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**Re: Announcement of starting noise filter business  
and introducing products**

Dear customers:

This letter is announcing that COSEL CO., LTD. will start noise filter business and introduce 5 types of noise filter series, "NAC, NAM, NAP, TAC, SNA," as attached note. Please read it carefully.

Should you have any questions for this announcement, please feel free to contact us.

Sincerely yours,

Kuniaki Nagahara  
General manager of R&D 1 Dept.  
Cosel Co., Ltd.

Person in charge  
Toshio Watanabe  
Manager of R&D 1 Dept.  
Cosel Co., Ltd.

## 1. Background of noise filter development

Currently, as industrial equipment have been made small, low profile, short lengths, and light, noise emanated by the equipment itself and/or affecting from outside become trouble in the market. Especially, products exported to Europe must be complied with EMC to be certified with CE mark. In order to comply with EMC, a noise filter becomes the needed items for various applications.

In this circumstance, we support customers, using our power supply, in order to solve noise problems on their applications. We have various noise test equipment and the radio anechoic chamber and have accumulated noise measure techniques. However, even if we have noise measure techniques, we did not have noise filter to the market.

Noise measure experiences and knowledge through the power supply design and user support enable us to develop competitive noise filters and manufacture them. Furthermore, we anticipate synergic effect by offering a power supply and noise filter together.

## 2. Features

### (1) Selective leakage current

Cosel's noise filter enables users to select appropriate leakage current in order to meet leakage current requirement on their systems and comply with EMC. Current noise filters do not provide these various choices to users.

### (2) Work saving for wiring

Pushdown terminal enables users to connect with a crimping terminal without losing screws. Moreover, a slide cover provided on a terminal block prevent users from losing screws.

### (3) RoHS compliance

Our noise filters are complied with RoHS Directive.

### (4) Products (5 types are available)

NAC series: High attenuator EMI filter at low wave frequency (Single-phase AC input)

NAM series: Low leakage current EMI filter (Single-phase AC input)

NAP series: External pulse voltage high attenuator EMS filter (Single-phase AC input)

TAC series: High attenuator EMI filter at low wave frequency (Three-phase AC input)

SNA series: Attenuator for ripple noise

\*EMI = electro-magnetic interference, \*EMS = electro-magnetic susceptibility

Table 1: Product line-up

No	Part Number	Rated Voltage	Rated Current [A]	Size (W x H x D [mm])
1	NAC-06 NAM-06	Single-phase AC Input 250V	6	53 x 41 x 92
2	NAC-10 NAM-10		10	
3	NAC-16 NAM-16		16	
4	NAC-20 NAM-20		20	
5	NAC-30 NAM-30		30	
6	NAP-06	Single-phase AC Input 250V	6	53 x 41 x 92
7	NAC-10		10	
8	NAP-16		16	
9	NAP-20		20	
10	NAP-30		30	
11	TAC-06-683	Three-phase AC Input 500V	6	63 x 64 x 128
12	TAC-10-683		10	
13	TAC-20-683		20	
14	TAC-30-683		30	
15	SNA-01	DC Input +/- 50V	1	52 x 35 x 93
16	SNA-03		3	
17	SNA-06		6	

### 3. Targeted market

- (1) Counting machines such as coin exchanger
- (2) Manufacturing equipment with inverter, servo motor, and so on.  
Semiconductor equipment, Chip mounting machine
- (3) Medical equipment such as CT, MRI, and endoscopes
- (4) Measuring equipment such as a radio measurement instrument

### 4. Sales prospective of the noise filter business

700 million yen in three years. We will expand products line-up sequentially

### 5. Product view

