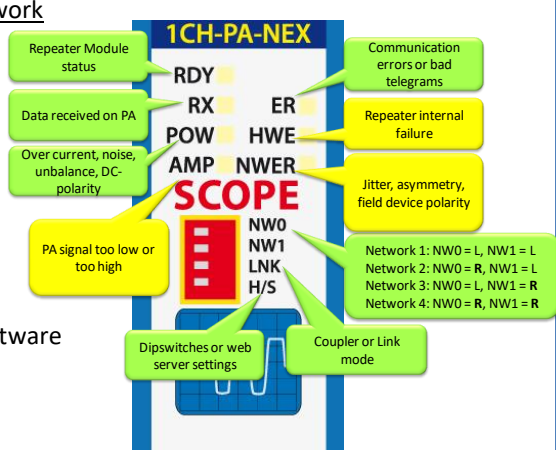


Technical Data - PA Module (101-201610)

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Dimensions and weight	
Dimensions L x W x H	133 x 25 x 105 mm (including backplane, per module)
Weight	133 g (excluding plug-able connectors, backplane and packing material)
Mounting DIN-rail type	35mm x 7,5mm (EN 50022, BS 5584, DIN 46277-3)
Ambient conditions	
Ambient operating temperature range	-20° ... +60° Celsius (for mounting position see manual) -4° ... 158° Fahrenheit
Isolating class	IP 20 (IEC/EN 60529, DIN 40050)
Backplane	
PROFIBUS networks	4 (set by dipswitches or web server)
Module position Modules	First 10 slots Link mode: max. 9 PA modules and 1 DP repeater module Coupler mode: max. 9 PA modules and 1 DP repeater module Monitoring mode: max. 4 PA modules (4 backplane networks)
Power supply for the module Typical backplane current Max. backplane current	Provided through the backplane 350 mA (at 5.72 VDC) 550 mA (at 5.72 VDC) At this current consumption the module is switched OFF from backplane. Occurs when module is faulty, e.g. internal short circuit.
Compatible backplane units	101-200011, 101-200022, 101-200023, 101-200024, 101-200027
PROFIBUS PA power specifications	
Trunk voltage Trunk current Current consumption	10 to 27 VDC customizable PA trunk voltage (Non-Ex) 500 mA 10 mA (in all modes)
PROFIBUS PA cable specifications	
Cable length Wire diameter Wire type Termination	Max. 1900 m cable length (PROFIBUS PA specifications) < 2.5 mm ² Stranded or solid core ON when power supplied on PA power connector

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PROFIBUS DP protocol specifications	
Supported Protocols	DP-V0, DP- V1, DP-V2, FDL, MPI, FMS, PROFIsafe, PROFIdrive and any other FDL based protocol
Address	No bus address required
Transmission speed	9.6 kbps to 12 Mbps (including 45.45 kbps)
Transmission speed detection	Auto detect (< 10 s detection and 50 s baudrate switchover time)
PROFIBUS busparameters	No adjustments required in Link mode
PROFIBUS PA protocol specifications	
Address	Coupler mode: no address required Link mode: master on PA bus address 1 (fixed)
Number of devices	32 (PROFIBUS PA specifications)
Baudrate PA bus	31.25 kbps
Oscilloscope specifications	
AC PA voltage	4 MS/s, resolution 7.5 mV, range -0.95 to 0.95 V
DC PA voltage	1 kS/s, resolution 75 mV, range -38 to +38 V
DC PA current	1 kS/s, resolution 1 mA, range 0 to 1024 mA
Connector lay-out	
<u>2x PROFIBUS PA</u>	<u>Plug-able screw connector, connectors 1 to 1, pitch 5.08 mm</u> Pin PA- : 0 V Pin PA+ : 10 to 27 VDC Pin SH : Shield Pin I : Indirect Shield
<u>PA Power</u>	<u>Plug-able screw connector, pitch 5,08 mm</u> Pin - : 0 V Pin + : 10 to 27 VDC Pin SH: Shield <i>Pin SH is connected internally to the DIN-rail with spring-loaded contact.</i> <i>Pin I is connected internally with 10nF/1MOhm to shield.</i>

Technical Data - PA Module (101-201610)	
Dipswitches	
<p><u>NW0</u> <u>NW1</u> LEFT LEFT RIGHT LEFT LEFT RIGHT RIGHT RIGHT</p> <p><u>LNK</u> LEFT / RIGHT</p> <p><u>H/S</u> LEFT / RIGHT</p>	<p><u>PROFIBUS Network</u> 1 2 3 4</p> <p><u>Link mode</u> OFF / ON</p> <p><u>Settings</u> Hardware / Software</p> 
LEDs	
<p>RDY : Ready RX : Receiving data HWE : Hardware error ER : Error AMP : Amplitude error POW : Power error NWER : Network error</p>	<p>Module is ready for operation (ON) Receiving PA telegrams (blinking) Internal hardware error (contact PROCENTEC) No or bad telegrams on PA detected PA signal too low or too high Over current, noise, unbalance, DC-polarity Jitter, asymmetry, field device polarity</p> <p><i>Alarm values can be changed through the web server.</i></p>
Standard and approvals	
<p>CE</p> <p>FCC</p> <p>UL</p>	<p>EMC Directive 2014/30/EU, class B Digital Device RoHs Directive 2011/65/EU</p> <p>47 CFR 15, Unintentional Radiator, class B Digital Device.</p> <p>Report reference: E468970 Standards for safety: UL 508 - Industrial Control Equipment, CSA C22.2 No. 142-M1987 - Industrial Control Equipment</p>
Others	
<p>Head Station firmware MTBF</p>	<p>At least version 1.279 1165020 hours, at 30° Celsius, IEC TR 62380</p>
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