








## Selection catalogue of high voltage PTC coolant heater

| Main model | Product outline drawing   | Rated power                               | Sub model      | Rated voltage/VDC | High voltage range/VDC | Low voltage range/VDC | Control signal        |
|------------|---|---|----------------|-------------------|------------------------|-----------------------|-----------------------|
| SH-05      |    | 5kw@60°C,10L/min                          | 02.23.101.2XXX | 600               | 450-750                | 9-32                  | CAN2.0B               |
| NF-WPTC01  |    | 6000±10%@10L/min,<br>T <sub>in</sub> =0°C | WPTC01-1       | 350               | 250-450                | 9-16 or 18-32         | CAN                   |
|            |   |   | WPTC01-2       | 600               | 450-750                | 9-16 or 18-32         | CAN                   |
| NF-WPTC02  |    | 6000±10%@10L/min,<br>T <sub>in</sub> =0°C | WPTC02-1       | 350               | 250-450                | 9-16 or 18-32         | CAN                   |
|            |   |   | WPTC02-2       | 600               | 450-750                | 9-16 or 18-32         | CAN                   |
| NF-WPTC03  |  | 7000±10%@10L/min,<br>T <sub>in</sub> =0°C | WPTC03-1       | 330               | 200-400                | 18-32                 | CAN                   |
| NF-WPTC04  |  | 3500±10%@10L/min,<br>T <sub>in</sub> =0°C | WPTC04-01      | 280               | 240-400                | 12                    | Vehicle relay control |



|           |   |   |          |     |         |               |                       |
|-----------|---|---|----------|-----|---------|---------------|-----------------------|
| NF-WPTC05 |    | 6000±10%@10L/min,<br>$T_{in}=0^{\circ}\text{C}$   | WPTC05   | 380 | 300-450 | 12            | Vehicle relay control |
| NF-WPTC06 |    | 10000±10%@20L/min,<br>$T_{in}=0^{\circ}\text{C}$  | WPTC06-1 | 400 | 295-475 | 9-16          | CAN                   |
| NF-WPTC07 |    | 8000±10%@10L/min,<br>$T_{in}=0^{\circ}\text{C}$   | WPTC07-1 | 350 | 250-450 | 9-16 or 18-32 | CAN                   |
|           |   |   | WPTC07-2 | 600 | 450-750 | 9-16 or 18-32 | CAN                   |
| NF-WPTC08 |    | 6500±10%@10L/min,<br>$T_{in}=65^{\circ}\text{C}$  | WPTC08-1 | 614 | 500-710 | 18-32         | CAN                   |
| NF-WPTC09 |  | 3000±10%@12L/min,<br>$T_{in}=-20^{\circ}\text{C}$ | WPTC09-1 | 355 | 260-420 | 9-16          | CAN                   |
|           |   | 1200±10%@10L/min,<br>$T_{in}=0^{\circ}\text{C}$   | WPTC09-2 | 48  | 36-90   | 18-32         | CAN                   |
| NF-WPTC10 |  | 2500±10%@25L/min,<br>$T_{in}=40^{\circ}\text{C}$  | WPTC10-1 | 220 | 175-276 | 12            | Relay control         |



|           |   |  |          |     |         |                                  |                            |
|-----------|---|--|----------|-----|---------|----------------------------------|----------------------------|
| NF-WPTC11 |    | 2600±10%@10L/min,<br>$T_{in}=0^{\circ}\text{C}$  | WPTC11-1 | 360 | 280-420 | 12                               | Vehicle relay control      |
| NF-WPTC12 |    | 6500±10%@10L/min,<br>$T_{in}=60^{\circ}\text{C}$ | WPTC12-1 | 350 | 250-470 | 9-16                             | CAN                        |
| NF-WPTC13 |    | 8000±10%@50L/min,<br>$T_{in}=40^{\circ}\text{C}$ | WPTC13-1 | 430 | 323-552 | 12                               | Relay control              |
| W-08      |    | 5kW<br>@ $T_{in}60^{\circ}\text{C}$              | W08-1    | 350 | 250-500 | 9-16 Or 16-32                    | CAN2.0B、LIN2.1             |
|           |   |  | W08-2    | 600 | 400-750 | 9-16 Or 16-32                    | CAN2.0B、LIN2.1             |
| W-09      |   | 7kW<br>@ $T_{in}60^{\circ}\text{C}$              | W09-1    | 350 | 250-450 | 9-16 Or 16-32                    | CAN2.0B、LIN2.1             |
|           |   |  | W09-2    | 600 | 400-750 | 9-16 Or 16-32                    | CAN2.0B、LIN2.1             |
| W-04      |  | 7kW<br>@ $T_{in}40^{\circ}\text{C}$              | W04-1    | 600 | 400-750 | 9-16 Or 16-32                    | CAN2.0B                    |
|           |   |  | W04-2    | 600 | 400-750 | NTC + temperature control switch | Without integrated control |
|           |   |  | W04-3    | 350 | 250-500 | 9-16 Or 16-32                    | CAN2.0B                    |



|         |   |  |              |     |         |               |                                   |
|---------|---|--|--------------|-----|---------|---------------|-----------------------------------|
| W-01    |    | 14kW@ T <sub>in</sub> 20°C             | W01-3        | 600 | 450-750 | 16-32         | CAN2.0B                           |
| W-13    |    | 8kW@ T <sub>in</sub> 60°C              | W13-1        | 350 | 250-500 | 9-16 Or 16-32 | CAN2.0B                           |
|         |   | 8kW@ T <sub>in</sub> 60°C              | W13-2        | 600 | 400-750 | 9-16 Or 16-32 | CAN2.0B                           |
|         |   | 7kW@ Tin60°C                           | W13-3        | 800 | 600-950 | 9-16 Or 16-32 | CAN2.0B                           |
| W-15    |    | 24KW@ Tin40°C high voltage 4PIN socket | W15-1        | 600 | 400-750 | 16-32         | CAN2.0B                           |
|         |   | 24KW@ Tin40°C high voltage 2PIN socket | W15-2        | 600 | 400-750 | 16-32         | CAN2.0B                           |
| W-20    |   | 6kW@ Tin60°C                           | W20-1        | 350 | 250-500 | 9-16 Or 16-32 | CAN2. 0B、LIN2. 1                  |
|         |   | 6kW@ Tin60°C                           | W20-2        | 600 | 400-750 | 9-16 Or 16-32 | CAN2. 0B、LIN2. 1                  |
|         |   | 5kW@ Tin60°C                           | W20-3        | 800 | 600-950 | 9-16 Or 16-32 | CAN2. 0B、LIN2. 1                  |
| HVH-Q20 |  | 10kW@T <sub>in</sub> 20°C              | HVH-Q20-10KW | 600 | 450-750 | 9-16 or 18-32 | Rocker switch<br>hardwire control |
|         |   | 15kW@T <sub>in</sub> 20°C              | HVH-Q20-15KW | 600 | 450-750 | 9-16 or 18-32 |                                   |
|         |   | 20kW@T <sub>in</sub> 20°C              | HVH-Q20-20KW | 600 | 450-750 | 9-16 or 18-32 |                                   |
| HVH-Q30 |  | 30kW@T <sub>in</sub> 20°C              | HVH-Q30      | 600 | 450-750 | 9-16 or 18-32 | CAN2.0B                           |



## SH-05



1. Rated working voltage: DC 600V, high-voltage power supply voltage range: DC 450V-750V;
2. Low-voltage power supply voltage range: DC 9-32V;
3. Rated power: 5KW±10% (test conditions: medium temperature 60±2°C, flow rate 10±1L/MIN, medium to high water) ;
4. High voltage connector : 805-972-021,  
Low voltage connector : 805-031-551;

|  |                               |
|--|-------------------------------|
| <b>Model</b>                               | <b>02.23.101.2XXX</b>         |
| Medium temperature                         | -40°C~90°C                    |
| Medium type                                | Water: ethylene glycol /50:50 |
| Power/kW                                   | 5kw@60°C , 10L/min            |
| Brust pressure                             | 5bar                          |
| Insulation resistance MΩ                   | ≥50 @ DC1000V                 |
| Communication protocol                     | CAN                           |
| Connector IP level ( high and low votage ) | IP67                          |
| High voltage working voltage/V ( DC )      | 450-750                       |
| Low voltage operating voltage/V ( DC )     | 9-32                          |
| Low voltage quiescent current              | < 0.1mA                       |



# NF-WPTC01



Overall dimension (length \* width \* height): 232.3 \* 98.3 \* 97mm

Installation dimension: 144 (128) \* 119mm

Joint dimension :  $\phi 25$ ,  $\phi 20$ mm

Electrical interface: Holder connector

High voltage connector model: PL082X-6.1-2.5, PL082X-6.1-4 (Amphenol)

: C10514N1-04-1-2 (JonHon)

Low voltage connector Model: A02-ECC320Q60A1-LVC-4 (A)(Sumitomo adaptive drive module)

| Model                      | WPTC01-1                                    | WPTC01-2                                    |
|----------------------------|---|---|
| Rated voltage (V)          | 350   | 600   |
| Voltage range (V)          | 250-450                                     | 450-750                                     |
| Rated power (W)            | 6000 $\pm$ 10%@10L/min, $T_{in}=0^{\circ}C$ | 6000 $\pm$ 10%@10L/min, $T_{in}=0^{\circ}C$ |
| Controller low voltage (V) | 9-16 or 18-32                               | 9-16 or 18-32                               |
| Control signal             | CAN   | CAN   |

## NF-WPTC02



Overall dimension (length \* width \* height): 232.3 \* 98.3 \* 97mm

Installation dimension: 144 (128) \* 119mm

Joint dimension:  $\phi 25$ ,  $\phi 20$ mm

Electrical interface: Wire connector

High voltage connector model: C10514N1-02-6-1 (JonHon)

Low voltage connector Model: 282106-1 (TE)

| Model                      | WPTC01-1                                  | WPTC01-2                                   |
|----------------------------|---|--|
| Rated voltage (V)          | 350                                       | 600  |
| Voltage range (V)          | 250-450                                   | 450-750                                    |
| Rated power (W)            | 6000 $\pm$ 10%@10L/min, Tn=0 $^{\circ}$ C | 6000 $\pm$ 10%@10L/min, Tin=0 $^{\circ}$ C |
| Controller low voltage (V) | 9-16 or 18-32                             | 9-16 or 18-32                              |
| Control signal             | CAN                                       | CAN  |



## NF-WPTC03



Overall dimension (length \* width \* height): 236 \* 147 \* 110mm

Installation dimension: 154 (104) \* 165mm

Joint dimension:  $\phi 20$ mm

Electrical interface: Holder connector

High voltage connector model: HVC2P28MV104 (Amphenol)

Low voltage connector Model: A02-ECC320Q60A1-LVC-4 (A) (Sumitomo adaptive drive module)

| Model                      | WPTC03-1                                  |
|----------------------------|---|
| Rated voltage (V)          | 330                                       |
| Voltage range (V)          | 200-400                                   |
| Rated power (W)            | 7000 $\pm$ 10%@10L/min,Tin=0 $^{\circ}$ C |
| Controller low voltage (V) | 18-32                                     |
| Control signal             | CAN                                       |

# NF-WPTC04



Overall dimension (length \* width \* height): 216.4 \* 100 \* 57mm

Installation dimension: 193.4 \* 68mm

Joint dimension:  $\phi 16\text{mm}$

Electrical interface: Holder connector

High voltage connector model: HVIL-F3P (16A) -A-1 (JonHon)

Low voltage connector Model: PB621-04020 (KUM)

| Model                      | WPTC04-01  |
|----------------------------|--|
| Rated voltage (V)          | 280  |
| Voltage range (V)          | 240-400  |
| Rated power (W)            | 3500 $\pm$ 10%@10L/min, $T_{in}=0^{\circ}\text{C}$ |
| Controller low voltage (V) | 12   |
| Control signal             | Vehicle relay control                              |



## NF-WPTC05



Overall dimension (L\*W\*H): 236\*147\*83mm

Installation dimension: 154 (104)\*165mm

Joint dimension: Quick Release Coupling

Electrical Interface :Holder connector

High voltage connector model: HVIL-F3P(16A)-A-1 (JonHon)

Low voltage connector model: PB621-04020 (KUM)

| Model                      | WPTC05-01                              |
|----------------------------|--|
| Rated voltage (V)          | 380                                    |
| Voltage range (V)          | 300~450                                |
| Rated power (W)            | 6000±10%@10L/min, T <sub>in</sub> =0°C |
| Controller low voltage (V) | 12                                     |
| Control signal             | Vehicle relay control                  |

# NF-WPTC06



Overall dimension (length \* width \* height): 236 \* 147 \* 83mm

Installation dimension: 154 (104) \* 165mm

Joint dimension:  $\phi 20$ mm

Electrical interface: Wire connector

High voltage connector model: HVC2P28FS204 (Amphenol)

Low voltage connector model: A02-ECC320Q60A1-LVC-4 (A) (Sumitomo adaptive drive module)

| Model                      | WPTC06-1  |
|----------------------------|---|
| Rated voltage (V)          | 400   |
| Voltage range (V)          | 295~475   |
| Rated power (W)            | 10000 $\pm$ 10%@20L/min, $T_{in}=0^{\circ}\text{C}$ |
| Controller low voltage (V) | 9~16  |
| Control signal             | CAN   |



## NF-WPTC07



Overall dimension (L\*W\*H): 236\*147\*83mm

Installation dimension: 154 (104)\*165mm

Joint dimension:  $\phi 20$ mm

Electrical Interface: Holder connector

High voltage connector model: HVC2P28MV102, HVC2P28MV104 (Amphenol)

Low voltage connector model: A02-ECC320Q60A1-LVC-4(A) (Sumitomo adaptive drive module)

| Model                      | WPTC07-1                                     | WPTC07-2                                     |
|----------------------------|--|--|
| Rated voltage (V)          | 350  | 600  |
| Voltage range (V)          | 250-450                                      | 450-750                                      |
| Rated power (W)            | 8000 $\pm$ 10%@10L/min, T <sub>in</sub> =0°C | 8000 $\pm$ 10%@10L/min, T <sub>in</sub> =0°C |
| Controller low voltage (V) | 9-16 or 18-32                                | 9-16 or 18-32                                |
| Control signal             | CAN  | CAN  |



# NF-WPTC08



Overall dimension (L\*W\*H): 251\*211\*82.5mm

Installation dimension: 183\*160mm

Joint dimension :  $\phi 20$ mm

Electrical Interface : Holder connector

High voltage connector model: RT00122PN03 (Amphenol)

Low voltage connector model: Y2M-7ZJBM (LINGHANG)

| Model                      | WPTC08-1                                     |
|----------------------------|--|
| Rated voltage (V)          | 614  |
| Voltage range (V)          | 500-710                                      |
| Rated power (W)            | 6500 $\pm$ 10%@10L/min,T <sub>in</sub> =65°C |
| Controller low voltage (V) | 18-32  |
| Control signal             | CAN  |

# NF-WPTC09



Overall dimension (L\*W\*H): 209.6\*123.4\*80.7mm

Installation dimension: 189.6\*70mm

Joint dimension:  $\phi 20$ mm

Electrical Interface : Holder connector

High voltage connector model: HVC2P28MV102, HVC2P28MV104 (Amphenol)

Low voltage connector model: A02-ECC320Q60A1-LVC-4(A) (Sumitomo adaptive drive module)

| Model                      | WPTC09-1  | WPTC09-2   |
|----------------------------|---|--|
| Rated voltage (V)          | 355   | 48   |
| Voltage range (V)          | 260-420   | 36-90  |
| Rated power (W)            | 3000 $\pm$ 10%@12/min, $T_{in}=-20^{\circ}\text{C}$ | 1200 $\pm$ 10%@10L/min, $T_{in}=0^{\circ}\text{C}$ |
| Controller low voltage (V) | 9-16  | 18-32  |
| Control signal             | CAN   | CAN  |



# NF-WPTC10



Overall dimension (L\*W\*H): 209.6\*123.4\*80.7mm

Installation dimension: 189.6\*70mm

Joint dimension:  $\phi 20$ mm

Electrical interface: Wire connector

High voltage connector model: ATP06-2S-NFK

Low voltage connector model: 282080-1 (TE)

| Model                      | WPTC10-1                                      |
|----------------------------|---|
| Rated voltage (V)          | 220   |
| Voltage range (V)          | 175-276                                       |
| Rated power (W)            | 2500 $\pm$ 10%@25L/min, T <sub>in</sub> =40°C |
| Controller low voltage (V) | 12  |
| Control signal             | Relay control                                 |



# NF-WPTC11



Overall dimension (L\*W\*H): 145\*95\*96.5mm

Installation dimension:  $\phi$ 16mm

Electrical interface: Wire connector

High voltage connector model: HVIL-M2S(20A)-M00A-1 G002 (JonHon)

Low voltage connector model: 174264-2 (TE)

NF Group

| Model                      | WPTC11-1                                     |
|----------------------------|--|
| Rated voltage (V)          | 360  |
| Voltage range (V)          | 280-420                                      |
| Rated power (W)            | 2600 $\pm$ 10%@10L/min, T <sub>in</sub> =0°C |
| Controller low voltage (V) | 12   |
| Control signal             | Vehicle relay control                        |



# NF-WPTC12



Overall dimension (L\*W\*H): 192.7\*155\*110mm

Joint dimension:  $\phi 20\text{mm}$

Electrical Interface : Holder connector

High voltage connector model: HVC2P28MV104 (Amphenol)

Low-voltage connector model: A02-ECC320Q60A1-LVC-4(A) (Sumitomo adaptive drive module)

NF Group

| Model                      | WPTC12-1                                      |
|----------------------------|---|
| Rated voltage (V)          | 350   |
| Voltage range (V)          | 250-470                                       |
| Rated power (W)            | 6500 $\pm$ 10%@50L/min, T <sub>in</sub> =60°C |
| Controller low voltage (V) | 9-16  |
| Control signal             | CAN   |



# NF-WPTC13



Overall dimension (L\*W\*H): 247\*197.5\*99mm

Joint dimension:  $\phi 25\text{mm}$

Electrical interface: Wire connector

High voltage connector model: RTS6BS14N4SHEC (Amphenol)

Low voltage connector model: 282080 (TE)

NF Group

| Model                      | WPTC12-1   |
|----------------------------|--|
| Rated voltage (V)          | 430  |
| Voltage range (V)          | 323-552  |
| Rated power (W)            | $8000\pm 10\% @ 10\text{L}/\text{min}, T_{\text{in}}=40^{\circ}\text{C}$ |
| Controller low voltage (V) | 12   |
| Control signal             | Relay control  |

# W08



Overall dimension: L145\*W135\*H99 mm

Installation dimension: Six screw mounting holes

Joint dimension: D20\*30 (waterproof ring)

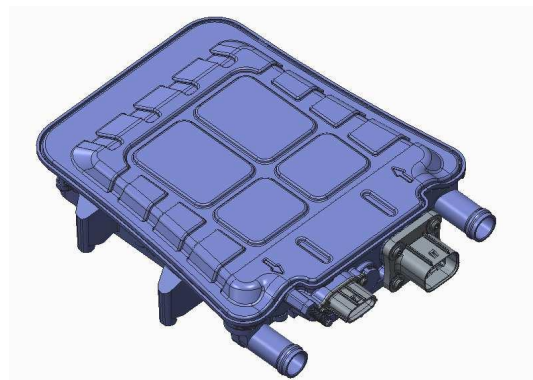
Electrical interface : Holder connector

High voltage connector: Amphenol HVC2P28MV104, Wire harness connector:  
Amphenol HVC2P28FS104

Low voltage connector: 320Q60A1-LVC-4 (Haichen A02-ECC), Wire harness  
connector: Sumitomo 6189-1083

| Item                        | W08-1   | W08-2   |
|-----------------------------|---|---|
| Rated voltage(VDC)          | 350   | 600   |
| Working voltage(VDC)        | 250-450   | 450-750   |
| Rated power(kW)             | 5 (1±10%) @10L/min, T <sub>in</sub> =60°C, 350V | 5 (1±10%) @10L/min, T <sub>in</sub> =60°C, 600V |
| Impulse current(A)          | 28.5≤@450V                                      | 20≤@750V  |
| Controller low voltage(VDC) | 9-16 or 16-32                                   | 9-16 or 16-32                                   |
| Control signal              | CAN2.0B、LIN2.1                                  | CAN2.0B、LIN2.1                                  |
| Control model               | Gear (3rd gear) or PWM                          | Gear (3rd gear) or PWM                          |

# W09



Overall dimension: 258.6\*200\*56mm

Installation dimension: 185.5\*80 four screw mounting holes

Joint dimension: D19\*21 (waterproof ring)

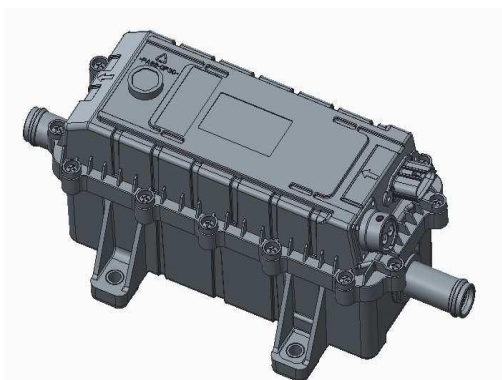
Electrical interface : Holder connector

High voltage connector : Amphenol HVC2P28MV104, Wire harness connector: Amphenol HVC2P28FS104

Low voltage connector : 320Q60A1-LVC-4 (Haichen A02-ECC), Wire harness connector: Sumitomo 6189-1083

| Item                        | W09-1   | W09-2   |
|-----------------------------|---|---|
| Rated voltage(VDC)          | 350   | 600   |
| Working voltage(VDC)        | 250-450                                       | 450-750                                       |
| Rated power(kW)             | 7(1±10%)@10L/min, T <sub>in</sub> =60°C, 350V | 7(1±10%)@10L/min, T <sub>in</sub> =60°C, 600V |
| Impulse current(A)          | ≤40@450V                                      | ≤25@750V                                      |
| Controller low voltage(VDC) | 9-16 or 16-32                                 | 9-16 or 16-32                                 |
| Control signal              | CAN2.0B、LIN2.1                                | CAN2.0B、LIN2.1                                |
| Control model               | Gear (5th gear) or PWM                        | Gear (5th gear) or PWM                        |

# W04



Overall dimension: 310\*144.3\*107.5mm

Installation dimension: 144-128\*119

Joint dimension: D20\*22 (waterproof ring) mm

Electrical interface : Holder connector

High voltage connector : JonHon C10514N1-02-3-1

Low voltage connector: 320Q60A1-LVC-4 (Haichen A02-ECC)

| Item                        | W04-1                             | W04-2(Without controller)         | W04-3                             |
|-----------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Rated voltage(VDC)          | 600                               | 600                               | 350                               |
| Working voltage(VDC)        | 450-750                           | 450-750                           | 250-450                           |
| Rated power(kW)             | 7(1±10%)@10L/min, T_in 40°C, 600V | 7(1±10%)@10L/min, T_in 40°C, 600V | 7(1±10%)@10L/min, T_in 40°C, 350V |
| Impulse current(A)          | ≤30@750V                          | ≤45@750V                          | ≤45@450V                          |
| Controller low voltage(VDC) | 9-16 or 16-32                     | -                                 | 9-16 or 16-32                     |
| Control model               | Gear (3rd gear) or PWM            | -                                 | Gear (3rd gear) or PWM            |
| Control signal              | CAN2.0B                           | NTC + temperature control switch  | CAN2.0B                           |

# W01



Overall dimension: 336\*170\*110.5mm

Installation dimension: 172\*152mm

Joint dimension : D25\*27 (waterproof ring) mm

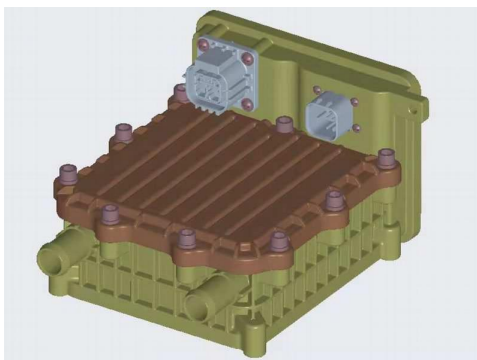
Electrical interface: Holder connector

High voltage connector : HVIL-F2P (40A)-A (JonHon) [optional  
C10514N1-02-3-1 G004]

Low voltage connector : RT00188SN03 (Amphenol) [optional wire connector  
structure,AMP6PIN connector 282090-1]

| Item                        | W01  |
|-----------------------------|--|
| Rated voltage(VDC)          | 600  |
| Working voltage(VDC)        | 450-750                                      |
| Rated power(kW)             | 14(1±10%)@20L/min, T <sub>In</sub> 20°C,600V |
| Impulse current(A)          | ≤50@750V                                     |
| Controller low voltage(VDC) | 16-32  |
| Control signal              | CAN2.0B                                      |
| Control model               | Gear (3rd gear) or PWM                       |

# W13



Overall dimension: 214\*178\*119mm

Installation dimension: 148.5\*145mm

Joint dimension: D20\*D22.4 (waterproof ring) mm

Electrical interface : Holder connector

High voltage connector : (1)JonHon EVH2-N2ZJ-SA (2)Tyco EVH2-N2ZJ-SA ,Wire harness connector EVH2-N2TK-TDA

Low voltage connector : Tyco TE 776276-1, Wire harness connector: Tyco TE 776286-1

| Item                        | W13-1   | W13-2  | W13-3  |
|-----------------------------|---|--|--|
| Rated voltage(VDC)          | 350   | 600  | 800  |
| Working voltage(VDC)        | 250-500                                       | 400-750                                      | 600-950                                      |
| Rated power(kW)             | 8(1±10%)@12L/min , T <sub>in</sub> 60℃ , 350V | 8(1±10%)@12L/min, T <sub>in</sub> 60℃ , 600V | 7(1±10%)@12L/min, T <sub>in</sub> 60℃ , 800V |
| Impulse current(A)          | 45≤@450V                                      | ≤30@750V                                     | ≤25@950V                                     |
| Controller low voltage(VDC) | 9-16 or 16-32                                 | 9-16 or 16-32                                | 9-16 or 16-32                                |
| Control signal              | CAN2.0B                                       | CAN2.0B                                      | CAN2.0B                                      |
| Control model               | Gear (5th gear) or PWM                        | Gear (7th gear) or PWM                       | Gear (7th gear) or PWM                       |



# W15



Overall dimension: 421\*225.2\*126 mm

Installation dimension: 190\*202.6mm, 4-D6.5

Joint dimension: D25\*42 (waterproof ring) mm

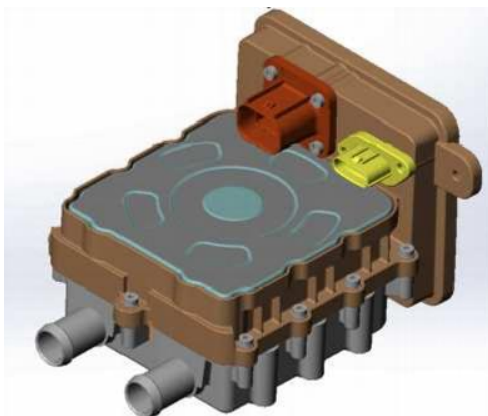
Electrical interface: high voltage: Holder connector, low-voltage : Wire connector

High voltage connector: 4PIN: JonHon EVH2-M4JZ-SA; 2PIN: Amphenol HVC2PG36MV210

Low voltage connector: Tyco 282090-1

| Item                        | W15-1  | W15-2                            |
|-----------------------------|--|----------------------------------|
| Rated voltage(VDC)          | 600  | 600                              |
| Working voltage(VDC)        | 400-750  | 400-750                          |
| Rated power(kW)             | 24(1±10%)@40L/min, Tin 40℃, 600V (2 high voltage circuits, 2*12kw) | 24(1±10%)@40L/min, Tin 40℃, 600V |
| Impulse current(A)          | 70≤@750V   | 70≤@750V                         |
| Controller low voltage(VDC) | 16-32  | 16-32                            |
| Control signal              | CAN2.0B  | CAN2.0B                          |
| Control model               | Gear 4   | Gear 4                           |

# W20



Overall dimension: 181.9\*152.4\*114.8 mm

Installation dimension: 115\*33mm, 6-M6

Joint dimension: D20\*26 (waterproof ring) mm

Electrical interface: Holder connector

High voltage connector : Tyco 2103124-4 (Wire harness connector: 4-2103177-4)

Low voltage connector :Self-made (Wire harness connector: Sumitomo Sheath: 6189-7606)

| Item                        | W20-1  | W20-2  | W20-3  |
|-----------------------------|--|--|--|
| Rated voltage(VDC)          | 350  | 600  | 800  |
| Working voltage(VDC)        | 250-500                                      | 400-750                                      | 600-950                                      |
| Rated power(kW)             | 6(1±10%)@10L/min, T <sub>in</sub> 60°C, 350V | 6(1±10%)@10L/min, T <sub>in</sub> 60°C, 600V | 5(1±10%)@10L/min, T <sub>in</sub> 60°C, 800V |
| Impulse current(A)          | 50≤@500V                                     | ≤30@750V                                     | ≤25@950V                                     |
| Controller low voltage(VDC) | 9-16 or 16-32                                | 9-16 or 16-32                                | 9-16 or 16-32                                |
| Control signal              | CAN2.0B or LIN2.1                            | CAN2.0B or LIN2.1                            | CAN2.0B or LIN2.1                            |
| Control model               | Gear (3 gears) or PWM                        | Gear (3 gears) or PWM                        | Gear (3 gears) or PWM                        |

## HVH-Q20



1. Rated working voltage: DC600V
2. Voltage range: DC450V~DC750V
3. Rated power:10/15/20KW
4. Working temperature:-40℃~85℃
5. Unmarked dimensional tolerance shall comply with GB/T1804-C
6. Service medium: coolant, ratio of water to ethylene glycol=50:50
- 7.Heater high voltage plug-in : PL082X-60-6

High voltage plug-in at high voltage harness end: PL182x-60-6(provided by bus factory)

| Item                        | HVH-Q20-10KW                   | HVH-Q20-15KW  | HVH-Q20-20KW  |
|-----------------------------|--------------------------------|---------------|---------------|
| Rated voltage(VDC)          | 600                            | 600           | 600           |
| Working voltage(VDC)        | 450-750                        | 450-750       | 450-750       |
| Rated power(kW)             | 10KW, T_In20℃                  | 15KW,T_In20℃  | 20KW,T_In20℃  |
| Current consumption (A)     | ≈17A                           | ≈25A          | ≈33A          |
| Controller low voltage(VDC) | 9-16 or 18-32                  | 9-16 or 18-32 | 9-16 or 18-32 |
| Flow (L/h)                  | > 1800                         | > 1800        | > 1800        |
| Control signal              | Rocker switch hardwire control |               |               |

# HVH-Q30



1. Rated working voltage: DC600V
2. Voltage range: DC450V~DC750V
3. Rated power:30KW
4. Working temperature:-40℃~85℃
5. Unmarked dimensional tolerances are implemented according to GB/T18D4-V
6. Use medium: cooling water and ethylene glycol ratio = 50:50
7. High voltage connector : GYHE-2-80Z-A  
Wire harness connector : GYHE-2-80T-A (provided by bus factory)
8. Low Voltage connector : RT001 28PN03  
Wire harness connector : RT06128SNHEC03 (provided by bus factory)

| Item                        | HVH-Q30       |
|-----------------------------|---------------|
| Rated voltage(VDC)          | 600           |
| Working voltage(VDC)        | 450-750       |
| Rated power(kW)             | 30KW, T_In20℃ |
| Controller low voltage(VDC) | 9-16 or 18-32 |
| Control signal              | CAN2.0B       |