

■ RIA-DIDO-05-1

RS3™ - Interface Adapter for migration toward a new system

Description :

The RS3 Interface Adapter **RIA-DIDO-05-1** allows to easily connect an existing RS3 32 channel isolated discrete termination panel A and B (Standard Density) or single panel (High Density) to a discrete input card and/or a discrete output card of a DCS or a PLC.

It is easy to install the **RIA-DIDO-05-1** on the existing RS3 termination panel. It replaces the " Field Interface Module (FIM) on the existing panel (panel A).

The **RIA-DIDO-05-1** supports 32 points. Each point 1 to 16 can be configured as input or output using internal jumpers, and points 17 to 32 are only available as inputs.

Configuration of points (input or output) and status of the first 16 points are indicated by 32 LED (16 green and 16 yellow) on the front face of the RIA. The status of points 17 to 32 are indicated by 16 yellow LED.

The input and output channels of the DCS or PLC are optically isolated by the RIA (if power supplies of the panel and of DCS or PLC are separated).

The power supply of the existing RS3 Termination panel is kept and used for the power supply of the RIA



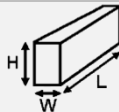
Technical specifications :

Dimensions :

Length : 446,2 mm

Width : 34 mm

Height : 93 mm



Weight :

400 g

Temperature range :

Operating : 0°C to 50°C

Storage : -20°C to 60°C

Humidity :

Up to 90% (no condensation)

Mounting :

Plugged on existing RS3 panel in place of the FIM module

Switching speed :

Turn On time : 1 ms (Typical) / 3 ms (max)

Turn Off time : 1 ms (Typical) / 3 ms (max)

Power supply :

Provided by redundant PS connected on the I/O termination panel.

18Vdc to 36Vdc (120mA max at 30Vdc), with all points activated.

Internal Power Supply of the RIA is fully redundant and fuse protected.

Redundant power supply is monitored with status reported

by free dry contact (NC) available on the front face of the RIA.

Status of primary and secondary power supplies are indicated on front face by two green LED

Configuration and input/output status :

32 off Yellow LED for input/output status

16 off Green LED for configuration status

Green Led "On" : Channel configured as output (DO)

Green Led "Off" : Channel configured as input (DI)

RIA Electrical characteristics :

Output impedance to be considered for the DCS or PLC input card :

On state : 35ohm max

Off state : Leakage current less than 1µA

Input current to be considered for the DCS or PLC output card :

On state current : 12mA @24Vdc

Accepted Off state current : less than 1mA @24Vdc

Connection to the DCS or to the PLC :

By 3 x D-Sub 15 pin male connector with UNC 4-40 female lock on front face of the RIA and shielded suitable cable

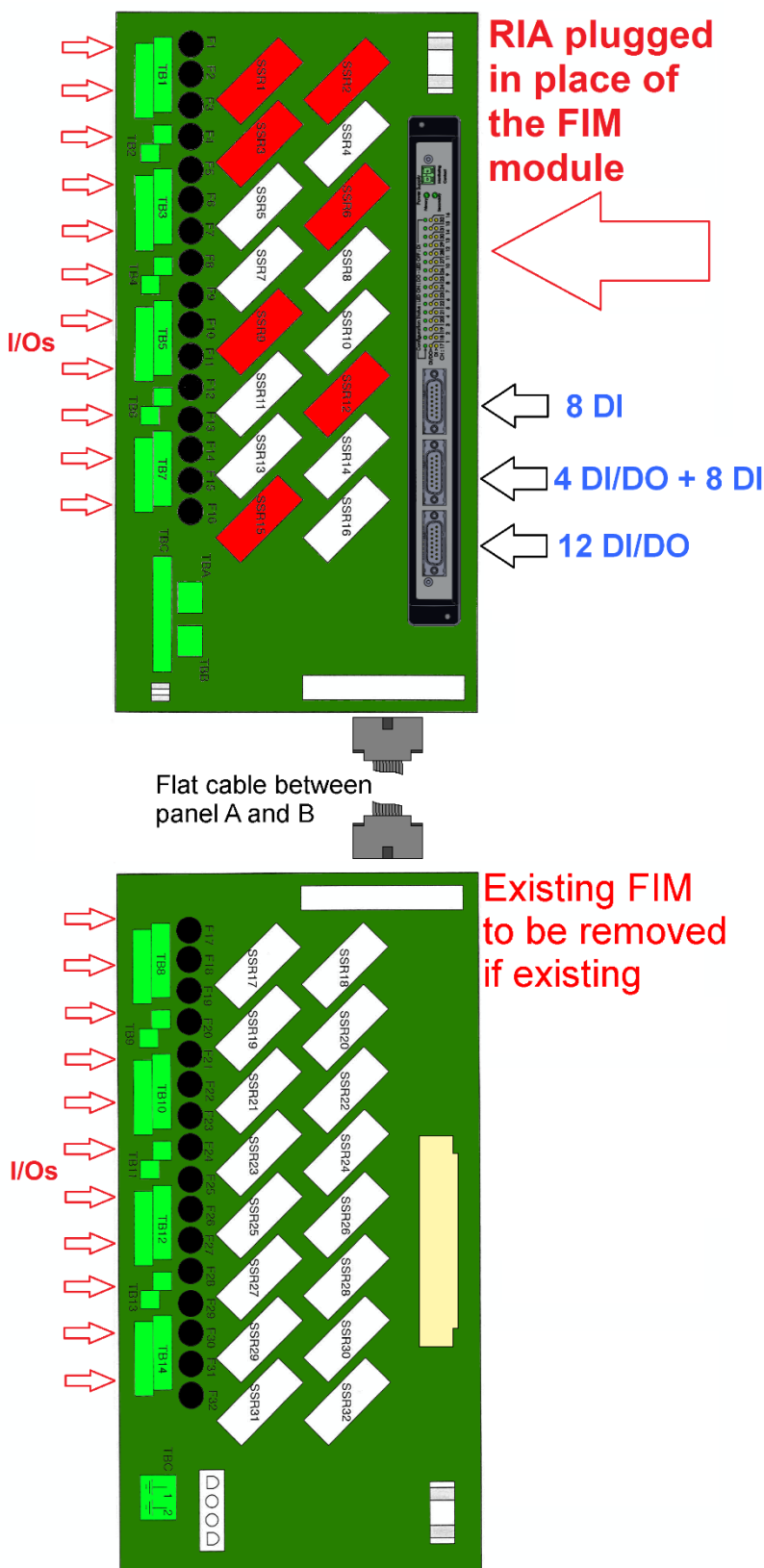
1st D-Sub 15 pin male connector : 12 DI or DO

2nd D-Sub 15 pin male connector : 4 DI or DO and 8 DI

3rd D-Sub 15 pin male connector : 8 DI



1. INSTALLATION PROCEDURE FOR EXISTING RS3 PANELS TYPE 1984-4121-000X (ISOLATED DISCRETE TERMINATION PANEL (PANEL A) AND TYPE 1984-4124-000X (PANEL B) :



2. POWER SUPPLY OF THE PANELS FROM CONNECTORS TBC AND J969

Keep in place connections of power supplies on panel A : Connector TBC.

Remove (if existing when redundancy was in use) connector J969 on panel B : Connector J969.

2.1. FIM MODULE

Remove FIM module from its connector on panels A and B.

2.2. WIRING MODIFICATION

Flat cable between Panel A and Panel B installed at the HE1050 connector (J564 (A) and J565 (B)) has to be kept
Existing serial links for communication with RS3 controller at connectors TBA and TBB can remain wired but are no longer necessary for the RIA.

2.3. RIA CONFIGURATION

- Open RIA using screws
- Depending on the type of SSR (Solid State Relay) installed, set jumpers on the "Input" or "Output" position for channels 1 to 16 as indicated on the product.

2.4. RIA INSTALLATION AND CONNECTION

- Unplug the Field Interface Module (FIM) from its socket using front screws
- Plug the RIA on connector J552 and secure it using its two screws
- Plug the D-SUB15 female connectors of the cables on the front D-SUB male connectors of the RIA
- Connect the other ends of the cables to the DCS or PLC DI and/or DO cards.

