

RDP-300 REMOTE DISPLAY PANEL

The RDP-300 Remote Display Panel is a Human-Machine Interface (HMI) used in conjunction with the DECS-300 Digital Excitation Control System to provide remote control, to view metered quantities, and to provide annunciation of system status and alarms available from the DECS-300 system. The RDP-300 uses a touch-sensitive 6" diagonal monitoring screen with two-wire, RS-485 Modbus™ communication protocol, which may be located up to 4000 feet away from the DECS-300 Controller.

FEATURES

RDP-300 Remote Display Panels have the following features:

- Six inch (diagonal) monochrome LCD with fluorescent backlight
- Touch screen covers made of tough, flexible material to withstand sustained use
- Direct access from any of the five screens to any of the other four screens
- Low power consumption
- NEMA 12/4 (Self-Certified) rating
- Suitable for semi-flush mounting
- Suitable for controlling a single remote DECS-300 excitation controller
- RS-485 serial communications with the DECS-300 for easy installation
- Predesigned structure for dedicated display of DECS-300 information
- No programming required, ready for immediate use

ADDITIONAL INFORMATION

INSTRUCTION MANUAL

Request publication 9334500990

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B Basler Electric

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FUNCTIONAL DESCRIPTION

RDP-300 Remote Display Panels use microprocessor-based technology to provide remote control and annunciation status of a DECS-300 Digital Excitation Control System. A touch-sensitive display panel with five screens provides the control and display using Modbus™ protocol. Microprocessor-based technology allows the use of serial communications for quick and simple connection to the remote unit. RS-485 compatible signals ensure noise immunity over long distances. This combination of features in the RDP-300 yields significant savings in installation and setup costs for remote excitation control and monitoring.

Note: Use of the RDP-300 precludes use of the DECS-300 RS-485 communication port with any other device.

METERING SCREEN

| | | | |
|----------------------------|------------------------------|------------------------------|---------------------------|
| GENERATOR KVA 1234567 | GENERATOR kW 1234567 | GENERATOR kVAR 1234567 | GENERATOR PF 1.000 |
| GENERATOR CURRENT 12345 | GENERATOR FREQUENCY 123.1 | GENERATOR VOLTAGE 12345 | BUS VOLTAGE 12345 |
| FIELD VOLTAGE 123.1 | FIELD CURRENT 1234.1 | POSITION INDICATION 123.1 | TRACKING ERROR 12345.1 |
| ALARMS | STATUS | CONTROL | SETPOINT ADJUST |

Displays generator quantities monitored by DECS-300 including Generator KVA, Generator kW, Generator kVAR, Generator PF, Generator Line Current, Generator Frequency, Generator Voltage, Bus Voltage, Field Voltage, Field Current, Position Indication, and Tracking Error.

STATUS SCREEN

| | | | |
|---------------------|----------------------------------|--------------------------------|-----------------|
| 52 J-K CONTACT OPEN | 52 L-M CONTACT OPEN | UNIT INTERNAL TRACKING | NULL BALANCE |
| VOLTAGE MATCHING ON | EXTERNAL TRACKING CONTACT CLOSED | SELECTED AS SECONDARY DECS-300 | |
| METERING | ALARMS | CONTROL | SETPOINT ADJUST |

Displays the DECS-300 present status of contact inputs and system conditions: 52 J-K Contact, 52 L-M Contact, Unit Internal Tracking, Null Balance, Voltage Matching On; "External Tracking" and "Selected as Secondary DECS-300" for use with redundant DECS-300 Controller systems.

ALARM SCREEN

| | | | |
|-------------------------|--------------------------|-------------------------|-------------------|
| GENERATOR OVER VOLTAGE | GENERATOR UNDER VOLTAGE | LOSS OF SENSING | UNDER FREQUENCY |
| FIELD OVER VOLTAGE | FIELD OVER CURRENT | FAILED TO BUILD VOLTAGE | SYSTEM BELOW 10HZ |
| OVER EXCITATION LIMITER | UNDER EXCITATION LIMITER | EDIT LED ON | ALARM RESET |
| HA-THINK | STATUS | CONTROL | SETPOINT ADJUST |

Displays the following alarms: Generator Overvoltage, Generator Undervoltage, Loss of Voltage Sensing, Underfrequency Limit, Field Overvoltage, Field Overcurrent, Failed to Build Voltage, System Below 10Hz, Overexcitation Limiter, Underexcitation Limiter, Edit LED On. An "Alarm Reset" active touch-sensitive switch allows the alarms to be cleared after the condition causing the alarm is no longer present.

CONTROL SCREEN

| | | | |
|------------------------------|-------------------------|---------------------------|------------------------------|
| GENERATOR VOLTAGE 1234567 | FIELD CURRENT 1234.1 | GENERATOR kVAR 1234567 | GENERATOR PF 1.000 |
| START/STOP TOGGLE | AVR/FCR TOGGLE | VAR/PP SELECT | TRACKING ERROR 12345.1 |
| UNIT ON | AVR MODE ACTIVE | VAR MODE ENABLED | PF MODE ENABLED |
| SETPOINT LOW LIMIT | PRE POSITION | SETPOINT HIGH LIMIT | POSITION INDICATION 123.1 |
| METERING | ALARMS | STATUS | SETPOINT ADJUST |

Provides an array of active touch-sensitive virtual switches, meters, and other indicators. Active touch-sensitive virtual switches: Start/Stop Toggle, AVR/FCR Toggle, VAR/PP Select, Set Point Raise, Set Point Lower. Metered quantities displayed: Generator Voltage, Field Current, Generator kVAR, Generator PF, Tracking Error, and Position Indication. Annunciation is provided for Unit On/Off, AVR/FCR Mode Active, VAR Mode Enabled, PF Mode Enabled, Set Point Low Limit, Set Point High Limit, and Preposition.

SET POINT ADJUST SCREEN

| | | | |
|------------------------------|-------------------------|---------------------------|-----------------------|
| GENERATOR VOLTAGE 1234567 | FIELD CURRENT 1234.1 | GENERATOR kVAR 1234567 | GENERATOR PF 1.000 |
| AVR SETPOINT 1234.1 | FCR SETPOINT 1234.1 | kVAR SETPOINT 1234567 | PF SETPOINT 1.000 |
| UNIT ON | AVR MODE ACTIVE | VAR MODE ENABLED | PF MODE ENABLED |
| METERING | ALARMS | STATUS | CONTROL |

Provides an array of meters, active touch-sensitive virtual switches, and indicators to facilitate making set point changes. Metered quantities displayed: Generator Voltage, Field Current, Generator kVAR, Generator PF, and Position Indication. Active touch-sensitive virtual switches: AVR Set Point, FCR Set Point, kVAR Set Point, and PF Set Point. Selecting an active set point adjustment virtual switch enables a data entry display (below). The display returns to the previous screen when a new set point is entered.

SELECT /O=OFF 1=PF 2=VAR

Current Value: 4

Maximum: 4

Minimum: 0

| | | | | |
|---|---|---|-----|-------|
| 1 | 2 | 3 | +/- | OK |
| 4 | 5 | 6 | . | Enter |
| 7 | 8 | 9 | 0 | Done |

SPECIFICATIONS

ELECTRICAL

Power Input

20.4 to 27.6Vdc, 20 Watts maximum

Memory

Five panels

HARDWARE

Display

Six inch diagonal monochrome LCD with fluorescent backlight

Touch Screen

Analog resistive

Resolution

320 wide x 240 high

Communication Port

RS-485 Interface

Used to communicate with DECS-300 with Modbus™ protocol

ENVIRONMENTAL AND PHYSICAL

Operating temperature range

0°C to +50°C (32°F to +122°F)

Humidity

30 to 85% noncondensing

NEMA Rating

12/4

Weight

0.75 kilograms (1.65 pounds)

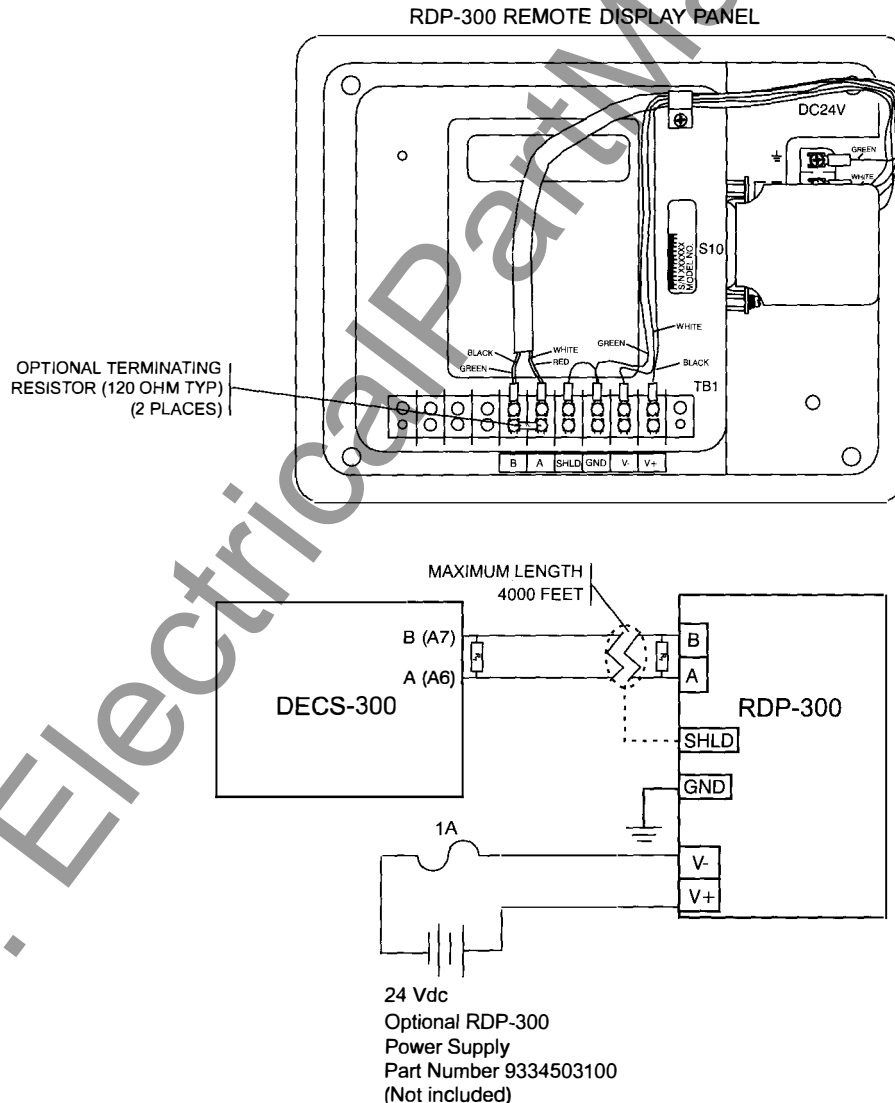


Figure 1 - Typical Interconnection Diagram

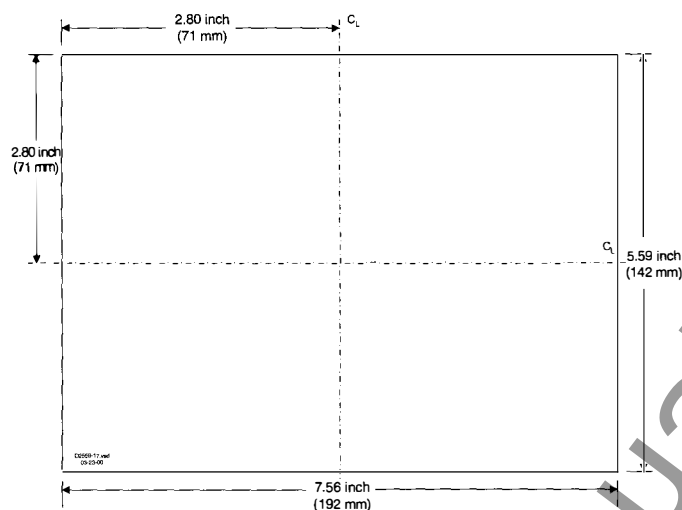


Figure 2 - Cutout Dimensions

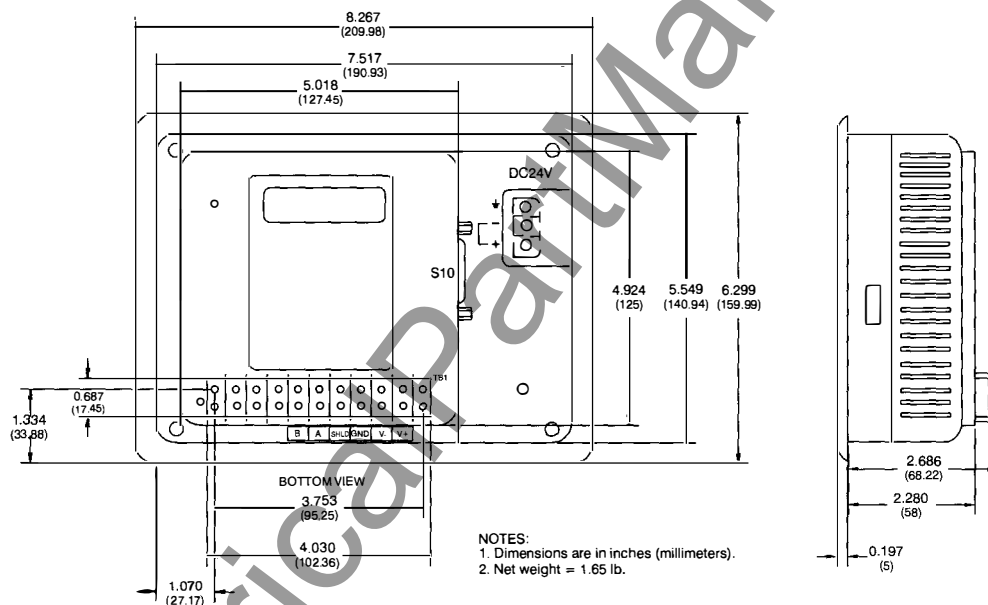


Figure 3 - Outline Diagram

ORDERING INFORMATION

Order Basler Electric Model Number **RDP-300**

OPTIONAL EQUIPMENT

Power supply shipped separately to power one RDP-300, order Basler P/N 9334503100.

Power input requirements: ac or dc voltage, 85-265Vac, 47-440Hz, or 110-330Vdc.

Power output rating: 24Vdc, 31.2 Watts.

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