

To All Customers

Rep No. TR20-044a

July 07, 2021

Fuji Electric Technica Co., Ltd.

## Notification regarding Production Discontinuation of Single-Phase APR-N Series Products

We would like to thank you for your continued patronage of Fuji products.

We are writing to announce the discontinuation of single-phase APR-N Series products.

Please review the following information and take appropriate actions.

Please also inform all related sections of your company of these changes.

Thank you for your understanding.

|                                |  |                      |
|--------------------------------|--|----------------------|
| Product name                   | Fuji APR   |                      |
| Series name                    | Single-phase APR-N Series  |                      |
| Type                           | All single-phase APR-N Series products<br>RPNE□020, RPNE□045, RPNE□060, RPNE□100, RPNE□150<br>RPNE□250, RPNE□350, RPNE□450, RPNE□600, RPNE□800<br>RPNE□A00, RPNE□A20, RPNE□A50 |                      |
| Reason                         | Due to the products not being compliant with the revised European RoHS Directive (2011/65/EU).   |                      |
| Date of production termination | Last date for orders   | End of December 2021 |
|                                | Date of production discontinuation   | January 2022         |
| Recommended alternative        | Single-phase APR-V Series  |                      |
| Attachments                    | Comparison of Single-Phase APR-V and Single-Phase APR-N Specifications   |                      |

**Comparison of Single-Phase APR-V and Single-Phase APR-N Specifications**

| No. | Item   | Recommended Alternative Single-phase APR-V Series   | Discontinued Single-phase APR-N Series  |
|-----|--|---|---|
| 1   | Type   | RPVE□□□□-□  | RPNE□□□□-□  |
| 2   | Rated current  | 20, 45, 60, 100, 150, 250, 350, 450, 600 (A) (Standard)<br>800, 1000, 1200, 1500 (A) (Semi-standard)                          | 20, 45, 60, 100, 150, 250, 350, 450, 600 (A) (Standard)<br>800, 1000, 1200, 1500 (A) (Semi-standard)                          |
| 3   | Control circuit/main circuit power supply            |   |   |
|     | Control circuit voltage                              | 100 to 240 V AC ±10%: Control circuit terminal<br><b>380 to 440 V AC, 380 to 480 V AC ±10%: Main circuit control terminal</b> | 100 to 240 V AC ±10%: Control circuit terminal  |
|     | Main circuit voltage                                 | 100 to 240 V AC, 380 to 440 V AC, 380 to 480 V AC ± 10%   | 100 to 240 V AC, 380 to 440 V AC, 380 to 480 V AC ± 10%   |
|     | Existence of operation transformer                   | <b>None (Note: Main circuit control terminal newly installed)</b>   | TR1-70R/UL  |
|     | Frequency  | 50/60 ±2.5 Hz (Automatic frequency detection)   | 50/60 ±2.5 Hz (Automatic frequency detection)   |
| 4   | Control circuit input capacitance                    | 20 to 100 A: ?? VA, 150 A: ?? VA, 250 to 600 A: ?? VA   | 20 to 100 A: 34 VA, 150 A: 40 VA, 250 to 600 A: 45 VA   |
| 5   | Waveform control system                              | Phase control/Cycle control (intermittent)/ <b>Phase angle control (APD3 required)</b>  | Phase control/Cycle control (intermittent)  |
| 6   | Applied load   |   |   |
|     | Phase control  | Resistive load, inductive load, transformer primary control, rectifier primary control  | Resistive load, inductive load, transformer primary control, rectifier primary control  |
|     | Cycle control  | Resistive load with a temperature coefficient of 10% or less (T type)<br>Transformer primary control (P type)                 | Resistive load with a temperature coefficient of 10% or less (T type)<br>Transformer primary control (P type)                 |
|     | Inrush current automatic suppression control         | Resistive load containing pure metal materials, etc. (A type)   | Resistive load containing pure metal materials, etc. (A type)   |
| 7   | Output voltage adjustment range                      | Main circuit power supply voltage 0 to 100% (Excluding thyristor voltage drop)  | Main circuit power supply voltage 0 to 100% (Excluding thyristor voltage drop)  |
| 8   | Power supply voltage compensation                    | Fluctuation ±3% FS or less (T, A types) (for ±10% fluctuation of power supply voltage)  | Fluctuation ±3% FS or less (T, A types) (for ±10% fluctuation of power supply voltage)  |
| 9   | Feedback control accuracy (4 times load fluctuation) | CLR: ±2%FS, AVR,ACR,AWR: ±1%FS<br>Control system B, C, D, E, F types => A type (Function selection SW6 = OFF)                 | CLR: ±2%FS, AVR,ACR,AWR: ±1%FS<br>Control system B, C, D, E, F types => A type (Function selection SW6 = OFF)                 |
| 10  | Run/stop switching input                             | Contact input (RUN-COM terminal), instantaneous breaking (within half wave)   | Contact input (RUN-COM terminal), instantaneous breaking (within half wave)   |
| 11  | Automatic/manual switching input                     | Contact input (AUTO-COM terminal)   | Contact input (AUTO-COM terminal)   |
| 12  | Control setting input                                | 0 to 100% of output voltage   | 0 to 100% of output voltage   |
|     | Manual setting                                       | External variable resistor (1 kΩ)   | External variable resistor (1 kΩ)   |
|     | Automatic setting) Current signal                    | 4 to 20 mA DC (100 Ω)   | 4 to 20 mA DC (100 Ω)   |
|     | Automatic setting) Voltage signal                    | 1 to 5 V DC/0 to 5 V DC (10 kΩ)   | 1 to 5 V DC/0 to 5 V DC (10 kΩ)   |
| 13  | Control setting I/O characteristics                  | Resistive load linearity ± 3% or less   | Resistive load linearity ± 3% or less   |
| 14  | Gradient setting                                     | 0 to 100% of output voltage   | 0 to 100% of output voltage   |
|     | External variable resistor                           | 1 kΩ (1A-2A-3A terminal)  | 1 kΩ (1A-2A-3A terminal)  |
|     | Internal   | Internal "GRD" volume (Option: Z43)   | Internal "GRD" volume (Option: Z43)   |
|     | Voltage signal                                       | 1 to 5 V DC (5V-M0 terminal)  | 1 to 5 V DC (5V-M0 terminal)  |
| 15  | Base load setting                                    | 0 to 100% of output voltage (Option: Z07)   | 0 to 100% of output voltage (Option: Z07)   |
| 16  | Software start and software up/down time setting     | Selection of 0.5 to 10 seconds, 5 to 100 seconds<br>Can individually set software up/down time (Function selection SW7 = OFF) | Selection of 0.5 to 10 seconds, 5 to 100 seconds<br>Can individually set software up/down time (Function selection SW7 = OFF) |
| 17  | Alarm output   |   |   |
|     | Number of alarm display categories                   | 13 (Combination of 3 alarm LEDs)  | 13 (Combination of 3 alarm LEDs)  |
|     | Alarm output   | 1a (Major failure: Z1-ZC terminal) + 1a (Minor failure: Z2-ZC terminal)   | 1a (Major failure: Z1-ZC terminal) + 1a (Minor failure: Z2-ZC terminal)   |
|     | Alarm reset  | RST-COM terminal: Momentary   | RST-COM terminal: Momentary   |
|     | Thyristor abnormality                                | Detection of thyristor short circuit fault (excluding T type)   | Detection of thyristor short circuit fault (excluding T type)   |
|     | Overcurrent/Current limit                            | After detecting 120% or more of the rated current, stops output and outputs overcurrent alarm (excluding T type)              | After detecting 120% or more of the rated current, stops output and outputs overcurrent alarm (excluding T type)              |
|     | Overheating abnormality                              | Detection via temperature sensor ( <b>all types</b> )   | Detection via temperature sensor (Air cooling type only)  |
|     | CPU memory error                                     | Detects CPU memory error during startup   | Detects CPU memory error during startup   |
|     | Fast-acting fuse breaking                            | Detects internal fast-acting fuse breaking  | Detects internal fast-acting fuse breaking  |
|     | Communication error (Option)                         | Communication error in parallel operation, etc.   | Communication error in parallel operation, etc.   |
|     | Heater break detection                               | 3 or less alloy heaters (standard specification. Excluding T type)  | 3 or less alloy heaters (standard specification. Excluding T type)  |
|     | Control system P type) Load error                    | Detects polarization phenomenon on the primary side of transformer  | Detects polarization phenomenon on the primary side of transformer  |
|     | External setting input unconnected                   | Detects unconnected automatic, manual, and gradient setting terminals   | Detects unconnected automatic, manual, and gradient setting terminals   |
|     | Power supply frequency error detection               | Detects control power supply frequency other than 45 to 65 Hz   | Detects control power supply frequency other than 45 to 65 Hz   |
|     | Undervoltage detection                               | Detects control power supply voltage of 80 V (160 V, <b>320 V</b> ) or less   | Detects control power supply voltage of 80 V (160 V) or less  |
|     | Overvoltage detection                                | Detects control power supply voltage of 146 V (276 V, <b>552 V</b> ) or more  | Detects control power supply voltage of 146 V (276 V) or more   |
|     | Cooling fan life detection                           | Detects steady rotation speed of 70% to 200 rpm or less   | Detects steady rotation speed of 70% to 200 rpm or less   |
|     | Data write/read failure                              | Detects EEPROM R/W check errors (When using <b>APD3</b> )   | Detects EEPROM R/W check errors (When using APD1)   |
|     | Password input error                                 | Password mismatch (When using <b>APD3</b> )   | Password mismatch (When using APD1)   |
| 18  | Main circuit terminal cover                          | Main circuit terminal cover structure   | Main circuit terminal cover structure   |
| 19  | Finger guard (Option)                                | Type: RPN005-E□□  | Type: RPN005-E□□  |
| 20  | External cooling installation method (Option)        | Type: RPN004-E□□  | Type: RPN004-E□□  |
| 21  | Parallel operation (Option)                          | Compatible with MX2, N (ZAX, ZAP), capable of anti-flicker, up to 50 units  | Compatible with MX2, N (ZAX, ZAP), capable of anti-flicker, up to 50 units  |
| 22  | Network communications (Option)                      | RS-485 (Modbus RTU, CC-Link)  | RS-485 (Modbus RTU, CC-Link)  |
| 23  | Ambient temperature and allowable load current       | -5 to 50 °C (I=100%), -55°C (I=90%)   | -5 to 50 °C (I=100%), -55°C (I=90%)   |
| 24  | Relative humidity                                    | 30 to 90%   | 30 to 90%   |
| 25  | Standards compliance                                 | JEC-2420-2002   | JEC-2420-2002   |
|     | RoHS directive                                       | <b>European (revised) 2011/65/EU, revised Chinese version</b>   | Compatible with 2011/65/EU and revised Chinese RoHS   |
|     | UL standard (Option)                                 | UL508 17th edition (industrial electric controller)   | UL508 17th edition (industrial electric controller)   |
|     | cUL standard (Option)                                | CSA C22.2 No. 14  | CSA C22.2 No. 14  |
|     | CE marking (Option)                                  | Compliant with new EMC directive (2014/30/EU), new low voltage directive (2014/35/EU)   | Compliant with new EMC directive (2014/30/EU), new low voltage directive (2014/35/EU)   |