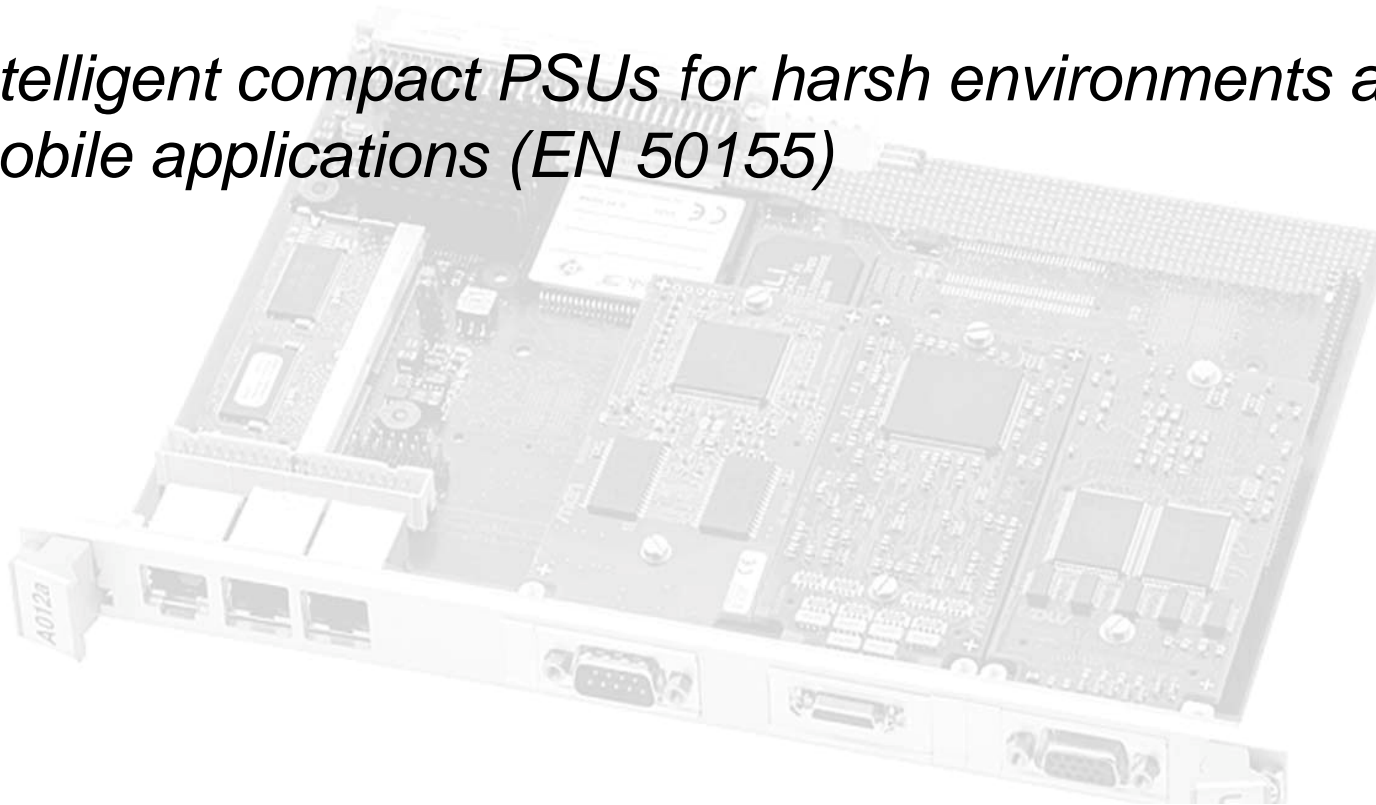


Power Supplies for Trains and Buses – PU2, PU3, PU4

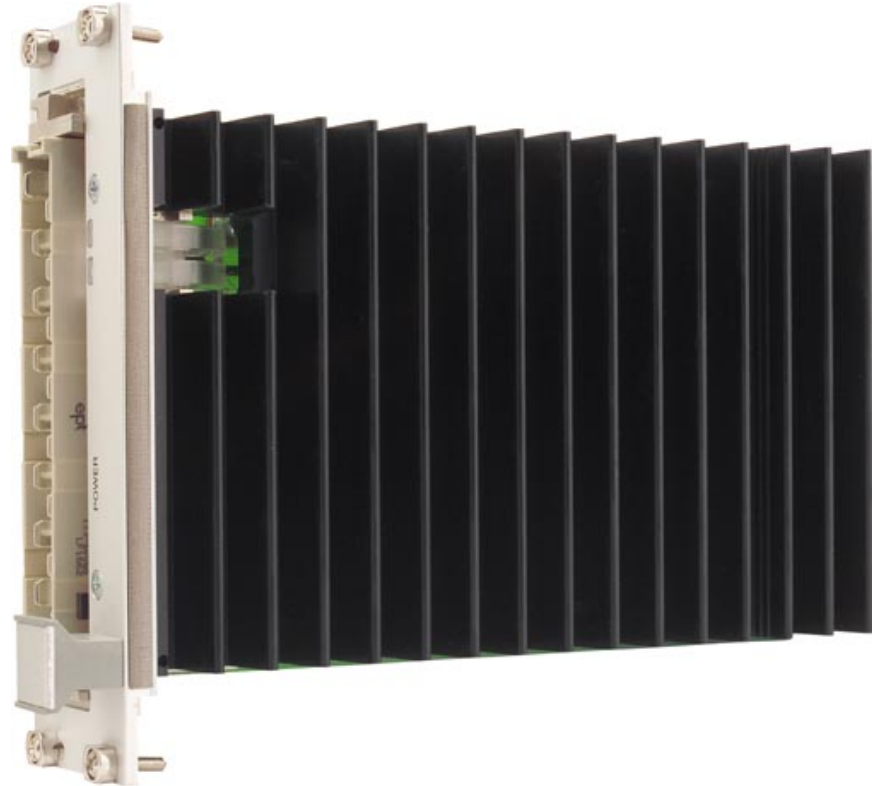
Intelligent compact PSUs for harsh environments and mobile applications (EN 50155)



Overview

Wide range input 9...154V

- ◆ 19" rack mountable
- ◆ 3U, 8HP
- ◆ Output 3.3V and 5V
- ◆ Power 35W
- ◆ H15 DIN41612 plug connector (front and rear)
- ◆ SMBus
- ◆ External I/Os for key function
- ◆ -40..+85°C operation temperature
- ◆ Conformal coating
- ◆ Complies with EN 50155



Content

Technical data

Features and benefits

Typical applications

Target markets

Commercials

Summary

Technical Data 1/3

Microcontroller

- ◆ Voltage and temperature supervision (readable via SMBus)
- ◆ Communication with CPU

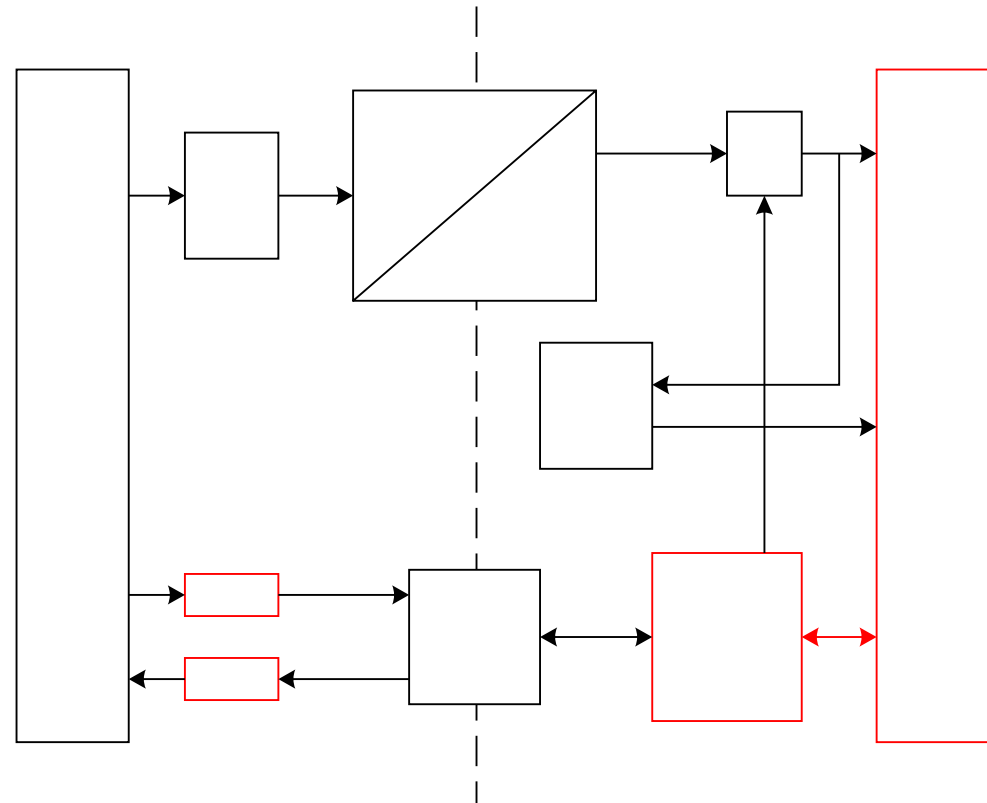
3 binary inputs

3 binary outputs

SMBus signals on back connector

Software support

- ◆ Windows, Linux, VxWorks



Technical Data 2/3

Watchdog functionality

External switch (key) with binary input

Switch-on by key input or wake-on time

Switch-off by key input or software

Overtemperature and overvoltage shutdown

Short circuit protection

Remote on/off

Technical Data 3/3

Input characteristics

- ◆ Nominal voltage input: 24/36/110VDC
- ◆ Input voltage range: 9..36/18..72/36..154V
- ◆ No load input power: 900mW

Output characteristics

- ◆ Output power (max.): 35W
- ◆ Output power (min.): 5W
- ◆ 5V tolerance: +5%/-3%
- ◆ 3.3V tolerance: -+3%
- ◆ Overvoltage protection: +0.5V/-0.2V
- ◆ Overtemperature shutdown: 50°...90°

Features and Benefits 1/2

Intelligence via the PIC microcontroller

- ◆ Supervision of 3 binary inputs and outputs and of voltage and temperature
- ◆ Communication with CPU as SMB slave via the backplane which enables system power-on at a programmed time via the PSU or status polls with regard to error messages, time-out, on/off etc. by the CPU

Three versions cover the whole input voltage range required by EN 50155

- ◆ 9..36V
- ◆ 18..72V
- ◆ 36..154V

Features and Benefits 2/2

The PSU delivers 2 different output voltages (3.3V and 5V) instead of only one (5V)

EN 50155

- ◆ -40 to +85°C
- ◆ Conformal coating
- ◆ No socketed components

It is a compact solution as it only needs two slots (8HP) on the backplane

Typical applications and target markets

Typical applications

- ◆ All sorts of power supply in vehicles (buses, railways, metros, trams)

Target markets

- ◆ Primarily public transportation
- ◆ Further markets like aerospace depending on specific safety criteria required



Commercials

Standard Configurations

- ◆ 0712-0002 (PU2): input voltage range 9..36V (for buses – soft wheels)
- ◆ 0712-0003 (PU3): input voltage range 18..72V (for trains – on rails)
- ◆ 0712-0004 (PU4): input voltage range 36..154V (for trains – less common)

Availability

- ◆ November 2006

Prices

- ◆ MEN list price 550 euros

Summary

Intelligence

- ◆ Thanks to a PIC microcontroller the PSU is able to communicate with the CPU and to control three binary inputs and three outputs

Flexibility

- ◆ Wide input voltage range 9..154V
- ◆ User specific functionality via the binary inputs and outputs

Compact solution

- ◆ Only two slots on the backplane

Suited for rugged environments

- ◆ Extended temperature range and coating
- ◆ EN 50155

Thank you for your attention!

Our mission is to provide embedded computing and I/O solutions for demanding industrial applications in the most innovative, reliable and flexible way.



As a member of the UN Global Compact Initiative, MEN is committed to follow the principles of human rights, labour, environment and anti-corruption as defined by this organization.