

COSEL

2020
2021

SHORT FORM CATALOG
POWER SUPPLIES / EMI FILTERS



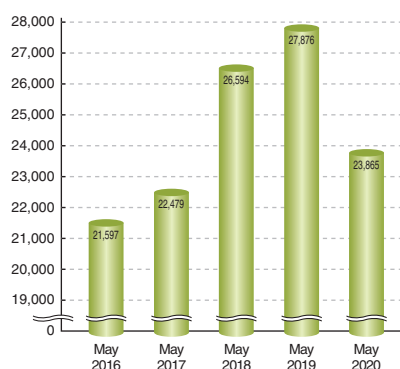
Company Guidance

- Established : July 26, 1969.
- Paid Capital : 2,055 Million Yen
- CEO : Masato Tanikawa
- Annual Sales : 23,865 Million Yen (As of May 2020)
(Consolidated)
- Employees : 685 (As of May 2020)
- Subsidiaries : Cosel U.S.A., Inc.
Cosel Europe GmbH
Cosel Asia Ltd.
Cosel (Shanghai) Electronics Co., Ltd.
Wuxi Cosel Electronics Co., Ltd.
Shanghai Cosel International Trading Co., Ltd.
Cosel Vietnam Co., Ltd.
Powerbox International AB

- History :
 - J u l . 1969 Established Elco Co., Ltd.
 - A p r . 1978 Introduced QC circle activities.
 - J u n . 1978 Became Pure-Power Supply Business-Play.
 - M a y . 1982 Introduced TQC activities (Now changed to TQM activities).
 - J u n . 1983 Introduced Hoshin Management (Business Goal Management) activities.
 - M a r . 1988 Introduced Toyota Production System activities.
 - M a r . 1989 Tateyama Factory completed.
 - A p r . 1990 Established Cosel U.S.A., Inc. (Former U. S. Elco Inc.) in San Jose, USA.
 - A p r . 1992 Changed company name to Cosel Co., Ltd. from Elco Co., Ltd.
 - J u n . 1993 Acquired ISO9001.
 - M a y 1995 Set a representative in Hong Kong, China.
 - M a y . 1996 Introduced TPM (Total Plant Maintenance) activities.
 - J u l . 1997 Established Cosel Europe GmbH in Frankfurt, Germany.
 - M a y . 1998 Established Cosel Asia Ltd. in Hong Kong, China.
 - J a n . 1999 Shares listed on the Second Sections of the Tokyo Stock Exchange and Nagoya Stock Exchange both.
 - Dec. 1999 Acquired ISO14001.
 - M a y . 2000 Shares listed on the First Section of the Tokyo Stock Exchange.
 - N o v . 2002 Established Cosel (Shanghai) Electronics Co., Ltd. in Shanghai, China.
 - M a y . 2005 Entering EMI filter Business.
 - F e b 2006 Successfully completed the RoHS Directive conformity.
 - N o v . 2011 Established Shanghai Cosel International Trading Co., Ltd. in Shanghai, China.
 - Dec 2011 Established Wuxi Cosel Electronics Co., Ltd. in Wuxi, China.
 - A u g . 2015 Established Cosel Vietnam Co., Ltd. in Ho Chi Minh City, Vietnam.
 - J u n . 2018 Acquired Powerbox International AB.
 - O c t . 2018 Began operations at R&D Center.

Data

Annual sales
(Consolidated)
(Unit: Million Yen)



Net profit/ loss before tax
(Consolidated)
(Unit: Million Yen)

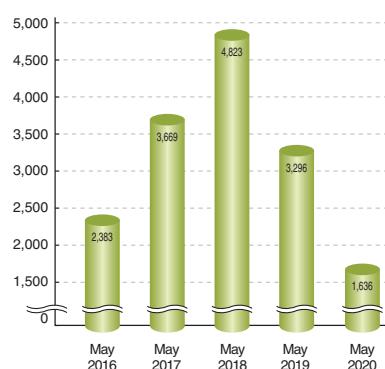




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| Input Voltage Range | Outputs | Series | Output Power [W] | | | | | | | | | | | | | | | | Released Year | Main Feature | Safety Standard · RoHS | |
|----------------------------|---------|--------|--------------------|----|----|----|-----|---------------|-----------------------------------|------------------------|-----|-----|-----|-----|-----|-----|--|--------------|---------------|--------------|---|--------------|
| | | | 10 | 20 | 40 | 60 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | | | | 1000 |
| 100VAC 200VAC 480VAC | Single | NEW 1 | PCA | | | | | | | | | | | | | | | | | '17 | Enclosed type power supplies for general purpose. | UL, CE, RoHS |
| | | | | | | | | | | | | | | | | | | | | '19 | | |
| | | | | | | | | | | | | | | | | | | | | '20 | | |
| | | | | | | | | | | | | | | | | | | | | '03 | Enclosed type power supplies for general purpose. | UL, CE, RoHS |
| | | | | | | | | | | | | | | | | | | | | '04 | | |
| | | | | | | | | | | | | | | | | | | | | '05 | | |
| | | | | | | | | | | | | | | | | | | | | '07 | Enclosed type power supplies for general purpose. Three-phase type. | UL, CE, RoHS |
| | | | | | | | | | | | | | | | | | | | | '14 | Low profile and enclosed type power supplies for general purpose. Basic function and economical type. | |
| | | | | | | | | | | | | | | | | | | | | '16 | Enclosed type power supplies for general purpose. | |
| | | | | | | | | | | | | | | | | | | | | '17 | | |
| | | | | | | | | | | | | | | | | '03 | Convection cooling. High output wattage and peak current function. | UL, CE, RoHS | | | | |
| | | | | | | | | | | | | | | | | '13 | Low profile front-end power supplies. High power density. | | UL, CE, RoHS | | | |
| | | | | | | | | | | | | | | | | '19 | Low profile front-end power supplies. High power density. | | | | | |
| | | | | | | | | | | | | | | | | '17 | Low profile front-end power supplies. Three-phase type. | | | | | |
| | | | | | | | | | | | | | | | | '18 | Low profile front-end power supplies. Three-phase four-wire type. | UL, CE, RoHS | | | | |
| | | | | | | | | | | | | | | | | '00 | High input voltage (187-528VAC), Peak current function. | | | | | |
| | | | | | | | | | | | | | | | | '01 | High input voltage (187-528VAC), Peak current function. | UL, CE, RoHS | | | | |
| | | | | | | | | | | | | | | | | '09 | Three-phase input. 10KW high wattage. 48VDC output front-end power supplies. | | | | | |
| | | | | | | | | | | | | | | | | '00 | Three-phase input. High wattage. Power factor corrected and 48VDC output front-end power supplies. | UL, CE, RoHS | | | | |
| | | | | | | | | | | | | | | | | '00 | Three-phase input. High wattage. Power factor corrected and 48VDC output front-end power supplies. | | | | | |
| | | | | | | | | | | | | | | | | '05 | 2 outputs of PBA series. | UL, CE, RoHS | | | | |
| | | | | | | | | | | | | | | | | '05 | 2 outputs of PBA series. | | | | | |
| | | | | | | | | | | | | | | | | '12 | Din rail type. Full function model. 2 types of interface (Block type · Euro type) | UL, CE, RoHS | | | | |
| | | | | | | | | | | | | | | | | '13 | | | | | | |
| | | | | | | | | | | | | | | | | '15 | Din rail type. Basic function model. Economical type. | UL, CE, RoHS | | | | |
| | | | | | | | | | | | | | | | | '15 | Din rail type. Basic function model. Economical type. | | | | | |
| Input Voltage Range | Outputs | Series | Output Current [A] | | | | | Released Year | Main Feature | Safety Standard · RoHS | | | | | | | | | | | | |
| | | | 20 | 40 | 60 | 80 | 100 | | | | | | | | | | | | | | | |
| 10-60VDC | 1 | KR | | | | | | '16 | Din rail type. Redundancy Module. | UL, CE, RoHS | | | | | | | | | | | | |
| 10-30VDC | | | | | | | | | | | | | | | | | | | | | | |

| Type | Configurable Type | Multiple | Single | Multiple | Single | Multiple | Single | Multiple | Input Voltage Range | Outputs | Series | Output Power [W] | Released Year | Main Feature | Safety Standard · RoHS | |
|-------------------|--------------------------|----------|--------|----------|--------|----------|--------|----------|----------------------------|---|--|--|--|---|--|-----------------|
| | | | | | | | | | 100VAC 200VAC 400VAC | 20 40 60 100 200 300 400 500 600 700 800 900 1k 2k 3k 4k | Released Year | Main Feature | Safety Standard · RoHS | | | |
| Configurable Type | Multiple | | | | | | | | NEW | 4 | AME | 300, 500 | '19 | Low profile (1U) type. Available to select 4-6 channels among many output · current modules. | UL, D, CE, RoHS | |
| | | | | | | | | | NEW | 6 | AME | 300, 500 | | | | |
| | | | | | | | | | | | 3 | RB | 200, 700, 1k | '19 | Open frame type 4X6 inches. Available to select 3 channels among many output · current modules. | UL, D, CE, RoHS |
| | | | | | | | | | | | 4 | | | | | |
| | | | | | | | | | | | 5 | ACE | 300, 500 | '01 | Available to select 4-6 channels among many output · current modules. | UL, CE, RoHS |
| | | | | | | | | | | | 6 | ACE | 900 | | | |
| | Open Frame/Enclosed Type | Single | | | | | | | | NEW | 1 | LHA | 200, 300, 500, 800 | '19 | Open frame type power supplies for general purpose. Succeeding series of LFA series. | UL, D, CE, RoHS |
| | | | | | | | | | | | 1 | LFP | 150, 200, 300 | '12 | Peak current function. Succeeding series of LEP series. | UL, D, CE, RoHS |
| | | | | | | | | | | | 1 | LEP | 100, 150, 200 | '13 | Peak current function. | UL, CE, RoHS |
| | | | | | | | | | | | 1 | LFA | 20, 40, 80, 100, 150, 200, 300, 400, 500, 1000, 1500 | '09 | Open frame type power supplies for general purpose. Succeeding series of LEA series. | UL, CE, RoHS |
| | | | | | | | | | | | 1 | LEA | 100, 150, 200, 300, 400, 500, 1000, 1500 | '10 | Open frame type power supplies for general purpose. | UL, CE, RoHS |
| | | | | | | | | | | | 1 | LDA | 20, 40, 80, 100, 150, 200, 300, 400, 500, 1000, 1500 | '99 | Open frame type power supplies for general purpose. | UL, CE, RoHS |
| | | | | | | | | | | 1 | LDA | 20, 40, 80, 100, 150, 200, 300, 400, 500, 1000, 1500 | '94 | Open frame type power supplies for general purpose. | UL, CE, RoHS | |
| | | | | | | | | | | 1 | LDA | 20, 40, 80, 100, 150, 200, 300, 400, 500, 1000, 1500 | '95 | Open frame type power supplies for general purpose. | UL, CE, RoHS | |
| | | | | | | | | | 1 | LGA | 100, 150, 200, 300, 400, 500, 1000, 1500 | '97 | Open frame type power supplies for general purpose. | UL, CE, RoHS | | |
| | | | | | | | | | | 1 | LGA | 100, 150, 200, 300, 400, 500, 1000, 1500 | '08 | 100VAC input open frame type power supplies for general purpose. | UL, CE, RoHS | |
| Multiple | | | | | | | | | | | 2 | LEB | 200, 300, 400 | '00 | 2 Outputs of LEA series. | UL, CE, RoHS |
| | | | | | | | | | | | 3 | LDC | 40, 80, 100 | '94 | 3 Outputs of LDA series. | UL, CE, RoHS |
| Medical Type | Single | | | | | | | | NEW | 1 | GMA | 300 | '17 | Open frame type 2X4 inches. For medical applications | UL, D, CE, RoHS | |
| | | | | | | | | | | 1 | GHA | 300, 500 | '13 | Open frame type 3X5 inches. Conduction cooling. For medical applications | UL, D, CE, RoHS | |
| | | | | | | | | | | | 1 | GHA | 500 | '15 | -SNF: Optional with FAN. | |
| | | | | | | | | | | | 1 | LMA | 100, 150, 200, 300 | '16 | | |
| | | | | | | | | | | 1 | PMA | 20, 40, 60, 80, 100 | '14 | Open frame type Peak current function. For medical applications. | UL, D, CE, RoHS | |
| Multiple | | | | | | | | | | 4 | | 200, 300, 400, 500, 600, 700, 800, 900, 1k, 2k, 3k, 4k, 5k, 6k, 7kover | '11 | Multiple output in large power with 1-4CH(ACE300F), 1-5CH(ACE450F,650F) 1-6CH(ACE900F) Harmonic attenuator Universal input voltage range. | UL, CE, RoHS | |

POL Type

Single

| Input Voltage Range | Outputs | Series | Output Current [A] | | | | | | | | | | Released Year | Main Feature | Safety Standard · RoHS |
|------------------------|---------|--------|--------------------|----|----|----|----|----|-----|-----|-----|-----|---------------|---|------------------------|
| | | | 6 | 12 | 20 | 30 | 40 | 60 | 100 | 120 | 150 | | | | |
| 3-14.4VDC | 1 | BRNS | ● | ● | ● | | | | | | | | '13 | Compact size · Wide input | UL, CE, RoHS |
| 4.5-14.0VDC NEW | 1 | BRFS | | | | ● | | ● | ● | | | | '13 | Compact size · Fast transient response | UL, CE, RoHS |
| | | | | | | | | | | | | '18 | | | |
| 4.5-14.0VDC NEW | 1 | BRDS | | | | | ● | ● | ● | | | | '17 | Compact size · Fast transient response, PMBus | UL, CE, RoHS |
| | | | | | | | | | | | | '18 | | | |

Bus Converter · Power Module Type

Single

| Input Voltage Range | Outputs | Series | Output Power [W] | | | | | | | | | | Released Year | Main Feature | Safety Standard · RoHS | |
|---------------------|---------|--------|------------------|----|-----|-----|-----|-----|-----|-----|------|------|---------------|---|------------------------------|--------------|
| | | | 40 | 80 | 100 | 150 | 200 | 300 | 400 | 500 | 1000 | 1500 | | | | |
| 3VDC | 1 | CHS | | | | ● | | | | | | | | '17 | 24VDC input, 1/16 brick size | UL, CE, RoHS |
| 12VDC | | | | | | | | | | | | | | '15 | 24VDC input, 1/8 brick size | |
| 24VDC | | | | | | | | | | | | | | '18 | 24VDC input, 1/4 brick size | |
| 48VDC | | | | ● | | | | | | | | | | '14 | 48VDC input, 1/32 brick size | |
| 110VDC | | | | | ● | | | | | | | | | '11 | 48VDC input, 1/16 brick size | |
| 280VDC | | | | | | ● | | | | | | | | '16 | 48VDC input, 1/16 brick size | |
| | | | | | | | ● | | | | | | | '11 | 48VDC input, 1/8 brick size | |
| | | | | | | | | ● | | | | | | '13 | 48VDC input, 1/8 brick size | |
| | | | | | | | | | ● | | | | | '17 | 48VDC input, 1/8 brick size | |
| | | | | | | | | | | ● | | | | '13 | 48VDC input, 1/4 brick size | |
| | 1 | CES | | ● | ● | | | | | | | | '03 | 24 · 48VDC input, 1/8 brick size | UL, CE, RoHS | |
| | 1 | CQS | | | | ● | | | | | | | '03 | 24 · 48VDC input, 1/4 brick size | UL, CE, RoHS | |
| | 1 | CQHS | | | | | | ● | | | | | '14 | 48VDC input, 1/8 brick size | UL, CE, RoHS | |
| | | | | | | | | | ● | | | | '13 | 48VDC input, 1/4 brick size | | |
| | 1 | CBS | ● | ● | | ● | | | | ● | ● | | '01 | 24 · 48VDC input, half brick size | UL, CE, RoHS | |
| | 1 | CDS | | | | | | | | ● | | | '00 | 24 · 48VDC input, full brick size | UL, CE, RoHS | |
| | 1 | DHS | ● | ● | ● | | ● | | | | | | '10 | 110VDC input, small brick size | UL, CE, RoHS | |
| | | | ● | ● | | | | | | | | | '09 | 280VDC input, small brick size | | |
| | 1 | DBS | | | ● | ● | | ● | | ● | | | '03 | 110VDC input, full function and full brick size | UL, CE, RoHS | |
| | | | | | | | | | ● | ● | | | '00 | 280VDC input, full function and full brick size | | |
| 100VAC | 1 | TUXS | | | | ● | | | | | | | '15 | 100/200VAC input. High efficiency. Complied with harmonic regulations. Isolated type. | UL, CE, RoHS | |
| 200VAC | | | | | | | ● | | | | | | | | | '17 |
| 100VAC | 1 | TUNS | | ● | ● | | | | | | | | '12 | 100/200VAC input. Complied with harmonic regulations. Isolated type. Brick size | UL, CE, RoHS | |
| 200VAC | | | | | | | | ● | | | | | '14 | | | |
| 277VAC | | | | | | | | | | | ● | | | | | '15 |
| | | | | | | | | | | | | ● | '20 | 100/200/277VAC input, full function Complied with harmonic regulations | UL, CE, RoHS | |
| | 1 | DPG | | | | | | | | ● | ● | | '10 | 100/200VAC input. Compact size. Complied with harmonic regulations. | UL, CE, RoHS | |
| | 1 | DPF | | | | | | | | | | ● | '00 | 100/200VAC input. High wattage. Complied with harmonic regulations. | UL, CE, RoHS | |

PCB Mount Type

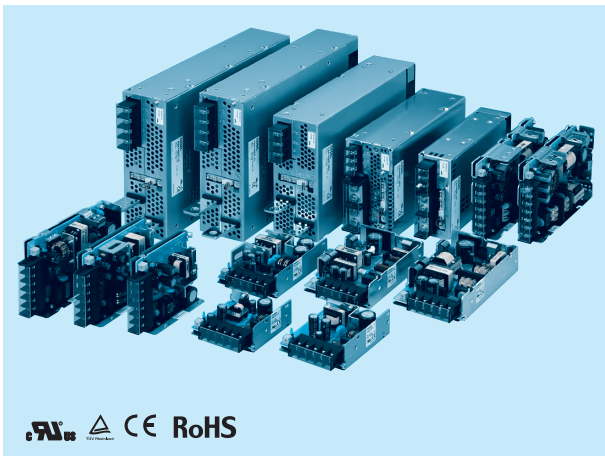
Single

Multiple

| Input Voltage Range | Outputs | Series | Output Power [W] | Released Year | Main Feature | Safety Standard · RoHS |
|---|---------|----------|--------------------------------|-------------------|---|------------------------------|
| 5VDC 12VDC 24VDC 48VDC 110VDC 280VDC | 1 | MGS | 1.5 3 5 6 10 15 20 25 30 40 80 | '10 '16 | Global standard DC/DC converter for general purpose. | UL, CE, RoHS UL, CE, RoHS |
| NEW | 1 | MGFS | 1.5 3 5 6 10 15 20 25 30 40 80 | '10 '17 '19 | Wide-input global standard DC/DC converter for general purpose. | UL, CE, RoHS UL, CE, RoHS |
| NEW | 1 | MGXS | 1.5 3 5 6 10 15 20 25 30 40 80 | '18 | Wide-input (6-60VDC) global standard DC/DC converter. | UL, CE, RoHS |
| | 1 | STMG | 1.5 3 5 6 10 15 20 25 30 40 80 | '13 | Value-added type of MGFS series | CE, RoHS |
| NEW | 1 | MHFS | 1.5 3 5 6 10 15 20 25 30 40 80 | '20 | DC/DC Converters with 4.2kVDC Isolation | UL, CE, RoHS |
| | 1 | SUS/SUCS | 1.5 3 5 6 10 15 20 25 30 40 80 | '04 | Compact and thin DC/DC Converter for general purpose | UL, CE, RoHS |
| | 1 | SUTS | 1.5 3 5 6 10 15 20 25 30 40 80 | '09 | Vertical type of SUCS series | UL, CE, RoHS |
| | 1 | SFS | 1.5 3 5 6 10 15 20 25 30 40 80 | '05 '03 '05 | Thin SMD/DIP type DC/DC converter | UL, CE, RoHS |
| | 1 | SFCS | 1.5 3 5 6 10 15 20 25 30 40 80 | '07 | SFS series with metal cover | UL, CE, RoHS |
| | 1 | SFLS | 1.5 3 5 6 10 15 20 25 30 40 80 | '07 | Thin SMD type DC/DC converter | UL, CE, RoHS |
| | 1 | ZUS | 1.5 3 5 6 10 15 20 25 30 40 80 | '96 | DC/DC converter for general purpose | UL, CE, RoHS |
| | 1 | ZTS | 1.5 3 5 6 10 15 20 25 30 40 80 | '98 | Vertical type of ZUS series | UL, RoHS |
| 100VAC 200VAC 270VAC | 1 | TUHS | 1.5 3 5 6 10 15 20 25 30 40 80 | '14 '15 | 100/200VAC input, compact size | UL, CE, RoHS |
| | 1 | VAF | 1.5 3 5 6 10 15 20 25 30 40 80 | '99 | 100/200VAC input | UL, CE, RoHS |
| | 1 | VAA | 1.5 3 5 6 10 15 20 25 30 40 80 | '98 | 100VAC input | UL, RoHS |
| 5VDC 12VDC 24VDC 48VDC 110VDC 280VDC | 2 | MGW | 1.5 3 5 6 10 15 20 25 30 40 80 | '10 '16 | Global standard DC/DC converter for general purpose. | UL, CE, RoHS UL, CE, RoHS |
| NEW | 2 | MGFW | 1.5 3 5 6 10 15 20 25 30 40 80 | '10 '17 '19 | Wide-input global standard DC/DC converter for general purpose. | UL, CE, RoHS UL, CE, RoHS |
| NEW | 2 | MGXW | 1.5 3 5 6 10 15 20 25 30 40 80 | '18 | Wide-input (6-60VDC) global standard DC/DC converter. | UL, CE, RoHS |
| | 2 | STMG | 1.5 3 5 6 10 15 20 25 30 40 80 | '13 | Value-added type of MGFW series | CE, RoHS |
| NEW | 2 | MHFW | 1.5 3 5 6 10 15 20 25 30 40 80 | '20 | DC/DC Converters with DC4.2kVDC Isolation | UL, CE, RoHS |
| | 2 | SUW/SUCW | 1.5 3 5 6 10 15 20 25 30 40 80 | '04 | Compact and thin DC/DC Converter for general purpose. | UL, CE, RoHS |
| | 2 | SUTW | 1.5 3 5 6 10 15 20 25 30 40 80 | '09 | Vertical type of SUCW series | UL, CE, RoHS |
| | 2 | ZUW | 1.5 3 5 6 10 15 20 25 30 40 80 | '96 | DC/DC Converter for general purpose. | UL, CE, RoHS |
| | 2 | ZTW | 1.5 3 5 6 10 15 20 25 30 40 80 | '98 | Vertical type of ZUW series | UL, RoHS |

COSEL AC-DC Power Supplies Enclosed Type

PBA, PBW-Series



UL CE RoHS



Feature

Universal input (85 - 264VAC) : PBA1500T(170 - 264VAC 3φ)
 Parallel and parallel redundancy operations
 (PBA300F - 1500F, PBA1500T)
 Fan alarm, Remote ON/OFF and other functions
 (PBA300F - 1500F, PBA1500T)

Safety agency approvals

UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178
 UL508 (PBA10F-30F: 5, 12, 24V, PBA50F-150F: 24V With
 Cover) (PBA1500F, PBA1500T: External EMI filter is required.)
 Complies with DEN-AN
 EN62368-1 pending

EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B,
 VCCI-B

CE marking

Low Voltage Directive
 RoHS Directive

EMS Compliance : EN61204-3, EN61000-6-2

EN61000-4-2
 EN61000-4-3
 EN61000-4-4
 EN61000-4-5
 EN61000-4-6
 EN61000-4-8
 EN61000-4-11

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|---------|----------------------------------|--------------------|--------------------|----------|-------------------------------|------------|
| | | | ACIN100V | ACIN200V | | |
| PBA10F | 85-264VAC 1φ or 110-370VDC | 5 | 2 | | 31·78·68 (1.22·3.07·2.68) | 150 |
| | | 12 | 0.9 | | | |
| | | 24 | 0.5 | | | |
| PBA15F | 85-264VAC 1φ or 110-370VDC | 3.3 | 3 | | 31·78·85 (1.22·3.07·3.35) | 200 |
| | | 5 | 3 | | | |
| | | 9 | 1.7 | | | |
| | | 12 | 1.3 | | | |
| | | 15 | 1 | | | |
| | | 24 | 0.7 | | | |
| | | 48 | 0.35 | | | |
| PBA30F | 85-264VAC 1φ or 110-370VDC | 3.3 | 6 | | 31·78·103 (1.22·3.07·4.06) | 270 |
| | | 5 | 6 | | | |
| | | 9 | 3.4 | | | |
| | | 12 | 2.5 | | | |
| | | 15 | 2 | | | |
| | | 24 | 1.3 | | | |
| | | 48 | 0.65 | | | |
| PBA50F | 85-264VAC 1φ or 120-370VDC | 3.3 | 10 | | 31·82·120 (1.22·3.23·4.72) | 280 |
| | | 5 | 10 | | | |
| | | 9 | 5.6 | | | |
| | | 12 | 4.3 | | | |
| | | 15 | 3.5 | | | |
| | | 24 | 2.2 | | | |
| | | 36 | 1.4 | | | |
| 48 | 1.1 | | | | | |
| PBA75F | 85-264VAC 1φ or 120-370VDC | 3.3 | 15 | | 32·82·135 (1.26·3.23·5.31) | 350 |
| | | 5 | 15 | | | |
| | | 9 | 8.4 | | | |
| | | 12 | 6.3 | | | |
| | | 15 | 5 | | | |
| | | 24 | 3.2 | | | |
| | | 36 | 2.1 | | | |
| 48 | 1.6 | | | | | |
| PBA100F | 85-264VAC 1φ or 120-370VDC | 3.3 | 20 | | 32·93·147 (1.26·3.66·5.79) | 440 |
| | | 5 | 20 | | | |
| | | 9 | 10.5 | | | |
| | | 12 | 8.5 | | | |
| | | 15 | 7 | | | |
| | | 24 | 4.5 | | | |
| | | 36 | 2.8 | | | |
| 48 | 2.1 | | | | | |
| PBA150F | 85-264VAC 1φ or 120-370VDC | 3.3 | 30 | | 34·93·168 (1.34·3.66·6.61) | 560 |
| | | 5 | 30 | | | |
| | | 9 | 16.7 | | | |
| | | 12 | 13 | | | |
| | | 15 | 10 | | | |
| | | 24 | 6.5 | | | |
| | | 36 | 4.3 | | | |
| 48 | 3.3 | | | | | |

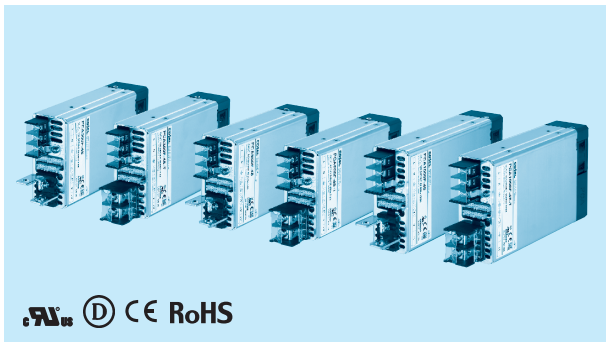
| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W·H·D [mm] (inches) | WEIGHT [kg] |
|----------|----------------------------------|--------------------|--------------------|-----------------------|--------------------------------|-------------|
| | | | ACIN100V | ACIN200V | | |
| PBA300F | 85-264VAC 1φ or 120-350VDC | 3.3 | 60 | 60 | 102·42·170 (4.02·1.65·6.69) | 1.0 |
| | | 5 | 60 | 60 | | |
| | | 7.5 | 40 | 40 | | |
| | | 12 | 27 | 27 | | |
| | | 15 | 22 | 22 | | |
| | | 24 | 14 | 14(16.5) [*] | | |
| | | 36 | 9 | 9 | | |
| | | 48 | 7 | 7 | | |
| PBA600F | 85-264VAC 1φ or 120-350VDC | 3.3 | 120 | 120 | 120·61·190 (4.72·2.4·7.48) | 1.6 |
| | | 5 | 120 | 120 | | |
| | | 7.5 | 80 | 80 | | |
| | | 12 | 53 | 53 | | |
| | | 15 | 43 | 43 | | |
| | | 24 | 27 | 27(31) [*] | | |
| | | 36 | 18 | 18 | | |
| 48 | 13 | 13 | | | | |
| PBA1000F | 85-264VAC 1φ or 120-350VDC | 3.3 | 200 | 200 | 150·61·240 (5.91·2.4·9.45) | 2.2 |
| | | 5 | 200 | 200 | | |
| | | 7.5 | 134 | 134 | | |
| | | 12 | 88 | 88 | | |
| | | 15 | 70 | 70 | | |
| | | 24 | 44 | 44(51) [*] | | |
| | | 36 | 29 | 29 | | |
| 48 | 22 | 22 | | | | |
| PBA1500F | 85-264VAC 1φ or 120-370VDC | 3.3 | 300 | 300 | 178·61·268 (7.01·2.4·10.55) | 3.4 |
| | | 5 | 300 | 300 | | |
| | | 7.5 | 200 | 200 | | |
| | | 12 | 125 | 125 | | |
| | | 15 | 100 | 100 | | |
| | | 24 | 65 | 70(105) [*] | | |
| | | 36 | 42 | 47(70) [*] | | |
| 48 | 32 | 35 | | | | |
| PBA1500T | 170-264VAC 3φ | 5 | - | 300 | 178·61·268 (7.01·2.4·10.55) | 3.4 |
| | | 12 | - | 125 | | |
| | | 24 | - | 70(105) [*] | | |
| | | 48 | - | 35 | | |

*Peak current.

| MODEL | INPUT VOLTAGE | MAX OUTPUT WATTAGE [W] | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W · H · D [mm] (inches) | WEIGHT [g] |
|--------|----------------------------------|------------------------|--------------------|--------------------|----------|-----------------------------------|------------|
| | | | | CURRENT1 | CURRENT2 | | |
| PBW15F | 85-264VAC 1φ or 110-370VDC | 16.8 | ±12 (+24) | 0.7 | 1.4 | 31·78·85 (1.22·3.07·3.35) | 200 |
| | | 15.0 | ±15 (+30) | 0.5 | 1.0 | | |
| PBW30F | 85-264VAC 1φ or 110-370VDC | 15.0 | ±5 (+10) | 1.5 | 2.0 | 31·78·103 (1.22·3.07·4.06) | 270 |
| | | 31.2 | ±12 (+24) | 1.3 | 1.7 | | |
| | | 30.0 | ±15 (+30) | 1.0 | 1.4 | | |
| PBW50F | 85-264VAC 1φ or 120-370VDC | 30.0 | ±5 (+10) | 3.0 | 4.0 | 31·82·120 (1.22·3.23·4.72) | 280 |
| | | 50.4 | ±12 (+24) | 2.1 | 2.7 | | |
| | | 51.0 | ±15 (+30) | 1.7 | 2.4 | | |

* The sum of +power and -power must be less than output power. For details, please see Cosel website. (<https://en.cosel.co.jp>).

COSEL AC-DC Power Supplies Enclosed Type
PCA-Series



RoHS CE RoHS

PCA



Feature

- Low profile (41mm, 1.61 inches = Meets 1U height)
- Universal input (85 - 264VAC)
- Operating input voltage: 88-370VAC (Excl. PCA1000F and PCA1500F.)
- For medical applications (ANSI/AAMI ES60601-1, EN60601-1 3rd, IEC60601-1-2 4th Ed.)
- 2MOPP
- AUX output 12V 0.1A (Voltage adjustable range 5 - 12V)
- Constant current function
- Output voltage can be adjusted to approximately 0V
- Many alarm functions
- Parallel and N+1 parallel redundancy operations
- Monitoring function by communication.

Safety agency approvals

- UL62368-1, C-UL (CSA62368-1), EN62368-1, ANSI/AAMI EN60601-1, EN60601-1 3rd, IEC60601-1-2 4th
- Complies with DEN-AN

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W · H · D [mm] (inches) | WEIGHT [kg] |
|----------|---------------------------------|---------------------------------|-----------------------------------|-----------------------------------|-------------|
| | | | | | |
| PCA600F | 85-264VAC 1φ or 88-370VDC | 5 12 15 24 32 48 | 120 53 43 27 20 13 | 89·41·152 (3.50·1.61·5.98) | 0.84 |
| PCA1000F | 85-264VAC 1φ | 5 12 15 24 32 48 | 200 88 70 44 33 22 | 102·41·178 (4.02·1.61·7.01) | 1.2 |

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W · H · D [mm] (inches) | WEIGHT [kg] |
|----------|---------------|---------------------------------|-------------------------------------|-------------------------------------|-----------------------------------|-------------|
| | | | 100VACin | 230VACin | | |
| PCA1500F | 85-264VAC 1φ | 5 12 15 24 32 48 | 300 125 100 65 47 32 | 300 125 100 70 52 35 | 140·41·203 (5.51·1.61·7.99) | 1.7 |

*Input derating is required except PCA300F

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

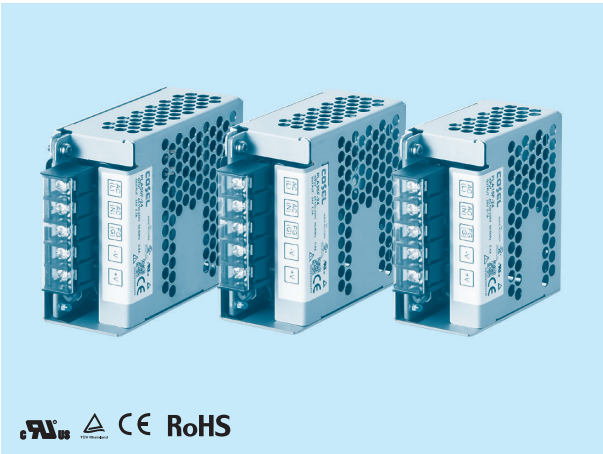
- Complies with FCC-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B (PCA1000F and PCA1500F : External EMI filter is required to meet Class B. Only PCA1000F and PCA1500F : Class A)

EMS Compliance

- EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

COSEL AC-DC Power Supplies Enclosed Type

PLA-Series



PLA



Feature

- Low profile
- Wide operating ambient temperature (-20°C to +70°C, Derating is required)
- Harmonic attenuator (Complies with IEC61000-3-2 class A)
- Universal input (85 - 264VAC, Derating is required)
- Low power consumption at no load

Safety agency approvals

- UL60950-1, C-UL (CSA60950-1), EN60950-1, EN50178
- UL508 (Except option -J) approved
- Complies with DEN-AN
- EN62368-1 pending

CE marking

- Low Voltage Directive
- RoHS Directive

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W · H · D [mm] (inches) | WEIGHT [kg] |
|--------|------------------|--------------------|----------------------|--------------|-----------------------------------|-------------|
| | | | 85-115VACin | 115-264VACin | | |
| PLA15F | 85-264VAC 1 φ | 5 | Derating is required | 3 | 38·80·73 (1.50·3.15·2.87) | 0.25 |
| | | 12 | | 1.3 | | |
| | | 15 | | 1 | | |
| | | 24 | | 0.7 | | |
| PLA30F | 85-264VAC 1 φ | 5 | Derating is required | 6 | 38·80·88 (1.50·3.15·3.46) | 0.33 |
| | | 12 | | 2.5 | | |
| | | 15 | | 2 | | |
| | | 24 | | 1.3 | | |
| PLA50F | 85-264VAC 1 φ | 5 | Derating is required | 8 | 38·80·99 (1.50·3.15·3.90) | 0.4 |
| | | 12 | | 4.3 | | |
| | | 15 | | 3.5 | | |
| | | 24 | | 2.2 | | |

* For further information, please see Cosel website. (<https://en.cosel.co.jp>)

EMI

- Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

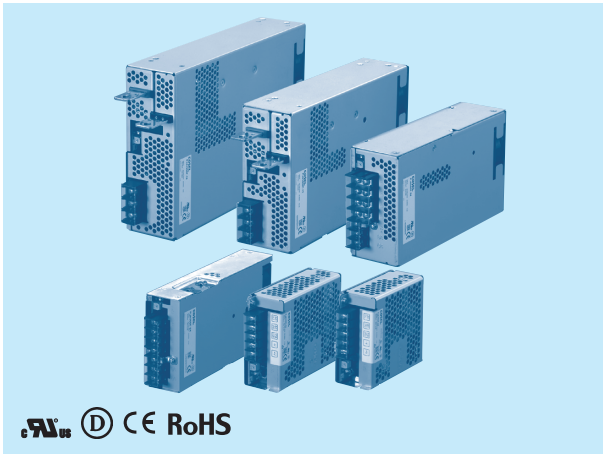
EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Enclosed Type

PJA-Series



PJA



Feature

- Low profile
- Wide operating ambient temperature (-20°C to +70°C, Derating is required)
- Harmonic attenuator (Complies with IEC61000-3-2 class A)
- Universal input (85 - 264VAC, Derating is required)
- Low power consumption at no load
- Complies with SEMI F-47

Safety agency approvals

- UL62368-1, C-UL (CSA62368-1), EN62368-1,
- UL508 (PJA100F and PJA150F, Except option -J) approved
- Complies with DEN-AN

CE marking

- Low Voltage Directive
- RoHS Directive

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W · H · D [mm] (inches) | WEIGHT [kg] |
|----------|------------------|--------------------|----------------------|--------------|-----------------------------------|-------------|
| | | | 85-115VACin | 115-264VACin | | |
| PJA100F | 85-264VAC 1 φ | 12 | Derating is required | 8.4 | 41·97·109 (1.61·3.82·4.29) | 0.5 |
| | | 15 | | 6.7 | | |
| | | 24 | | 4.3 | | |
| | | 36 | | 2.8 | | |
| | | 48 | | 2.1 | | |
| PJA150F | 85-264VAC 1 φ | 12 | Derating is required | 12.5 | 41·97·129 (1.61·3.82·5.08) | 0.6 |
| | | 15 | | 10 | | |
| | | 24 | | 6.4 | | |
| | | 36 | | 4.2 | | |
| | | 48 | | 3.2 | | |
| PJA300F | 85-264VAC 1 φ | 5 | Derating is required | 50 | 102·41·190 (4.02·1.61·7.48) | 1.0 |
| | | 12 | | 25 | | |
| | | 15 | | 20 | | |
| | | 24 | | 12.5 | | |
| | | 36 | | 8.4 | | |
| PJA600F | 85-264VAC 1 φ | 5 | Derating is required | 100 | 120·61·215 (4.72·2.40·8.46) | 2.0 |
| | | 12 | | 50 | | |
| | | 15 | | 40 | | |
| | | 24 | | 25 | | |
| | | 36 | | 16.7 | | |
| PJA1000F | 85-264VAC 1 φ | 12 | Derating is required | 84 | 150·61·240 (5.91·2.40·9.45) | 2.8 |
| | | 15 | | 67 | | |
| | | 24 | | 42 | | |
| | | 36 | | 28 | | |
| | | 48 | | 21 | | |
| PJA1500F | 85-264VAC 1 φ | 12 | Derating is required | 125 | 178·61·268 (7.01·2.40·10.55) | 3.5 |
| | | 15 | | 100 | | |
| | | 24 | | 64 | | |
| | | 36 | | 42 | | |
| | | 48 | | 32 | | |

*For further information, please see Cosel website. (<https://en.cosel.co.jp>).

EMI

- Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B
- (PJA1500F: External EMI filter is required to meet Class B.
- Only PJA1500F: Class A)

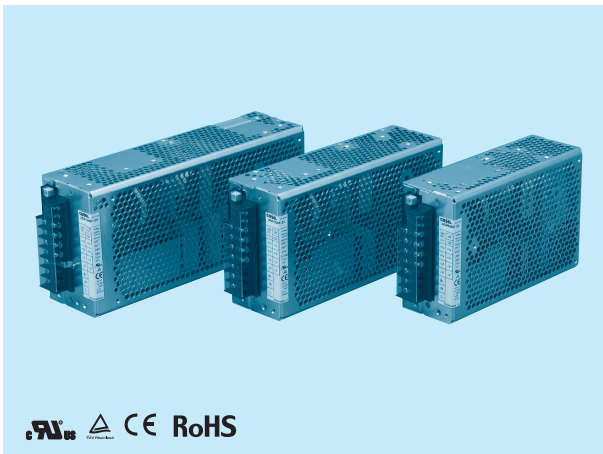
EMS Compliance : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Enclosed Type

ADA-Series



| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W·H·D [mm] (inches) | WEIGHT [kg] | |
|----------|----------------------|--------------------|--------------------|--------------|-------------------------------|------------------------------|-----|
| | | | 100VACin | 200VACin | | | |
| ADA600F | 85 -264VAC 1 φ | 24 | Convection | 14 (25)* | 15 (31)* | 65·127·195 (2.56·5·7.68) | 1.5 |
| | | | Forced air | 21 (25)* | 25 (31)* | | |
| | 30 | Convection | 11 (20)* | 12 (24.5)* | | | |
| | | Forced air | 16.5 (20)* | 20 (24.5)* | | | |
| | 36 | Convection | 9 (16.5)* | 10 (20.5)* | | | |
| | | Forced air | 14 (16.5)* | 16.5 (20.5)* | | | |
| | 48 | Convection | 6.5 (12.5)* | 7 (15.5)* | | | |
| | | Forced air | 10.5 (12.5)* | 12.5 (15.5)* | | | |
| ADA750F | 85 -264VAC 1 φ | 24 | Convection | 17 (42)* | 19 (63)* | 70·127·230 (2.76·5·9.06) | 1.9 |
| | | | Forced air | 25 (42)* | 31.5 (63)* | | |
| | 30 | Convection | 13.5 (33.5)* | 15 (50)* | | | |
| | | Forced air | 20 (33.5)* | 24.5 (50)* | | | |
| | 36 | Convection | 11 (28)* | 12.5 (42)* | | | |
| | | Forced air | 16.5 (28)* | 20.5 (42)* | | | |
| | 48 | Convection | 8 (21)* | 9 (31.5)* | | | |
| | | Forced air | 12.5 (21)* | 15.5 (31.5)* | | | |
| ADA1000F | 85 -264VAC 1 φ | 24 | Convection | 21 (63)* | 25 (83)* | 75·127·280 (2.95·5·11.02) | 2.5 |
| | | | Forced air | 33 (63)* | 42 (83)* | | |
| | 30 | Convection | 16.5 (50)* | 20 (66)* | | | |
| | | Forced air | 26 (50)* | 33.5 (66)* | | | |
| | 36 | Convection | 14 (42)* | 16.5 (55)* | | | |
| | | Forced air | 22 (42)* | 28 (55)* | | | |
| | 48 | Convection | 10.5 (31.5)* | 11.5 (41.5)* | | | |
| | | Forced air | 16.5 (31.5)* | 21 (41.5)* | | | |

*:Peak current.

Feature

- Peak power
- Fan optional
- Parallel operation/master-slave operation/N+1 redundant (Option)
- Optional : remote ON/OFF, alarm functions
- Current monitor
- DIN rail (35mm) optional

Safety agency approvals

- UL60950-1, EN62368-1, C-UL(CSA60950-1) recognized, TÜV approved
- Complies with DEN-AN

EMI

- Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B

Optional parts

- Harness
- Fan unit
- Attachment

CE marking

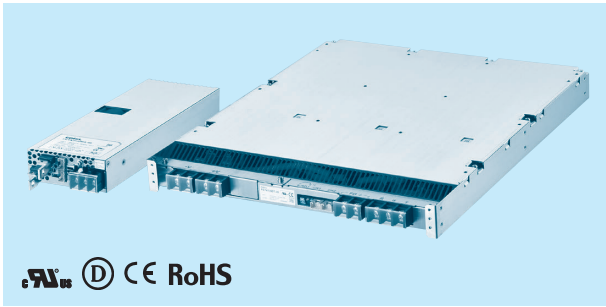
- Low Voltage Directive
- RoHS Directive

EMS Compliance : EN61204-3, EN61000-6-2

- EN55022-B
- EN61000-3-2
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Enclosed Type
FETA-Series



FETA



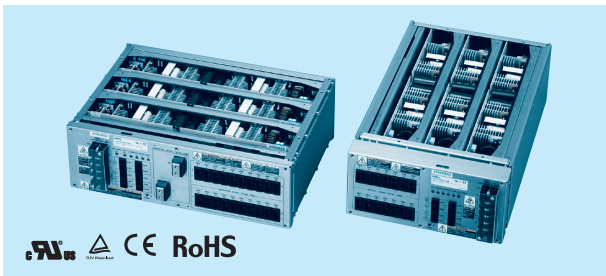
Feature

- High power density (2.09W/cm³ FETA3000BA-48)
- Low profile (Meets 1U height)
- High efficiency (93.0%typ FETA3000BA-48, 230VACin, 50% load)
- Harmonic attenuator (Complies with IEC61000-3-2 class A: FETA2500BA, FETA3000BA, FETA7000ST, Complies with IEC61000-3-12: FETA7000T)
- Complies with SEMI F47
- Parallel and parallel redundancy operations
- Alarm signals, Remote ON / OFF and other functions

Safety agency approvals

UL60950-1, C-UL (CSA60950-1), EN60950-1, UL62368-1, C-UL (CSA62368-1), EN62368-1

COSEL AC-DC Power Supplies Enclosed Type
SC-Series



SC



Feature

- High power, AC-DC front end power supply
- Three-phase input (160 - 264VAC 3 φ)
- High efficiency (90%), high power factor (0.99)
- Complies with SEMI F47
- Wide adjustable output voltage range (approximately 0 to 52.8V) (Option)
- Constant current function (Needs additional external components) (Option)
- Parallel and parallel redundancy operations (SCHA1000T)
- System ON / OFF (Remote ON / OFF)
- Alarm functions
- Output voltage monitor
- Parallel control (Start in / out)
- Remote signal ON / OFF

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W · H · D [mm] (inches) | WEIGHT [kg] |
|------------|-------------------|--------------------|----------------------|--------------|-----------------------------------|-------------|
| | | | 170-180VACin | 180-264VACin | | |
| FETA2500BA | 170-264VAC 1 φ | 36 | Derating is required | 55 | 102·41·340 (4.02·1.61·13.39) | 2.3 |
| FETA3000BA | | 48 | | 52 | | |
| FETA7000T | 170-264VAC 3 φ | 48 | | 148.2 | | |
| | | 144 | 52 | | | |

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W · H · D [mm] (inches) | WEIGHT [kg] |
|------------|--------------------------|--------------------|----------------------|--------------|-----------------------------------|-------------|
| | | | 300-320VACin | 320-480VACin | | |
| FETA7000ST | 300-480VAC 3 φ 4-Wire | 48 | Derating is required | 148.2 | 388·43·475 (15.28·1.69·18.70) | 11 |
| | | 144 | | 52 | | |

CE marking

Low Voltage Directive
 RoHS Directive

EMI

Complies with FCC Part15-A, CISPR32-A, EN55011-A, EN55032-A, VCCI-A (FETA7000ST External EMI filter is required.)

EMS Compliant : EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

3-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | OUTPUT WATTAGE [W] | CASE SIZE W · H · D [mm] (inches) | WEIGHT [kg] |
|-----------|-------------------|--------------------|--------------------|--------------------|-------------------------------------|-------------|
| SCHA1000T | 160-264VAC 3 φ | 48 | 208 | 9,984 | 495·150·320 (18.07·5.91·12.6) | 23 |
| SCDA1000T | 160-264VAC 3 φ | 48 | 208 | 9,984 | 310.5·150·510 (12.22·5.91·20.08) | 20 |

Safety agency approvals

UL60950-1, C-UL, EN60950-1
 EN62368-1 pending

CE marking

Low Voltage Directive
 RoHS Directive

EMI

Complies with EN55011 Group1-A, EN55022-A, CISPR22-A, FCC Part15 classA

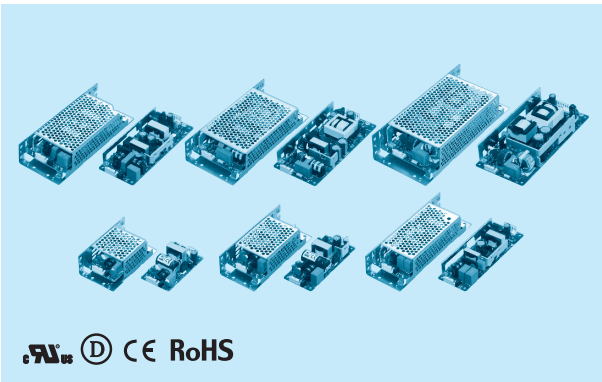
EMS Compliance: EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

3-year warranty

COSEL AC-DC Power Supplies Open Frame Type

LHA-Series



Feature

- EN62477-1 (OVC III) : LHA150F, 300F
- Low profile
- Compact open frame type
- High efficiency
- Low noise
- Harmonic attenuator (Complies with IEC61000-3-2)
- Power factor correction (LHA75F-300F)
- Universal input (85-264VAC)
- Inrush current, overcurrent and overvoltage protection

Safety agency approvals

- UL62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), EN62368-1
- EN62477-1 (OVC III) : LHA150F, 300F
- Complies with DEN-AN

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

- Complies with FCC-B, CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B

EMS Compliance: EN61204-3, EN61000-6-2

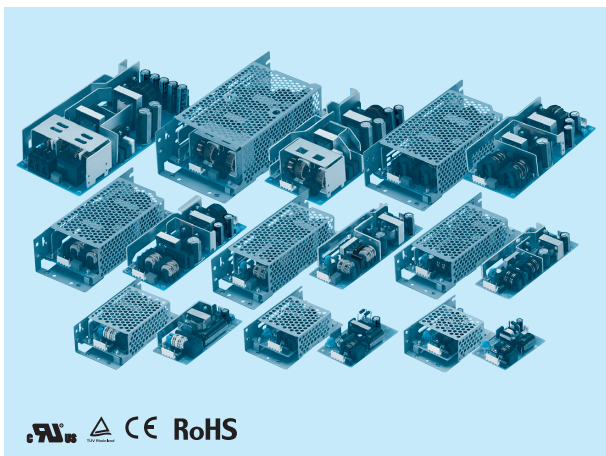
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W · H · D [mm] (inches) | WEIGHT [g] |
|---------|------------------|--------------------|--------------------|-----------------------------------|------------|
| LHA30F | 85-264VAC 1 φ | 3.3 | 6 | 50·27·87.5 (1.97·1.07·3.44) | 100 |
| | | 5 | 6 | | |
| | | 12 | 2.5 | | |
| | | 15 | 2 | | |
| | | 24 | 1.3 | | |
| LHA50F | 85-264VAC 1 φ | 3.3 | 8 | 50·27·112 (1.97·1.07·4.41) | 140 |
| | | 5 | 8 | | |
| | | 12 | 4.3 | | |
| | | 15 | 3.5 | | |
| | | 24 | 2.1 | | |
| | | 36 | 1.4 | | |
| LHA75F | 85-264VAC 1 φ | 3.3 | 12 | 50·27·150 (1.97·1.07·5.91) | 190 |
| | | 5 | 12 | | |
| | | 12 | 6.3 | | |
| | | 15 | 5 | | |
| | | 24 | 3.2 | | |
| | | 36 | 2.1 | | |
| LHA100F | 85-264VAC 1 φ | 48 | 1.6 | 62·27·155 (2.44·1.07·6.10) | 250 |
| | | 5 | 15 | | |
| | | 12 | 8.5 | | |
| | | 15 | 6.7 | | |
| | | 24 | 4.3 | | |
| LHA150F | 85-264VAC 1 φ | 36 | 2.8 | 75·27·160 (2.95·1.07·6.30) | 320 |
| | | 48 | 2.1 | | |
| | | 12 | 12.5 | | |
| | | 24 | 6.3 | | |
| LHA300F | 85-264VAC 1 φ | 36 | 4.2 | 84·37·180 (3.31·1.46·7.09) | 580 |
| | | 48 | 3.2 | | |
| | | 12 | 25 | | |
| | | 24 | 12.5 | | |
| | | 48 | 6.3 | | |

COSEL AC-DC Power Supplies Open Frame Type

LFA-Series



UL CE RoHS

LFA



Feature

- Universal input (85-264VAC)
- Power factor correction (LFA50F-300F)
- Low standby power consumption
(Normal: 10, 15W Optional: 100, 150, 240, 300W)

Safety agency approvals

- UL60950-1, C-UL (CSA60950-1), EN60950-1, EN62368-1, EN50178, EN60065
- Complies with DEN-AN

EMI

- Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

CE marking

- Low Voltage Directive
- RoHS Directive

EMS Compliance: EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

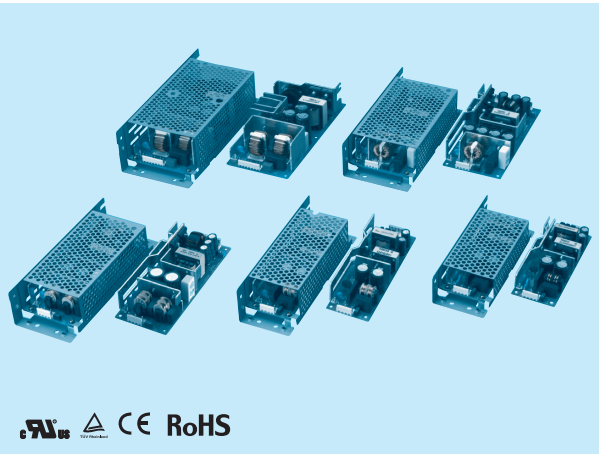
5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W · H · D [mm] (inches) | WEIGHT [g] |
|----------------------|------------------|--------------------|--------------------|-----------------------------------|------------|
| LFA10F | 85-264VAC 1 φ | 3.3 | 2 | 50·22·73.5 (1.97·0.87·2.89) | 55 |
| | | 5 | 2 | | |
| | | 12 | 0.9 | | |
| | | 15 | 0.7 | | |
| LFA15F | 85-264VAC 1 φ | 3.3 | 3 | 50·22·87.5 (1.97·0.87·3.44) | 80 |
| | | 5 | 3 | | |
| | | 12 | 1.3 | | |
| | | 15 | 1 | | |
| LFA30F | 85-264VAC 1 φ | 3.3 | 6 | 50·26.5·105 (1.97·1.04·4.13) | 130 |
| | | 5 | 6 | | |
| | | 12 | 2.5 | | |
| | | 15 | 2 | | |
| LFA50F | 85-264VAC 1 φ | 3.3 | 10 | 50·26.5·132 (1.97·1.04·5.20) | 165 |
| | | 5 | 10 | | |
| | | 12 | 4.3 | | |
| | | 15 | 3.5 | | |
| LFA75F | 85-264VAC 1 φ | 3.3 | 15 | 50·33.5·150 (1.97·1.32·5.91) | 230 |
| | | 5 | 15 | | |
| | | 12 | 6.3 | | |
| | | 15 | 5 | | |
| LFA100F | 85-264VAC 1 φ | 3.3 | 20 | 62·33.5·155 (2.44·1.32·6.10) | 280 |
| | | 5 | 20 | | |
| | | 12 | 8.5 | | |
| | | 15 | 6.7 | | |
| LFA150F | 85-264VAC 1 φ | 3.3 | 30 | 75·37·160 (2.95·1.46·6.30) | 390 |
| | | 5 | 30 | | |
| | | 12 | 12.5 | | |
| | | 15 | 10 | | |
| LFA240F | 85-264VAC 1 φ | 24 | 6.3 | 84·46.5·180 (3.31·1.83·7.09) | 550 |
| | | 24 | 6.3 (7.9)* | | |
| | | 36 | 4.2 | | |
| | | 48 | 3.2 | | |
| LFA300F (Convection) | 85-264VAC 1 φ | 24 | 10 | 95·52.5·222 (3.74·2.07·8.74) | 810 |
| | | 24 | 10 (12.5)* | | |
| | | 36 | 6.7 | | |
| | | 48 | 5 | | |
| LFA300F (Forced air) | 85-264VAC 1 φ | 3.3 | 40 | 95·52.5·222 (3.74·2.07·8.74) | 810 |
| | | 5 | 40 | | |
| | | 12 | 17 | | |
| | | 15 | 14 | | |
| LFA300F (Forced air) | 85-264VAC 1 φ | 24 | 12.5 | 95·52.5·222 (3.74·2.07·8.74) | 810 |
| | | 24 | 12.5 (19)* | | |
| | | 30 | 10 | | |
| | | 36 | 8.4 | | |
| LFA300F (Forced air) | 85-264VAC 1 φ | 48 | 6.3 | 95·52.5·222 (3.74·2.07·8.74) | 810 |
| | | 3.3 | 60 | | |
| | | 5 | 60 | | |
| | | 12 | 27 | | |
| LFA300F (Forced air) | 85-264VAC 1 φ | 15 | 22 | 95·52.5·222 (3.74·2.07·8.74) | 810 |
| | | 24 | 14 | | |
| | | 24 | 14 (19)* | | |
| | | 30 | 11 | | |
| LFA300F (Forced air) | 85-264VAC 1 φ | 36 | 9.4 | 95·52.5·222 (3.74·2.07·8.74) | 810 |
| | | 48 | 7 | | |

*Peak current (Optional: -H).

COSEL AC-DC Power Supplies Open Frame Type

LGA-Series



Feature

Inrush current, overcurrent and overvoltage protection

Safety agency approvals

UL60950-1, C-UL(CSA60950-1) recognized, EN60950-1 approved
 Complies with DEN-AN
 EN62368-1 pending

EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

CE marking

Low Voltage Directive
 RoHS Directive

EMS Compliance: EN61204-3, EN61000-6-2

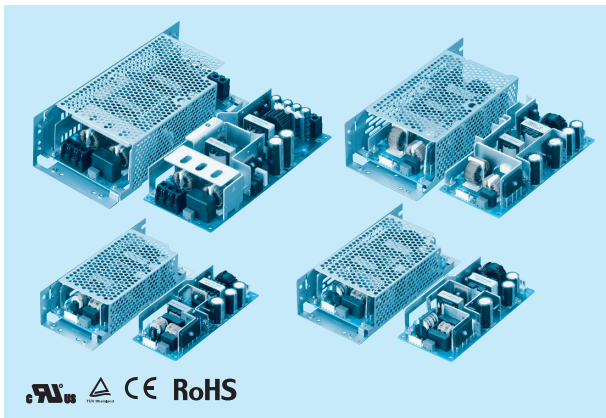
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W · H · D [mm] (inches) | WEIGHT [g] |
|---------|---------------|--------------------|--------------------|-----------------------------------|------------|
| LGA50A | 85-132VAC 1 φ | 3.3 | 10 | 50·28.5·132 (1.97·1.12·5.2) | 160 |
| | | 5 | 10 | | |
| | | 12 | 4.3 | | |
| | | 15 | 3.5 | | |
| | | 24 | 2.5 | | |
| | | 24 | 2.5(3.2)* | | |
| LGA75A | 85-132VAC 1 φ | 3.3 | 15 | 50·34.5·150 (1.97·1.36·5.91) | 200 |
| | | 5 | 15 | | |
| | | 12 | 6.3 | | |
| | | 15 | 5 | | |
| | | 24 | 3.2 | | |
| | | 24 | 3.2(4.2)* | | |
| LGA100A | 85-132VAC 1 φ | 3.3 | 20 | 62·35.5·155 (2.44·1.4·6.1) | 300 |
| | | 5 | 20 | | |
| | | 12 | 8.5 | | |
| | | 15 | 7 | | |
| | | 24 | 4.3 | | |
| | | 24 | 4.3(5.4)* | | |
| LGA150A | 85-132VAC 1 φ | 3.3 | 30 | 75·39·160 (2.95·1.54·6.3) | 420 |
| | | 5 | 30 | | |
| | | 12 | 12.5 | | |
| | | 15 | 10 | | |
| | | 24 | 6.3 | | |
| | | 24 | 6.3(7.9)* | | |
| LGA240A | 85-132VAC 1 φ | 24 | 10 | 84·48.5·180 (3.31·1.91·7.09) | 590 |
| | | 24 | 10(12.5)* | | |

* Peak current (Optional:-H).

COSEL AC-DC Power Supplies Open Frame Type
LFP-Series



UL CE RoHS

LFP



Feature

Peak power
Low power consumption at no load (Option)

Safety agency approvals

UL60950-1, C-UL(CSA60950-1), EN60950-1, EN50178
Complies with DEN-AN
EN62368-1 pending

EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] | |
|---------|------------------|--------------------|--------------------|------------|---------------------------------|---------------------------------|-----|
| | | | 100VACin | 200VACin | | | |
| LFP100F | 85-264VAC 1 φ | 24 | 4.3(8.6)* | 4.3(8.6)* | 62·33·155 (2.44·1.30·6.10) | 290 | |
| | | 36 | 2.8(5.6)* | 2.8(5.6)* | | | |
| | | 48 | 2.1(4.2)* | 2.1(4.2)* | | | |
| LFP150F | 85-264VAC 1 φ | 24 | 6.3(12.6)* | 6.3(12.6)* | 75·36.5·160 (2.95·1.44·6.30) | 380 | |
| | | 36 | 4.2(8.4)* | 4.2(8.4)* | | | |
| | | 48 | 3.2(6.4)* | 3.2(6.4)* | | | |
| LFP240F | 85-264VAC 1 φ | 24 | Convection | 10 (20)* | 10 (20)* | 84·46·180 (3.31·1.81·7.09) | 540 |
| | | | Forced air | 12.5(20)* | 12.5(20)* | | |
| | | 30 | Convection | 8 (16)* | 8 (16)* | | |
| | | | Forced air | 10 (16)* | 10 (16)* | | |
| | | 36 | Convection | 6.7(13.4)* | 6.7(13.4)* | | |
| | | | Forced air | 8.4(13.4)* | 8.4(13.4)* | | |
| 48 | Convection | 5 (10)* | 5 (10)* | | | | |
| | Forced air | 6.3(10)* | 6.3(10)* | | | | |
| LFP300F | 85-264VAC 1 φ | 24 | Convection | 12.5(22)* | 12.5(25)* | 95·52.5·222 (3.74·2.07·8.74) | 810 |
| | | | Forced air | 15 (22)* | 15 (25)* | | |
| | | 30 | Convection | 10 (18)* | 10 (20)* | | |
| | | | Forced air | 12 (18)* | 12 (20)* | | |
| | | 36 | Convection | 8.4(14.6)* | 8.4(16.8)* | | |
| | | | Forced air | 10 (14.6)* | 10 (16.8)* | | |
| | | 48 | Convection | 6.3(11)* | 6.3(12.6)* | | |
| | | | Forced air | 7.5(11)* | 7.5(12.6)* | | |

*:Peak current.

CE marking

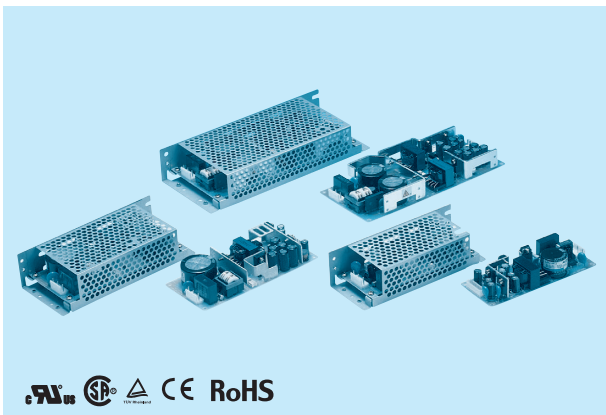
Low Voltage Directive
RoHS Directive

EMS Compliance : EN61204-3, EN61000-6-2

EN61000-4-2
EN61000-4-3
EN61000-4-4
EN61000-4-5
EN61000-4-6
EN61000-4-8
EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Open Frame Type
LDC-Series



UL CE RoHS

LDC



Feature

Universal input (85 - 264VAC)
Inrush current, overcurrent and overvoltage protection

| MODEL | | INPUT VOLTAGE | OUTPUT VOLTAGE/ OUTPUT CURRENT | | | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|--------|----|------------------|--------------------------------|-----------------------------|------------------------------|-------------------------------|------------|
| | | | V1[V]/[A] | V2[V]/[A] | V3[V]/[A] | | |
| LDC15F | -1 | 85-264VAC 1 φ | +5(V) 2.0(A) (3.0A)* | +12(V) 0.3(A) (0.6A)* | -12(V) 0.2(A) (0.3A)* | 50·26·127 (1.97·1.02·5.00) | 150 |
| | -2 | 110-370VDC | +5(V) 2.0(A) (3.0A)* | +15(V) 0.3(A) (0.6A)* | -15(V) 0.2(A) (0.3A)* | | |
| LDC30F | -1 | 85-264VAC 1 φ | +5(V) 3.0(A) (4.5A)* | +12(V) 1.2(A) (2.0A)* | -12(V) 0.3(A) (0.45A)* | 65·26·140 (2.56·1.02·5.11) | 220 |
| | -2 | 110-370VDC | +5(V) 3.0(A) (4.5A)* | +15(V) 1.0(A) (2.0A)* | -15(V) 0.3(A) (0.45A)* | | |
| LDC60F | -1 | 85-264VAC 1 φ | +5(V) 5.0(A) (7.0A)* | +12(V) 2.5(A) (3.5A)* | -12(V) 0.5(A) (0.7A)* | 83·26·185 (3.27·1.02·7.28) | 300 |
| | -2 | 110-370VDC | +5(V) 5.0(A) (7.0A)* | +15(V) 2.0(A) (3.5A)* | -15(V) 0.5(A) (0.7A)* | | |

*Peak current.

Safety agency approvals

UL60950-1, EN62368-1, CSA C22.2 No.60950-1, EN60950-1, EN50178
Complies with DEN-AN

EMI

FCC-B, VCCI-B, CISPR22-B, EN55022-B

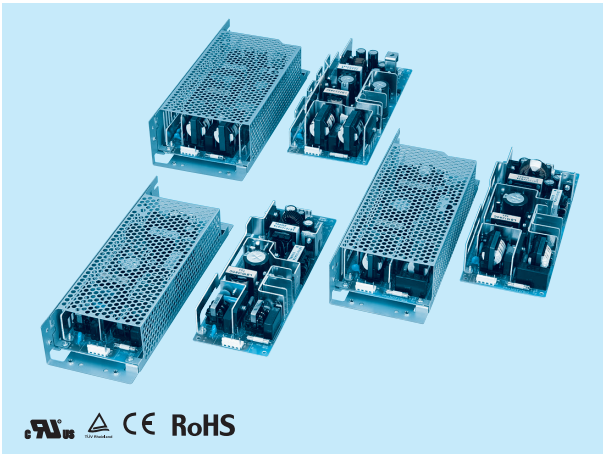
CE marking

Low Voltage Directive
RoHS Directive

2-year warranty

COSEL AC-DC Power Supplies Open Frame Type

LEB-Series



UL CE RoHS

LEB



Feature

Universal input (85 - 264VAC)
Remote ON/OFF (Option)

Safety agency approvals

UL60950-1, C-UL recognized, TÜV approved
Complies with DEN-AN
EN62368-1 pending

EMI

Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B

CE marking

Low Voltage Directive
RoHS Directive

EMS Compliance: EN61204-3, EN61000-6-2

- EN55022-B
- EN61000-3-2
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

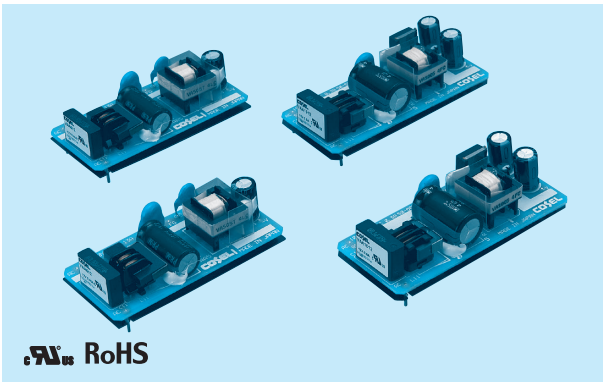
2-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE / OUTPUT CURRENT | | CASE SIZE W · H · D [mm] (inches) | WEIGHT [g] | |
|---------|---------------|-----------------------------------|----------------|--|-----------------------------------|-----|
| | | V1[V]/[A] | V2[V]/[A] | | | |
| LEB100F | -0512 | 85-264VAC 1 φ or 120-370VDC | 5(V) 5(A) | 12(V) 5.0(A) (10.0A)* | 75 · 35 · 222 (2.95·1.38·8.74) | 420 |
| | -0324 | | 3.3(V) 5(A) | 24(V) 4.0(A) (7.0A)* | | |
| | -0524 | | 5(V) 5(A) | 24(V) 4.0(A) (7.0A)* | | |
| | -0530 | | 5(V) 5(A) | 30(V) 3.2(A) (5.6A)* | | |
| | -0536 | | 5(V) 5(A) | 36(V) 2.7(A) (4.7A)* | | |
| LEB150F | -0512 | 85-264VAC 1 φ or 120-370VDC | 5(V) 5(A) | 12(V) 7.5(A) (14.0A)* | 85 · 40 · 222 (3.35·1.57·8.74) | 530 |
| | -0324 | | 3.3(V) 5(A) | 24(V) 6.0(A) (10.0A)* | | |
| | -0524 | | 5(V) 5(A) | 24(V) 6.0(A) (10.0A)* | | |
| | -0530 | | 5(V) 5(A) | 30(V) 4.8(A) (8.0A)* | | |
| | -0536 | | 5(V) 5(A) | 36(V) 4.0(A) (6.7A)* | | |
| LEB225F | -0512 | 85-264VAC 1 φ or 120-370VDC | 5(V) 5(A) | 12(V) 10.0(A) (20.0A)* | 95 · 45 · 222 (3.74·1.77·8.74) | 700 |
| | -0324 | | 3.3(V) 5(A) | 24(V) 9.0(A) (14.0A)* | | |
| | -0524 | | 5(V) 5(A) | 24(V) 9.0(A) (14.0A)* | | |
| | -0530 | | 5(V) 5(A) | 30(V) 7.2(A) (11.0A)* | | |
| | -0536 | | 5(V) 5(A) | 36(V) 6.0(A) (9.3A)* | | |

*Peak current.

COSEL AC-DC Power supplies PCB Mount Type

VAA-Series



RoHS

VAA



Feature

PCB mount type AC-DC converter
Inrush current and overcurrent protection

Safety agency approvals

UL60950-1, C-UL recognized
Complies with DEN-AN

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W · H · D [mm] (inches) | WEIGHT [g] |
|-------|------------------|--------------------|--------------------|-----------------------------------|------------|
| VAA5 | 85-132VAC 1 φ | 5 | 1.0 | 32·18·65 (1.26·0.71·2.56) | 30 |
| | | 12 | 0.45 | | |
| VAA10 | or 110-170VDC | 5 | 2.0 | 32·18·72.5 (1.26·0.71·2.85) | 35 |
| | | 12 | 0.9 | | |

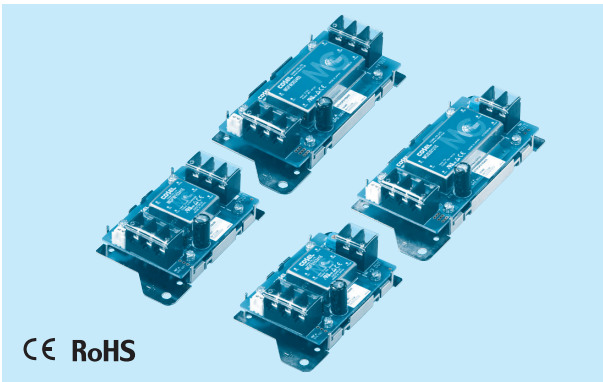
EMI

FCC-B, VCCI-A
(Additional capacitors required for meeting VCCI classB)

2-year warranty

COSEL DC-DC Converters PCB Mount Type Value-added Type

STMG-Series



CE RoHS

STMGFS



STMGFW



Feature

Isolated PCB mount type DC-DC converter
Wide input 9-36VDC/18-76VDC
Connector interface available (Option)
Case cover available (Option)
DIN rail attachment available (Option)
Overcurrent protection (Auto recovery type)
Overvoltage protection (for STMG30)
Remote ON/OFF
Output voltage adjustment (Single output only, ±10%)

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A] | | | | CASE SIZE W · H · D [mm] (inches) | WEIGHT [g] |
|----------|---------------|---|------|-------|-------|-----------------------------------|------------|
| | | 3.3[V] | 5[V] | 12[V] | 15[V] | | |
| STMGFS15 | 9-36VDC | 4 | 3 | 1.3 | 1 | 52·27·93 (2.05·1.06·3.66) | 110 |
| | 18-76VDC | 4 | 3 | 1.3 | 1 | | |
| STMGFS30 | 9-36VDC | 7.5 | 6 | 2.5 | 2 | 52·27·117 (2.05·1.06·4.61) | 140 |
| | 18-76VDC | 7.5 | 6 | 2.5 | 2 | | |

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE[V]/ OUTPUT CURRENT[A] | | | CASE SIZE W · H · D [mm] (inches) | WEIGHT [g] |
|----------|---------------|---|----------------|----------------|-----------------------------------|------------|
| | | ± 5 (+10) [V] | ± 12 (+24) [V] | ± 15 (+30) [V] | | |
| STMGFW15 | 9-36VDC | 1.5 | 0.65 | 0.5 | 52·27·93 (2.05·1.06·3.66) | 110 |
| | 18-76VDC | 1.5 | 0.65 | 0.5 | | |
| STMGFW30 | 9-36VDC | 2 | 1.25 | 1 | 52·27·117 (2.05·1.06·4.61) | 140 |
| | 18-76VDC | 2 | 1.25 | 1 | | |

Safety agency approvals

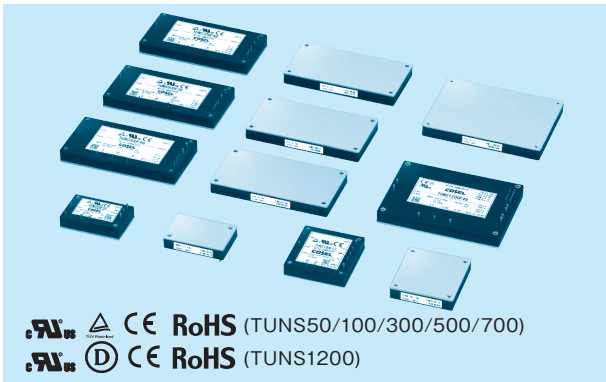
Complies with UL60950-1 C-UL EN60950-1

CE marking

Low Voltage Directive
RoHS Directive

5-year warranty

COSEL AC-DC Power Supplies Bus Converter/Power Module Type
TUNS-Series



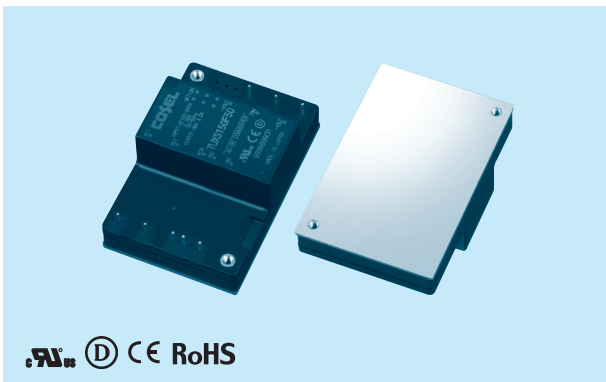
TUNS



Feature

- AC-DC power module type converter
- Harmonic attenuator (Complies with IEC61000-3-2 class A)
- Thin and small size
- Overcurrent, overvoltage and thermal protection
- Universal input 85-264VAC (TUNS50/100/300/500/700)
- Wide input 85 - 305VAC (TUNS1200)
- For medical applications (TUNS1200)
- Constant current function (TUNS1200)
- Output voltage can be adjusted to approximately 0V (TUNS1200)
- Parallel operation (TUNS1200) (-P option : TUNS700)

COSEL AC-DC Power Supplies Bus Converter/Power Module Type
TUXS-Series



TUXS



Feature

- AC-DC power module type converter
- Harmonic attenuator (Complies with IEC61000-3-2 class A)
- Overcurrent, overvoltage and thermal protection
- PMBus (Option : -I / TUXS200F50)

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|----------|---------------|--------------------|--------------------|---------------------------------|------------|
| TUNS50 | 85-264VAC 1 φ | 5 | 10 | 58.4·12.7·37.3 (2.3·0.5·1.47) | 80 |
| | | 12 | 4.2 | | |
| | | 24 | 2.1 | | |
| TUNS100 | 85-264VAC 1 φ | 5 | 20 | 58.4·12.7·61.0 (2.3·0.5·2.4) | 120 |
| | | 12 | 8.4 | | |
| | | 24 | 4.2 | | |
| TUNS300 | 85-264VAC 1 φ | 12 | 25 | 117.3·12.7·61.5 (4.62·0.5·2.42) | 190 |
| | | 28 | 11 | | |
| | | 48 | 6.5 | | |
| TUNS500 | 85-264VAC 1 φ | 12 | 42 (55)* | 117.3·12.7·61.5 (4.62·0.5·2.42) | 190 |
| | | 28 | 18 (24)* | | |
| | | 48 | 10.5 (14)* | | |
| TUNS700 | 85-264VAC 1 φ | 12 | 58.4 | 117.3·12.7·61.5 (4.62·0.5·2.42) | 190 |
| | | 28 | 25 | | |
| | | 48 | 14.6 | | |
| TUNS1200 | 85-305VAC 1 φ | 12 | 84 | 117.3·12.7·86.8 (4.62·0.5·3.42) | 280 |
| | | 28 | 43 | | |
| | | 48 | 25 | | |

*Peak current.

Safety agency approvals

- UL60950-1, C-UL, EN60950-1, EN62368-1 pending (TUNS50/100/300/500/700)
- UL62368-1, C-UL, EN62368-1 (TUNS1200)
- ANSI/AAMI ES60601-1, EN60601-1 3rd (TUNS1200)

CE marking

- Low Voltage Directive
- RoHS Directive

Optional parts

- Heat sink (TUNS50/TUNS100)

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|---------|---------------|--------------------|--------------------|-------------------------------|------------|
| TUXS150 | 85-264VAC 1 φ | 50 | 3 | 76.2·28.5·50.8 (3.0·1.12·2.0) | 150 |
| TUXS200 | 85-264VAC 1 φ | 50 | 4 | 76.2·28.5·50.8 (3.0·1.12·2.0) | 150 |
| | | 42 | 4.7 | | |
| | | 32 | 6.2 | | |
| | | 28 | 7 | | |
| | | 24 | 8.3 | | |

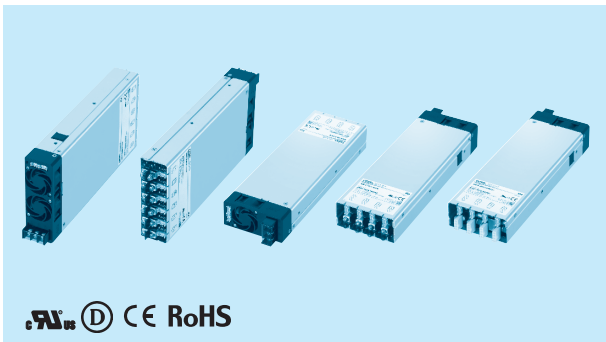
Safety agency approvals

- UL60950-1, C-UL, EN60950-1
- EN62368-1 pending

CE marking

- Low Voltage Directive
- RoHS Directive

COSEL AC-DC Power Supplies Configurable Type
AME-Series



Feature

- Configurable type power supply
- Low profile (41mm, 1.61 inches = Meets 1U height)
- Universal input (85-264VAC)
- For medical applications
(ANSI/AAMI ES60601-1, EN60601-1 3rd, IEC60601-1-2 4th Ed.)
- AUX output 5V 1A
- Global inhibit, remote ON/OFF control
- Connector type (Output terminal) (Option)

Safety agency approvals

- UL62368-1, ANSI/AAMI ES60601-1
- C-UL (CAN/CSA62368-1), C-UL (CAN/CSA60601-1)
- EN62368-1, EN60601-1 3rd

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

- Complies with FCC-B, CISPR32-B,
- EN55011-B, EN55032-B, VCCI-B

| MODEL [TYPE] | INPUT VOLTAGE | NUMBER OF SLOT | TOTAL OUTPUT WATTAGE [W] | CASE SIZE W·H·D [mm] (inches) | WEIGHT [kg] |
|-----------------|------------------|----------------|--------------------------|----------------------------------|-------------|
| AME400F (AM04) | 85-264VAC 1 φ | 4 | 250 (ACIN90-150V) | 89·41.5·257 (3.50·1.61·10.12) | 1.2 |
| | | | 400 (ACIN170-264V) | | |
| AME600F (AM06) | 85-264VAC 1 φ | 4 | 400 (ACIN90-150V) | 89·41.5·257 (3.50·1.61·10.12) | 1.2 |
| | | | 600 (ACIN170-264V) | | |
| AME800F (AM08) | 85-264VAC 1 φ | 6 | 600 (ACIN90-150V) | 127·41·257 (5.00·1.61·10.12) | 1.8 |
| | | | 800 (ACIN170-264V) | | |
| AME1200F (AM12) | 85-264VAC 1 φ | 6 | 1000 (ACIN90-150V) | 127·41·257 (5.00·1.61·10.12) | 1.8 |
| | | | 1200 (ACIN170-264V) | | |

OUTPUT MODULE

| OUTPUT | | |
|--------|------------|------------|
| CODE | VOLTAGE[V] | CURRENT[A] |
| A | 5 | 12 |
| B | 12 | 8.5 |
| C | 24 | 5 |
| D | 48 | 2.5 |
| E | 5 | 32 |
| F | 12 | 20 |
| G | 24 | 10(15)* |
| H | 48 | 5(7.5)* |

*Peak current.

EMS Compliance: EN61204-3, EN61000-6-2

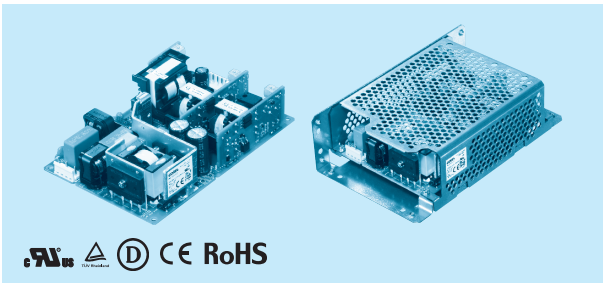
IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Configurable Type

RB-Series



RB



Feature

- Configurable type power supply
- Multiple outputs combination (driving and control systems) for robot controller applications
- Meets OVC III (Complies with EN60204-1)
- Reinforced isolation between SLOT3 and SLOT1, 2

Safety agency approvals

- UL62368-1
- C-UL (CAN/CSA-C22.2 No.62368-1)
- EN62368-1
- EN62477-1 (OVC III)
- Complies with EN61558-2-16 (OVC III)

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

- Complies with FCC-B, CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B

EMS Compliance: EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

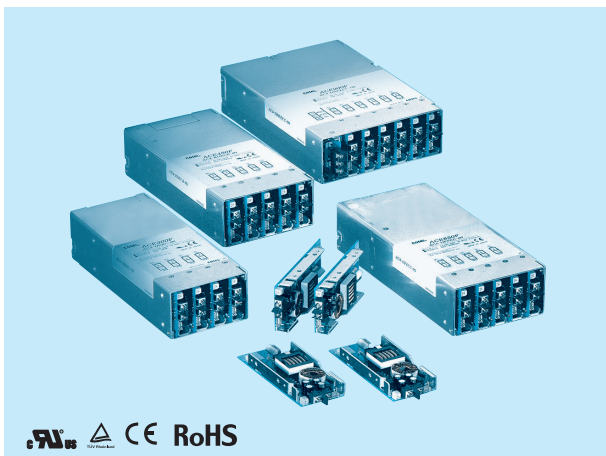
| MODEL | INPUT VOLTAGE | NUMBER OF SLOT | TOTAL OUTPUT WATTAGE [W] | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|---------|------------------|----------------|--------------------------|----------------------------------|------------|
| RBC200F | 85-264VAC 1 φ | 3 | 207 | 101·38.3·152 (3.98·1.51·5.98) | 450 |

OUTPUT MODULE

| CODE | OUTPUT | |
|------|------------|------------|
| | VOLTAGE[V] | CURRENT[A] |
| V | 12 | 10 |
| W | 15 | 8.5 |
| Y | 24 | 6 |
| Z | 48 | 3 |
| B | 5 | 3 |
| C | 12 | 1.3 |
| D | 24 | 0.65 |
| E | ±12 | 0.6 |
| F | ±15 | 0.5 |
| G | 3.3 | 5 |
| H | 5 | 5 |
| J | 12 | 2.5 |
| K | 16.5 | 1.9 |
| L | 24 | 1.3 |
| M | 48 | 0.65 |
| P | ±12 | 0.7 |
| Q | ±15 | 0.7 |

COSEL AC-DC Power Supplies Configurable Type

ACE-Series



UL CE RoHS

ACE



Feature

Configurable type power supply
Remote ON/OFF control, alarm functions

Safety agency approvals

UL60950-1, C-UL (CSA60950-1), EN60950-1, EN62368-1, EN50178
Complies with DEN-AN
UL60601-1, C-UL (CSA601.1), EN60601-1 approvals (optional: -H)

EMI

Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B

CE marking

Low Voltage Directive
RoHS Directive

EMS Compliance: EN61204-3, EN61000-6-2

EN61000-4-2
EN61000-4-3
EN61000-4-4
EN61000-4-5
EN61000-4-6
EN61000-4-8
EN61000-4-11

ICE60601-1-2 (2014), EN60601-1-2 (2015) (optional: -H)

3-year warranty

| MODEL [TYPE] | INPUT VOLTAGE | NUMBER OF SLOT | TOTAL OUTPUT WATTAGE [W] | CASE SIZE W·H·D [mm] (inches) | WEIGHT [kg] |
|-------------------------|-------------------------------|----------------|------------------------------|---------------------------------|-------------|
| ACE300F (AC3) | 85-264VAC 1 φ / 120-350VDC | 4 | 250 (AC 90-150V) | 103·63.5·254 (4.06·2.5·10) | 1.7 |
| | | | 300 (AC170-264V) | | |
| ACE450F (AC4) | 85-264VAC 1 φ / 120-350VDC | 5 | 400 (AC 90-150V) | 127·63.5·254 (5·2.5·10) | 2.2 |
| | | | 450 (AC170-264V) | | |
| ACE650F (AC6) | 85-264VAC 1 φ / 120-350VDC | 5 | 600 (AC 90-150V) | 127·63.5·279 (5·2.5·10.98) | 2.4 |
| | | | 650 (AC170-264V) | | |
| ACE900F (AC9) | 85-264VAC 1 φ / 120-350VDC | 6 | 800(Peak 1K) (AC 90-150V) | 177.5·63.5·254 (6.99·2.5·10) | 3.0 |
| | | | 900(Peak 1K) (AC170-264V) | | |
| | | | | | |

OUTPUT MODULE

| OUTPUT | | | | OUTPUT | | | |
|--------|------------|-------------|-------------|---|--|-------------|-------------|
| CODE | VOLTAGE[V] | CURRENT1[A] | CURRENT2[A] | CODE | VOLTAGE[V] | CURRENT1[A] | CURRENT2[A] |
| A | 2 | 26 | — | 2A | 2 | 60 | — |
| B | 3.3 | 26 | — | 2B | 3.3 | 60 | — |
| C | 5 | 26 | — | 2C | 5 | 60 | — |
| D | 7.5 | 18 | — | 2D | 7.5 | 40 | — |
| E | 12 | 13 | — | 2E | 12 | 25 | — |
| F | 15 | 10 | — | 2F | 15 | 20 | — |
| G | 18 | 8.5 | — | 2G | 18 | 17 | — |
| H | 24 | 6.5 | — | 2H | 24 | 14 | — |
| J | 34 | 4.5 | — | 2J | 34 | 10 | — |
| K | 48 | 3.2 | — | 2K | 48 | 7 | — |
| L | 3.3 | 10 | — | S | V ₁ +5 ; V ₂ +5 | 10 | 5 |
| M | 5 | 10 | — | T | V ₁ +5 ; V ₂ +12 | 10 | 4.2 |
| N | 12 | 5 | — | U | V ₁ +5 ; V ₂ +24 | 10 | 2.1 |
| P | 15 | 4 | — | Q | ±12 | 6.4 | 8 |
| R | 24 | 2.5 | — | V | ±15 | 5.5 | 7 |
| Y | ± 5 | 3 | 7 | INPUT MODULE Contact us for details. | | | |
| W | ±12 | 3.2 | 4.2 | | | | |
| Z | ±15 | 2.5 | 3.5 | | | | |
| 9 | ±24 | 1.6 | 2.5 | | | | |

COSEL AC-DC Power Supplies DIN Rail Type

KH-Series



Feature

- DIN (35mm) rail type (Full function series)
- Attachment available with DIN EN60715
- TH35 (35x7.5mm) (Top hat shaped DIN rail)
- Convection cooling
- Wide operating ambient temperature (Derating is required)
- 2 types of I/O terminal (Euro style and barrier blocks style)
- Overcurrent protection, overvoltage protection
- KHEA30F/60F/90F, KHNA30F/60F/90F
- Low power consumption at no load
- Complies with SEMI F-47 (Derating is required)
- KHEA120F/240F/480F, KHNA120F/240F/480F
- Remote ON/OFF
- Relay signal for checking output voltage
- Complies with SEMI F-47

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|-----------------------|----------------------------------|--------------------|--------------------|--------------------------------|------------|
| KHEA30F/ KHNA30F | 85-264VAC 1 φ or 88-370VDC | 5 | 5 | 22.5·75·90 (0.89·2.95·3.54) | 165 |
| | | 12 | 2.3 | | |
| | | 24 | 1.3 | | |
| KHEA60F/ KHNA60F | 85-264VAC 1 φ or 88-370VDC | 12 | 4.5 | 32·90·90 (1.26·3.54·3.54) | 270 |
| | | 24 | 2.5 | | |
| KHEA90F/ KHNA90F | 85-264VAC 1 φ or 88-250VDC | 12 | 6.8 | 50·90·90 (1.97·3.54·3.54) | 405 |
| | | 24 | 3.8 | | |
| KHEA120F/ KHNA120F | 85-264VAC 1 φ or 88-370VDC | 12 | 5 (7.5)* | 37·124·117 (1.46·4.88·4.61) | 580 |
| | | 24 | | | |
| KHEA240F/ KHNA240F | 85-264VAC 1 φ or 88-350VDC | 12 | 10 (15)* | 50·124·117 (1.97·4.88·4.61) | 900 |
| | | 24 | | | |
| KHEA480F/ KHNA480F | 85-264VAC 1 φ or 88-350VDC | 24 | 20 (30)* | 70·124·117 (2.76·4.88·4.61) | 1200 |
| | | 48 | 10 (15)* | | |

*Peak current.

Safety agency approvals

- 30-90F: <AC input>
 - UL60950-1, C-UL (CSA60950-1), EN60950-1, UL508 (NEC Class2 per UL1310)※, ANSI/ISA12.12.01, ATEX
 - Complies with DEN-AN
 - ※90F: Only option -E
 - <DC input>
 - UL60950-1, C-UL(CSA60950-1), EN60950-1
 - EN62368-1 pending
- 120-480F: <AC input>
 - UL60950-1, C-UL (CSA60950-1), EN60950-1, UL508, ANSI/ISA12.12.01, GL (Except 480F-48), ATEX
 - Complies with DEN-AN
 - <DC input>
 - UL60950-1, C-UL (CSA60950-1), EN60950-1
 - EN62368-1 pending

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

- Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

EMS Compliance: EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

COSEL AC-DC Power Supplies DIN Rail Type
KL-Series



KL



Feature

- DIN (35mm) rail type (Basic function series)
- Attachment available with DIN EN60715
- TH35 (35x7.5mm) (Top hat shaped DIN rail)
- Convection cooling
- Wide operating ambient temperature (Derating is required)
- 2 types of I/O terminal (Euro style and barrier blocks style)
- Harmonic attenuator (Complies with IEC61000-3-2 Class A)
- Overcurrent and overvoltage protection

COSEL Redundancy Module DIN Rail Type
KR-Series



KR



Feature

- DIN(35mm) rail type (Redundancy module)
- Attachment available with DIN EN60715
- TH 35 (35 x 7.5 mm) (Top hat shaped DIN rail)
- Convection cooling
- Wide operating ambient temperature (Derating is required)
- LED signal for checking input voltage balance
- Relay signal for checking input voltage

Safety agency approvals

- UL60950-1, UL508, C-UL (CSA60950-1), EN60950-1
- EN62368-1 pending

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|-----------------------|------------------|--------------------|--------------------|--------------------------------|------------|
| KLEA120F/ KLNA120F | 85-264VAC 1 φ | 24 | 5 | 38·124·117 (1.50·4.88·4.61) | 580 |
| | | 48 | 2.5 | | |
| KLEA240F/ KLNA240F | 85-264VAC 1 φ | 24 | 10 | 50·124·117 (1.97·4.88·4.61) | 750 |
| | | 48 | 5 | | |

Safety agency approvals

- UL60950-1, UL508, C-UL (CSA60950-1), EN60950-1
- Complies with DEN-AN
- EN62368-1 pending

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

- Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

EMS Compliance: EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT CURRENT [A] | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|---------|---------------|--------------------|--------------------------------|------------|
| KRE-20A | 10-60VDC | 20 (30)* | 38·124·117 (1.50·4.88·4.61) | 480 |
| KRE-40A | 10-30VDC | 40 (60)* | | 610 |

*Peak current.

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

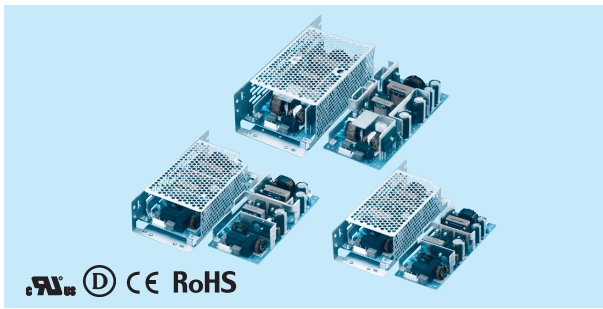
- Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

EMS Compliance: EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6

5-year warranty

LMA-Series



LMA



Feature

- For medical applications
- Internal dual fuses
- Low leakage current
- High power and peak power (Option)
- Compact open frame type
- Inrush current, overcurrent and overvoltage protection
- Harmonic attenuator (Complies with IEC61000-3-2 class A)
- Universal input (85-264VAC)
- Power factor correction

Safety agency approvals

ANSI/AAMI ES60601, EN60601-1 3rd

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

EMS Compliant : EN61204-3, EN61000-6-2
IEC60601-1-2 (2014), EN60601-1-2 (2015)

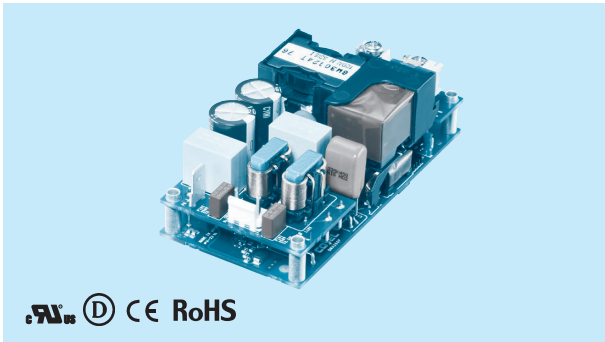
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] | |
|---------|-----------------|--------------------|--------------------|---------------------------------|-------------------------------|-----|
| LMA100F | 85-264VAC 1φ | 24 | 4.3 (8.6)* | 62·33·155 (2.44·1.30·6.10) | 290 | |
| LMA150F | 85-264VAC 1φ | 24 | 6.3 (12.6)* | 75·36.5·160 (2.95·1.44·6.30) | 370 | |
| LMA240F | 85-264VAC 1φ | 24 | Convection | 10 (20)* | 84·46·180 (3.31·1.81·7.09) | 540 |
| | | | Forced air | 12.5 (20)* | | |

*Peak current (Optional: -H)

GMA-Series



GMA



Feature

- Maximum 300W
- For medical applications (ANSI/AAMI ES60601-1, EN60601-1 3rd, IEC60601-1-2 4th Ed.)
- For type BF medical applications (Output-FG : 1MOPP, Input-Output : 2MOPP)
- 2"X4"standard footprint
- Remote ON/OFF (Option)
- AUX1(12V 1A), AUX2(5V 1A) (Option)

Safety agency approvals

- UL62368-1, ANSI/AAMI ES60601-1
- C-UL (CSA62368-1, CAN/CSA60601-1)
- EN62368-1, EN60601-1 3rd
- Complies with IEC60601-1-2 4th Ed.

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|---------|-----------------|--------------------|--------------------|------|-----------------------------------|------------|
| | | | Forced air | 25 | | |
| GMA300F | 85-264VAC 1φ | 12 | Forced air | 25 | 50.8·37·101.6 (2.00·1.46·4.00) | 230 |
| | | 24 | Forced air | 12.5 | | |

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

- Complies with FCC-B, CISPR11-B, CISPR32-B, EN55011-B, EN55032-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2,

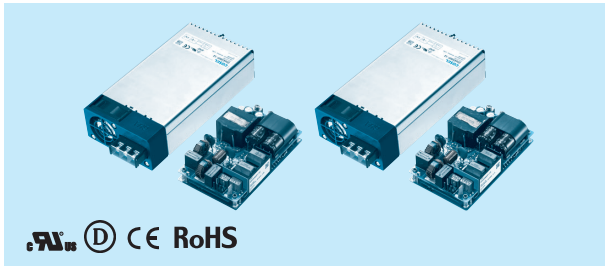
IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

COSEL AC-DC Power Supplies Medical Type

GHA-Series



Feature

- Maximum 500W
- Conduction cooling (GHA500F)
- 3"X5"standard footprint
- Meets 1U high
- For medical applications
- Low leakage current
- Remote ON/OFF (Option)
- AUX1(12V 1A), AUX2(5V 1A) (Option)
- Fan (Option: -SNF)

Safety agency approvals

- UL60950-1, ANSI/AAMI ES60601-1, C-UL, EN60950-1, EN60601-1 3rd
- Complies with DEN-AN
- EN62368-1 pending

CE marking

- Low Voltage Directive
- RoHS Directive

EMI

- Complies with FCC-B, CISPR11-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2, IEC60601-1-2 (2014), EN60601-1-2 (2015)

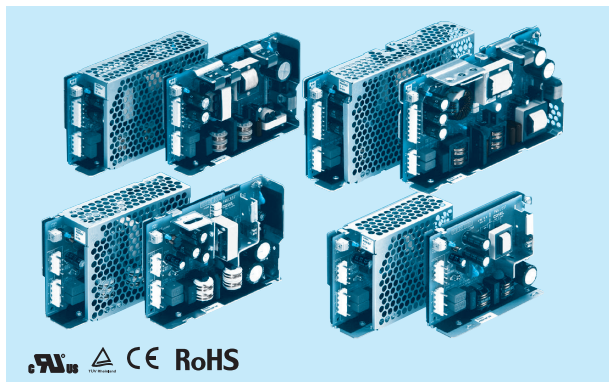
- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | | CASE SIZE W·H·D [mm] (inches) | WEIGHT [g] |
|-------------|-----------------|--------------------|--------------------|-----------------------------------|-------------------------------|------------|
| | | | Forced air | Conduction | | |
| GHA300F | 90-264VAC 1φ | 12 | Forced air | 25 | 76.2·35·127 (3.0·1.4·5.0) | 400 |
| | | | Convection | 4.5 | | |
| | | 24 | Forced air | 12.5 | | |
| | | | Convection | 2.2 | | |
| 48 | Forced air | 6.3 | | | | |
| | Convection | 1.1 | | | | |
| GHA500F | 90-264VAC 1φ | 12 | Forced air | 41.7 | 76.2·35·127 (3.0·1.4·5.0) | 420 |
| | | | Convection | 9.2 | | |
| | | | Conduction | 16.7 | | |
| | | 15 | Forced air | 33.4 | | |
| | | | Convection | 7.4 | | |
| | | | Conduction | 13.4 | | |
| | | 24 | Forced air | 21 | | |
| | | | Convection | 4.6 | | |
| | | | Conduction | 8.4 | | |
| | | 30 | Forced air | 16.7 | | |
| | | | Convection | 3.7 | | |
| | | | Conduction | 6.7 | | |
| | | 48 | Forced air | 10.5 | | |
| | | | Convection | 2.3 | | |
| | | | Conduction | 4.2 | | |
| | | 56 | Forced air | 9.0 | | |
| Convection | 1.9 | | | | | |
| Conduction | 3.6 | | | | | |
| GHA300F-SNF | 90-264VAC 1φ | 12 | 25 | 85.2·41·165.3 (3.35·1.61·6.51) | 620 | |
| | | 24 | 12.5 | | | |
| | | 48 | 6.3 | | | |
| GHA500F-SNF | 90-264VAC 1φ | 12 | 37.5 | 85.2·41·165.3 (3.35·1.61·6.51) | 660 | |
| | | 15 | 33.4 | | | |
| | | 24 | 21 | | | |
| | | 30 | 16.7 | | | |
| | | 48 | 10.5 | | | |
| | | 56 | 9 | | | |

*Derating is required. For details, please see cosel website. (<https://en.cosel.co.jp>).

COSEL AC-DC Power Supplies Medical Type
PMA-Series



PMA



Feature

For medical applications
 Internal dual fuses
 High efficiency by synchronous rectification technology (PMA60F, PMA100F)

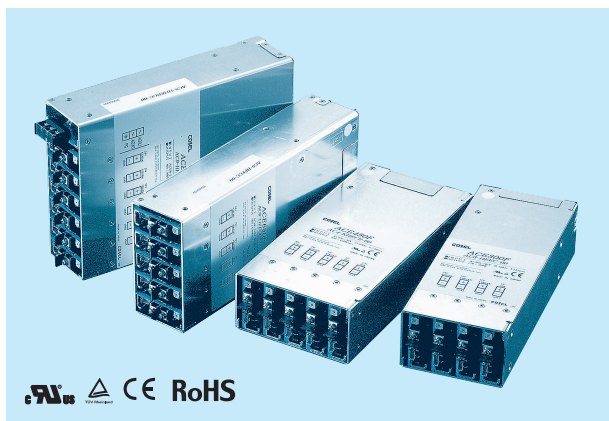
Safety agency approvals

UL60601-1, C-UL (CSA-C22.2 No.601.1), EN60601-1

EMI

FCC-B, CISPR11-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

COSEL AC-DC Power Supplies Medical Type
ACE-H-Series



ACE-H



Feature

Configurable type power supply
 Remote ON/OFF control, alarm functions

| MODEL | INPUT VOLTAGE | OUTPUT VOLTAGE [V] | OUTPUT CURRENT [A] | CASE SIZE W · H · D [mm] (inches) | WEIGHT [g] |
|---------|-----------------|--------------------|--------------------|-----------------------------------|------------|
| PMA15F | 85-264VAC 1φ | 3.3 | 3 | 31·78·103 (1.22·3.07·4.06) | 230 |
| | | 5 | 3 | | |
| | | 12 | 1.3 | | |
| | | 15 | 1 | | |
| PMA30F | 85-264VAC 1φ | 24 | 0.7 | 31·82·120 (1.22·3.23·4.72) | 240 |
| | | 3.3 | 6 | | |
| | | 5 | 6 | | |
| | | 12 | 2.5 | | |
| PMA60F | 85-264VAC 1φ | 15 | 2 | 32·82·135 (1.26·3.23·5.31) | 350 |
| | | 24 | 1.3 | | |
| | | 3.3 | 12 | | |
| | | 5 | 12 | | |
| PMA100F | 85-264VAC 1φ | 12 | 5 | 34·93·168 (1.34·3.66·6.61) | 560 |
| | | 15 | 4 | | |
| | | 24 | 2.5 | | |
| | | 3.3 | 20 | | |
| | | 5 | 20 | | |
| | | 12 | 8.5 | | |
| | | 24 | 4.5 | | |
| | | 48 | 2.1 | | |

CE marking

Low Voltage Directive
 RoHS Directive

EMS Compliance: EN61204-3, EN61000-6-2

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5 (Common mode Level4, Differential mode Level2)
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

5-year warranty

ACE-H option is a configurable type power supply for medical use.
For more details, please refer to the specifications of ACE series.

Safety agency approvals

UL60950-1, C-UL (CSA60950-1), EN60950-1, EN62368-1, EN50178
 Complies with DEN-AN
 UL60601-1, C-UL (CSA601.1), EN60601-1 approvals (optional)

EMI

Complies with FCC-B, CISPR22-B, EN55022-B, VCCI-B

CE marking

Low Voltage Directive

EMS Compliance : EN61204-3, EN61000-6-2

IEC60601-1-2 (2014), EN60601-1-2 (2015)

- EN61000-4-2
- EN61000-4-3
- EN61000-4-4
- EN61000-4-5
- EN61000-4-6
- EN61000-4-8
- EN61000-4-11

3-year warranty

COSEL | EMI/EMC Filter Selection Guide by Type

Three phase EMI/EMC Filter

| | | Rated current | | | | |
|---|---|--|---|---|---|--|
| | | 4A | 6A | 10A | 20A | 30A |
| JAC Series 1-stage filter TAC Series TAH Series 1-stage filter TBC Series 2-stage filter FTA Series 1-stage filter FTB Series 2-stage filter FSB Series 2-stage filter | Compact and low profile General-purpose Push down type terminal block Selectable leakage current specification (30A or less) | JAC Series 6A to 30A | | Option(-H) Ultra high attenuation type | Option(-U) Improve differential mode attenuation (Three-phase 250V) | DIN rail (Option) JAC Series 6A to 30A |
| | Low-profile General-purpose Push down type terminal block Selectable leakage current specification (TAC/TAH Series for 30A or less) | TAC Series 4A to 30A | | TAH Series 4A to 30A | | DIN rail (Option) TAC Series TAH Series 4A to 30A |
| | High-attenuation Selectable leakage current specification | | | | | |
| | Book type General-purpose Selectable leakage current specification (Ultra high attenuation for EU) | Option(-H) Ultra high attenuation type | Option(-G) With switch of line to ground capacitor | Option(-U) Improve differential mode attenuation (Three-phase 250V) | 80A 100A 125A 150A Standard | |
| | High-attenuation Selectable leakage current specification | Option(-L) Ultra high attenuation for EU | | | | |
| | Saturation resistance type Push down type terminal block Selectable leakage current specification (30A or less) | Option(-H) Ultra high attenuation type | Option(-U) Improve differential mode attenuation (Three-phase 250V) | FSB Series 10A to 30A | | Option(-S) Hexagon socket head cap screws option EMI/EMC Filter for motor drive system. Improve saturation resistance. |

Single phase EMI/EMC Filter

| | | Rated current | | | | | | |
|--|---|------------------------------------|----|------------------------------------|-----|------------------------------------|------------------------------------|---|
| | | 3A | 4A | 6A | 10A | 16A | 20A | 30A |
| ES Series 1-stage filter EA Series 1-stage filter NA Series 1-stage filter NB Series 2-stage filter | Screwless type Small size type Torque management unnecessary Selectable leakage current specification | ESC Series 3A to 16A | | ESM Series 3A to 16A | | ESP Series 3A to 16A | | DIN rail (Option) ES Series |
| | Screw type Small size type Push down type terminal block Selectable leakage current specification | EAC Series 3A to 30A | | EAM Series 3A to 30A | | EAP Series 3A to 30A | | DIN rail (Option) EA Series |
| | Screw type General-purpose Push down type terminal block Selectable leakage current specification | NAC Series 4A to 30A | | NAM Series 4A to 30A | | NAP Series 4A to 30A | NAH Series 6A to 30A | DIN rail (Option) NA Series |
| | Screw type High-attenuation Push down type terminal block Selectable leakage current specification | NBC Series 6A to 30A | | NBM Series 6A to 30A | | Installation compatible ② | NBH Series 6A to 30A | DIN rail (Option) NB Series |
| | Installation compatible ① | | | | | | | |
| | High attenuation for Low frequency band (150kHz to 1MHz) Low leakage current High-voltage pulses attenuation Low leakage current High-voltage pulses high attenuation Ultra high attenuation for ultra low frequency band (10kHz to 10MHz) Ultra high attenuation and broadband (10kHz to 10MHz) Low leakage current Withstand voltage 4kV | | | | | | | |

DC EMI/EMC Filter

| | | Rated current | | |
|---|-------------|--|-----------------------------|---|
| | | 1A 3A | 6A | 10A |
| SNA Series SNR Series 1-stage filter Ripple noise attenuation for switch mode power supplies | RoHS | SNA Series 1A/3A | SNA Series 6A | SNR Series 10A |
| | | For ±V output power supply | For ±V output power supply | For +V output power supply (Peak load) |
| | | DIN rail (Option) SNA Series SNR Series | | Terminal block (Option) SNA (6A) SNR (10A) |

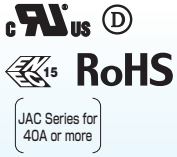
40A 50A 60A

80A 100A 125A

150A

200A 250A 300A

400A 600A



JAC Series
40A 50A 60A

NEW

High attenuation for Low frequency band (150kHz to 1MHz)



High attenuation for Low frequency band (150kHz to 1MHz)

TAC Series ※

TAH Series
50A 60A

High attenuation for Low frequency band (150kHz to 1MHz)



High attenuation for Low frequency band (150kHz to 1MHz)

TAC Series ※

TAH Series
80A 100A

TAC Series ※

TAH Series
150A

TAC Series
200A to 300A

Ultra high attenuation for ultra low frequency band (10kHz to 1MHz)

Option(-U)
Improve differential mode attenuation
TAC/TAH Series for 50A or more (Three-phase 250V)

※ Same external dimensions as TAH series

RoHS TSC Series
multi-stage filter

TBC Series
50A 60A

TBC Series
80A 100A

TBC Series
150A

TBC Series
200A to 300A

Ultra high attenuation for Low frequency band (150kHz to 1MHz)

Ultra high attenuation for Low frequency band (150kHz to 1MHz)

2-stage filter

TSC Series
400A 600A

Ultra high attenuation for star connection with neutral earthing

FTA Series
40A 50A 60A

High attenuation for Low frequency band (150kHz to 1MHz)



High attenuation for Low frequency band (150kHz to 1MHz)

FTA Series
80A 100A 125A

FTA Series
150A

FTB Series
80A 100A

Ultra high attenuation for Low frequency band (150kHz to 1MHz)



Ultra high attenuation for Low frequency band (150kHz to 1MHz)

FTB Series
150A

FSB Series
40A 50A 60A

NEW

EMI/EMC Filter for motor drive system. Improve saturation resistance.



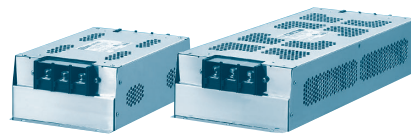
EMI/EMC Filter for motor drive system. Improve saturation resistance.

FSB Series
80A 100A

NEW

FSB Series
150A

NEW



Low-profile

Book type

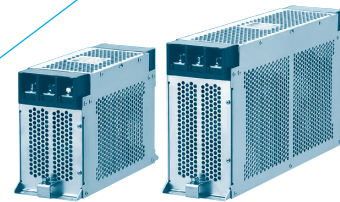
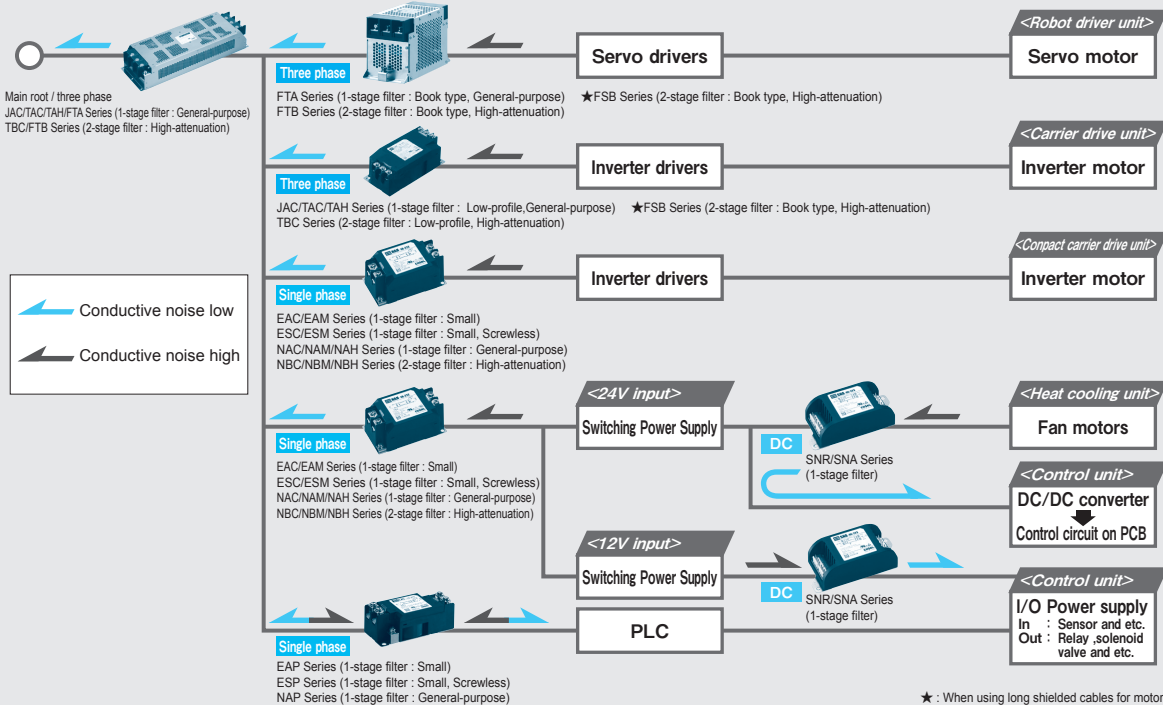


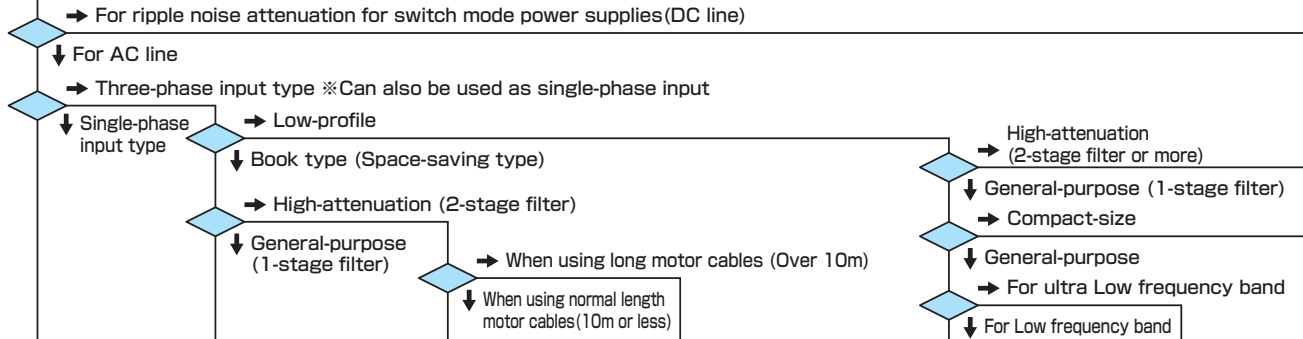
Diagram of Sample application

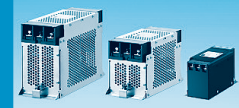






COSEL | EMI/EMC Filter Selection Guide by Function

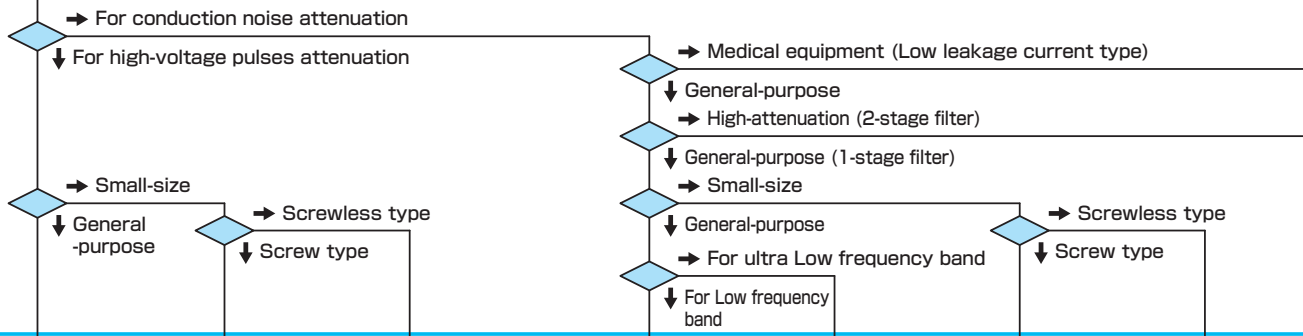
By using the flow chart below, you can easily select the model you need.


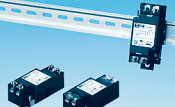



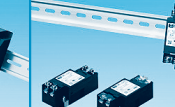

START



| FTA series(1-stage filter) | FTB series(2-stage filter) | FSB series(2-stage filter) | TAC series(1-stage filter) | TAH series(1-stage filter) |
|--|---|---|---|---|
|  |  |  |  |  |
| (40-150A) EMI/EMC filters for anti-conducted emission of servomotor and device having inverter General-purpose from 150kHz to 1MHz | (80-150A) EMI/EMC filters for anti-conducted emission of servomotor and device having inverter High-attenuation from 150kHz to 1MHz | (10-150A) EMI/EMC filters for motor drive system Improve saturation resistance | (4-300A) EMI/EMC filters for anti-conducted emission of servomotor and device having inverter General-purpose from 150kHz to 1MHz | (4-150A) EMI/EMC filters for anti-conducted emission of servomotor and device having inverter General-purpose from 10kHz to 1MHz (Ultra low-frequency band) |
| ■Option -H, -U, -G, -S(80-150A) | ■Option -H, -L, -S | ■Option -H, -U, -HU, -S(80-150A) | ■Option -D(4-30A), -U(50-300A) | ■Option -D(4-30A), -U(50-150A) |
| ■Use:Robot with inverter or servomotor, Welding machine, Elevator, Medical equipment, etc | ■Use:Robot with inverter or servomotor, Welding machine, Elevator, Medical equipment, etc | ■Use:Robot with inverter or servomotor, Welding machine, Elevator, Medical equipment, etc | ■Use:Robot with inverter or servomotor, Welding machine, Elevator, Medical equipment, etc | ■Use:Robot with inverter or servomotor, Welding machine, Elevator, Medical equipment, etc |

Three-phase EMI/EMC filter



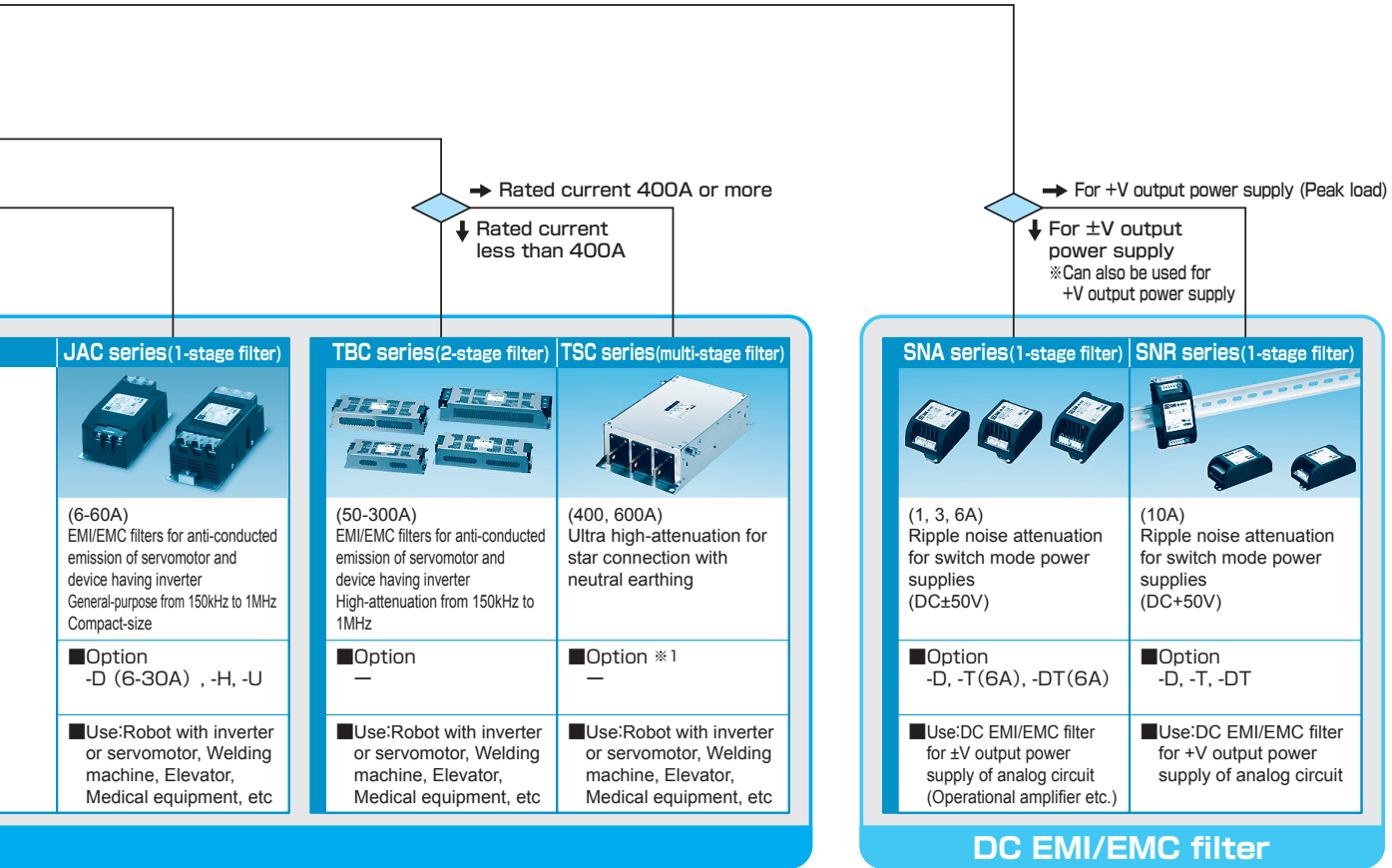
| NAP series(1-stage filter) | EAP series(1-stage filter) | ESP series(1-stage filter) | NAC series(1-stage filter) | NAH series(1-stage filter)(★) | EAC series(1-stage filter) | ESC series(1-stage filter) |
|---|---|---|---|---|--|---|
|  |  |  |  |  |  |  |
| (4-30A) EMI/EMC filters for anti-malfunction by external noise High-voltage pulses high-attenuation | (3-30A) EMI/EMC filters for anti-malfunction by external noise High-voltage pulses high-attenuation Small-size | (3-16A) EMI/EMC filters for anti-malfunction by external noise High-voltage pulses high-attenuation Small-size Screwless terminal type | (4-30A) EMI/EMC filters for anti-conducted emission General-purpose from 150kHz to 1MHz | (6-30A) EMI/EMC filters for anti-conducted emission General-purpose from 10kHz to 1MHz (Ultra low-frequency band) | (3-30A) EMI/EMC filters for anti-conducted emission General-purpose from 150kHz-1MHz Small-size | (3-16A) EMI/EMC filters for anti-conducted emission General-purpose from 150kHz-1MHz Small-size Screwless terminal type |
| ■Option -D | ■Option -D | ■Option -D | ■Option -D | ■Option -D | ■Option -D | ■Option -D |
| ■Use:PLC, industrial equipment with computer, etc | ■Use:PLC, industrial equipment with computer, etc | ■Use:PLC, industrial equipment with computer, etc | ■Use:Using multiple switching power supplies, single phase inverter, etc | ■Use:Using multiple switching power supplies, single phase inverter, robot with servo motor, medical equipment, etc | ■Use:Using multiple switching power supplies, single phase inverter, etc | ■Use:Using multiple switching power supplies, single phase inverter, etc |

Single-phase EMI/EMC filter

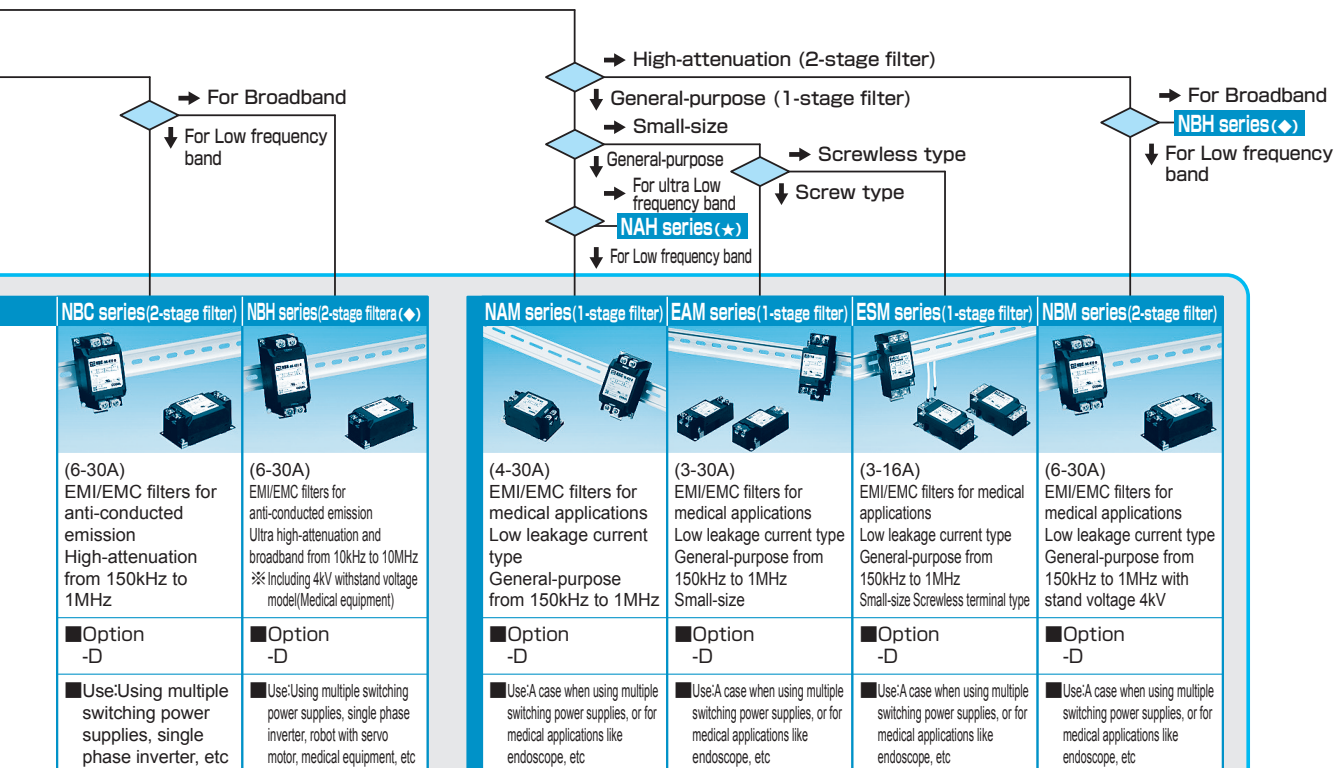
■Option

- D : DIN rail installation type
- H : Ultra high attenuation type
- U : Improve differential mode attenuation (Rated voltage 250V)
- L : Ultra high attenuation type for EU

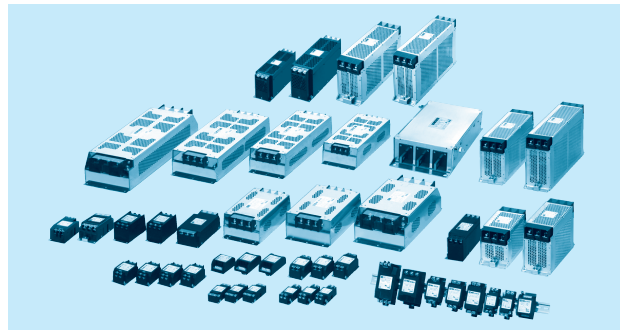
- G : With switch of line to ground capacitor
- S : Hexagon socket head cap screw (Standard type is Hexagon head screw)
- T : Terminal block type



※1 Please contact us about low leakage current type (Change to low grounding capacitor)



EMI/EMC Filter



Line-up

■ Single phase type RoHS

| | Rated voltage | Series | Rated current [A] | | | | | | | Released year | Main feature |
|---------|---------------|--------|-------------------|---|---|----|----|----|----|---------------|---|
| | | | 3 | 4 | 6 | 10 | 16 | 20 | 30 | | |
| 1-stage | AC250V | EAC | ● | — | ● | ● | ● | ● | ● | '10 | Small, attenuation (150kHz-1MHz), DIN rail installation (Optional) |
| | AC250V | EAM | ● | — | ● | ● | ● | ● | ● | '10 | Small, Low leakage current, DIN rail installation (Optional) |
| | AC250V | EAP | ● | — | ● | ● | ● | ● | ● | '10 | Small, High-voltage pulses attenuation, DIN rail installation (Optional) |
| | AC250V | ESC | ● | — | ● | ● | ● | — | — | '10 | Small,attenuation(150kHz-1MHz), Screwless terminal type,DIN rail installation (Optional) |
| | AC250V | ESM | ● | — | ● | ● | ● | — | — | '10 | Small,Low leakage current, Screwless terminal type,DIN rail installation (Optional) |
| | AC250V | ESP | ● | — | ● | ● | ● | — | — | '10 | Small,High-voltage pulses attenuation, Screwless terminal type,DIN rail installation (Optional) |
| | AC250V | NAC | — | ● | ● | ● | ● | ● | ● | '05 | General-purpose High-attenuation (150kHz-1MHz), DIN rail installation (Optional) |
| | AC250V | NAM | — | ● | ● | ● | ● | ● | ● | '05 | Low leakage current, DIN rail installation (Optional) |
| | AC250V | NAH | — | — | ● | ● | ● | ● | ● | '05 | Ultra high-attenuation (10kHz-1MHz), DIN rail installation (Optional) |
| | AC250V | NAP | — | ● | ● | ● | ● | ● | ● | '05 | High-voltage pulses high-attenuation, DIN rail installation (Optional) |
| 2-stage | AC250V | NBH | — | — | ● | ● | ● | ● | ● | '07 | Ultra high-attenuation and broadband (10kHz-10MHz), DIN rail installation (Optional) |
| | AC250V | NBC | — | — | ● | ● | ● | ● | ● | '07 | High-attenuation (150kHz-1MHz), DIN rail installation (Optional) |
| | AC250V | NBM | — | — | ● | ● | ● | ● | ● | '07 | Low leakage current, Withstand voltage 4KVAC, DIN rail installation (Optional) |

■ Three phase type RoHS [JAC(40, 50, 60A): RoHS]

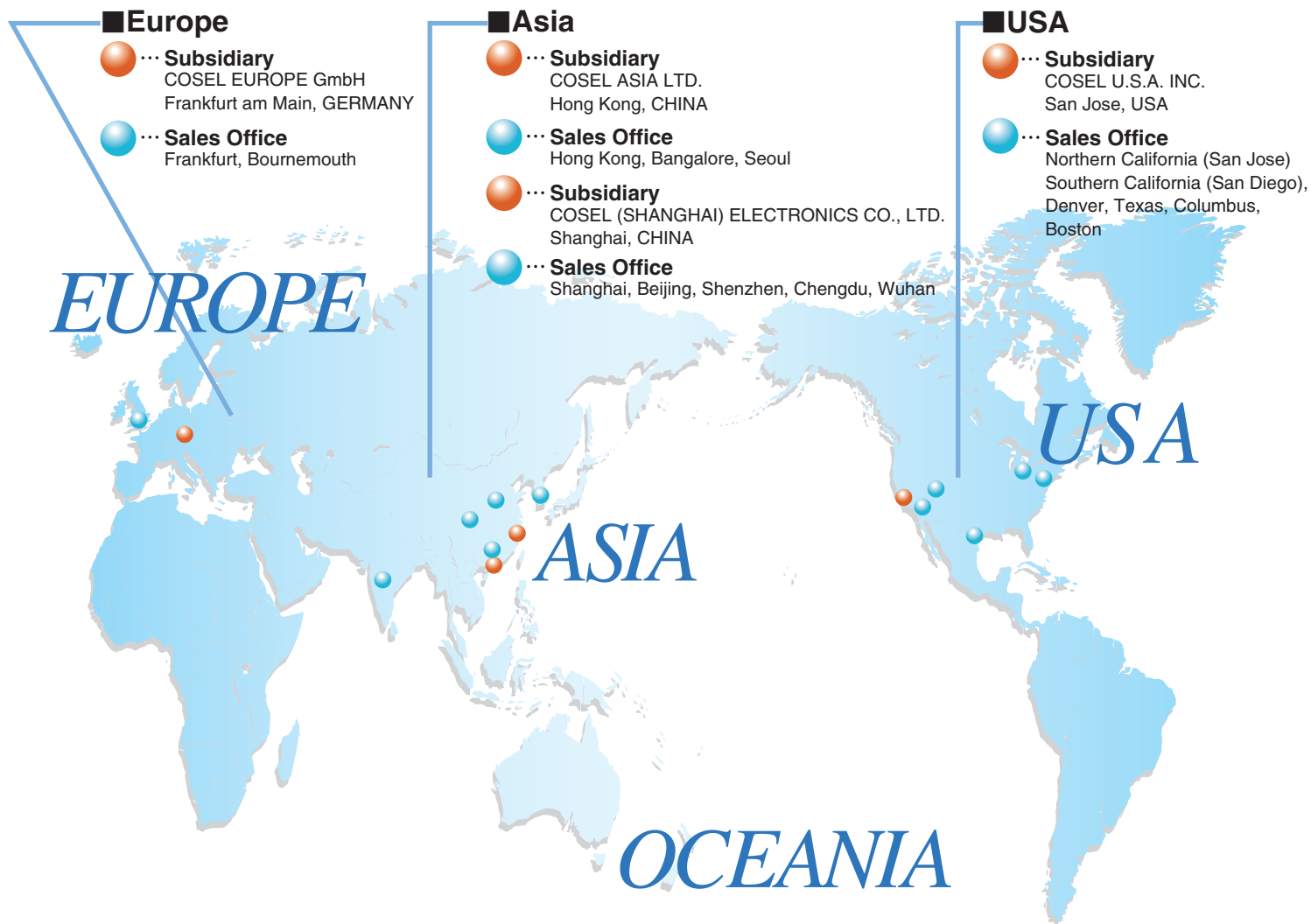
| | Rated voltage | Series | Rated current [A] | | | | | | | | | | | | | | | | | | Released year | Main feature |
|-------------|---------------|--------|-------------------|---|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|---------|---|---|---------------|--------------|
| | | | 4 | 6 | 10 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 400 | 600 | | | |
| 1-stage | AC500V | JAC | — | ● | ● | ● | — | — | — | — | — | — | — | — | — | — | — | — | '14 | Compact and low profile General-purpose High-attenuation (150kHz-1MHz), Ultra high-attenuation(optional) DIN rail installation (Optional) | | |
| | AC500V | JAC | — | — | — | — | ● | ● | ● | — | — | — | — | — | — | — | — | — | NEW '19 | Compact and low profile General-purpose High-attenuation (150kHz-1MHz), Ultra high-attenuation(optional) Input voltage range 528VAC max | | |
| | AC500V | TAC | ● | ● | ● | ● | — | — | — | — | — | — | — | — | — | — | — | — | '05 | General-purpose High-attenuation (150kHz-1MHz), DIN rail installation (Optional) | | |
| | AC500V | TAH | ● | ● | ● | ● | — | — | — | — | — | — | — | — | — | — | — | — | '05 | Ultra high-attenuation (10kHz-1MHz), DIN rail installation (Optional) | | |
| | AC500V | TAC | — | — | — | — | ● | ● | ● | — | ● | — | — | — | — | — | — | — | '08 | General-purpose High-attenuation (150kHz-1MHz), Input voltage range 528VAC max | | |
| | AC500V | TAH | — | — | — | — | ● | ● | ● | — | ● | — | — | — | — | — | — | — | '16 | Ultra high-attenuation(10kHz-1MHz), Input voltage range 528VAC max | | |
| | AC500V | TAC | — | — | — | — | — | — | — | — | — | — | ● | ● | ● | — | — | — | '09 | General-purpose High-attenuation (150kHz-1MHz), Input voltage range 528VAC max | | |
| | AC500V | FTA | — | — | — | — | ● | ● | ● | — | — | — | — | — | — | — | — | — | '13 | General-purpose High-attenuation (150kHz-1MHz), For Europe high-attenuation, Ultra high-attenuation(Optional) With switch of line to ground capacitor (Optional) | | |
| | AC500V | FTA | — | — | — | — | — | — | — | ● | ● | ● | — | — | — | — | — | — | '11 | General-purpose High-attenuation (150kHz-1MHz), For Europe high-attenuation, Ultra high-attenuation(Optional) | | |
| | 2-stage | AC500V | TBC | — | — | — | — | — | ● | ● | ● | — | ● | — | — | — | — | — | '08 | High-attenuation (150kHz-1MHz), Input voltage range 528VAC max | | |
| AC500V | | TBC | — | — | — | — | — | — | — | — | — | — | ● | ● | ● | — | — | '09 | High-attenuation (150kHz-1MHz), Input voltage range 528VAC max | | | |
| AC500V | | FTB | — | — | — | — | — | — | — | ● | ● | — | ● | — | — | — | — | '11 | High-attenuation(150kHz-1MHz), Ultra high-attenuation(Optional) | | | |
| AC500V | | FSB | — | — | ● | ● | — | — | — | — | — | — | — | — | — | — | — | '16 | EMI/EMC Filter for motor drive system. Improve saturation resistance. | | | |
| AC500V | | FSB | — | — | — | — | ● | ● | — | — | — | — | — | — | — | — | — | NEW '18 | EMI/EMC Filter for motor drive system. Improve saturation resistance. | | | |
| multi-stage | AC500V | TSC | — | — | — | — | — | — | — | — | — | — | — | — | — | — | ● | ● | '13 | Ultra high attenuation for star connection with neutral earthing, Input voltage range 528VAC max | | |

■ DC type RoHS

| | Rated voltage | Series | Rated current [A] | | | Released year | Main feature | |
|---------|---------------|--------|-------------------|---|---|---------------|--------------|---|
| | | | 1 | 3 | 6 | | | 10 |
| 1-stage | DC±50V | SNA | ● | ● | ● | — | '05 | Ripple noise attenuation for switch mode power supplies (±Vin), DIN rail installation (Optional) |
| | DC50V | SNR | — | — | — | ● | '07 | Ripple noise attenuation for switch mode power supplies (+Vin), Peak load, DIN rail installation (Optional) |

Sales Network

Worldwide Sales Bases



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