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IQAN-LF1 Input Devices

Electronic Control Systems



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Application

Typical applications for an electric accelerator pedal include speed control of a mobile machine with an electric engine speed actuator, E-gas. The IQAN-LF1 pedal may be combined with an IQAN-XT2 to proportionally control a hydrostatic transmission. The pedal can also be used as a brake pedal or as an inch pedal.

Design and function

The pedal frame and the pedal plate are made of black-anodized sheet metal, which results in a sturdy construction. The pedal pivots around a through shaft with dual bushings. The plate is rubber coated to prevent slipping. The enclosed electric potentiometer is located under the pedal to protect against mechanical damage. The pedal motion is transmitted to the potentiometer through a linkage with ball-joints. The pedal has a mechanical bottom stop so no external forces can reach the potentiometer. The potentiometer is a high cycle, plastic-hybrid type and for safety reasons, has a built in neutral indicator switch. Both the potentiometer and the switch have additional built-in protective resistors that prevent them from being destroyed by an electric short circuit. The electric connector is well protected against dirt and mechanical damage but is easily available for plug-in and troubleshooting.

Properties

This pedal is designed to be very flexible when it comes to correct ergonomic location and a good looking environment in the cab. The activation force has been carefully selected for operator comfort. Mounting on a horizontal cab floor will give a good starting and final angle for the pedal. The pedal requires 3 mounting screws. The other section of this datasheet shows the mounting pattern and connector configuration.

General

Weight	1,6 kg
Operating temperature	-40 °C to +80 °C
Sealing	IP 54
Start angle	36,5°
Final angle	17°
Activation point, switch	2,5°
Activation torque, start	3,5 Nm
Activation torque, final	8 Nm
Max. load	1000 N
Sensing pot. resistance	1 kohm
Protective resistor, pot.	1 kohm
Protective resistor, switch	1 kohm
Signal range at 5V supply	0,4 to 3,2 V
Signal, neutral switch active	0,8 V
Expected life	2X10 ⁶ cycles
Electrical connector	AMP, timer
Mating connector kit	Part no. 5031022

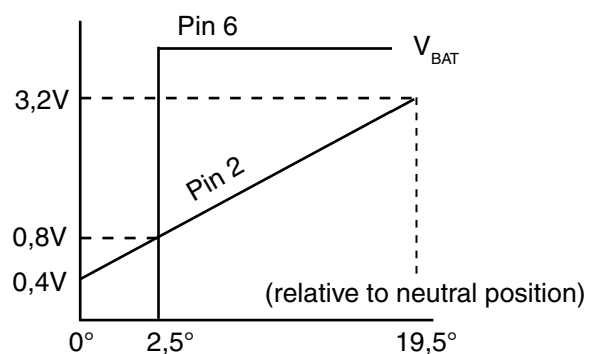
Connector configuration

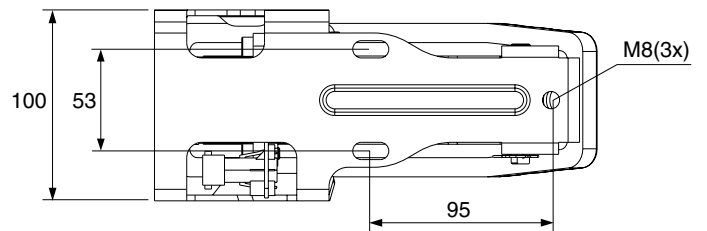
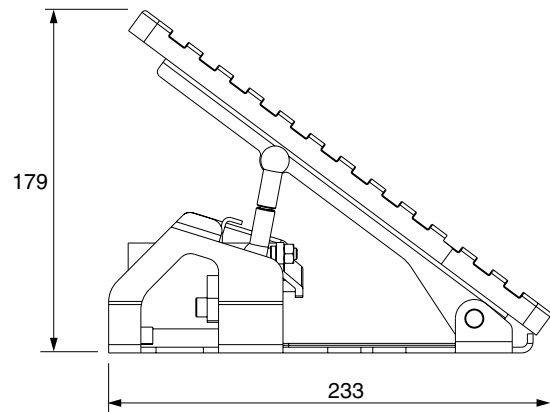
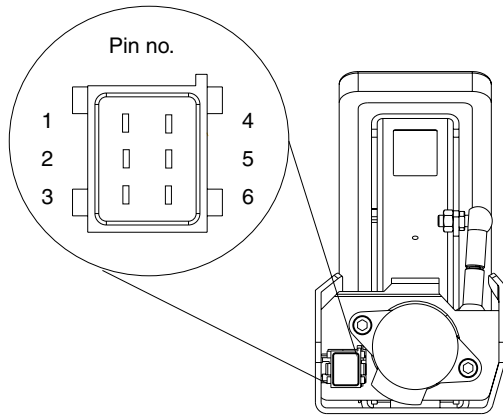
Pin 1:	not used
Pin 2:	analogue output signal
Pin 3:	+ 12/24V neutral switch supply
Pin 4:	+ 5Vref potentiometer supply
Pin 5:	- Vref potentiometer ground
Pin 6:	neutral switch signal

Ordering part number

IQAN-LF1	5010011
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Angle vs. output diagram





unit = mm

! WARNING

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Europe, Middle East, Africa

AE – United Arab Emirates,
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Tel: +971 4 8127100
parker.me@parker.com

AT – Austria, Wiener Neustadt

Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe, Wiener
Neustadt

Tel: +43 (0)2622 23501 900
parker.easteurope@parker.com

AZ – Azerbaijan, Baku

Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles

Tel: +32 (0)67 280 900
parker.belgium@parker.com

BY – Belarus, Minsk

Tel: +375 17 209 9399
parker.belarus@parker.com

CH – Switzerland, Etoy

Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CZ – Czech Republic, Klecany

Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst

Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup

Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid

Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa

Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve

Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens

Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budapest

Tel: +36 1 220 4155
parker.hungary@parker.com

IE – Ireland, Dublin

Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IT – Italy, Corsico (MI)

Tel: +39 02 45 19 21
parker.italy@parker.com

KZ – Kazakhstan, Almaty

Tel: +7 7272 505 800
parker.easteurope@parker.com

NL – The Netherlands, Oldenzaal

Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Asker

Tel: +47 66 75 34 00
parker.norway@parker.com

PL – Poland, Warsaw

Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Leca da Palmeira

Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest

Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow

Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga

Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SK – Slovakia, Banská Bystrica

Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto

Tel: +386 7 337 6650
parker.slovenia@parker.com

TR – Turkey, Istanbul

Tel: +90 216 4997081
parker.turkey@parker.com

UA – Ukraine, Kiev

Tel: +380 44 494 2731
parker.ukraine@parker.com

UK – United Kingdom, Warwick

Tel: +44 (0)1926 317 878
parker.uk@parker.com

ZA – South Africa, Kempton Park

Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario

Tel: +1 905 693 3000

US – USA, Cleveland

(industrial)
Tel: +1 216 896 3000

US – USA, Elk Grove Village

(mobile)
Tel: +1 847 258 6200

Asia Pacific

AU – Australia, Castle Hill

Tel: +61 (0)2-9634 7777

CN – China, Shanghai

Tel: +86 21 2899 5000

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NZ – New Zealand, Mt Wellington

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Tel: +65 6887 6300

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Tel: +662 717 8140

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Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires

Tel: +54 3327 44 4129

BR – Brazil, Sao Jose dos

Campos
Tel: +55 12 4009 3500

CL – Chile, Santiago

Tel: +56 2 623 1216

MX – Mexico, Apodaca

Tel: +52 81 8156 6000

VE – Venezuela, Caracas

Tel: +58 212 238 5422

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EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL,
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