-□□□H3
	AP48-T3□□□E3C	None
	AP48-T3□□□CE3	DP48T3N-□□□E3C
Full face 2-color, LED:	AP48-T4RGE3	DP48T4N-FE3
Full face, incandescent:	AP48-T1□E	DP48T1N-□E4
	AP48-T1□H	DP48T1N-□H4
	AP48-T1□M	DP48T1N-□M4
	AP48-T1□H6	None
2-split face, incandescent:	AP48-T2□□E	DP48T2N-□□E4
	AP48-T2□□H	DP48T2N-□□H4
	AP48-T2□□M	DP48T2N-□□M4
	AP48-T2□□H6	None
3-split face, incandescent:	AP48-T3□□□E	DP48T3N-□□□E4
	AP48-T3□□□H	DP48T3N-□□□H4
	AP48-T3□□□M	DP48T3N-□□□M4
	AP48-T3□□□H6	None

■ Time of discontinuation: December 2005

Besides the above-mentioned models, all models including special products and parts in the products concerned will be discontinued.



Contact FUJI for details of substituting models.

Terminal block AYHN42B type

	Discontinued	→	Substitute
• Terminal block section with tab/screw terminal	AYHN42B-6		None

■ Time of discontinuation: September 2005

AS-Interface Accessories/Waterproof cap and gasket Pg11

	Discontinued	→	Substitute
• Waterproof cap	FX9C021		3RK1901-1KA00 *
• Gasket Pg11 for AS-i cable	FX9P011		3RX9805-0AA00 *

* The substitutes are made by siemens, but can be supplied from FUJI.

■ Time of discontinuation: January 2005

Safety Considerations

- For safe operation, before using the product read the instruction manual or user manual that comes with the product carefully or consult the Fuji sales representative from which you purchased the product.
- Products introduced in this catalog have not been designed or manufactured for such applications in a system or equipment that will affect human bodies or lives.
- Customers, who want to use the products introduced in this catalog for special systems or devices such as for atomic-energy control, aerospace use, medical use, passenger vehicle, and traffic control, are requested to consult the Fuji sales division.
- Customers are requested to prepare safety measures when they apply the products introduced in this catalog to such systems or facilities that will affect human lives or cause severe damage to property if the products become faulty.
- For safe operation, wiring should be conducted only by qualified engineers who have sufficient technical knowledge about electrical work or wiring.

Fuji Electric FA Components & Systems Co., Ltd.

5-7, Nihonbashi Odemma-cho, Chuo-ku, Tokyo 103-0011, Japan

URL <http://www.fujielectric.co.jp/fcs/eng>