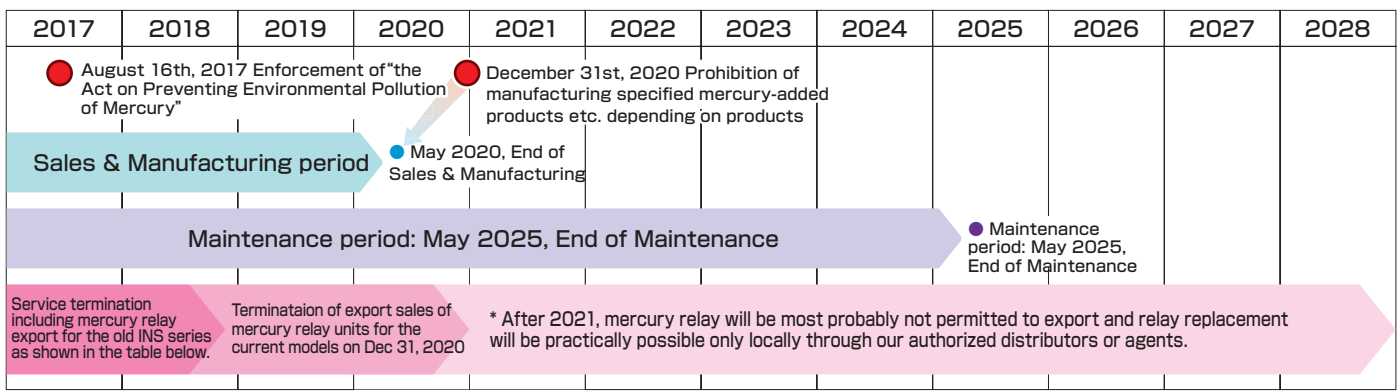


# Impulse Noise simulator after sales service and support status and successor product notice

Following the enforcement of the The Minamata convention on Mercury signed on October 2013, domestic law “the Act on Preventing Environmental Pollution of Mercury” had taken effect on August 16th 2017. We have thus decided to announce the termination of sales and manufacture of the impulse noise simulator on May 2020.

If you wish to continue using the impulse noise simulator, we urge you to consider replacing your impulse simulator early. And we also urge you to replace yours even when you own the latest models (INS-4020/4040, INS-AX2 series) but expired 8 years after delivery maintenance period, we may have to decline for repair due to our maintenance policy.



## INS series old products

| Applicable Products   | Service and support termination |
|-----------------------|---------------------------------|
| INS-410/420/420A/420R | November 30th 2018              |
| INS-4310/4320/4320A   | November 30th 2018              |
| INS-200/300/400AX     | November 30th 2018              |
| INS-400L              | November 30th 2018              |
| INS-4001              | November 30th 2018              |



If your product is not on the list and not our active products (INS-4020, INS-4040, INS-AX2), maintenance service and parts sales of Mercury relays are already terminated. (Ex. INS-10A/20A, INS-320/350 etc.)

This notice does not warrant the execution of repair service until 2018. Some service parts are already out of stock and unprocurable so that we can only offer maintenance repair service where possible

## Information on Successive models (Current models)

Correspondence chart between old model and current models (Per model)

| Old models            | Current models |
|-----------------------|----------------|
| INS-410/420/420A/420R | INS-4020/4040  |
| INS-4310/4320/4320A   | INS-4020/4040  |
| INS-200/300/400AX     | INS-AX2 series |
| INS-400L              | INS-4020/4040  |
| INS-4001              | INS-4020/4040  |

Correspondence chart between the old models and current models (Per output voltage)

| Old models | Current models            |
|------------|---------------------------|
| 2kV model  | INS-4020, INS-AX2-220/250 |
| 3kV model  | INS-4040, INS-AX2-420/450 |
| 4kV model  | INS-4040, INS-AX2-420/450 |

Please consult with sales representative for EUT power capacities

Noise Simulator(Mercury relay type)

# INS-4020/4040

Scheduled end of sale: May 31, 2020



INS-4020/4040

- Easy setting either to Common mode or Normal mode with short plug
- Simple setting of the repetitive cycles (VARIABLE, LINE PHASE) only on the main unit
- Output voltage level and pulse repetitive cycle ramps up/down granularity selectable at sweep

| Parameter          | INS-4020   | INS-4040  |
|--------------------|--|---|
| Output voltage     | 0.01 ~ 2.00kV±10%(Positive and Negative Polarity)                                    | 0.01 ~ 4.00kV±10%(Positive and Negative Polarity) |
| Pulse width        | 50, 100, 200, 250, 400ns±10% combination thereof, 10ns±3ns (the shortest connection) |   |
| Rise time          | ≤ 1ns  |   |
| Output impedance   | 50Ω system (53.5Ω)   |   |
| EUT power capacity | AC240V / DC60V 16A (L1/L2/PE or L1/L2/L3)  |   |

Noise Simulator(Mercury relay type)

# INS-AX2 series

Scheduled end of sale: May 31, 2020



INS-AX2 series

- Realize automation and efficiency in the test
- Simple and easy setting of the test parameters with PC remote control software
- Enable to switch Common mode / Normal mode and injection angle in the main unit
- EUT FAIL INPUT terminal built-in. Enable to control the test stop when EUT is malfunctioned during the automated test

| Parameter          | Specification  |
|--------------------|--|
| Output voltage     | INS-AX2-220 / 250 : 0.01 ~ 2.00kV±10% (±0.04kV for <0.1kV) (Polarity Positive and negative)<br>INS-AX2-420 / 450 : 0.01 ~ 4.00kV±10% (±0.04kV for <0.1kV) (Polarity Positive and negative)   |
| Pulse width        | 50, 100, 200, 400, 500, 800, 1000ns±10% 10ns±3ns   |
| Rise time          | ≤ 1ns  |
| Output impedance   | 50Ω system (53.5Ω)   |
| EUT power capacity | Single phase AC240V / DC65V, 20A (L1/L2/PE/SG) AC50/60Hz±10% (model 220 / 420)<br>Single & 3-phase AC300V / DC65V, 50A (L1/L2/L3/PE/SG) AC50/60Hz±10% (model 250 / 450)<br>Single & 3-phase AC500V / DC250V, 50A (L1/L2/L3/PE/SG) AC50/60Hz±10% (model 250H/ 450H) |

## NEW impulse noise simulator

Noise Simulator(Semiconductor Relay type)

# INS-S220

As noted above, upon enforcement of "the Act on Preventing Environmental Pollution of Mercury", our current impulse noise simulators which utilize mercury relays (thereafter referred to as current model) will be ceased to sell and manufacture on May 2020. In response, new simulator development utilizing new relay is currently underway.

### ■ General Specification

|                  | INS-S220                | INS-440(current model)                   | INS-AX2-420(current model)                   |
|------------------|-------------------------|--|--|
| Relay mechanism  | Semiconductor Relay     | Mercury relay                            | Mercury relay                                |
| Output voltage   | 2kV (4kV model pending) | 4kV max                                  | 4kV max                                      |
| Rise time        | 3ns or less             | 1ns or less                              | 1ns or less                                  |
| Pulse repetition | 2ms~999ms±10%           | 16ms~999ms±10%                           | 16ms~999ms±10%                               |
| Pulse width      | 50ns ~ 1000ns           | 50,100,200,250,400ns combination thereof | 50,100,200,400,500,800, 1000ns±10%, 10ns±3ns |
| Output impedance | 50 ohm                  | 50 ohm                                   | 50 ohm                                       |



**Scheduled market launch: Sep. 2019 (as of Dec. 2018)**

Subject to change depending on future circumstances

### ■ Correlation between the NEW impulse simulator and current model

New impulse noise simulator specification is different from current model in terms of the output waveform (Rise time) due to the difference of relay mechanism. Therefore we expect that the test results between two simulators may not be correlational. There may be test results discrepancy where customer product (EUT) failure event is not reproduced under the same test condition. In order for you to keep enough transitional periods for the adoption of new impulse simulators, while you continue testing with the current model, we recommend you to consider updating your existing equipment to the latest model for longer service period.

\* Designs, appearances and specifications on the products are subject change without notice.