

Think Automation and beyond...



# RV8H *New* Interface Relays



**Slim, space-saving interface relays.  
Smallest in its class!**

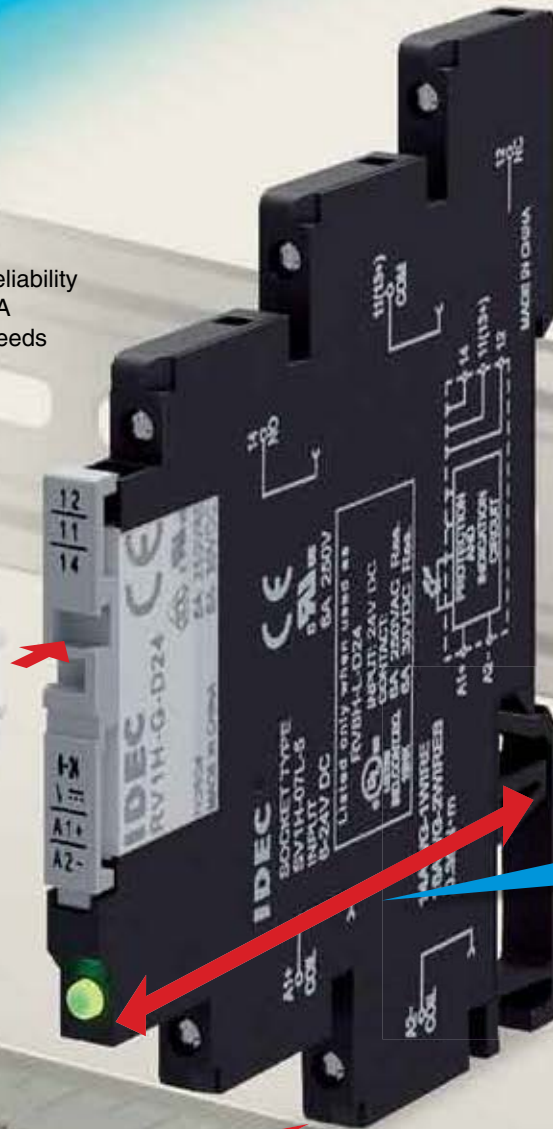
# Ultra-slim interface relays

## Suitable for high density mounting

- Screw and spring clamp terminals
- Release lever for easy locking and removal of relay



- Green LED indicator
- 6A contact capacity in the slim housing
- Gold-plated contacts for high contact reliability
- Minimum applicable load: 6V DC, 10mA
- 12 coil voltage types to meet various needs



Marking plate  
can be installed  
on the release  
lever.

Only **70** mm  
from the DIN rail  
Shortest in its class

Slim Width  
**6** mm

# RV8H

## Interface Relays

# RV8H Interface Relays

**Space-saving 6mm width suitable for high density mounting.**

- Screw and spring clamp terminals available
- Release lever for easy locking and removal of relay
- Green LED indicator
- 6A contact capacity in a slim housing
- Gold-plated contacts for high contact reliability
- Wide input voltage range: 6 to 240V
- Marking plate can be installed on the release lever



| Applicable Standards      | Mark | Certification Organization / File No. |
|---------------------------|------|---------------------------------------|
| UL508<br>CSA C22.2 No. 14 |      | UL listed, File No. E55996            |
| EN61810-1                 |      | VDE No. 40030148<br>(RV1H relay only) |
|                           |      | EU Low Voltage Directive              |

## Interface Relays

Package Quantity: 1

| Contact Arrangement | Coil Voltage   | Part No.       |                       |
|---------------------|----------------|----------------|-----------------------|
|                     |                | Screw Terminal | Spring Clamp Terminal |
| SPDT                | 6V DC          | RV8H-L-D6      | RV8H-S-D6             |
|                     | 9V DC          | RV8H-L-D9      | RV8H-S-D9             |
|                     | 12V DC         | RV8H-L-D12     | RV8H-S-D12            |
|                     | 18V DC         | RV8H-L-D18     | RV8H-S-D18            |
|                     | 24V DC         | RV8H-L-D24     | RV8H-S-D24            |
|                     | 12V AC/DC      | RV8H-L-AD12    | RV8H-S-AD12           |
|                     | 18V AC/DC      | RV8H-L-AD18    | RV8H-S-AD18           |
|                     | 24V AC/DC      | RV8H-L-AD24    | RV8H-S-AD24           |
|                     | 48V AC/DC      | RV8H-L-AD48    | RV8H-S-AD48           |
|                     | 60V AC/DC      | RV8H-L-AD60    | RV8H-S-AD60           |
|                     | 110-125V AC/DC | RV8H-L-AD110   | RV8H-S-AD110          |
|                     | 220-240V AC/DC | RV8H-L-AD220   | RV8H-S-AD220          |

## Accessories

### Relay / Socket

Package Quantity: 1


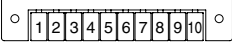






















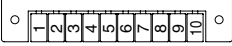






















| Screw Terminal                    |                            |                           |
|-----------------------------------|----------------------------|---------------------------|
| Interface Relay Complete Part No. | Applicable Socket Part No. | Applicable Relay Part No. |
|                                   | SV1H-07L-5                 | RV1H-G-D5                 |
| RV8H-L-D9                         |                            | RV1H-G-D9                 |
| RV8H-L-D12                        |                            | RV1H-G-D12                |
| RV8H-L-D18                        |                            | RV1H-G-D18                |
| RV8H-L-D24                        |                            | RV1H-G-D24                |
| RV8H-L-AD12                       | SV1H-07L-1                 | RV1H-G-D12                |
| RV8H-L-AD18                       |                            | RV1H-G-D18                |
| RV8H-L-AD24                       |                            | RV1H-G-D24                |
| RV8H-L-AD48                       |                            | RV1H-G-D48                |
| RV8H-L-AD60                       | SV1H-07L-2                 | RV1H-G-D60                |
| RV8H-L-AD110                      | SV1H-07L-3                 | RV1H-G-D60                |
| RV8H-L-AD220                      | SV1H-07L-4                 | RV1H-G-D60                |


| Spring Clamp Terminal             |                            |                           |
|-----------------------------------|----------------------------|---------------------------|
| Interface Relay Complete Part No. | Applicable Socket Part No. | Applicable Relay Part No. |
|                                   | SV1H-07LS-5                | RV1H-G-D5                 |
| RV8H-S-D9                         |                            | RV1H-G-D9                 |
| RV8H-S-D12                        |                            | RV1H-G-D12                |
| RV8H-S-D18                        |                            | RV1H-G-D18                |
| RV8H-S-D24                        |                            | RV1H-G-D24                |
| RV8H-S-AD12                       | SV1H-07LS-1                | RV1H-G-D12                |
| RV8H-S-AD18                       |                            | RV1H-G-D18                |
| RV8H-S-AD24                       |                            | RV1H-G-D24                |
| RV8H-S-AD48                       |                            | RV1H-G-D48                |
| RV8H-S-AD60                       | SV1H-07LS-2                | RV1H-G-D60                |
| RV8H-S-AD110                      | SV1H-07LS-3                | RV1H-G-D60                |
| RV8H-S-AD220                      | SV1H-07LS-4                | RV1H-G-D60                |

# RV8H Interface Relays

## Marking Plate

Package Quantity: 1

| Shape  | Marking  |   |   |   |   |   |   |   |   |   | Part No.  |                          |
|--|--|---|---|---|---|---|---|---|---|---|---|--------------------------|
| No marking<br><br>Material: PBT (white)             | Blank  |   |   |   |   |   |   |   |   |   | <b>SV9Z-PW10</b>  |                          |
| Vertical laser marking<br><br>Material: PBT (white) | 1  | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | <b>SV9Z-PW10-V1-10</b>  |                          |
|  | 11   | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | <b>SV9Z-PW10-V11-20</b>   |                          |
|  | 21   | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | <b>SV9Z-PW10-V21-30</b>   |                          |
|  | 31   | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  | <b>SV9Z-PW10-V31-40</b>   |                          |
|  | 41   | 42  | 43  | 44  | 45  | 46  | 47  | 48  | 49  | 50  | <b>SV9Z-PW10-V41-50</b>   |                          |
|  | 51   | 52  | 53  | 54  | 55  | 56  | 57  | 58  | 59  | 60  | <b>SV9Z-PW10-V51-60</b>   |                          |
|  | 61   | 62  | 63  | 64  | 65  | 66  | 67  | 68  | 69  | 70  | <b>SV9Z-PW10-V61-70</b>   |                          |
|  | 71   | 72  | 73  | 74  | 75  | 76  | 77  | 78  | 79  | 80  | <b>SV9Z-PW10-V71-80</b>   |                          |
|  | 81   | 82  | 83  | 84  | 85  | 86  | 87  | 88  | 89  | 90  | <b>SV9Z-PW10-V81-90</b>   |                          |
|  | 91   | 92  | 93  | 94  | 95  | 96  | 97  | 98  | 99  | 100   | <b>SV9Z-PW10-V91-100</b>  |                          |
|  | A  | B   | C   | D   | E   | F   | G   | H   | I   | J   | <b>SV9Z-PW10-VA-J</b>   |                          |
|  | K  | L   | M   | N   | O   | P   | Q   | R   | S   | T   | <b>SV9Z-PW10-VK-T</b>   |                          |
|  | U  | V   | W   | X   | Y   | Z   |   |   |   |   | <b>SV9Z-PW10-VU-Z</b>   |                          |
|  |   |    |    |    |    |    |    |    |    |    |    | <b>SV9Z-PW10-VGROUND</b> |
|  |   |    |    |    |    |    |    |    |    |    |    | <b>SV9Z-PW10-VAC</b>     |
|  | Horizontal laser marking<br><br>Material: PBT (white) | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | <b>SV9Z-PW10-H1-10</b>   |
|  |  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | <b>SV9Z-PW10-H11-20</b>  |
|  |  | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | <b>SV9Z-PW10-H21-30</b>  |
|  |  | 31  | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  | <b>SV9Z-PW10-H31-40</b>  |
| 41   |  | 42  | 43  | 44  | 45  | 46  | 47  | 48  | 49  | 50  | <b>SV9Z-PW10-H41-50</b>   |                          |
| 51   |  | 52  | 53  | 54  | 55  | 56  | 57  | 58  | 59  | 60  | <b>SV9Z-PW10-H51-60</b>   |                          |
| 61   |  | 62  | 63  | 64  | 65  | 66  | 67  | 68  | 69  | 70  | <b>SV9Z-PW10-H61-70</b>   |                          |
| 71   |  | 72  | 73  | 74  | 75  | 76  | 77  | 78  | 79  | 80  | <b>SV9Z-PW10-H71-80</b>   |                          |
| 81   |  | 82  | 83  | 84  | 85  | 86  | 87  | 88  | 89  | 90  | <b>SV9Z-PW10-H81-90</b>   |                          |
| 91   |  | 92  | 93  | 94  | 95  | 96  | 97  | 98  | 99  | 100   | <b>SV9Z-PW10-H91-100</b>  |                          |
| A  |  | B   | C   | D   | E   | F   | G   | H   | I   | J   | <b>SV9Z-PW10-HA-J</b>   |                          |
| K  |  | L   | M   | N   | O   | P   | Q   | R   | S   | T   | <b>SV9Z-PW10-HK-T</b>   |                          |
| U  |  | V   | W   | X   | Y   | Z   |   |   |   |   | <b>SV9Z-PW10-HU-Z</b>   |                          |
|   |  |  |  |  |  |  |  |  |  |  |  | <b>SV9Z-PW10-HGROUND</b> |
|   |  |  |  |  |  |  |  |  |  |  |  | <b>SV9Z-PW10-HAC</b>     |

| Shape   | Material  | Part No.             | Package Quantity | Note  |
|---|---|----------------------|------------------|---|
| Jumper<br>Rated current: 6A (Note)<br> | Brass (nickel-plated) with polyamide sheath<br>Approx. 6g | <b>SV9Z-J20*PN10</b> | 10               | Specify a color code in place of * in the Part No.<br>B: black<br>W: gray<br>S: blue<br>Can be cut to required length.<br>No. of points: 20 |
| DIN Rail Spacer   | Polyamide (gray)  | <b>SV9Z-SA2W</b>     | 1                | Used for adjusting spacing between sockets and to prevent the ends of jumpers from exposing.  |

Note: Ensure that the total current to the jumper does not exceed the rated current.



## Contact Ratings

| Allowable Contact Power |                           | Rated Load        |                |                           | Allowable Switching Current | Allowable Switching Voltage | Minimum Applicable Load           |
|-------------------------|---------------------------|-------------------|----------------|---------------------------|-----------------------------|-----------------------------|-----------------------------------|
| Resistive Load          | Inductive Load            | Voltage           | Resistive Load | Inductive Load            |                             |                             |                                   |
| 1,500VA AC<br>180W DC   | B300/R300<br>(pilot duty) | 250V AC<br>30V DC | 6A<br>6A       | B300/R300<br>(pilot duty) | 6A                          | 400V AC<br>125V DC          | 6V DC, 10 mA<br>(reference value) |

## Coil Ratings

| Rated Voltage (V) | Coil Voltage Code | Rated Current (mA)<br>±15% (at 23°C)<br>(Note) | Coil Resistance (Ω)<br>±15% (at 23°C)<br>(Note) | Impedance (Ω)<br>±15%<br>(at 23°C) | Operating Characteristics<br>(against rated values at 23°C) |                        |                 | Power Consumption |      |
|-------------------|-------------------|--|---|------------------------------------|---|------------------------|-----------------|-------------------|------|
|                   |                   |  |   |                                    | Maximum Continuous Applied Voltage (Note)                   | Minimum Pickup Voltage | Dropout Voltage |                   |      |
| DC                | 6V DC             | D6   | 35  | 170                                | 110%  | 90%<br>maximum         | 7%<br>minimum   | 0.21              |      |
|                   | 9V DC             | D9   | 18.6  | 485                                |   |                        |                 | 0.2               |      |
|                   | 12V DC            | D12  | 14.6  | 820                                |   |                        |                 | 0.25              |      |
|                   | 18V DC            | D18  | 11.6  | 1,550                              |   |                        |                 | 0.2               |      |
|                   | 24V DC            | D24  | 10.6  | 2,270                              |   |                        |                 | 0.25              |      |
| AC/DC             | 12V AC/DC         | AD12   | 15.5  | 800                                |   |                        |                 | 755               | 0.2  |
|                   | 18V AC/DC         | AD18   | 13.3  | 1,345                              |   |                        |                 | 1,365             | 0.25 |
|                   | 24V AC/DC         | AD24   | 13.7  | 1,790                              |   |                        |                 | 1,730             | 0.33 |
|                   | 48V AC/DC         | AD48   | 4.0   | 12,230                             |   |                        |                 | 11,880            | 0.2  |
|                   | 60V AC/DC         | AD60   | 3.4   | 17,910                             |   |                        |                 | 17,600            | 0.5  |
|                   | 110-125V AC/DC    | AD110  | 3.4-3.9   | 32,450-32,900                      | 31,790-31,890   | 0.85                   |                 |                   |      |
|                   | 220-240V AC/DC    | AD220  | 3.3-3.6   | 65,940-68,570                      | 65,670-66,070   | 0.85                   |                 |                   |      |

Note: D12 and below: ±10%

## UL and c-UL Ratings

| Voltage | Resistive | Inductive                 |
|---------|-----------|---------------------------|
| 250V AC | 6A        | B300/R300<br>(pilot duty) |
| 30V DC  | 6A        |                           |

## VDE Ratings (RV1H relay only)

| Voltage | Resistive |
|---------|-----------|
| 250V AC | 6A        |
| 30V DC  | 6A        |

## Applicable Ferrules

| Applicable Wire (stranded) |     | Part No.          | Manufacturer    |
|----------------------------|-----|-------------------|-----------------|
| mm <sup>2</sup>            | AWG |                   |                 |
| 0.5                        | 20  | <b>AI0.5-8WH</b>  | Phoenix Contact |
| 0.75                       | 18  | <b>AI0.75-8GY</b> |                 |
| 1                          | 18  | <b>AI1-8RD</b>    |                 |
| 0.5                        | 22  | <b>TE0.5-8</b>    | Nichifu         |
| 0.75                       | 20  | <b>TE0.75-8</b>   |                 |
| 1                          | 18  | <b>TE1.0-8</b>    |                 |

## Specifications

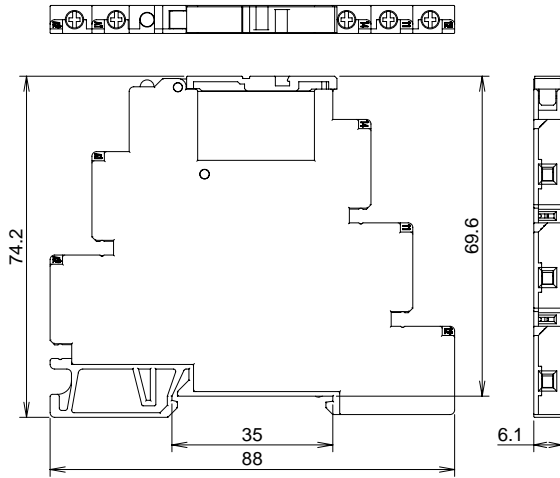
| Part No.                           | RV8H-L (Screw Terminal)  | RV8H-S (Spring Clamp Terminal)                                       |
|------------------------------------|--|--|
| Number of Poles                    | 1-pole   |  |
| Contact Configuration              | SPDT   |  |
| Contact Material                   | Silver alloy (gold-plated)   |  |
| Degree of Protection               | Relay: IP67, Socket: IP20 (IEC 60529)  |  |
| Contact Resistance (initial value) | 100mΩ maximum  |  |
| Operate Time                       | 15ms maximum   |  |
| Release Time                       | 20ms maximum   |  |
| Insulation Resistance              | 1,000MΩ minimum (500V DC megger)   |  |
| Dielectric Strength                | Between contact and coil   | 4,000V AC, 1 minute  |
|                                    | Between contacts of the same pole  | 1,000V AC, 1 minute  |
| Vibration Resistance               | Operation extremes   | 10 to 55 Hz, amplitude 0.5mm (NO contact), 0.2mm (NC contact)        |
|                                    | Damage Limits  | 10 to 55 Hz, amplitude 0.5mm (NO contact), 0.2mm (NC contact)        |
| Shock Resistance                   | Operation extremes   | 49 m/s <sup>2</sup> (NO contact), 29.4 m/s <sup>2</sup> (NC contact) |
|                                    | Damage Limits  | 980 m/s <sup>2</sup>   |
| Electrical Life (rated load)       | 30,000 operations minimum (NO contact), 10,000 operations minimum (NC contact)<br>(250V AC/30V DC, 6A resistive load, operation frequency 1,800 operations per hour) |  |
| Mechanical Life (no load)          | 10 million operations minimum (operation frequency 18,000 operations/hour)   |  |
| Operating Temperature              | RV8H-*D6, D9, D12, D18, D24, AD12, AD18, AD24, AD48, AD60: -40 to +70°C (no freezing)<br>RV8H-*AD110, AD220: -40 to +55°C (no freezing)                              |  |
| Operating Humidity                 | 5 to 85% RH (no condensation)  |  |
| Storage Temperature                | -40 to +85°C (no freezing)   |  |
| Storage Humidity                   | 5 to 85% RH (no condensation)  |  |
| Weight (approx.)                   | 30g  | 26g  |

# RV8H Interface Relays

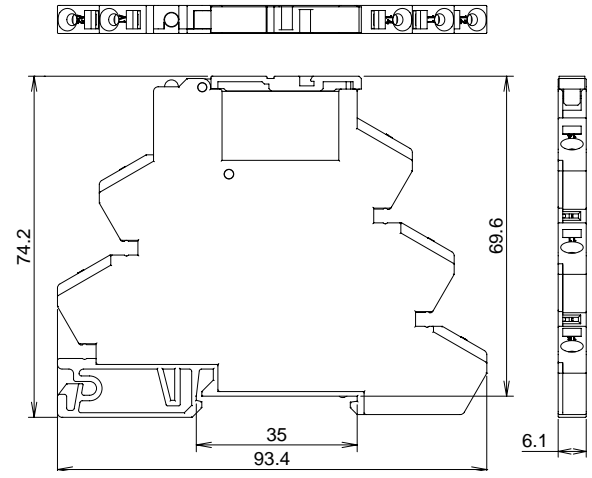
## Dimensions

All dimensions in mm.

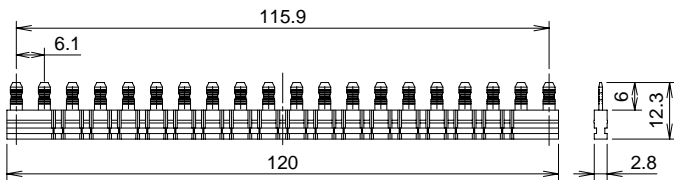
### Screw Terminal RV8H-L



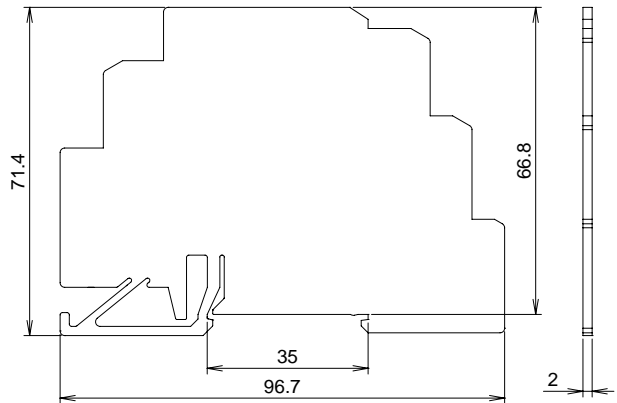
### Spring Clamp Terminal RV8H-S



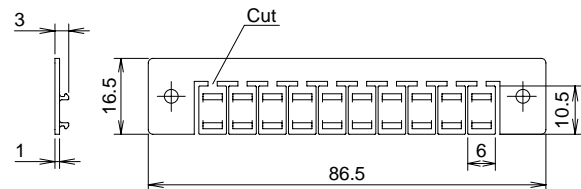
### Jumper SV9Z-J20\*PN10



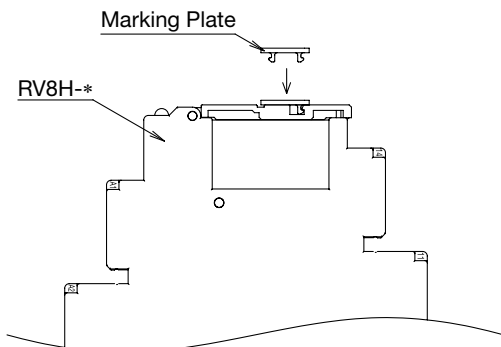
### DIN Rail Spacer SV9Z-SA2W



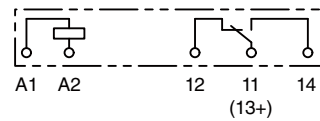
### Marking Plate SV9Z-PW10



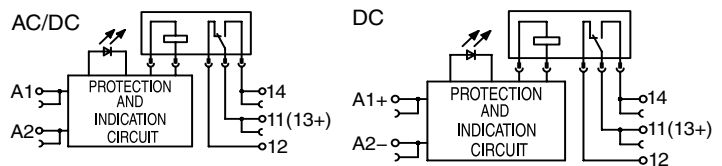
### Installing a marking plate



### RV1H Internal Connection (bottom view)



### RV8H Internal Connection



Specifications and other descriptions in this catalog are subject to change without notice.



## IDEC CORPORATION

7-31, Nishi-Miyahara 1-Chome, Yodogawa-ku, Osaka 532-8550, Japan  
Tel: +81-6-6398-2571, Fax: +81-6-6392-9731  
E-mail: marketing@idec.co.jp

**IDEC CORPORATION (USA)**  
Tel: +1-408-747-0550 / (800) 262-IDEC (4332)  
E-mail: opencontact@idec.com  
**IDEC CANADA LIMITED**  
Tel: +1-905-890-8561, Toll Free: (800) 262-IDEC (4332)  
E-mail: sales@ca.idec.com  
**IDEC AUSTRALIA PTY. LTD.**  
Tel: +61-3-8523-5900, Toll Free: 1800-68-4332  
E-mail: sales@au.idec.com

**IDEC ELECTRONICS LIMITED**  
Tel: +44-1256-321000 E-mail: sales@uk.idec.com  
**IDEC ELEKTROTECHNIK GmbH**  
Tel: +49-40-25 30 54 - 0 E-mail: service@idec.de  
**IDEC (SHANGHAI) CORPORATION**  
Tel: +86-21-6135-1515 E-mail: idec@cn.idec.com  
**IDEC (BEIJING) CORPORATION**  
Tel: +86-10-6581-6131

**IDEC (SHENZHEN) CORPORATION**  
Tel: +86-755-8356-2977  
**IDEC IZUMI (H.K.) CO., LTD.**  
Tel: +852-2803-8989 E-mail: info@hk.idec.com  
**IDEC TAIWAN CORPORATION**  
Tel: +886-2-2698-3929 E-mail: service@tw.idec.com  
**IDEC IZUMI ASIA PTE. LTD.**  
Tel: +65-6746-1155 E-mail: info@sg.idec.com

www.idec.com