

AMS 5812 Cross Reference

How to replace SM5852 and SM5812 with AMS 5812 pressure sensor series

This document is intended to help engineers and purchasers select the right AMS 5812 pressure sensor model to substitute or replace current and obsolete products in the SM5852 and SM5812 amplified pressure sensor series.

With its AMS 5812 pressure sensor series Analog Microelectronics offers substitute / replacement sensors for Silicon Microstructures' SM5852 / SM5812 series. The AMS 5812 series is identical to the SM5852 / SM5812 series in terms of dimensions, pinout, pressure connection and similar in function¹ with enhanced specifications.

Analog Microelectronics' board mount pressure sensors series AMS 5812 consists of high-precision amplified, fully signal conditioned, and temperature compensated pressure sensors. AMS5812 features an analog, ratiometric 0.5 to 4.5 V output and a digital I²C output and comes in a ceramic dual in line package (DIP) for assembly on printed circuit boards. They are available in various pressure ranges from 0.05 psi up to 100 psi for all types of pressure.

For more information on AMS 5812 see: <https://www.analog-micro.com/en/products/pressure-sensors/board-mount-pressure-sensors/ams5812/>

Cross reference tables

In the following tables show the original product numbers of SM5852 and SM5812 together with the corresponding substitute product number from the AMS 5812 series.

1. Replacement of low pressure sensors from the SM5852 series with AMS 5812 pressure sensor models

Sensor to be replaced		Substitute product
SM5852 series product number	Description pressure type and range, pressure ports	AMS5812 series ordering code
SM5852-001-D-3-LR	Differential pressure, -0.15 to 0.15 psi, two long tubes	AMS 5812-0001-D-B
SM5852-003-D-3-LR	Differential pressure, -0.3 to 0.3 psi, two long tubes	AMS 5812-0003-D-B
SM5852-008-D-3-LR	Differential pressure, -0.8 to 0.8, two long tubes	AMS 5812-0008-D-B
SM5852-015-D-3-LR	Differential pressure, -1.5 to 1.5, two long tubes	AMS 5812-0015-D-B
SM5852-030-D-3-LR	Differential pressure, -3 to 3, two long tubes	AMS 5812-0030-D-B
SM5852-001-S-3-LR	Single-ended differential, 0 to 0.15 psi, two long tubes	AMS 5812-0001-D
SM5852-003-S-3-LR	Single-ended differential, 0 to 0.3 psi, two long tubes	AMS 5812-0003-D
SM5852-004-S-3-LR	Single-ended differential, 0 to 0.4 psi, two long tubes	AMS 5812-0004-D
SM5852-008-S-3-LR	Single-ended differential, 0 to 0.8 psi, two long tubes	AMS 5812-0008-D
SM5852-015-S-3-LR	Single-ended differential, 0 to 1.5 psi, two long tubes	AMS 5812-0015-D
SM5852-030-S-3-LR	Single-ended differential, 0 to 3 psi, two long tubes	AMS 5812-0030-D
SM5852-008-G-3-SR	Gage pressure, 0 to 0.8 psi, one short tube	AMS 5812-0008-D ²
SM5852-015-G-3-LR	Gage pressure, 0 to 1.5 psi, one long tube	AMS 5812-0015-D ⁰

¹ AMS5812's analog 0.5 to 4.5 V output is identical to SM58xx's voltage output; software for I²C communication has to be adapted.

² Standard variant with two long tubes. Gage models of AMS 5812 with only one tube or short tubes or without tubes are available on request.

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2. Replacement of (obsolete) pressure sensors from the series SM5812 with AMS 5812 pressure sensor models

Sensor to be replaced		Substitute product
SM5812 series product number	Description <i>pressure type and range, pressure ports</i>	AMS5812 series ordering code
SM5812-005-D-3-L	Differential pressure, - 5 to 5 psi, two long tubes	AMS 5812-0050-D-B
SM5812-015-D-3-L	Differential pressure, -15 to 15 psi, two long tubes	AMS 5812-0150-D-B
SM5812-005-S-3-L	Single-ended differential, 0 to 5 psi, two long tubes	AMS 5812-0050-D
SM5812-015-S-3-L	Single-ended differential, 0 to 15 psi, two long tubes	AMS 5812-0150-D
SM5812-030-S-3-L	Single-ended differential, 0 to 30 psi, two long tubes	AMS 5812-0300-D
SM5812-060-S-3-L	Single-ended differential, 0 to 60 psi, two long tubes	AMS 5812-0600-D
SM5812-100-S-3-L	Single-ended differential, 0 to 100 psi, two long tubes	AMS 5812-1000-D
SM5812-015-G-3-L	Gage pressure, 0 to 15 psi, one long tube	AMS 5812-0150-D ⁰
SM5812-030-G-3-L	Gage pressure, 0 to 30 psi, one long tube	AMS 5812-0300-D ⁰
SM5812-060-G-3-L	Gage pressure, 0 to 60 psi, one long tube	AMS 5812-0600-D ⁰
SM5812-100-G-3-L	Gage pressure, 0 to 100 psi, one long tube	AMS 5812-1000-D ⁰
SM5812-015-A-3-L	Absolute pressure, 0 to 15 psi, one long tube	AMS 5812-0150-A
SM5812-030-A-3-L	Absolute pressure, 0 to 30 psi, one long tube	AMS 5812-0300-A