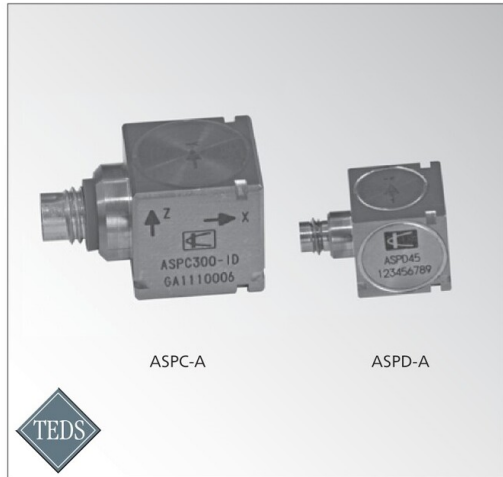# ASPC-A/ASPD-A

Piezoelectric Acceleration Transducer (Built-in Amplifier)

ASPC-A   ASPD-A

TEDS

Wide measurement range, capable of measuring slight through to high accelerations.

● High sensitivity, small size
● Capable of measurement of wide band, low to high frequencies
● High mechanical strength
● Environmentally-resistant

● Simultaneous measurement of acceleration in X, Y and Z directions
● 360 to 4500 m/s^2

ASPC-A Specifications

Rated Capacity	See table below.
Voltage Sensitivity	See table below.
Resonant Frequency	Approx. 35 kHz
Frequency Response (±1 dB)	1 to 5000 Hz
Frequency Response (±3 dB)	1 to 8000 Hz
Impact Resistant	30000 m/s^2
Operating Temperature	ASPC-A-30/ASPC-A-300:
	-50 to 110°C
	(With operating power supply: 0.5 to 5 mA)
	-50 to 70°C
	(With operating power supply: 0.5 to 10 mA)
	Measuring instrument side's operating temperature: -20 to 60°C
	ASPC-A-30-ID/ASPC-A-300-ID:
	-40 to 85°C
	(With operating power supply: 0.5 to 5 mA)
	-40 to 70°C
	(With operating power supply: 0.5 to 10 mA)
	Measuring instrument side's operating temperature: -20 to 60°C
Transverse Sensitivity	5% RO or less
Output Impedance	1000 Ω or less
Weight	Approx. 11 g (Excluding cable)
Case Material	Titanium
Mounting Screw	Female screw (M5×0.8, depth 3.5)
Power Supply	21 to 24 VDC, 0.5 to 10 mA
Cable	Dedicated cable (SA12ZSC-01B), length approx. 3.3 m
	Sensor side: DR-4S-1
	Measuring instrument side: BNC connector (BNC163)
	(Shield wire is connected to the case.)
Sensor ID	TEDS (IEEE1451.4)
	(ASPC-A-30-ID/ASPC-A-300-ID only)

Models	Rated Capacity	Voltage Sensitivity (±10%)	TEDS
ASPC-A-30-ID	±360 m/s^2		✔
ASPC-A-30	±400 m/s^2	10 mV/m/s^2	−
ASPD-A-45-ID	±450 m/s^2		✔
ASPD-A-45			−
ASPC-A-300-ID	±3600 m/s^2		✔
ASPC-A-300	±4000 m/s^2	1.0 mV/m/s^2	−
ASPD-A-450-ID	±4500 m/s^2		✔
ASPD-A-450			−

Standard Accessories　Dedicated cable SA12ZSC-01B

Optional Accessories　Mount base

*Acceleration (m/s^2)
= Output voltage from sensor (mV) ÷ Voltage sensitivity (mV/m/s^2)

To Ensure Safe Usage

Before measuring data by using the CCA-40A or CCA-40A-F, insulate the mounting surface between the transducer and target object.

ASPD-A Specifications

Performance

Rated Capacity	See table on the previous page.
Voltage Sensitivity	See table on the previous page.

Environmental Characteristics

Operating Temperature	ASPD-A-45 (-ID):
	-50 to 110°C
	(With operating power supply: 2 to 5 mA)
	-50 to 80°C
	(With operating power supply: 2 to 10 mA)
	ASPD-A-45-ID:
	-40 to 85°C
	(Operating temperature of TEDS)
	ASPD-A-450 (-ID):
	-50 to 120°C
	(With operating power supply: 2 to 5 mA)
	-50 to 80°C
	(With operating power supply: 2 to 10 mA)
	ASPD-A-450-ID:
	-40 to 85°C
	(Operating temperature of TEDS)

Electrical Characteristics

| Output Impedance	ASPD-A-45 (-ID): 500 Ω or less
	ASPD-A-450 (-ID): 100 Ω or less
Power Supply	21 to 30 VDC, 2 to 10 mA
Cable	Dedicated cable (SA11ZSCA-01B), length approx. 3.3 m
	(Measuring instrument side's operating temperature: -20 to 60°C)
	Sensor side: CZ663
	Measuring instrument side: BNC connector
	(Shield wire is connected to the case.)

Mechanical Properties

Frequency Response	ASPD-A-45 (-ID):
	(±5%) (X, Y): 2 to 7000 Hz
	(Z): 2 to 10000 Hz
	(±3 dB) (X, Y): 0.5 to 10000 Hz
	(Z): 0.5 to 18000 Hz
	ASPD-A-450 (-ID):
	(±5%) (X, Y): 2 to 10000 Hz
	(Z): 2 to 15000 Hz
	(±3 dB) (X, Y):0.5 to 15000 Hz
	(Z) :0.5 to 20000 Hz
Frequency Response	(±5%) (X, Y, Z): 2 to 900 Hz
(When using mount base)	(±3 dB) (X, Y, Z): 0.5 to 2000 Hz
Resonant Frequency	55 kHz or more (Z axis)
Impact Resistant	±30000 m/s^2
Transverse Sensitivity	5% RO or less
Case Material	Titanium
Dimensions	10 W ×10 H ×10 D mm
	(Excluding protrusions)
Weight	Approx. 4.4 g (Excluding cable)

Other

Mounting Screw	Female screw (M3 × 0.5, depth 2)
Attached Screw	Male screw (M3 × 0.5 × 4)

Standard Accessories | Dedicated cable SA11ZSCA-01B
Attached screw (M3 × 0.5 × 4)
Dedicated mount base SA11ZSCA-02

■ **Dimensions**

ASPC-A

ASPD-A

BNC connector
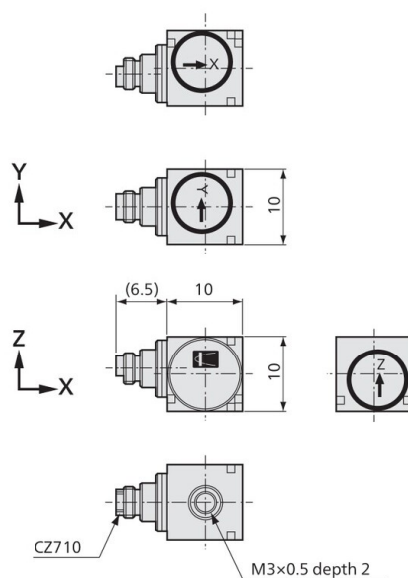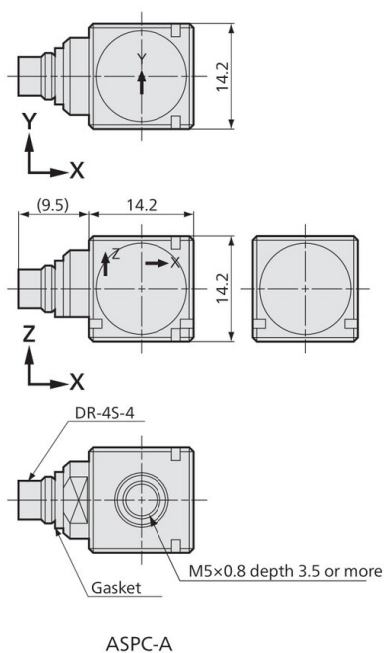
Acceleration
Transducers

Outline

General

Piezoelectric

Gyro