



DIN Rail Highlights

Off Board Solutions for DIN Rail Applications

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Our Product Portfolio

- Semiconductors
- Passive Components
- Electromechanical Components
- Displays & Monitors
- Boards & Systems
- Storage Technologies
- Wireless Technologies

Vertical Markets

- RUTRONIK SOLUTIONS
- RUTRONIK EMBEDDED
- RUTRONIK POWER
- RUTRONIK SMART
- RUTRONIK AUTOMOTIVE
- RUTRONIK IT ELECTRONICS

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Committed to excellence

Consult – Know-how. Built-in.

The Technical Competence from RUTRONIK
Worldwide and individual consulting on the spot by competent sales staff, application engineers & product specialists.

Components – Variety. Built-in.

The Product Portfolio from RUTRONIK
Wide product range of semiconductors, passive and electromechanical components, displays & monitors, boards & systems, storage and wireless technologies for optimum coverage of your needs.

Logistics – Reliability. Built-in.

The Delivery Service from RUTRONIK
Innovative and flexible solutions: from supply chain management to individual logistics systems.

Quality – Security. Built-in.

Quality without Compromise from RUTRONIK
The integrated management system (IMS) encompasses quality control, information security, environmental protection, occupational health and safety.

Off Board Solutions for DIN Rail Applications

Rutronik has significantly expanded its partner network in recent years to offer device manufacturers the most comprehensive selection of a wide range of electronic components possible. Our portfolio has now grown so significantly that we can also supply control cabinets and distribution boxes with a wide variety of functional classes, making us a qualified partner for system manufacturers who require innovative solutions for equipping DIN rails.

Benefit from the technical and logistical expertise of this family-run component distributor, founded in 1973, and be inspired for the first time by this highlight catalog for DIN rail products. Accordingly, we have already developed a trusting and proven partnership with the manufacturers included for several years. Whether power supplies, switching relays, fuses, universal memory programmable controllers (PLCs), industrial computers, or market-specific SmartBuilding controllers – use this brochure to get an initial overview and feel free to contact your local sales team for the latest news or for tricky technical questions.

AC/DC DIN Rail Power Supplies

As smarter control systems, robotics, and automated assembly lines drive industrial productivity to new levels. A constant, reliable flow of power is critical to smooth operation. Artificial intelligence (AI), machine learning (ML), and the Industrial Internet of Things (IIoT) are transforming operations, but they are also driving up power requirements. Modern machines pack more functionality into each unit, making high-performance power solutions as important as their size and ease of use. It takes more than just power: RECOM wanted to make it easier for you with the DIN rail-mounted power supply units (PSUs) that support breakthrough applications. To power the future of industry, only the best will do.

A better fit for DIN Rail-Mounted Industrial Power Configurations

- Recommended separation distances to other equipment are 40mm above and 20mm below
- No separation distance required on the left or right sides
- Connect cables with simple, tool-less push-in terminals

DIN-RAIL SMPS

REDIINXXX Series



Part Number	RUT Part Number	AC/DC	Power (W)	Vin (V)	Vout 1 (V)	Package Style	Isolation (kV)
REDIIN120-12	ICACDC1055	AC/DC	120.0	90.0 - 264.0	12.0	DIN-Rail	3.0
REDIIN120-24	ICACDC1056	AC/DC	120.0	90.0 - 264.0	24.0	DIN-Rail	3.0
REDIIN120-48	ICACDC1057	AC/DC	120.0	90.0 - 264.0	48.0	DIN-Rail	3.0
REDIIN240-24	ICACDC1058	AC/DC	240.0	90.0 - 264.0	24.0	DIN-Rail	3.0
REDIIN240-48	ICACDC1059	AC/DC	240.0	90.0 - 264.0	48.0	DIN-Rail	3.0
REDIIN480-24	ICACDC1060	AC/DC	480.0	90.0 - 264.0	24.0	DIN-Rail	3.0
REDIIN480-48	ICACDC1061	AC/DC	480.0	90.0 - 264.0	48.0	DIN-Rail	3.0

Main Features

- Universal Input Voltage Range 90V-264V_{AC}
- Power Range 120W; 240W and 480W
- Built-In constant current mode
- 3 output variations 12V, 24V and 48V
- Adjustable output voltage range $\pm 10\%$
- High power density with efficiency up to 93,5%
- Temperature range -30°C to +70°C
- Cold start -40°C
- Reduced no load power consumption < 0,75W
- Width only 30mm to 56mm
- Low weight only 450g to 870g



TOOL-LESS INSTALLATION AND PUSH-IN CABLING

Easy to install and dismount for maintenance or reconfiguration of rail components, and easy to connect and disconnect cables.

LONG LIFESPAN

With a design lifetime of 80,000 hours, components of the RACPRO1 family can meet the durability of industrial power supply applications.

LIGHTWEIGHT AND COMPACT

Specially designed to fit in tightly packed enclosures without weighing down support rails. The 960 W model is only 80 mm in wide and weighs only 1140 g.

RECOM

DIN-RAIL SMPS

RACPRO1-Sxxx

Main Features

- Input voltage range 1AC 85V to 264V
- DC input voltage range 88V to 370V
- Easy to connect: 25° push-in connectors
- Fast replacement without tools
- Active inrush current limit
- Highest efficiency up to 95%
- Ta -40°C/+70°C, full power at +60°C
- Extra power 120%/45°C, boost 150%/5s
- Easy fuse tripping
- Highest lifetime expectancy >80kh/40°C Full Load
- Return Voltage immunity 35V @ Vout 24V
- Return Voltage immunity 63V @ Vout 48V
- Reduced no load power consumption

Certifications

- EN/IEC/UL62368-1
- EN/IEC/UL61010-1
- EN/IEC/UL/CSA61010-2-201

Type	Part Number	RUT Part Number	Vin (V)	Vout 1 (V)	Aout (A)	Power (W)	Case / Dimension (DxHxW)	Other Features
	RACPRO1-S120/12	ICACDC	85-264	12	10	120	119.3 x 100.0 x 28.0 mm (4.7" x 3.9" x 1.1")	slim design, lowest weight width only 28mm
	RACPRO1-S120/24	ICACDC		24	5			
	RACPRO1-S120/48	ICACDC		48	2.5			
	RACPRO1-S240/12	ICACDC	85-264	12	15	-240	146.3 x 125.0 x 39.0 mm (5.8" x 4.9" x 1.5")	slim design, lowest weight width only 39mm
	RACPRO1-S240/24	ICACDC		24	10			
	RACPRO1-S240/48	ICACDC		48	5			
	RACPRO1-S240E/12	ICACDC	85-264	12	15	-240	125.0 x 125.0 x 39.0 mm (5.8" x 4.9" x 1.5")	slim design, lowest weight width only 39mm economical design
	RACPRO1-S240E/24	ICACDC		24	10			
	RACPRO1-S240E/48	ICACDC		48	5			
	RACPRO1-S480/24	ICACDC	85-264	24	20	480	162.3 x 135.0 x 52.0 mm (6.4" x 5.3" x 2.0")	slim design, lowest weight width only 52mm
	RACPRO1-S480/48	ICACDC		48	10			

COMING SOON

DIN-RAIL SMPS

RACPRO1-Txxx

- Universal Input Voltage Range DC 430V-850V & AC-Input Range 3x320V to 3x575V
- Power Range 240W, 480W and 960W
- 2 output variations 24V and 48V
- Adjustable output voltage range $\pm 10\%$
- High power density with efficiency up to 97,1%
- Temperature range -40°C to +70°C
- Cold start -40°C
- Reduced no load power consumption < 0,75W
- Width only 43mm 52mm 80mm
- Low weight only 531g, 768g, 1140g

Part Number	RUT Part Number	AC/DC	Power (W)	V _{in} DC (V)	V _{out} 1 (V)	Package Style	Isolation (kV)
RACPRO1-T240/24	ICACDC1095	AC/DC	240.0	430.0 - 850.0	24.0	DIN-Rail	3.0
RACPRO1-T480/24	ICACDC1098	AC/DC	480.0	430.0 - 850.0	24.0	DIN-Rail	3.0
RACPRO1-T480/48	ICACDC1099	AC/DC	480.0	430.0 - 850.0	48.0	DIN-Rail	3.0
RACPRO1-T960/24	ICACDC1100	AC/DC	960.0	430.0 - 850.0	24.0	DIN-Rail	3.0
RACPRO1-T960/48	ICACDC1101	AC/DC	960.0	430.0 - 850.0	48.0	DIN-Rail	3.0

DIN-RAIL Redundancy Diodes

RACPRO1-RD

- Streamlined perform. with push-in connectors in 25° design
- Fast installation with tool-less mounting and demounting
- Minimum power loss with MOSFET technology
- Load sharing for parallel use n+1 redundancy operation
- Slim design only 43mm
- Highest lifetime expectancy 80kh/40°C
- Suitable for all power supplies
- Separate Input (-) connector included
- Universal input for parallel operation on 12V, 24V, and 48V power supplies
- input current 2 * 20A, output current 40A, easy daisy chaining with integrated (-) connector

Part Number	RUT Part Number	V _{in} DC (V)	A _{in} (A)	V _{out} (V)	A _{out} (A)	Power	Case / Dimension (DxHxW)
RACPRO1-RD40	ICACDC	9-56	2*20A	12; 24; 48	40	1920	125.0 x 135.0 x 43.0 mm (4.9" x 5.3" x 1.7")

DIN-RAIL E-Fuse

RACPRO1-4SP/24V/xx

- Push-in connectors for tool-less wiring
- Start-Up delay adjustable by switch
- Individual switching for every channel
- Adjustable power limit & load indication by LED
- Individual ON/OFF and OCP limit for each channel
- Short circuit protection & power boost 150%/5s
- DC input UVLO protection
- DC-OK contacts with remote fault reset
- Overload priority channel protection
- Output hiccup or tripping mode adjustable by switch
- Easy daisy chaining of multiple modules
- Paired Input & output (+, -) connectors included
- 3 year warranty



Part Number	RUT Part Number	DC/DC	Power (W)	V _{in} (V)	V _{out} 1 (V)	Package Style	Isolation (kV)
RACPRO1-4SP/24V/10A	ICACDC1096	DC/DC	480.0	22.0 - 28.0	24.0	DIN-Rail	6.0
RACPRO1-4SP/24V/5A	ICACDC1097	DC/DC	480.0	22.0 - 28.0	24.0	DIN-Rail	6.0

RECOM



15W AC/DCs DIN Rail SMPS Series

RACM15E-K/PMAD-CTN

Main Features:

- Panel- and DIN-rail mount
- CV/CC: constant voltage; constant current limited
- -40°C to +85°C operating temperature ratings
- OVC III rated up to 3000m Altitude
- 2MOPP rating
- EN55032 class "B" compliant @ floating load
- 5U cabinet space requirements
- 3 year warranty

Unique selling points:

- IP20-protected
- DIN Rail with 1.5U slotsize
- 5 to 30Vdc
- Overcurrent limited
- 15 Watt
- DIN Rail mount: 3.2 x 1.0 x 1.1 inch
- 70g



Part Number	Rutronic Part Number	Input Voltage Range [V _{AC}]	Output Voltage nom. [V _{DC}]	Output Current rated [mA]	Efficiency typ. [%]	Output Power max. [W]
RACM15E-05SK/PMAD-CTN	ICACDC1026	80-275	5	3000	82	15
RACM15E-12SK/PMAD-CTN	ICACDC1027	80-275	12	1250	84.5	15
RACM15E-15SK/PMAD-CTN	ICACDC1028	80-275	15	1000	85	15
RACM15E-24SK/PMAD-CTN	ICACDC1029	80-275	24	625	86	15
RACM15E-30SK/PMAD-CTN	ICACDC1030	80-275	30	500	86	15

20W AC/DCs DIN Rail SMPS Series

RAC20NE-K/277(CC)/EPID

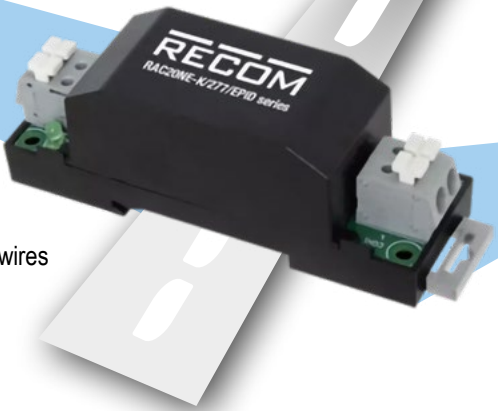
Main Features:

- 85-305V_{AC} wide input range
- Full load power ratings to 55°C
- 23 Watt Boost Power
- Optional CV/CC overcurrent limited
- EN55032 "B": O/P either floating or earth referenced
- Surge immunity 2kV_{AC}: L-N &; 4kV: L; N – Earth
- OVC III over voltage category up to 3000m

- Tool free push in terminals: up to 2.5mm² wires
- IP40 ingress protected
- 3 year warranty

Unique selling points:

- 83.0 x 26.4 x 29.5mm (3.2 x 1.0 x 1.1 inch)
- 70g



Part Number	Rutronic Part Number	Input Voltage Range [V _{AC}]	Output Voltage nom. [V _{DC}]	Output Current rated [mA]	Efficiency typ. [%]	Output Power max. [W]
RAC20NE-05SK/277/EPID	ICACDC1110	85-305	5	3000	86	15
RAC20NE-12SK/277/EPID	ICACDC1111	85-305	12	1667	87	20
RAC20NE-24SK/277/EPID	ICACDC1112	85-305	24	833	87	20
RAC20NE-36SK/277/EPID	ICACDC1113	85-305	36	555	88	20
RAC20NE-24SK/277/CC/EPID	ICACDC1114	85-305	24	833	87	20

30W AC/DCs DIN Rail SMPS Series

RACM30-K/277/PMx

Main Features:

- OVC III up to 5000m and LPS
- Meets EN55032 "B" floating or earth coupled load
- Full load power: -40 to +60°C
- Reduced load rating to 90°C
- Industry standard pinning [P12]
- Medical; household & industrial standards
- PCB-mount; chassis and DIN-rail mount options
- 3 year warranty
- Dimension: (DxHxW)
 - DIN Rail mount: 40.0 x 84.7 x 33.0mm (1.6 x 3.3 x 1.3 inch)
- Weight: 70.6g (0.15 lbs)



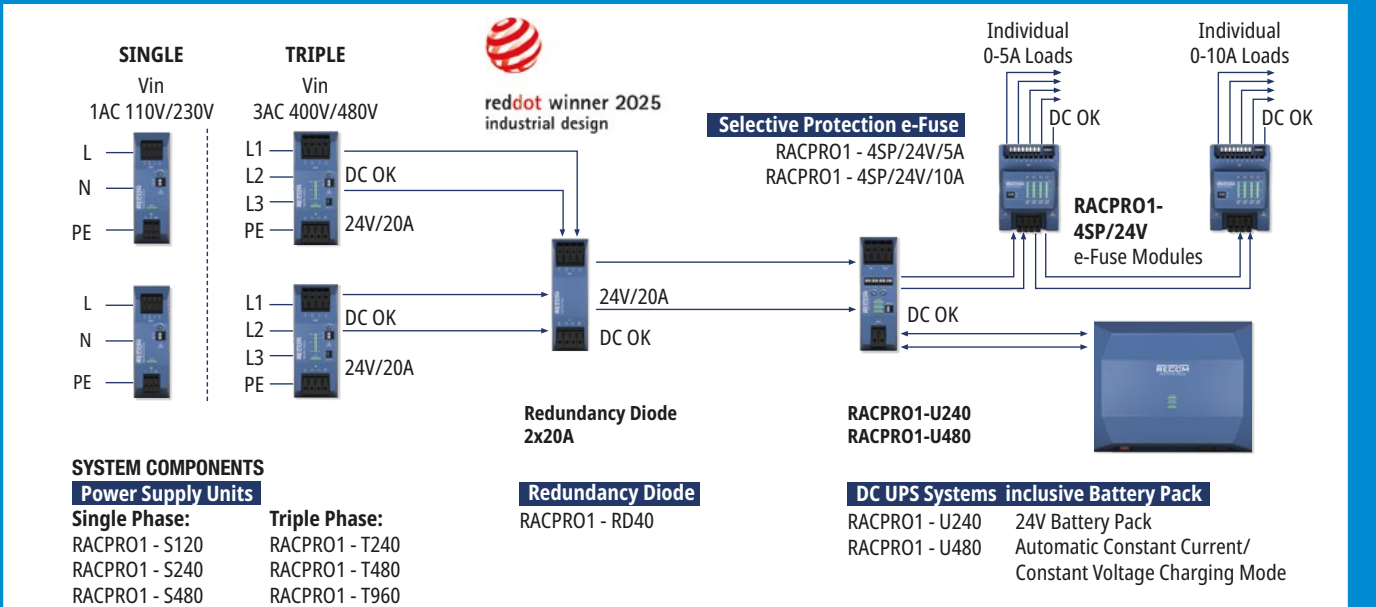
Part Number	Rutronic Part Number	Input Voltage Range [V _{AC}]	Output Voltage nom. [V _{OC}]	Output Current rated [mA]	Efficiency ¹⁾ typ. [%]	Output Power con. [W]
RACM30-05SK/277/PMA		85-305	5	6000	86	30
RACM30-05SK/277/PMP		85-305	5	6000	86	30
RACM30-05SK/277/PMPD		85-305	5	6000	86	30
RACM30-12SK/277/PMA		85-305	12	2500	90	30
RACM30-12SK/277/PMP	ICACDC1163	85-305	12	2500	90	30
RACM30-12SK/277/PMPD		85-305	12	2500	90	30
RACM30-15SK/277/PMA	SMPS1599	85-305	15	2000	90	30
RACM30-24SK/277/PMA		85-305	24	2000	89	30
RACM30-24SK/277/PMP	ICACDC1102	85-305	24	2000	89	30
RACM30-24SK/277/PMPD		85-305	24	2000	89	30
RACM30-36SK/277/PMA		85-305	36	833	88	30
RACM30-48SK/277/PMA		85-305	48	625	88	30
RACM30-54SK/277/PMA		85-305	54	556	88	30

R-DR/Clip

DIN Rail Clip

Note1: Refer to "PEAK LOAD Capability"

RACPRO1 Series Overview



140 Watt Chassis mounted SMPS Series

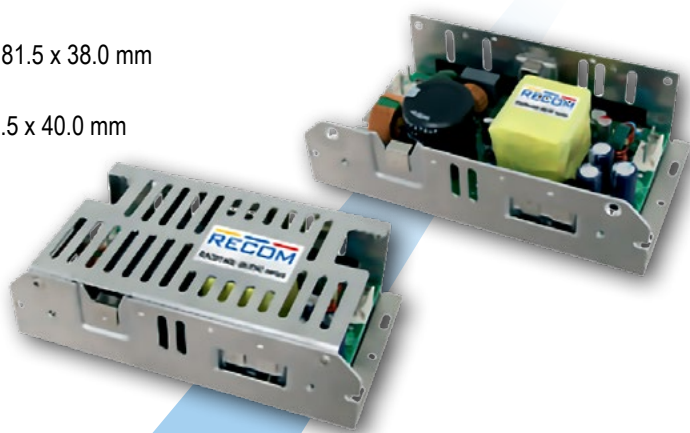
RACM140E-K Series

Main Features:

- Cost-efficient and reliable Design
- 210W boost power up to 10s
- Over voltage category OVC III; 2000m
- 5000m operating altitude
- Open Frame or enclosed; optional: Push-In connectors
- 2MOPP reinforced isolation, BF applicable
- 3 year warranty

Dimensions

- Open frame: 147.0 x 81.5 x 38.0 mm (5.7 x 3.2 x 1.5 inch)
- Enclosed: 147.0 x 81.5 x 40.0 mm (5.7 x 3.2 x 1.6 inch)



Part Number	Rutronic Part Number	Input Voltage Range [V _{AC}]	Output Voltage nom. [V _{OC}]	Output Adjust-ability [V _{OC}]	Output Current ¹⁾ rated [mA]	Efficiency ²⁾ typ. [%]	Output Power max. [W]
RACM140E-12SK/ENC	ICACDC1052	80-264	12	12-18	11.6	86	140W
RACM140E-12SK/OF	ICACDC1047	80-264	12	12-18	11.6	86	140W
RACM140E-15SK/OF	ICACDC1048	80-264	15	12-18	9.3	87	140W
RACM140E-24SK/ENC	ICACDC1053	80-264	24	22-28	5.8	88	140W
RACM140E-24SK/OF	ICACDC1049	80-264	24	22-28	5.8	88	140W
RACM140E-36SK/OF	ICACDC1050	80-264	36	30-36	3.8	90	136.8W
RACM140E-48SK/ENC	ICACDC1054	80-264	48	48-54	2.9	90	140W
RACM140E-48SK/OF	ICACDC1051	80-264	48	48-54	2.9	90	140W

Note1: Refer to "PEAK LOAD Capability". | Note2: Efficiency is tested at nominal input and rated load at +25°C ambient.

5 Watt Single Output SMPS Series

RAC05-xxSK/C14 Series

The RAC05-K/C14 is a unique patented design that combines a mains filter and isolated power supply in the same case as a mains input filter alone, at a cost lower than many mains filters. It fits into a standard IEC "kettle connector" mounting hole, so installation time is only a few seconds. The touchable output spade terminals are safe extra-low voltage (SELV) and are protected against short circuits, overload and overvoltage. The metal case offers secure fixing and enhances thermal dissipation allowing an operating temperature from -25°C to +70°C. The RAC05-K/C14 is ideal for powering single board computers such as the Raspberry Pi (including touchscreen), Arduino, BBC Micro:bit, etc.



Main Features

- Unique patented design
- Isolated power supply with integrated mains filter
- Packaged inside of line filter case
- Safe, touchable DC outputs
- Easy installation
- Worldwide standard IEC input
- 85-264V_{AC} universal input voltage
- Regulated Converter



- UL/IEC/EN62368-1 certified
- IEC/EN60950-1 certified
- FCC Part 15 compliant
- ANSI C63.4 compliant
- IEC/EN61204-3 compliant
- EN55014-1 / +2 compliant
- EN55024 compliant
- EN55032 compliant
- CB Report

Part Number	Rutronic Part Number	Input Voltage Range [V _{AC}]	Output Voltage nom. [V _{OC}]	Output Current rated [mA]	Efficiency (1) typ. [%]	Max. Capacitive Load (2)
RAC05-3.3SK/C14	ICDCDC4714	85-264	3.3	1510	76	15
RAC05-05SK/C14	ICDCDC4715	85-264	5	1000	80	15
RAC05-12SK/C14	ICDCDC4716	85-264	12	420	81	15
RAC05-15SK/C14	ICDCDC4717	85-264	15	333	81	15
RAC05-24SK/C14	ICDCDC4718	85-264	24	210	84	15

Note1: Efficiency is tested at nominal input and full load at +25°C ambient | Note2: Max Cap Load is tested at nominal input and full resistive load

Monitoring – Login via Web Browser

The monitoring software only works with compatible Finder 7M series meters and 6M energy converters. To access the OPTA, you must be in the same network.



Energy Monitoring

OPTA LITE / PLUS / ADVANCED – Programmable Logic Relay (PLR)

Easily create industrial, OEM and building automation programs with OPTA PLRs using traditional IEC 61131-3 languages (such as LADDER and FBD) with CODESYS, or ARDUINO PLC IDE open-source software.



- Supply 12...24 V DC
- 8 Digital/Analog (0-10 V) input
- 4 NO relay output contacts, rated 10 A
- USB (type C) High Speed port for:
 - Programming
 - Powering during configuration
 - Data logging (via memory stick)
- RJ45 for Ethernet connections or MODBUS TCP/IP

Optional:

Low profile Modular DC Power Supplies

- Designed for SELV system (EN 60950)
- Low stand-by power consumption
- Thermal protection: internal, with Vout shutdown - power OFF to reset
- Short circuit protection: (auto-recovery)
- Overvoltage protection: Varistor
- Compliant with EN 60950-1 and EN 61204-3



Type 78.12.1.230.2482 Up to 1 OPTA and 5 expansion modules

- Output 24 V DC - 0.5 A, 12 W
- Peak current: 2 A



Type 78.25.1.230.2482 Up to 2 groups of 1 OPTA and 5 expansion modules

- Output 24 V DC - 1 A, 25 W
- Peak current: 3 A

Compatible Energy Meters 7M Series



Type 7M.38.8.400.0212

- Three-phase energy meter
- Bidirectional up to 80 A
- Modbus (RS485) and S0 interface
- NFC interface
- MID-compliant



Type 7M.24.8.230.0210

- 1-phase alternating current up to 40 A
- Modbus (RS485)
- NFC interface
- MID-compliant

Power Analyzers 6M Series



6M TF..

- 300A - 800 V AC / 400A - 1000 V DC

6MTA/TB/TF

- 1-phase power monitoring devices
- Frequency range from 1 to 400 Hz
- Rated current from 50 to 300 A
- ModBus RS485RTU
- Voltage range 800 V AC / 1000 V DC

IECEEx, ATEX and HazLoc Compliant Relays Interface, PCB Relays and Modular Timers

39 - 58 - 66 - 83 - 86 Series

Finder offers a full range of solutions with the 39 and 58 Series interface modules, 41 and 66 Series PCB and fast-on relay, and new 83 Series IECEEx - Ex - HazLoc modular timer.

41 Series – Low profile (15.7 mm height) PCB Relays



- IECEEx, ATEX (II 3 G Ex nC IIC Gc)
 - HazLoc Class I, Zone 2, AEx nC IIC Gc
 - HazLoc Class I, Div. 2, Groups A, B, C, D - T4
- | | |
|---|---|
| Type 41.52
2 Pole 8 A (5.0 mm pin pitch)
2 CO (DPDT) - 2 NO (DPST-NO)
DC coils, from 5 to 110 V DC
8 mm, 6 kV (1.2/50 µs) isolation, coil-contacts | Type 41.61
1 Pole 16 A (5.0 mm pin pitch)
1 CO (SPDT) - 1 NO (SPST-NO) |
|---|---|

4C Series – Relay Interface Modules (Push-In Terminal / Box Clamp)



- | | | |
|--|---|--|
| Push-In Terminal
Type 4C.P1 - 1 CO 10 A
Type 4C.P2 - 2 CO 8 A | Box Clamp
Type 4C.01 - 1 CO 16 A
Type 4C.02 - 2 CO 8 A | AC coils or DC coils
Supply status indication and coil suppression module as standard
Identification label
UL Listing (certain relay/socket combinations)
35 mm rail (EN 60715) mounting |
|--|---|--|

Type 83.02.0.240.0003 – Modular timers - IECEEx - ATEX - HazLoc



- IECEEx, ATEX (Ex ec nC IIC T4 Gc)
- HazLoc Class I, Div. 2, Groups A, B, C, D - T4
- HazLoc Class I, Zone 2, AEx ec nC IIC T4 Gc
- 22.5 mm multi-function timer
- 2 CO (DPDT) output contact
- 10 A 277 V AC / 5 A 32 V DC
- Multi-voltage supply: 24...240 V AC/DC
- 8 functions with or without control signal
- 0.05 s to 10 day time range
- External time setting potentiometer option

Type 39.1x.x.xxx.0073 Box Clamp / Type 39.0x.x.xxx.0073 Push-in Terminal –Relay Interface Module



- | | | |
|--|---|---|
| Type 39.11 - 39.01 EMR
ATEX (II 3G Ex ec nC IIC Gc)
HazLoc Class I, Div. 2, Groups A, B, C, D - T5 - T6 | Type 39.10 - 39.00
Solid State Relay (SSR)
HazLoc Class I, Div. 2, Groups A, B, C, D - T5 - T6 | 1 CO (SPDT)
6 A 250 V AC / 6 A 24 V DC
Nominal voltage: 6 to 240 V AC/DC
6 to 24 V DC / 230 V AC
Integral coil indication
Multivoltage version |
|--|---|---|

Type 39.x1.x.xxx.0073 Box Clamp / Type 39.x0.x.xxx.0073 Push-in Terminal – Slim Timed Interface Module



- | | | |
|--|---|--|
| Type 39.81 - 39.91 - EMR
ATEX (II 3G Ex ec nC IIC Gc)
HazLoc Class I, Div. 2, Groups A, B, C, D - T5 - T6 | Type 39.80 - 39.90
Solid State Relay (SSR)
HazLoc Class I, Div. 2, Groups A, B, C, D - T5 - T6 | 1 CO (SPDT)
6 A 250 V AC / 6 A 24 V DC
Nominal voltage: 12 and 24 V AC/DC
Timer adjustment via top mounted rotary knob with integral coil indication - accessible after assembly
Multi-function
DIP-switch for selection from:
8 functions / 4 time scale: from 0.1s to 6h |
|--|---|--|

58 Series – Relay Interface Modules



- IECEEx - ATEX: II 3G Ex ec nC IIC Gc
- HazLoc Class I, Div. 2, Groups A, B, C, D - T5
- 2 CO (DPDT) 10 A 250 V AC
- 3 CO (3PDT) 8.5 A 250 V AC
- 4 CO (4PDT) 6 A 250 V AC
- Coil nominal voltage: 12 to 125 V DC / 12 to 230 V AC
- Supply status indication as standard
- Box clamp and Push-in terminal available

86 Series – Timer modules for use in conjunction with Relay Interface Module 58 Series ATEX versions



- ATEX (II 3G Ex ec nC IIC Gc)
- HazLoc Class I, Div. 2, Groups A, B, C, D - T6
- DIP-switch for selection 2 functions: AI: ON-Delay / DI: Interval
- DIP-switch for selection 7 time scale: from 0.05s to 100h
- LED indicator
- Plug-in mount

SMARTTimer, Digital Timer

84 Series

Multi-function Digital SMARTimer - Offering flexibility, easy installation and high precision timing.

Quick and flexible programming right from your smartphone. With NFC technology and the Finder Toolbox App. "Two in one": two totally independent programmable channels, in a single product.

■ Two programming modes:

- "Smart" mode via smartphone with NFC communication or
- "Classic" mode via the joystick

■ Wide backlit display for easy reading of all information during the programming phase and during normal operation

■ Flexibility: it's possible to create new specific functions, mixing the 30 available functions on each channel

■ High precision with the ability to finely set the set-time:

- Time units; 0.1 seconds, seconds, minutes, hours
- Set-time to 4 digits, anywhere between 000.1 second and 9999 hours

■ Large display allows easy viewing: set time, current time, timing in progress, input command state, output state

■ 1 CO (16 A) + 1 CO (16 A) output contacts

Type 84.02.0.230.0000

- Nominal voltage: 110...240 V AC/DC (non-polarized)
- Operating range: 90...264 V AC/DC (47/63Hz)

Type 84.02.0.024.0000

- Nominal voltage: 12...24 V AC/DC (non-polarized)
- Operating range: 10...30 V AC/DC (47/63Hz)
- It's possible to directly connect timer input to proximity sensors (both PNP and NPN)



Electronic Current Monitoring Relay

Type 70.51

Multifunctional type, providing the flexibility of monitoring Undercurrent, Overcurrent and Window Mode, up to 16 A directly..

- 1 CO relay output, 10 A
- Positive safety logic - Make output contact opens if the relay detects an error
- All functions and values can be easily adjusted by the selector and trimmer on front face
- Colored LEDs for clear & immediate visual indication
- 35 mm rail (EN 60715) mount

Type 70.51.0.240.2032

- 1 CO 10 A
- Nominal supply voltage: 24...240 V AC/DC
- 6 detection level range: 0.5 - 1 - 2 - 5 - 10 - 16 A
- Usable with current transformer up to 600 A
- LED indication contact status

■ 6 Functions:

- Undercurrent with or without memory
- Overcurrent with or without memory
- Window mode with or without memory
- Adjustable hysteresis 5...50% (1...99% in Window Mode)
- Start delay 0.1...40 sec
- Switch-off delay 0.1...30 sec



Relays with Forcibly Guided Contacts for Safety Applications

50 Series

PCB Relay 8 A

According to EN 61810-3 class B* (previously EN 50205)

- 2 CO 8 A
- Nominal coil voltage from 5 to 125 V_{DC}
- Cadmium Free contact materials
- 8 mm, 6 kV (1.2/50 μs) isolation, coil-contacts
- Available with AgNi or AgNi+Au contacts
- Flux proof: RT II



48 Series

Relay Interface Modules 8 A

According to EN 61810-3 class B* (previously EN 50205)

- 2 CO 8 A
- Nominal coil voltage 12 and 24 V DC
- Screw terminals
- Cadmium Free contact materials
- 8 mm, 6 kV (1.2/50 μs) isolation, coil-contacts
- Available with AgNi or AgNi+Au contacts
- 35 mm rail (EN 60715) mounting



7S Series

Modular relays 6 – 10 A

According to EN 61810-3 class A (previously EN 50205)

- Nominal coil voltage: 12 - 24 - 48 and 110 V DC
- 110...125 and 230...240 V AC
- Screw and Screwless terminals
- LED indication of coil status

For applications up to SIL2 according to IEC 61508 (according to type)

- 2, 3, 4, 5 or 6 forcibly contacts 6 A and 10 A (according to type)
- For functional reliability in machinery and plant engineering according to EN 13849-1
- For railway applications; materials compliant with fire and smoke characteristics (EN 45545-2); mechanical and climatic characteristics compliant with EN 61373 and EN 50155
- 24 and 110 V DC versions with extended operating range (0.7...1.25)UN

For applications up to SIL3 according to IEC 61508

- 2 NO safety contacts 6 A
- 1 NC feedback contact
- 1 auxiliary signalling contact
- For functional reliability in machinery and plant engineering according to EN 13849-1

SIL2



SIL3



For all applications requiring the expansion of safety contacts.

According to:

- EN 61810-3 class A and class B (previously EN 50205)
- EN 13849-1
- IEC 61508 up to SIL 2 and SIL 3 (according to type)

Applications:

- Elevator industry
- Railway applications
- Signalling
- For safety applications according to the Machinery Directive
- For electrical isolation
- Chemical and petrochemical plants

Industrial Contactors - According to EN 60947 / IEC 947

6K Series

Space Saving Size with Maximum Performance

- From 4 to 37 kW
- From 9 to 74 A, AC3 – 400 V AC
- Nominal voltage:
24 - 110 - 230 V AC
24 V DC (according to type)
- AgSnO₂ contact material
- Small size
- Working temperature: -40°C...+ 90°C
(with coil voltage derating @90°C)
- Auxiliary block contacts available
- 35 mm Din rail mounting



45 x 57.5 x 45 mm (WxHxD)

Type 6K.04.x.xxx.4x09

- 9 A - 400 V AC3
- 4 kW - 400 V AC3

Type 6K.04.x.xxx.4x12

- 12 A - 400 V AC3
- 5.5 kW - 400 V AC3

Available voltages:

24, 110, 230 V AC, 24 V DC



45 x 64.5 x 61.5 mm (WxHxD)

Type 6K.14.x.xxx.4x10

- 10 A - 400 V AC3
- 4 kW - 400 V AC3

Type 6K.14.x.xxx.4x18

- 18 A - 400 V AC3
- 7.5 kW - 400 V AC3

Available voltages:

24, 110, 230 V AC



45 x 74 x 83.5 mm (WxHxD)

Type 6K.13.8.xxx.4324

- 24 A - 400 V AC3
- 11 kW - 400 V AC3

Type 6K.13.8.xxx.4332

- 32 A - 400 V AC3
- 15 kW - 400 V AC3

Available voltages:

24, 110, 230 V AC



60 x 110 x 92 mm (WxHxD)

Type 6K.13.8.xxx.4350

- 50 A - 400 V AC3
- 22 kW - 400 V AC3

Type 6K.13.8.xxx.4374

- 74 A - 400 V AC3
- 37 kW - 400 V AC3

Available voltages:

24, 110, 230 V AC

Auxiliary Modules

Mechanically linked contacts according to EN 60947-5-1, IEC 947-5-1



2 A (AC15 – 400 V)

Type 06K.03
for Type 6K.04

1 NO + 1 NC
(SPST-NO + SPST-NC)



Type 06K.06
for Type 6K.04

2 NO + 2 NC
(DPST-NO + DPST-NC)



Type 06K.11
for Type 6K.13 and 6K.14

1 NO 2 A (AC15 – 400 V)
SPST-NC, 2 A (AC15 – 400 V)

Type 06K.12
for Type 6K.13 and 6K.14

1 NC 2 A (AC15 – 400 V)
SPST-NC, 2 A (AC15 – 400 V)

Switch Cabinet Components

7T – 7F – 7H Series

Performance in a very small space

Let thermostats and hygrostats always keep an eye on the vital values of your switch cabinet. Dangerous deviations in temperature or humidity can be nipped in the bud by automatically switching a heater or filter fan on and off. The best climatic conditions inside the switch cabinet for...

- More safety
- Higher performance
- Longer service life of all components

Key Features

- Space-saving Vari thermostats
- Space-saving multifunctional thermostats/hygrostats
- Filterfans with high flow rate, optionally as EMC version, (24...630) m³/h
- Heaters with touch-safe principle / PTC heating element (self-regulating), with and without fan, (10...550) W



7T.51 Series

Panel Thermo-Hygrostat

Full control of temperature and humidity at the same time

Switch-on humidity range (50...90)% and switch-on temperature range (+10...+60)°C, with LED status display, for switching on a fan and/or switching on a heater, operating voltage (110...240) V AC/DC, width 17.5 mm, for 35 mm mounting rail (EN 60715).



7T.81 Series

Panel Thermostat

Always keeping an eye on the temperature

Temperature ranges from (0...+60)°C or (-20...+40)°C for switching on (NO contact, 10 A) a fan or switching off (NC contact, 10 A) a heater, width 17.5 mm, for 35 mm mounting rail (EN 60715)



7T.92 Series

Modular Relays 6 – 10 A

Always the right temperature with one device

Temperature ranges from (0...+60)°C for switching on a fan (NO contact, 10 A) and (0...+60)°C for switching off a heater (NC contact, 10 A), width 50 mm, for mounting rail 35 mm (EN 60715)



7F Series

Filter Fans and Exhaust Filters

Air exchange - dust-free and efficient

Air flow rate (24...630)m³/h, operating voltage 230 V AC (50/60 Hz), 120 V AC (50/60) Hz or 24 V DC, standard mounting cut-outs, minimal installation depth and low noise. Also available as an EMC filter fan or as a "blowing" version.



7H Series

Panel Heaters

Heat - only where it is needed

Heating output (10...550) W, operating voltage 230 V AC (50/60 Hz) or (110...240)V AC/DC. With or without fan. Self-regulating heating system with PTC heating element. Connection via 2-pole pressure terminals or screw terminals, insulated by plastic housing (touch-safe principle), for 35 mm mounting rail (EN 60715).

POWR-GARD® Blocks

LF SERIES CLASS CC/CD AND MIDGET (10x38 mm) FUSE BLOCKS

600 V



The Littelfuse Class CC, CD and midget blocks offer generous space savings and enhanced value. DIN-rail mounting and universal mounting holes are available as well as an indication feature on all Class CD fuse blocks.

Features & Benefits

- Space-saving design
- Universal mounting holes for easy replacement
- Indication offered on CD blocks
- One hand release from DIN rail optional
- Rejection feature that prevents the insertion of fuses with lower interrupting rating or voltage ratings
- Clip design reduces resistance and heat
- Non DIN-rail fuse blocks have interlocking feature allowing ganging for any number of poles
- Covers available for all amperages to enhance safety
- Both hex and slot set screw options available on LFC Class CD 60 A box lugs

Recommended Fuses

Class H/K5 Blocks – 250 V	NLN
Class R Blocks – 250 V	FLNR/FLNR_ID, KLNK, LLNRK
Class H/K5 Blocks – 600 V	NLS
Class R Blocks – 600 V	FLSR/FLSR_ID, KLSR, LLSRK/LLSRK_ID, IDSR

LF SERIES CLASS H/K5 AND R FUSE BLOCKS

250 V, 600 V



The Littelfuse Class H/K5 and R blocks offer many benefits such as indication, snap-to-release DIN rail mounting and mounting flexibility for easier installation. Class H and Class R fuse blocks are dimensionally the same, but Class R blocks incorporate a rejection feature, which only allows Class R fuses to be inserted.

Features & Benefits

- Accommodates a wide range of existing mounting configurations
- Indication offered on most 250 V and 600 V versions
- One hand release from DIN rail for ferrule style fuses
- Reinforced fuse clips are standard on all Class H and Class R fuse blocks
- Covers available for 100 A and lower to enhance safety
- Both hex and slot set screw options available on 60 Ampere, 600 Volt
- Both hex and slot set screw options available on LFC Class CD 60 A box lugs

Recommended Fuses

Class H/K5 Blocks – 250 V	NLN
Class R Blocks – 250 V	FLNR/FLNR_ID, KLNK, LLNRK
Class H/K5 Blocks – 600 V	NLS
Class R Blocks – 600 V	FLSR/FLSR_ID, KLSR, LLSRK/LLSRK_ID, IDSR

LF SERIES CLASS J FUSE BLOCKS

600 V



Patent: US8810420

The Littelfuse 600 V Class J blocks offer generous space savings and enhanced value over previous generations, such as indication, snap-to-release DIN-rail mounting and universal mounting holes.

Features & Benefits

- Space-saving design—up to 45 % smaller
- Universal mounting holes for easy replacement
- Indication offered on all versions except 200–600 A
- One hand release from DIN rail for ferrule style fuses
- Reinforced fuse clips are standard on all Class J blocks
- Covers available for 100 A and lower to enhance safety
- Both hex and slot set screw options available on 30 A and 60 A box lugs

LF SERIES CLASS T FUSE BLOCKS

300V, 600 V



The Littelfuse Class T fuse blocks offer many advantages such as space saving design, mounting flexibility for easier installation, snap-to-release DIN rail mounts and available covers.

Features & Benefits

- Space-saving design
- Accommodates a wide range of existing mounting configurations
- One hand release from DIN rail for 30–60 A fuses
- Reinforced fuse clips are standard
- Covers available for most amperages to enhance safety
- Both hex and slot set screw options available on 60 A box lugs

Recommended Fuses

300 V	JLLN
600 V	JLLS



POWR-GARD® Holders



LPSM Series POWR-SAFE Fuse Holders

600 V

The POWR-SAFE LPSM series dead front fuse holders feature touch-safe protection for personnel when installing and removing fuses. These fuse holders are intended to house Class CC and Midget-style fuses. They are available in 1-, 2-, 3-, and 4-pole configurations and are offered in indicating and non-indicating options. The LPSM series is DIN rail mountable and easily installed and removed with no additional fuse pullers or tools. The indicating fuse holders show blown fuse indication above 80 V.

Applications

- For use with Class CC and Midget style (10 x 38 mm) fuses



Features & Benefits

- Meets dead front requirements - Maximum safety for personnel
- 35 mm DIN rail mountable - Easy installation in various settings
- Compact design - Ultimate flexibility, space-saving
- Easy removal - No fuse pullers or additional tools required
- Ventilated design - Cooler operations



Dead Front Fuse Holders



LPSC Series POWR-SAFE Fuse Holders

600 V



The POWR-SAFE LPSC series dead front fuse holders feature touch-safe protection for personnel when installing and removing fuses. These fuse holders are intended to house Class CC fuses. They are available in 1-, 2-, 3-, and 4-pole configurations and are offered in indicating and non-indicating options. The LPSC series is DIN rail mountable and easily installed and removed with no additional fuse pullers or tools. They are UL Listed for branch circuit protection. The indicating fuse holders show blown fuse indication above 80 V.

Features & Benefits

- Meets dead front requirements - Maximum safety for personnel
- 35 mm DIN rail mountable - Easy installation in various settings
- Compact design - Ultimate flexibility, space-saving
- Easy removal - No fuse pullers or additional tools required
- Ventilated design - Cooler operation

Applications

- For use with Class CC fuses



LFPSJ Series POWR-SAFE Class J Fuse Holders

600 V



The Class J POWR-SAFE LFPSJ series dead front fuse holders feature the IP20 touch-safe design for maximum protection to personnel. These fuse holders are available in 1-, 2-, and 3-pole configurations and are offered in indicating and non-indicating options. The LFPSJ series is DIN rail mountable and easily installed and removed with no additional pullers or tools required. These fuse holders are UL 248-8 listed and CSA certified.

Features & Benefits

- IP20 finger-safe design - Maximum safety for personnel
- 35mm DIN rail mountable - Easy installation in various settings
- Compact design - Ultimate flexibility, space-saving
- Dual LED indication - Distinguishes polarity in dc power applications
- 1-, 2-, and 3-pole configurations - Suitable for various applications

Applications

- For use with Class J: JTD, JTD_ID, JLS fuses

DIN Rail Products

Space-saving Standard Components, Modular Design and Maximum Reliability



Industrial Control

Safe automation solutions are based on stable solutions. Flexible and modular power supply systems are also required in the machine cabinet. SCHURTER offers solutions for protection against EMC problems, overcurrent and overvoltage.

This offer is particularly aimed at safety-conscious manufacturers of automation systems who want to equip their power supply systems with integrated safety components for DIN rail mounting.

The equipment of power supply systems has been standardized worldwide with the aim of ensuring high reliability and a worldwide available solution. Users appreciate these requirements for the operational safety of all components and materials. For this purpose, SCHURTER offers certified products based on the IEC standard worldwide and thus also guarantees perfect components for the safe power supply, which have been tested by international approval authorities.

FPBB RAIL: 1-Phase DIN Rail-Filter

Filters for DIN rail mounting have been known for some time. It is important to achieve maximum filter performance with minimal installation space. Since the filter for EMC protection of the controller is located very close to the power supply of the device or system, it also makes sense to integrate overcurrent and overvoltage protection here.

The FPBB RAIL was developed precisely to meet these requirements and thus represents a unique concept that combines the expertise of EMC protection with that of overcurrent protection. This makes it possible, to use this filter in an optimal way for space-saving installation in the control cabinet thanks to its compact design. The FPBB RAIL is a 2-stage filter with a rated current from 1-16 A, available in standard and medical versions as well as with variants with fuseholder or thermal circuit breaker.



Variants with Circuit Breaker, with Fuseholder and without Fuseholder

FPAC RAIL: 3-Phase DIN Rail-Filter

SCHURTER launches a new 3-phase filter series for DIN rail mounting. Thanks to the slim housing (44 mm), it takes up very little space on the mounting rail in the control cabinet. The single-stage filter is available with standard or high attenuation. A metal base plate ensures an excellent ground connection to the rail. Space is almost always at a premium in control cabinets for industrial applications in the 3-phase range (e.g. motor drives, control systems).

SCHURTER addresses this problem with a complete new filter design that is just 44 mm in width. The new, single-stage filter series is constructed with a printed circuit board in a plastic housing. It has screw terminals for the three phases and a terminal on the metal base plate for the earth connection.

Standard and High Performance Versions

In the standard version with a ferrite core, the new filters already offer very impressive attenuation behavior. The high performance versions with nanocrystalline cores achieve up to 8 dB more attenuation.

Low Leakage Currents

The new filter family has particularly low leakage currents of just 1.3 mA. This applies to all versions!



Applications

All versions can be used from -40 °C to 100 °C. The filters are designed for currents from 3 A to 32 A at a maximum of 520 VAC in accordance with IEC and UL standards. They feature ENEC and cURus approval and are suitable for applications in accordance with IEC 62368-1.

FPAC Rail filters are recommended for devices with high EMC loads (switching power supplies, converters, etc.). Typical areas of application are therefore industrial or machine control systems, but the high-performance, slimline filters are also ideal for laboratory, telecom and IT devices.

DIN Rail FSO Fuseholder

Touch-safe fuse holder for high-performance fuses in PV systems

Fast DC fuses for rated voltages up to 1000 VDC and a rated current range of 1 A to 30 A are used to protect photovoltaic and similar DC applications. To ensure that they can be replaced safely and easily, an FSO fuseholder for DIN rail mounting has been developed that is protected against accidental contact. The space-saving and simple installation and the easy handling support the maintenance of the systems.



DIN Rail Kit

Mounting accessory for compact 1- and 3-phase filters

Unique Selling Proposition

- Simple mounting
- Metal clip for good ground connection
- Complete mounting kit

Characteristics

- For quick and easy installation of panel-mount filters in the control cabinet
- Suitable for compact filter: FMAB NEO, FMAB HV, FMBB NEO, FMBB EP, FMAD CP



Smart Server
SmartServer IoT

IoT Edge computing solutions for industrial IoT markets including smart buildings help customers to quickly deliver complex IoT projects via an open, end-to-end device and data integration platform. With an approach to easily integrate best-of-breed solutions from multiple vendors and to minimize the cost of deployments it will bring together diverse industrial networks with AI as well as analytics.

Building owners and managers are increasingly looking to reduce costs, improve data and asset utilization, increase occupant safety and security, and meet Net Zero targets. Edge automation and controls solutions can help to decrease costs, achieve the set sustainability goals, and enhance the well-being of building's residents.



Smart Server

SmartServer IoT

SmartServer IoT is an extensible, multi-protocol IoT edge server that is ideal for monitoring and controls, energy management and data analytics applications in smart buildings, cities and factories.

Features & Benefits

- 800 MHz ARM Cortex A9 processor
- Linux operating system
- Security: TLS with AES 128-bit encryption
- Internal, real time clock
- 2 GB DDR3L SDRAM
- 8 GB eMMC flash memory
- Memory expansion: 32GB Micro SD card (included)
- Device support: Up to 1,000 total devices; 20,000 datapoints
- Temperature range: -40°C to +65°C

The use of IoT edge computing solutions is steadily increasing as companies and organizations look for ways to optimize their IoT implementations and improve the performance of their systems. According to recent studies, a large number of companies are already using 4G and 5G networks to support their IoT edge computing solutions. Forecasts indicate that this trend will continue to grow in the future as the demand for faster and more efficient IoT systems increases.



Network Interfaces

U70 PL-20 USB Network Interface Expansion Module

USB interface for LON PL Networks for any Edge server, gateway, controller or device, including SmartServer IoT

Features & Benefits

- PL Smart Transceiver Processor
- 1 MB flash memory
- 64 KB RAM
- USB Micro-B 2.0, compatible with USB 1.1 and high-speed USB systems, peripherals and cables
- USB cable with Micro-B USB to Type A USB connectors included
- Mains interface 1-3 phase AC
- Indicators
 - LON Tx/Rx LEDs
 - Connect LED
 - Power LED

IoT Terminals for Industrial Communication Applications
DIN Rail Mounting Bracket

Telic offers a range of industrial terminals for different categories of the LTE cellular network. All terminals are equipped with Telit modules. The terminals are ideal to establish a wireless connection to a mobile or stationary application or transfer data into the cloud.

LT910-WW LTE IoT Terminal

LTE Cat.1 terminal
for worldwide use

LT910-EUbis

LTE Cat.1 bis Terminal
for cost-optimized application

NT910-G NB-IoT Terminal 4G

LTE Cat M1
for industrial applications

Advantages & Key Features

- Stationary applications can be remotely monitored to reduce and optimize service calls
- Fallback options if specific cellular technology is not accessible temporarily
- Interfaces: Power supply; SIM card holder lockable; FME antenna connector; RS232 (V.24/V.28) on Sub-D; USB
- Supply voltage: 7-32V DC
- Operation temperature: -30 °C to +75 °C
- Support of low-power mode
- Robust & compact housing for industrial use
- Firmware Over-The-Air (FOTA) Update
- Optional variants on request
- Extensive range of accessories

Sample Applications

- Monitoring of vending machines
- Monitoring data from industrial plants
- Intelligent control and monitoring of power grids
- Transmission of readings from electricity, gas, and water meters
- Monitoring of heating, ventilation and air conditioning



DIN Rail Mounting Bracket: TELIC 12304



Embedded Box PCs

KBox A-Series – Compact and flexible Box PC for IoT Gateway Applications

Kontron's KBox A-Series is specifically designed for IoT gateway applications in industrial environments. The KBox A-Series can be deployed quickly and efficiently and stands out with a low-power and compact design.

This makes it the perfect fit for OEM manufacturers and system integrators aiming to utilize the full potential of next generation intelligent infrastructures in an IoT context.

- Intelligent IoT gateways for edge analytics, data acquisition & remote monitoring
- Scalable processor performance from Intel Atom® to 13th Gen Intel Core i3/i5/i7
- Compact, fanless system designs
- Broad range of interfaces and expansion capabilities
- Options for Fieldbus, Wi-Fi, LTE or 5G
- Various mounting options e.g. DIN rail, desktop, wallmount, cabinet

KBox A-251-AML/ADN



- Compact & highly flexible IoT Edge gateway
- Based on powerful 2.5" Single Board Computer
- Intel® N97, Core™ i3-N305 or Atom® x7000RE processors
- Options for Wi-Fi, LTE/5G, additional GbE, Serial Ports, GPIOs ...

KBox A-151-AML/ADN



- Based on Intel® N-series, Intel® Core™ i3 N-series and Intel Atom® X7000 series
- Broad range of interfaces with WI-FI and LTE/5G option
- Flexible system expansion via I/O door
- Passive cooling concept, option for extended temperature range

KBox A-151-RPL



- Based on 13th Generation Intel® Core™ U-Series
- Broad range of interfaces with WI-FI and LTE/5G option
- Flexible system expansion via I/O door
- Passive cooling concept, option for extended temperature range

KBox A-Series – Compact and flexible Box PC for IoT Gateway Applications

The AL series is versatile in its robust design and especially suitable for use in industrial environments. Different, powerful processor variants are available in a housing suitable for the DIN rail. The AL series offers a variety of communication interfaces, variable memory sizes and software solutions. Adaptation to customer-specific requirements and, if required, individual expansion with multifunction I/O modules can be easily implemented.

AL i.MX8M Mini & Plus



- NXP i.MX8M Mini, 4x Arm® Cortex®-A53 @1.6 GHz, 1x Arm® Cortex®-M4 @400 MHz
- NXP i.MX8M Plus, 4x Arm® Cortex®-A53 @1.6 GHz, 1x Arm® Cortex®-M7 @800 MHz, NPU (2.3 Tops)
- 1 GB up to 4 GB LPDDR4-RAM, 4 GB up to 64 GB eMMC
- Stainless steel housing 111 x 25 x 76 mm, for mounting on 35 mm mounting rail

AL i.MX8M Mini LTE



- NXP i.MX8M Mini 4x Arm® Cortex®-A53 @1.6 GHz, 1x Arm® Cortex®-M4 @400 MHz
- LTE CAT1 Module
- 2 GB up to 4 GB LPDDR4-RAM, 16 GB up to 64 GB eMMC
- Stainless steel housing 111 x 43 x 76 mm, for mounting on 35 mm mounting rail

AL i.MX6 UL



- NXP i.MX6 ULL, 1x Arm® Cortex®-A7 @800 MHz
- 512 MB DDR3-RAM
- 4 GB eMMC
- Stainless steel housing 111 x 25 x 76 mm, for mounting on 35 mm mounting rail
- AL Pi-Tron CM3+ (Housing without ventilation)

AL Pi-Tron CM3+ (Housing without ventilation)



- Pi-Tron CM3+: Broadcom BCM2837BO, 4x Arm® Cortex®-A53 @1.2 GHz
- Pi-Tron CM4: Broadcom BCM2711, 4x Arm® Cortex®-A72 @1.5 GHz
- Pi-Tron CM4: 1 GB / 4 GB / 8 GB LPDDR4-RAM
- Stainless steel housing 111 x 25 x 76 mm, for mounting on 35 mm mounting rail

Control Units

PiXtend V2 – Electronic controls based on powerful processors of the Raspberry Pi Foundation

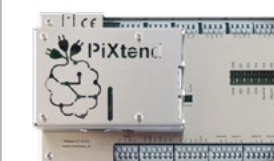
The Control Units can be divided into electronic controllers based on the Raspberry Pi and universal, robust industrial PCs with scalable performance, based on NXP processors and Intel Atom®. The high-performance control units feature an industrial design, offer a variety of mounting options and a large number of interfaces. The intelligent control device series is perfectly suited for cost-sensitive control and gateway applications.

PiXtend® V2-L-ePLC® PRO Pi 4 / PiXtend® V2-L-ePLC® PRO



- Brushed stainless steel DIN rail housing
- Raspberry Pi 4 or 3B+ single-board computer
- Retain memory 64 Byte Flash EEPROM

PiXtend® V2-S-ePLC® PRO Pi 4 / PiXtend® V2-S-ePLC® PRO



- Brushed stainless steel DIN rail housing
- Raspberry Pi 4 or 3B+ single-board computer
- Retain memory 32 Byte Flash EEPROM

CU Control Units

Universal, robust industrial PCs with scalable performance, based on NXP processors and Intel Atom®. Compact metal housing for DIN rail mounting (35 mm) acc. to EN 60715.

CU Control Unit Mini 6x



- NXP Arm® i.MX8M Plus Quad Core, 1.6 GHz
- Multiple serial interfaces for various requirements
- 2 GBE, 1x RS485 isol., 2x GPO
- OS: Embedded Linux (Yocto Distribution), Optional CODESYS® SoftSPS

CU Control Unit 6x



- NXP Arm® i.MX8M Plus Quad Core, 1.6 GHz
- Optional internal, pluggable Extensions:
- GPIO, HDMI, SPI, i²C, Audio 2x 2W, MIPI CSI 4-lane, M.2 Slot (Key E, B)
- 2 GBE, up to 2x CAN FD isol., 2x RS485 isol., RS232
- OS: Embedded Linux (Yocto Distribution), Optional CODESYS® SoftPLC

CU Control Unit Mini 5x



- Intel Atom® E3800, 2 Core™ 1.33 GHz / 4 Core™ 1.91 GHz
- Expansion connector for the realization of individual modules
- OS: Linux Debian, Microsoft Windows 10, IoT Enterprise

CU Control Unit 5x



- Intel Atom® E3800, 2 Core™ 1.33 GHz / 4 Core™ 1.91 GHz
- 1x CAN (isol.), 1x RS232, 1x RS485 (isol.), Profibus
- Expansion connector for the realization of individual modules
- OS: Linux Debian, Microsoft Windows 10, IoT Enterprise

CU Control Unit 3x



- NXP i.MX6 Arm® 2 Core™ 800 MHz
- 1x CAN (isol.), 2x RS232, 1x RS485 (isol.)
- MEMORY: DRAM-DDR3L, NAND/NOR Flash, SRAM, SD-Card
- OS: Embedded Linux

Expansion Systems for Digital and Analog Sensors

Kontron I/O Modules

I/O modules are compact expansion systems for digital and analog sensors. They are flexible in terms of connection, can be easily integrated into systems, also from third-party manufacturers, and offer industry-compatible connection technology. The multifunctional modules for automation and IoT solutions meet a wide range of tasks.

PiXtend® eIO Digital One Pro



I/O expansion system for digital standard inputs and outputs Specifications

- 8x 3.3 / 5 / 12 / 24 V Digital input including counter function
- 8x 0.5 A, 5 / 12 / 24 V Digital output
- Fast digital logic "HyperLogic"
- Counter-Function: Up/Down Counter, 2-channel counter independently of bus cycle
- Up to 32 devices can be operated is one network/bus
- The eIO devices can be addressed via Modbus RTU and our lean "PiXtend eIO ASCII Protocol"

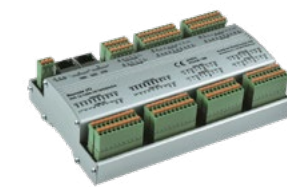
PiXtend® eIO Analog One Pro



I/O expansion system for analog standard inputs and outputs Specifications

- 4x 0...5 V / 0...10 V, 10 bit analog voltage input (AI-U)
- 4x 0...10 V, 12 bit analog voltage output (AO-U)
- 2x 0...20 mA, 12 bit analog current input (AO-I)

RIO Remote I/O Module



Easy integration even into existing plants Specifications. Standard configurations and options for custom solutions.

- Communication via EtherCAT or CANOpen
- Digital and analog inputs and outputs
- Cost-effective interface between process data and plant bus
- Intelligent and economical I/O module

AL CAN I/O Module



A compact I/O module for automation and IoT solutions in smallest installation space Specifications

- 12x digital input and output
- 4x analog input and output
- 2x temperature input
- Flexible connection via CAN bus
- Optional custom firmware

8-port Industrial Ethernet TSN Switches

KSwitch D10 MMT Series New

The Kontron KSwitch D10 MMT series offers cost-effective web-managed industrial TSN switches with 8 Gigabit Ethernet ports providing easy to use plug-n-play connectivity. Copper and fiber optics ports are available. Due to the standard compliance, the KSwitch D10 MMT series can easily be integrated in factory production lines, embedded into a machine control system or applied for any network expansion. It is the perfect solution for state-of-the-art TSN applications and edge site installation.

Key Features

- Managed Time Sensitive Networking (TSN) Ethernet switch
- 8-port switch with 6x 1000/100/10 and 2x 2500/1000/100/10Base-T
- Option with 2x SFP ports for 2.5G fiber and copper transceivers
- Dual redundant 12 V_{DC} to 56 V_{DC} input
- Industrial grade, highly reliable and long-term available



DINRail UPS

500VA/1000VA



DIN Rail Uninterrupted Power Supply (UPS)

DIN Rail Series – 500VA/1000VA

FSP DINRail UPS offers a dependable, cost effective solution to increase equipment stability and system reliability for control panels or different industrial segments. DINRail UPS series with Pure Sine Wave design protects connected devices and guarantees to get through utility grid issues, e.g. Under/OverVoltage, Surge, strike, lighting and outage, these problems will cause industrial processes and manufacturing issue to impact product quality, even safety. Moreover, as UPS Compact size and front access will allow layout-technician to have more space to design the control panel

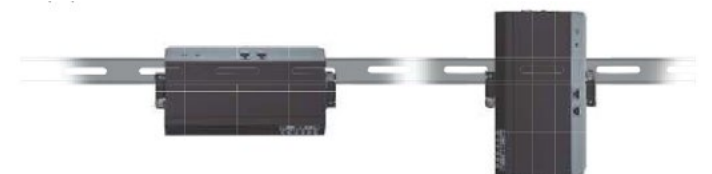
Key Features

- Pure Sine Wave
- High frequency inverter
- Microprocessor controller
- Line mode efficiency > 98%
- Cold start function
- Compact size
- DIN rail mounting, Front access
- Horizontal or vertical installation
- RS485 communication available
- Suitable for PLC, I/O controllers, IPC and control panel

Model	DINRail UPS 500 VA DINRail VAEPO	DINRail UPS 1k VA/600W DINRail 1k VAEPO
Capacity	500VA / 300W	1000VA / 600W
Input - Nominal Voltage	220V _{AC} / 230V _{AC} / 240V _{AC}	
Input - Frequency	50Hz / 60Hz Auto Sensing	
Typical Transfer Time	2-6 ms (10ms max.)	
Battery voltage	12V _{DC}	12V _{DC}
Operation temperature	0 – 40 °C	
Dimensions (WxHxD)	250 x 135 x 115	
Net weight	2.8 kg	3.2 kg

Simple & Easy design

FSP DIN Rail UPS implements compact design to mount in control panel for more space saving. The silent service guarantees power quality to protect, to enhance your system functionality and reliability. Not like traditional UPS, DIN Rail UPS with front access function solves assembly wiring layout issue and engineer will be more flexible to arrange equipment.





60 W Compact DIN-Rail Power Supply

D22 DIN Rail Power Supply Series

Advantech designed the D22 DIN rail power supply series to empower and promote industry 4.0. D22 offers 60W single output voltages at 12V, 24V, and 48V for industrial automation, automotive, networking, infrastructure, transportation & logistics, and other diverse applications. Supports OVP/SCP/OC/OTP.

Model	Output Voltage	Output Power
IPS-D22A60W24V-A	12 V _{DC}	60 Watts
IPS-D22A60W24V-A	24 V _{DC}	60 Watts
IPS-D22A60W24V-A	48 V _{DC}	60 Watts

1

High efficiency at full load up to 88% @230V_{AC}

2

Wide operating temperature

-20 ~ 70 °C with full load
up to 50 °C & cold start at -30 °C

3

Compact design with 60-watt output
saves space in cramped cabinets

4

Supports **adjustable DC output** within a specified range, enabling use of same power supply on multiple devices

Adjustable
DC Output



Smart Factory

Production Line Machine Monitoring

Designed for future industrial automation and smart manufacturing, this production line monitoring solution will play a crucial role in new-generation factories. When paired with the IPS-D22A60W24-A, the ADAM-6717 intelligent I/O gateway and UNO-2484G V2 Modular Embedded Box PC can help monitor equipment operations and health status in real-time. This improves overall equipment efficiency (OEE) and planned predictive maintenance. It also helps IOT edge data transmission and integration with Advantech WISE-PaaS software. This software helps visualize information in high resolution via 4K Ultra HD display ports. This solution performs real-time data collection, storage, processing, computing, and analysis; while providing logic control settings and flexible/manageable configuration. Alarms can be triggered and notifications sent immediately in the event of an emergency.

ADAM-6717

- Linux Open Platform
- 8-ch analog input (current or voltage)/ 5 ch digital input/4 ch digital output
- Programs by linux C API, Node-RED (graphic programming environment)
- Interfaces: 2 x RS-485, 2 x Ethernet port, 1 x USB Type-A 2.0, and 1 x USB Micro-B 2.0



UNO-2484G V2

- Intel® Core™ 11th i7/i5/i3/ Celeron® CPU w/ 8GB DDR4 3200Mb/s memory
- Optional 2nd stack supports up to 2 x iDoor extensions for wireless connectivity, industrial fieldbus, and/or more I/O
- Ruggedized compact fanless design with lockable I/O
- Multiple expansion slots combined by 2 x M.2 (B & M key) and 2 x miniPCIE



Networking

5G Deployment in Heavy Machinery Manufacturing

5G is being implemented across vertical markets, manufacturing, and diverse industries; and is used to improve operation efficiency. The Advantech IPS-D22A60W24-A DIN rail power supply enables the combined use of UNO-137 and ADAM-6317 as an IoT edge controller solution. This system collects data from CNC machines and transmits it through private 5G networks. It can be easily integrated within a factory's own production platform where it helps customers rapidly deploy 5G for full automation.

ADAM-6317

- OPC UA enables Modbus I/O users to access the industrial IoT world
- OPC UA I/O links SCADA and the cloud without requiring gateways. This accelerates OT and IT convergence
- Hardware and software double security levels to prevent being hacked
- Cost-effective: high-I/O density and the daisy-chaining of solutions saves costs
- Multiple expansion slots combined by 2 x M.2 (B & M key) and 2 x miniPCIE



Transportation

Intelligent Truck Tolling and Dynamic Weighing System

The Overloading of transport vehicles is a global problem, leading to significant traffic safety issues. As electronic toll collection (ETC) systems are being gradually implemented, there is a need for an intelligent solution that can support massive data collection and transmission, license plate recognition, and edge computing for real-time processing. Additionally, this solution must be integrated with dynamic vehicle weighing systems installed on highways to measure vehicle weight while in motion.

Combining the Advantech UNO-137 with an IPS-D22A60W24-A DIN rail Power Supply, EKI-2706G-1GFPI-BE Unmanaged Ethernet Switch, cameras, and a vehicle weighing system creates a powerful, integrated solution. After the cameras in this solution automatically take pictures of overloaded vehicles, the solution sends the relevant data to the UNO-137 gateway for uploading to a centralized server. This system enables real-time remote monitoring.

UNO-137

- Intel® Atom® E3940 processor (1.6 GHz) with 8GB DDR3L memory
- Modular design for optional 1 x iDoor extension
- Wide operating temperature range (-40 ~ 70 °C/ -40 ~ 158 °F)
- Port isolation for 8 x DI, 8 x DO, and 2 x COM



EKI-2706G-1GFPI-BE

- Supports 10/100/1000 Mbps Auto Negotiation (EKI-2706G)
- Supports jumbo frame transmission up to 9 kbytes
- DIN-rail with IP30 metal mechanism
- Redundant 24~48 V_{DC} power input (BE Version)
- 4 x IEEE 802.3 af/at PoE ports + 1 x Gigabit Copper + 1 x Gigabit SFP ports



Infrastructure

Building IP Surveillance System

Enterprises face the increasingly important challenge of ensuring infrastructure security, especially when they outgrow their facilities and need to move to a new campus or build a new one. Advantech provides a combined solution of IMC-390-SFP industrial media converter and IPS-D22A60W48-A DIN rail power supply, which supports LFPT functionality and includes 2 x 10/100/1000 Mbps Power Over Ethernet (PoE) copper ports, and a Small Form Pluggable (SFP) fiber port.

These features make this combination an excellent choice for establishing 24/7 video surveillance in large facilities. Additionally, each Ethernet port is capable of providing up to 25W of power to connected devices – eliminating the need for dedicated power lines for distributed CCTV cameras.

IMC-390-SFP

- Supports IEEE802.3at PoE+ (25.5W) and IEEE802.3af PoE (15.4W) standards
- Serves as a power sourcing equipment (PSE) device
- Supports multiple mounting options (desktop, DIN rail or wall-mount)
- Supports Link Fault Pass Through (LFPT)



Embedded Automation Computers

DIN Rail Automation Controller

The Din-Rail edge controller, UNO-1 series, is designed to provide rapid configurable design for edge computing and machine intelligence applications.



UNO-148 V2

Fanless DIN-Rail IPC with Intel® Core™ Processors (13th Gen)

- Intel® Core™ processors (13th Gen) with 8GB DDR5 memory
- Port isolation for 8 x DI, 8 x DO, 4 x COM
- Supports 2 x M.2 M key 2280 NVMe SSD storage (support RAID)
- Supports 1 x M.2 E Key 2230 wi-fi module and 1 x miniPCIe with Nano SIM card slot
- Dual 2500 BASE-T Ethernet supports Time-Sensitive Network (TSN) technology
- Modular design for optional iDoor extension
- Support Windows 11 IoT Enterprise LTSC



UNO-MXM-CB01

UNO Carrier Stack supports MXM GPU module aims for image processing and AI inference

- 1 x PCIe x4 expansion kit support 35W MXM GPU
- Bundle compact Din-rail embedded PC form factor, UNO-148 series, with Intel® Core™ processors (13th/11th Gen)
- Expansion modules to accommodate MXM GPU module for powerful computing capabilities
- Support 4 independent display outputs (3 x DP, 1 x HDMI)
- Standalone heatsink and fan for GPU stable performance
- Support up to 8GB GDDR6 with ECC (depends on MXM module option)
- Industrial design with longevity support (5 years life cycle compared to commercial GPU card 1 year)



UNO-137 V2

Small-Size Integrated DIN-Rail IPC with Intel® Atom® x6413E and x6425RE

- Intel® Atom® x6413E (1.5 GHz) and x6425RE (1.9GHz) processor with 8GB DDR4 memory
- Wide operating temperature range (-40 ~ 70 °C/-40 ~ 158 °F) and wide power input range (10 ~ 36 V_{DC})
- Port isolation for 8 x DI, 8 x DO, 2 x COM
- DP++ ensures HDMI/DVI compatibility
- Dual storage: 1 x M.2 M-key 2242 PCIe/ NVMe or SATA/SSD and 1 x mSATA
- Onboard TPM 2.0 provides hardware-based security
- Modular design for optional iDoor extension
- Ruggedized DIN-rail kit
- Compliant with IEC 61010-1 safety requirements

More Products

Series	Description	Processor
UNO-148	Compact DIN-Rail Edge Controller	11th Gen Intel® Core™ i CPU
UNO-137	Small-Size Integrated DIN-Rail IPC	Intel® Atom® E3940 CPU (1.6 GHz) with 8GB DDR3L memory
UNO-127	Pocket-Size DIN-Rail Edge IPC	Intel® Quad core x6413E CPU with 4GB/8GB DDR4 onboard memory
UNO-1372G-J	Small-Size DIN-rail IPC	Intel® Celeron® J1900 2.0GHz CPU with 4GB DDR3L Memory
UNO-1372GH	Explosion-Proof DIN-Rail Gateway	Intel® Atom™ E3845 1.91GHz CPU with 4GB DDR3L memory
UNO-1372G	Small Size DIN-rail IPC	Intel® Atom™ E3845 1.91GHz CPU with 4GB DDR3L Memory



Fanless Embedded Computer

Titan 300 TGL-UP3 AI

Fanless embedded computer with the 11th Gen Intel® Core™ and Intel® Celeron® SoCs (Codename: Tiger Lake UP3) plus Axeler AI Chip: Powered by a single Metis AIPU up to 120 TOPS .

Key Features

- CPU: 11th Gen Intel® Core™ processors and Intel® Celeron® SoCs
- Graphics: Intel® Iris® Xe architecture with up to 96 EUs, up to 4 independent displays
- Connectivity: 2x 2.5 GbE, Optional M.2 WWAN and WLAN modules
- Memory: Two DDR4 SO-DIMM slots supporting DDR4-3200 ECC memory with IBEC
- Dimensions: 199 x 174 x 73 mm (7.83" x 6.85" x 2.87") DIN-rail or Wall Mount brackets (Factory Alternatives)



DIN Mount Industrial Gateway

Modular Link MX93

Fanless industrial PC powered by the NXP i.MX 93 SoC with modular design and wireless connectivity for streamlined integration

Key Features

- CPU: NXP i.MX 93 SoC with NPU ML accelerator up to 0.5 TOPS
- Connectivity: 2x GbE, WLAN, optional WWAN module
- Memory: Up to 2GB LPDDR4
- Expansion: Stackable through custom connector for Daughter systems
- Dimensions: 140 x 96 x 36 mm (5.5" x 3.8" x 1.4"), DIN-rail or Wall Mounting options



Industrial PCs

DIN Rail Mounting Brackets for Various IPC Series

Tailor-made solutions for automation and digitization requirements. EXTRA Computer offers robust industrial PCs such as mini IPCs and box IPCs (from IP31). Powerful and robust, ideal for demanding environments.

Calmo TINY



Maximum efficiency - minimum of space.
Optional DIN Rail mounting bracket.

Calmo UNI



Energy-saving IPC with a variety of interfaces.
Optional VESA / DIN Rail mounting bracket.

Calmo XS



Dust-proof Industrial Client PC.
Optional DIN Rail mounting bracket

Calmo M



Reliable IPC for demanding industrial applications.
Optional DIN Rail mounting bracket.

Pokini F2



Robust interface variety in pocket format.
Optional DIN Rail mounting bracket.

Pokini Flex



Flat. Robust. Multifunctional.
Optional DIN Rail mounting bracket

Fanless Embedded Systems

DIN Rail Mounting Options

DFI's DIN rail-mountable embedded systems are engineered for seamless integration into industrial environments where space, reliability, and performance are critical. Designed with robust construction and fanless thermal solutions, these systems are ideal for automation, transportation, energy, and smart factory applications.

Ultra Compact Fanless PC

- EC70A-ADP
- EC70A-TGU
- EC70A-SU
- EC70A-MTH
- EC700-ASL
- EC70A-ADN
- EC700-ADN
- EC710-ADN
- ED700-EHL22I
- ED700-EHL
- EC90A-AL
- EC800-AL
(available upon request)
- EC700-AL
(available upon request)
- EC700-BT
- EC900-QCS
- EC900-8MM
- EC910-8MM
- EC900-FS6

AI Inference / Training System

- X6-MTH-ORN (Optional)
- X6-MTH-MXM (Optional)
- EC70A-MTH
- EC700-ADN
- EC710-ADN

Medical Systems

- MPC350-RPS (Optional)
- MD711-SU

In-Vehicle Systems

- VC230-BT (Optional)
- VC900-M8M

Fanless Touch Panel PCs

- KS070-M8M (Optional)
- KS057R-FS

Innovative Agile Infotainment Solutions

- EC70A-ADN



EC900-FS6

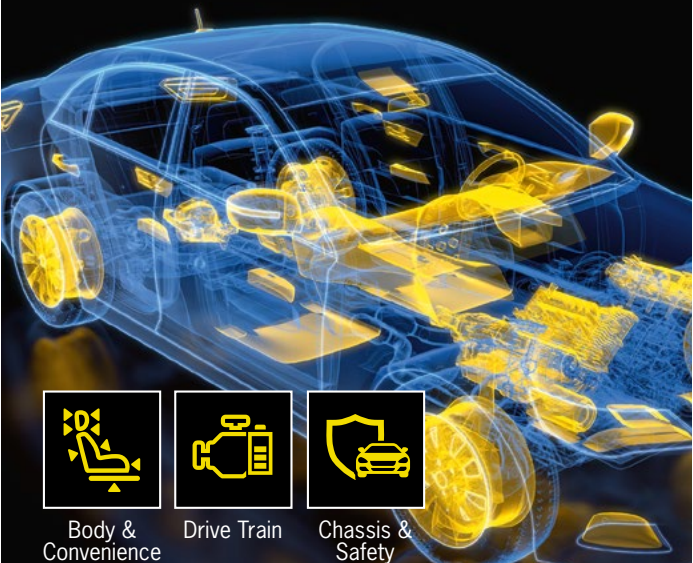


KS057R-FS



X6-MTH-ORN






Body & Convenience


Drive Train


Chassis & Safety


Connected Car


eMobility


Consulting

Discover Innovation in Motion

AUTOMOTIVE Products

RUTRONIK **AUTOMOTIVE** offers innovative products of leading manufacturers for the automotive industry. RUTRONIK **AUTOMOTIVE** brings together entire solutions for the following topics:

■ Body & Convenience

■ Drive Train

■ Chassis & Safety

■ Connected Car

■ eMobility

■ Consulting

More information:
www.rutronik.com/automotive

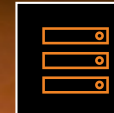





Wireless


Boards & Systems


Displays


Storage

Combine Technologies

Realize **EMBEDDED** Designs

RUTRONIK **EMBEDDED** will provide specific support to manufacturers of machines with focus on professional and robust applications:

■ Digital Signage

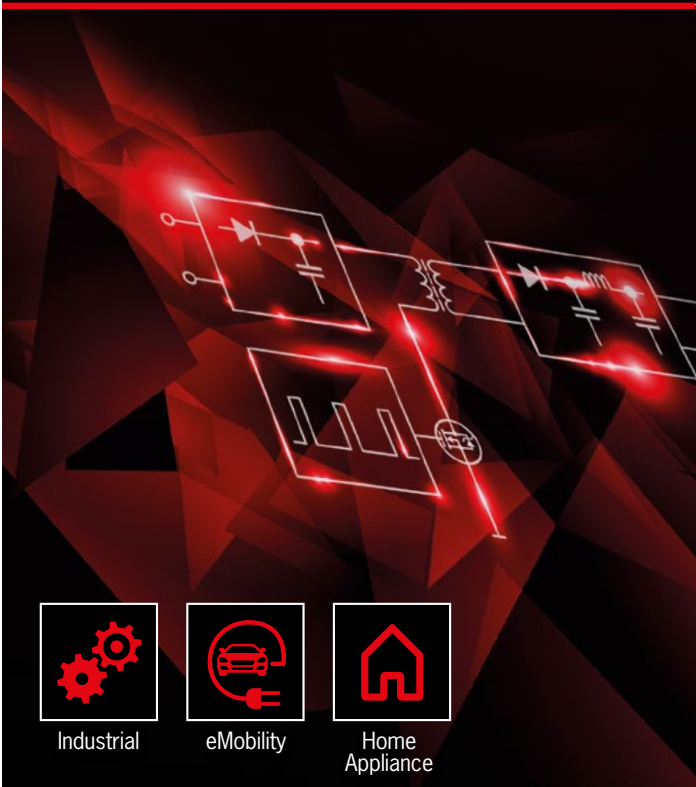
■ Industrial Control

■ Medical

■ Transportation

More information:
www.rutronik.com/embedded






Industrial


eMobility


Home Appliance

Efficient. Robust. Scalable.

Design your Ideas

RUTRONIK **POWER** brings the latest knowledge, scalable solutions and efficient support for innovative power electronic components together – not only in the focus markets:

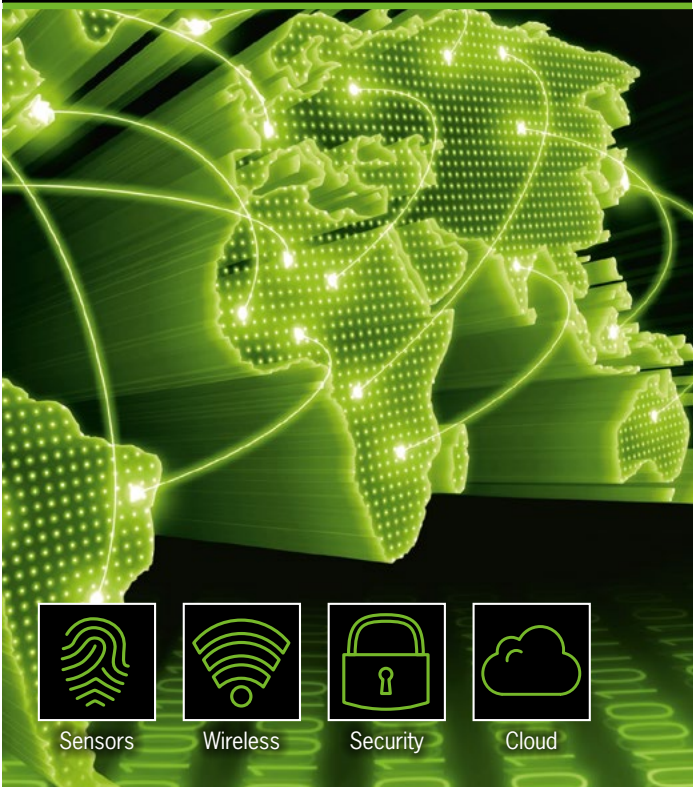
■ Industrial

■ eMobility

■ Home Appliance

More information:
www.rutronik.com/power






Sensors


Wireless


Security


Cloud

Discover the Internet of Things

Design **SMART** Products

RUTRONIK **SMART** offers a new range of bundled hardware, software and services. RUTRONIK **SMART** brings together entire solutions to build applications for:

■ Health

■ Home

■ Retail

■ Tracking

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