BRIEF INFORMATION

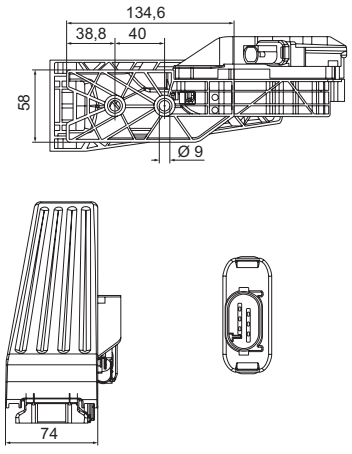
Pedal sensors

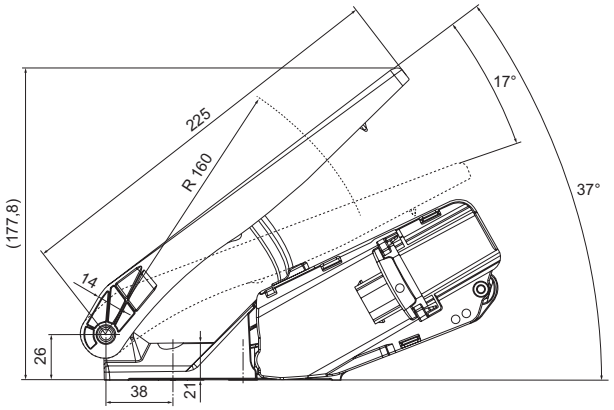
→ Contactless measurement principle
→ Slim and sturdy design
→ Simple mechanical connection
→ Redundant output signal
→ High degree of measuring accuracy
→ No learning process is necessary at the vehicle production line
→ High interference immunity against electrical and magnetic fields

PRODUCT FEATURES

Application
The HELLA pedal for floor-mounted or suspended installation is suitable for various vehicles - starting with applications in the automotive field as sports cars and E-cars, up to robust use in agricultural and construction vehicles.
Thanks to the wear-free measurement principle of the CIPOS® sensors developed in-house at HELLA (see description of the design and function of the angular rotation sensors) and the extremely low level of mechanical wear, this version is particularly preferable to contact-type pedals for frequent small movements.

FLOOR-MOUNTED PEDALS





Design/function

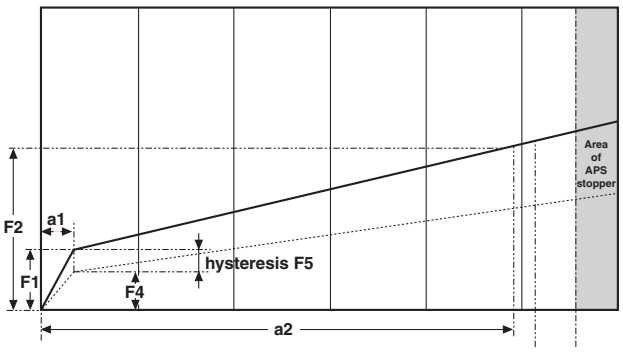
The housing and pedal plate are made completely of recyclable glass fibre-reinforced plastic. The sensor is completely waterproof, enclosed in housing within the overall dimensions of the device. The actuating force is generated by two springs, each of which is sufficient to safely return the pedal to its original position. The electrical output signal is obtained with the CIPOS® measurement principle. For this purpose, a sheet metal cursor is routed from the pedal arm to a guide rod via sensor conductor paths on the measuring board. Two output signals are generated by two galvanically-isolated sensors.

Technical data

Operating voltage	5 V ± 6 %
Initial force	15 N
Final force	25 N
Actuation angle	17°
Output signal	2 x analogue ratiometric, 2nd channel half pitch
Idling voltage	15 % / 7.5 %
Full throttle voltage	80 % / 40 %
Operating temperature	-40°C to +85°C
Protection class (electronic)	IP 6K9K
Two-way connector[1)]	AMP 1-967616-1

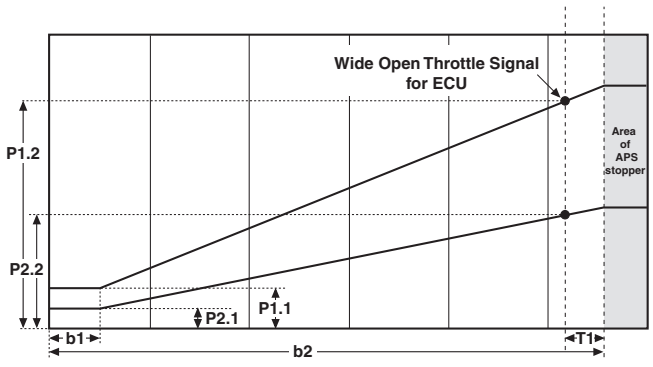
[1)] This accessory is not included in the scope of delivery.
Obtainable from Tyco Electronics.
Gold-plated contacts and single-wire sealing are required.

Mechanical characteristic curve



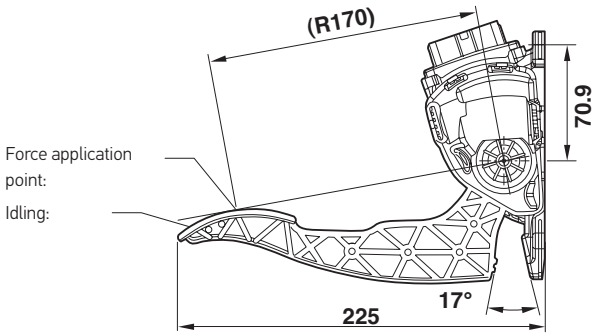
		Rated values
R	[mm]	160,0
F1	[N]	15,0 ± 3,5
F2	[N]	25 ± 4,5
F4	[N]	> 4,0
F5	[N]	> 1,5
a1	[degrees]	< 1,5
a2	[degrees]	15,5

Electrical characteristic curve



		Rated values
b2	[grad]	17 ± 1,0
P1.1	[%]	15,0 ± 1,0
P2.1	[%]	7,5 ± 1,0
P1.max	[%]	< 81,8
P2.max	[%]	< 40,9
P1.2	[%]	76,8
P2.2	[%]	38,4
T1	[degrees]	< 2,0
b1	[degrees]	< 1,2

SUSPENDED PEDALS



Design/function

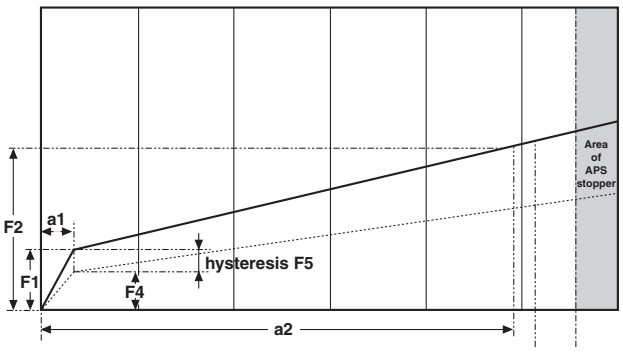
The housing and actuating lever are made completely of recyclable glass fibre-reinforced plastic. The sensor is completely waterproof, enclosed in housing within the overall dimensions of the device. The actuating force is generated by two springs, each of which is sufficient to safely return the pedal to its original position. The electrical output signal is obtained with the CIPOS® measurement principle. For this purpose, a sheet metal cursor is routed from the pedal arm to a guide rod via sensor conductor paths on the measuring board. Two output signals are generated by two galvanically-isolated sensors. Different output signals can be generated depending on the measuring board used. In addition, individual characteristic curves can be programmed on request.

Technical data

Operating voltage	5 V ± 6 %
Initial force	24 N
Final force	42 N
Actuation angle	17°
Output signal	2 x analogue ratiometric, 2nd channel half pitch
Idling voltage	10 % / 5 %
Full throttle voltage	90 % / 45 %
Operating temperature	-40°C to +85°C
Protection class (electronic)	IP 6K9K
Two-way connector[1)]	Yazaki 7283-1968-30

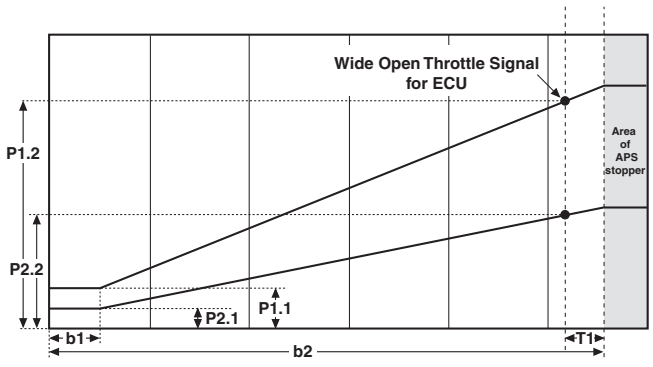
[1)] This accessory is not included in the scope of delivery.
Obtainable from Yazaki.
Gold-plated contacts and single-wire sealing are required.

Mechanical characteristic curve



		Rated values
R	[mm]	170,0
F1	[N]	24,0 ± 6,0
F2	[N]	42,0 ± 8,0
F4	[N]	> 5,0
F5	[N]	> 4,0
a1	[degrees]	< 1,2
a2	[degrees]	15,5

Electrical characteristic curve



		Rated values
b2	[degrees]	17,0 ± 1,2
P1.1	[%]	10,0 ± 1,0
P2.1	[%]	5,0 ± 1,0
P1.max	[%]	< 90,0
P2.max	[%]	< 45,0
P1.2	[%]	84,0
P2.2	[%]	42,0
T1	[degrees]	< 2,0
b1	[degrees]	< 1,5

SUMMARY OF VERSIONS

Version	Material	Part number
Accelerator pedal, floor-mounted	Plastic	**on request**
Accelerator pedal, suspended	Plastic	**on request**