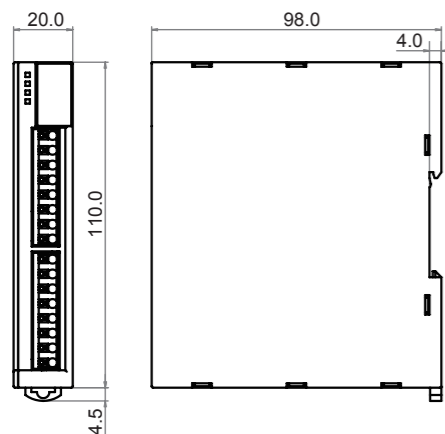


8 Dimensions

98.0mm x 110.0mm x 20.0mm (Weight : Approx. 150g (OFF-delay type))



9 Installation and Wirings

Installation to DIN rail

Mount this module on 35mm DIN rails. This module is designed for installation within an enclosure. Do not install this module outside an enclosure. Install the module in enclosure rated IP54 or higher. For DIN rails, use a mounting clip to prevent the module from falling off. IDEC's mounting clip (BNL6) can be used.

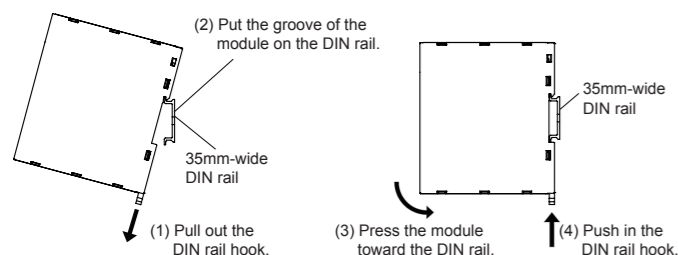


Fig. Mounting

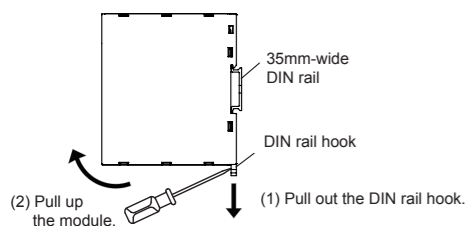


Fig. Removing

Direct Mounting on Panel Surface

Pull out the DIN rail hook on the back of the module and insert the direct mounting hook (HR5S-PSP) into the slot. Attach the module to the mounting plate using the screw holes. Attach the module to the mounting plate using M4 screws, as shown below, or make 5 to 6mm mounting holes and secure the module using M4 pan head screws. Always give sufficient consideration to operability, ease-of-maintenance, and environmental resistance when deciding on the mounting position.

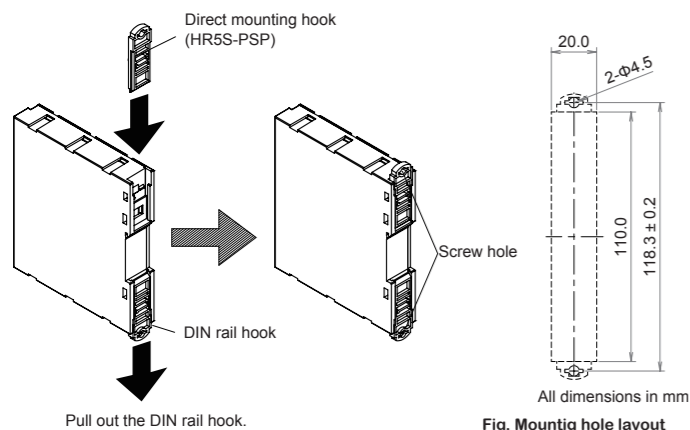


Fig. Mounting hole layout

Wiring

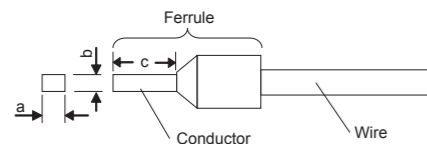
Use the following to wire to HR5S

- Solid wire : 24 AWG to 16 AWG (0.2 to 1.5 mm²)
- Stranded wire / Flexible wire : 24 AWG to 18 AWG (0.25 to 0.75 mm²)
- Strip the cover of wire : 7 to 9 mm

Use cables conforming to the applicable standards.

When using stranded wire, insulated ferrule should be used. Use below insulated ferrule.

- Insulated ferrule : 24 AWG to 18 AWG (0.25 to 0.75mm²)
- Crimp Width (a) : 2.1 mm max.
- Height (b) : 1.48 mm max.
- Conductor length (c) : 7 to 9 mm

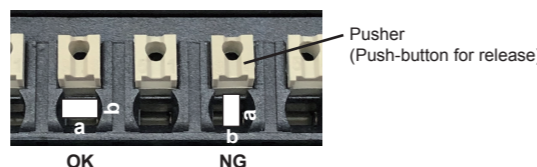


Recommended ferrules

Applicable cable	Model number (order number)		
mm ²	AWG	IDEC	Model number (order number)
0.25	24	S3TL-H025-12WJ	H0,25/12 HBL (9025760000)
0.34	22	S3TL-H034-12WT	H0,34/12 TK (9025770000)
0.5	20	S3TL-H05-14WA	H0,5/14 OR (0690700000)
0.75	18	S3TL-H075-14WW	H0,75/14 W (0462900000)

How to insert solid wire and insulated ferrule

The stripped solid wire or stranded wire with insulated ferrule is simply plugged into the contact point. So no tools are required for the wire connection. After inserting, make sure wire is fastened on to push-in terminal.



How to release wire

Use a screwdriver (e.g. a slotted head screwdriver) to release wire from Push-in terminal. And when releasing wire, the power source should be disconnected.

- Push the push-button with a force of about 20 N by a driver.
- Pull out the wire straight while the push-button is pushed.

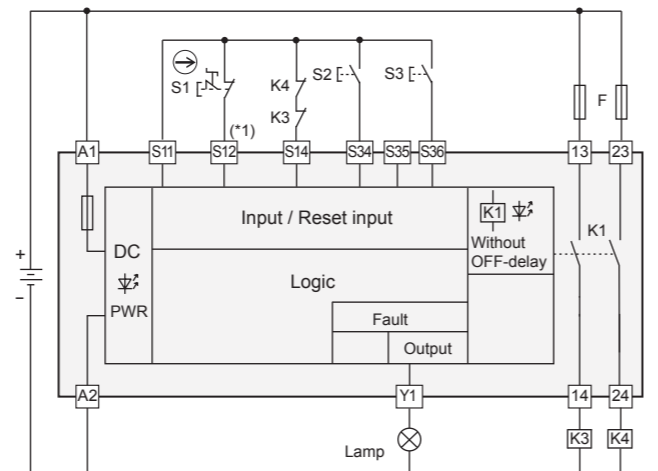
Push-in terminal may be damaged.

- Not push the push-button by a force of 40 N and over.
- Not Pull out the wire without pushing the push-button.

10 Wiring Diagram (Typical application)

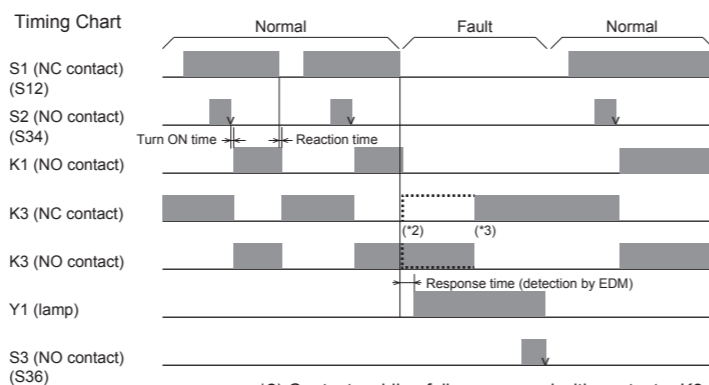
HR5S-C2S : The maximum achievable PL is "c".

(In the figure below, the manual reset input (S34) is used.)



- S1 : Emergency stop switch
- S2 : Reset switch for start
- S3 : Reset switch for a fault
- K1 : Force guided relay contained in the module
- K3, K4 : Contactor
- M1, M2 : Motor
- F : External fuse

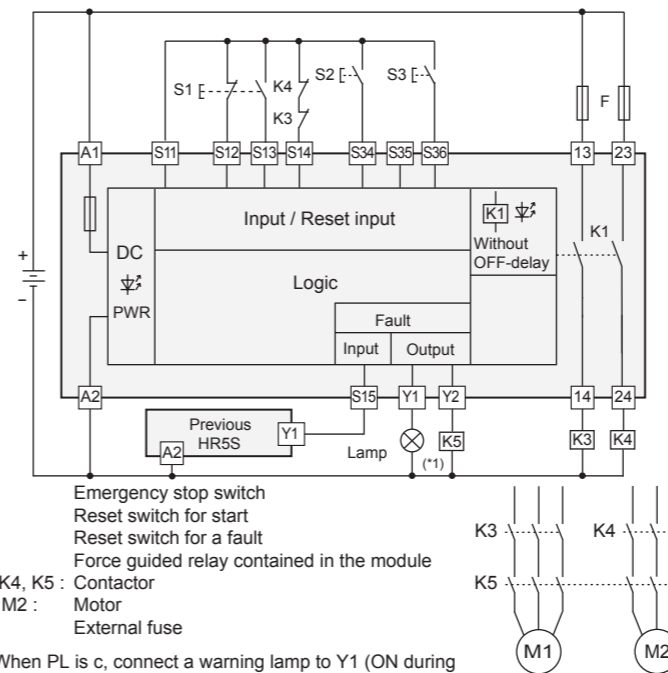
*1) It is necessary to exclude a short circuit between the cable of safety input (S12) and other cables (e.g. to protect the cables and/or to shield the cables).



- *2) Contact welding failure occurred with contactor K3.
- *3) Failure removed.

HR5S-C2B : The maximum achievable PL is "d".

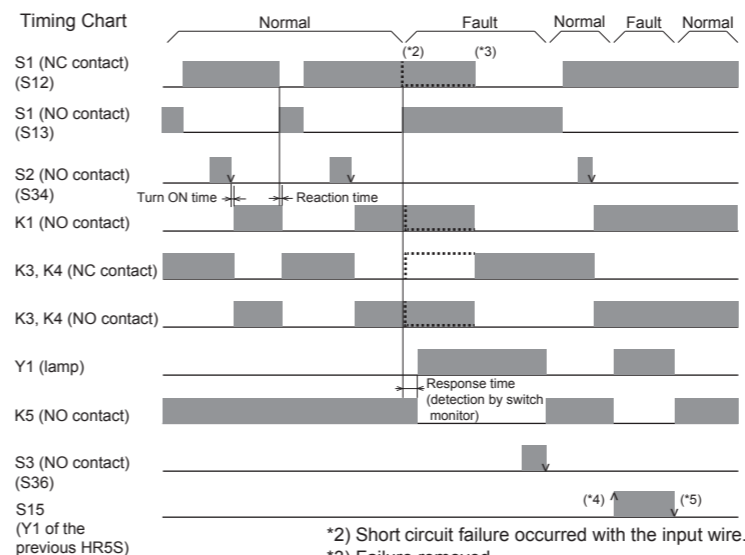
(In the figure below, the manual reset input (S34) is used.)



- S1 : Emergency stop switch
- S2 : Reset switch for start
- S3 : Reset switch for a fault
- K1 : Force guided relay contained in the module
- K3, K4, K5 : Contactor
- M1, M2 : Motor
- F : External fuse

*1) When PL is c, connect a warning lamp to Y1 (ON during fault detection).

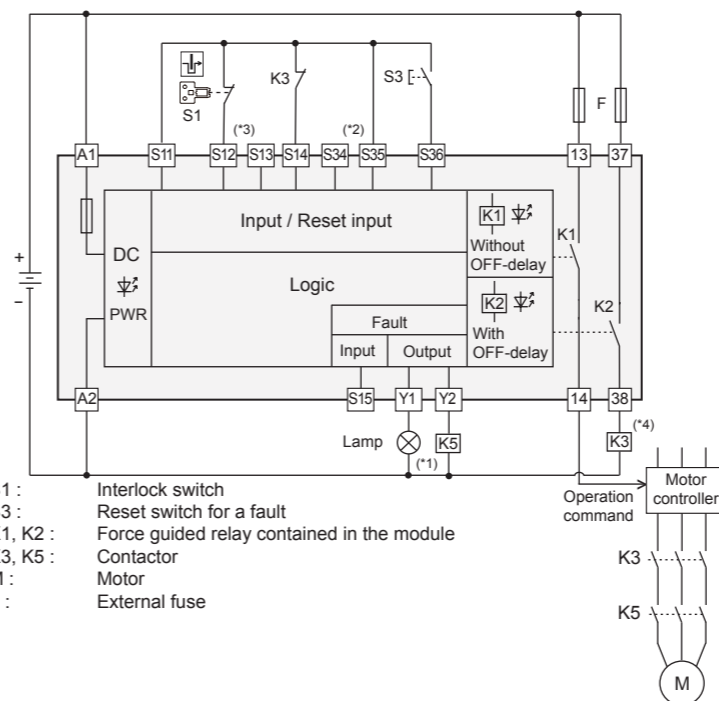
When PL is d, connect a contactor K5 to shut power of the hazardous source to Y2 (OFF during fault detection).



- *2) Short circuit failure occurred with the input wire.
- *3) Failure removed.
- *4) Failure occurred with the previous HR5S
- *5) Failure removed from the previous HR5S

HR5S-C2D-T*** : The maximum achievable PL is "d".

(In the figure below, the auto reset input (S35) is used.)



- S1 : Interlock switch
- S3 : Reset switch for a fault
- K1, K2 : Force guided relay contained in the module
- K3, K5 : Contactor
- M : Motor
- F : External fuse

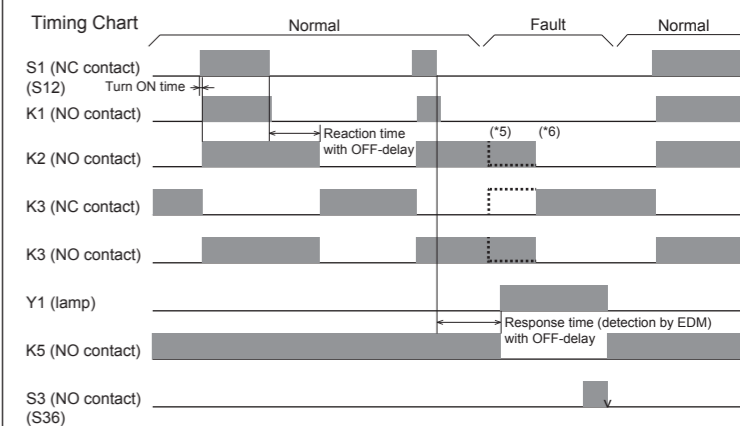
*1) When PL is c, connect a warning lamp to Y1 (ON during fault detection).

When PL is d, connect a contactor K5 to shut power of the hazardous source to Y2 (OFF during fault detection).

*2) When the auto reset input (S35) is used, it is necessary to perform risk assessment to prevent an unexpected activation.

*3) When the switch monitor input (S13) is not used, it is necessary to exclude a short circuit between the cable of safety input (S12) and other cables (e.g. to protect the cables and/or to shield the cables).

*4) "Stop category 1" of IEC 60204-1 is corresponding to "SS1-t" of IEC 61800-5-2.



- *5) Contact welding failure occurred with the internal relay K2.
- *6) Failure removed.

11 Troubleshooting

The module has the fault monitor output (and the fault detection output). The fault monitor output (Y1) goes ON (and the fault detection output (Y2) goes OFF) when a fault is detected. In this case, make sure nothing is a short circuit and a contact welding. The module can restart if a failure is cleared, and then check the safety function of this module. If the module is unable to resume the normal operation, contact the distributor or sales representative for support. The year of manufacture can be seen on the module.

12 Declaration of conformity

EU declaration of conformity

Identification of the Product : Safety Relay Module
Name and address of Manufacturer : IDEC CORPORATION
2-6-64 Nishimiyahara, Yodogawa-ku, Osaka 532-0004 Japan

Name and address of the authorized representative and authorized to compile the technical file : APEM SAS 55, Avenue Edouard Herriot BP1, 82303 Caussade Cedex, France

This declaration of conformity is issued under the sole responsibility of the manufacturer.
Object of the declaration : Series Name - HR5S Series
Model No. - HR5S-C2S, HR5S-C2B, HR5S-C2D-T025, HR5S-C2D-T050, HR5S-C2D-T100, HR5S-C2D-T200, HR5S-C2D-T400

The object of the declaration described above is in conformity with the relevant EU harmonization legislation : 2014/30/EU Electromagnetic Compatibility Directive
2006/42/EC Machinery Directive
2011/65/EU and (EU)2015/863 RoHS Directive

Applied Union harmonized legislation and references to the relevant harmonization standards used or references the other technical specifications in relation to which conformity is declared.
EN 60947-5-1:2017, EN ISO 13849-1:2015, EN IEC 63000:2018

Where applicable, the notified body : TÜV Rheinland Industrie Service GmbH (NB No.0035)
Am Grauen Stein 51105 Köln Germany
Additional Information : TÜV Rheinland Certificate No. 01/205/5739.00/19

UK declaration of conformity

Identification of the Product : Safety Relay Module
Name and address of Manufacturer : IDEC CORPORATION
2-6-64 Nishimiyahara, Yodogawa-ku, Osaka 532-0004 Japan

Name and address of the authorized representative and authorized to compile the technical file : APEM COMPONENTS LIMITED,
Drakes Drive, Long Crendon, Buckinghamshire,
HP18 9BA, UK

This declaration of conformity is issued under the sole responsibility of the manufacturer.
Object of the declaration : Series Name - HR5S Series
Model No. - HR5S-C2S, HR5S-C2B, HR5S-C2D-T025, HR5S-C2D-T050, HR5S-C2D-T100, HR5S-C2D-T200, HR5S-C2D-T400
The object of the declaration described above is in conformity with the relevant UK legislation harmonization legislation : Electromagnetic Compatibility Regulations 2016
Supply of Machinery (Safety) Regulations 2008
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

The products conform with the following standards :
EN 60947-5-1:2017, EN ISO 13849-1:2015, EN IEC 63000:2018

Where applicable, the notified body : TÜV Rheinland UK Ltd., (NB No.2571)
Friars Gate (Third Floor), 1011 Stratford Road, Shirley, Solihull B90 4BN, United Kingdom
Additional Information : TCertificate Numbering Scheme 01/205U/5739.00/22

IDEC CORPORATION

<http://www.idec.com>

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