



 PRODUCT-DETAILS

ACQ580-31-018A-4

LV AC wall-mounted ultra-low harmonic drive for water and wastewater, IEC: Pn 7.5 kW, 17.0 A, 400 V, UL: Pld 10 Hp, 14.0 A, 480 V (ACQ580-31-018A-4)



General Information

Global Commercial Alias	ACQ580-31-018A-4
Product ID	3AXD50000428748
ABB Type Designation	ACQ580-31-018A-4
EAN	6438177594222

Catalog Description	LV AC wall-mounted ultra-low harmonic drive for water and wastewater, IEC: Pn 7.5 kW, 17.0 A, 400 V, UL: Pld 10 Hp, 14.0 A, 480 V (ACQ580-31-018A-4)
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The ACQ580-31 drives deliver innovative pump features for the water and wastewater industry, securing energy efficient flow of water and wastewater in your pumping solutions. The ultra-low harmonic variant provides ultimate harmonic performance, reaching even less than 3 % THDi, and exceeding the requirements set by low harmonic standards and recommendations. The drive includes an active supply unit and integrated low harmonic line filter, meaning there is no need for external filters, multi-pulse arrangements or special transformers.

Long Description

Other features include output voltage boost and power factor correction. This robust and compact wall-mounted drive has built-in pump application functionality such as sensorless flow calculation, multipump control, level control, soft pipe fill, dry run protection, quick ramps and a solution for keeping the impeller of the pump clean. Usability is further enhanced with the intuitive Hand-Off-Auto control panel, the PC tool Drive composer and an optional Bluetooth® control panel. The ultra-low harmonic wall-mounted variant comes in IP21 enclosure as standard. Also, IP55 and flange mounting units are available.

Ordering

Country of Origin	Finland (FI)
Customs Tariff Number	85044085
HS Code	850440-- Electrical transformers, static converters (for example, rectifiers) and inductors.- Static converters
Invoice Description	ACQ580-31-018A-4 PN: 7.5 kW, IN: 17.0 A
Made To Order	Yes
Minimum Order Quantity	1 piece
Order Multiple	1 piece
Quote Only	No
Selling Unit of Measure	piece

Dimensions

Product Net Weight	21.3 kg 47.0 lb
Product Net Depth / Length	354 mm 13.94 in
Product Net Height	495 mm 19.49 in
Product Net Width	205 mm 8.07 in
Package Level 1 Depth / Length	676 mm 26.61 in
Package Level 1 Height	423 mm 16.65 in
Package Level 1 Width	289 mm 11.38 in
Package Level 1 Units	1 carton

Technical

Number of Phases	3
Degree of Protection	IP21
Enclosure Type NEMA	Type1
Altitude	4000 m 5 ... 95
Power Factor	1.00
Sound dB (A)	57 dB(A)
Multiple Battery Information	Lithium Coin; CR2032; 220 mAh; 3 V; 1 pc; 3 g
Frequency (f)	47.5 ... 63 Hz
Frame Size	R3
Input Voltage (U _{in})	380 ... 480 V
Mounting Type	Wall-mounted
Communication Protocol	BACNET CAN DeviceNet EtherNet/IP MODBUS Other Bus Systems PROFIBUS PROFINET IO TCP/IP
Number of Hardware	Industrial Ethernet 0

Interfaces	Other 2 Parallel 2 PROFINET 0 RS-232 0 RS-422 0 RS-485 1 Serial TTY 0 USB 1
Includes	Control unit PC connection
Analog Inputs	2
Analog Outputs	2
Number of Digital In/Outputs	6 / 3
Output Current, Heavy-Duty Use (I_{HD})	12.6 A
Output Current, Light-Overload Use (I_{LD})	16.2 A
Output Current, Normal Use (I_n)	17.0 A
Output Power, Heavy-Duty Use (P_{HD})	5.5 kW
Output Power, Light-Overload Use (P_{LD})	7.5 kW
Output Power, Normal Use (P_n)	7.5 kW
Apparent Power Output	12 kV·A
Efficiency Level	IE2
Standby Loss	36 W
Complete Drive Module Efficiency (61800-9-2)	

Operating Point Frequency / Current	Absolute Loss	Efficiency	Relative Loss
0/25 %	125 W	83.8 %	1.1 %
0/50 %	152 W	89.2 %	1.3 %
0/100 %	236 W	91.4 %	2.0 %
50/25 %	135 W	90.6 %	1.1 %
50/50 %	172 W	93.6 %	1.5 %
50/100 %	287 W	94.6 %	2.4 %
90/50 %	205 W	95.7 %	1.7 %
90/100 %	436 W	95.4 %	3.7 %

Temperature Rating	Maximum 50 °C Minimum -15 °C
Ecodesign Exemption	Energy efficiency data is not provided for the drive. The low-harmonic drives are exempt from the EU ecodesign requirements (Regulation EU/2019/1781, §2.3.d).

Technical UL

Output Current, Heavy-Duty Use (UL)	12 A
Output Current, Light-Overload Use (UL)	14.0 A
Output Current, Normal Use (UL)	14.0 A

Output Power, Heavy-Duty Use (UL)	7.5 Hp
Output Power, Light-Overload Use (UL)	10 Hp
Output Power, Normal Use (UL)	10 Hp

Classifications

ETIM 8	EC001857 - Frequency converter =< 1 kV
ETIM 9	EC001857 - Frequency converter =< 1 kV
UNSPSC	39122001

Environmental

SCIP	a203cde5-2de1-48cb-b0e8-df4a15913519 Finland (FI)
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

Additional Information

Product Name	Frequency converter
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Categories

Drives → Low Voltage AC Drives → Industry-Specific Drives → Drives for Water → ACQ580-31 - Wall-mounted ultra-low harmonic drive for water and wastewater

Drives → Services → Spares and Consumables → Parts

