

Technical Form

APTS SENSOR - ABDOMINAL PRESSURE TWIN SENSOR



The **APTS sensors**, developed by IFSTTAR (French Institute of Science and Technology for Transport, Development and Networks) **for the "Q-Series" dummies**, are an essential new tool for the in-depth assessment of child restraint systems.

Each APTS is composed of a soft cylindrical polymer bladder (currently polyurethane) filled with a viscous fluid and closed by aluminum caps. The fluid pressure is measured by a pressure cell (*specifications below*) implanted in the cap. Two APTS sensors are mounted inside the Q dummy abdomen in two cylindrical holes parallel to the lumbar spine. They thus enable the provision of relevant information needed for the **assessment of abdominal injuries**.

The **APTS is currently available in three sizes:**

- ° a nominal diameter of **30mm** for Q1/1.5 abdomens,
- ° a nominal diameter of **40mm** for Q3 and Q6 abdomens,
- ° a nominal diameter of **50mm** for the Q10 abdomen.

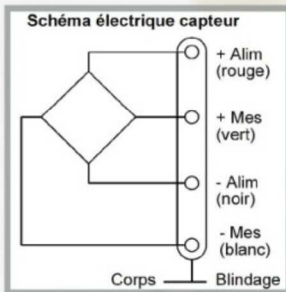
TECHNICAL SPECIFICATIONS

CAPTEUR TYPE / MODEL SENSOR
XPR30-S102

Ref. XPR30-S102-10BS_Rev A

UTILISATION
DESCRIPTION

Capteur de pression miniature
Miniature pressure sensor



ETENDUE DE MESURE

10 BS Bar scellé / sealed

RANGE

2 x l'étendue de mesure

SURCHARGE ADMISSIBLE

2 x full scale

OVERANGE

10 Vcc

TENSION D'ALIMENTATION

EXCITATION

10 Vdc

SIGNAL A L'ETENDUE DE MESURE

100 mV

SIGNAL OUTPUT AT FULL SCALE

100 mV

DESEQUILIBRE

< ± 10 mV

OFFSET

< ± 10 mV

LINEARITE

< ± 0.35% de l'étendue de mesure

LINEARITY

< ± 0.35% full scale

HYSTERESIS

< ± 0.25% de l'étendue de mesure

HYSTERESIS

< ± 0.25% full scale

INDICE DE PROTECTION

IP50

PROTECTION

PLAGE D'UTILISATION EN TEMPERATURE (OTR)

-20°C à +80°C

OPERATING TEMPERATURE RANGE (OTR)

-20°C to +80°C

PLAGE DE COMPENSATION EN TEMPERATURE (CTR)

0°C à +60°C

COMPENSATED TEMPERATURE RANGE (CTR)

0°C to +60°C

DERIVE DE ZERO DANS LA PLAGES COMPENSEE

< 3.5% de l'étendue de mesure / 50°C

ZERO SHIFT WITHIN CTR

< 3.5% full scale / 50°C

DERIVE DE SENSIBILITE DANS LA PLAGES COMPENSEE

< 2.5% de la valeur lue / 50°C

SENSIVITY SHIFT WITHIN CTR

< 2.5% of reading / 50°C

SORTIE ELECTRIQUE

3 conducteurs torsadés

ELECTRICAL OUTPUT

3 twisted wires

FICHE MOBILE

-

MATING CONNECTOR

-

TYPE ET LONGUEUR DE CABLE

Gaine silastène 3, longueur 4m

CABLE OUTPUT

Silastene jacket 3, 4m length

