Burner Interlock Module | RX-L80/90

The RX-L80/90, in combination with the burner control module (RX-R), executes burner interlock monitoring and prepurge functions.
There are 16 inputs for burner interlock. In addition to interlock input, this module can handle batch starting of multiple burners or batch ignition of multiple pilot burners. Status information such as the state of interlocks, alarms, completed purges, etc. can be assigned to 22 transistor outputs and utilized by outputting it to control panel indicator lamps or to a PLC for status monitoring. These functions can be selected easily using the computer loader, without the use of special programs. This product is equipped with RS-485 or Ethernet (only RX-L90) for communication. Remote monitoring is possible with this device.

Specifications

Operating environment	Ambient temperature		-20 to +55 °C
	Storage temperature		-20 to +70 °C
	Ambient humidity		10 to 90%RH (without condensation)
	Vibration		0 to 3.2 m/s² (10 to 150 Hz for 2 ch in each in X, Y, and Z directions)
	Shock		0 to 9.8 m/s²
Electrical specifications	Rated power supply voltage		24 Vdc
	Allowable power supply voltage		21.6 to 26.4 Vdc
	Power consumption		9 W or less
	Dielectric strength		- DC circuit terminals 500 Vac 1 min Voltage-applied location: Between 24 Vdc power terminals and input function terminals Between 24 Vdc power terminals and monitor output connector Between 24 Vdc power terminals and RX-R/RX control signal terminals - AC circuit terminals 1,500 Vac for 1 min or 1,800 Vac for 1 s Voltage-applied location: Between power terminals H & G and relay outputs H & G on one hand, and DC circuit terminals & connectors on the other Between blower output terminals and DC circuit terminals & connectors Between control motor output terminals and DC circuit terminals & connectors
	Insulation resistance		At least 50 MΩ with a 500 Vdc megger Voltage-applied location: Between power terminals H & G and relay outputs H & G on one hand, and DC circuit terminals & connectors on the other Between blower output terminals and DC circuit terminals & connectors Between control motor output terminals and DC circuit terminals & connectors
	Operating life		7 years of continuous use, 10 years of use 8 hours per day (at 25 °C), or 100,000 relay contact operations (at respective rated relay loads)
	Startup input		Contact input (24 Vdc/10 mA) * Usable with devices having contact resistance of 250 Ω or less
	Reset input		Contact input (24 Vdc/20 mA) * Usable with devices having contact resistance of 250 Ω or less
	Interlock input		Contact input (24 Vdc/20 mA) * Usable with devices having contact resistance of 250 Ω or less
	Relay output (voltage output)		400 VA (with relay contact welding detection)*1
	Blower output (no-voltage output)		350 VA
	Control motor output (no-voltage output)		100 VA
	Monitor output (transistor outputs)		22 (0.1 A max. each, 1 A max./module, 30 Vdc max.)
Communication specifications	RS-485 communication	Communication protocol	CPL
		Signal level	RS-485 compliant
		Communication/ synchronization type	Half-duplex, start/stop synchronization
		Maximum cable length	500 m
		Terminal resistor	External (150 Ω, 0.5 W min.)
		Transmission speed	Max. 38,400 bps
	Ethernet communication	Protocol	MODBUS/TCP
	RX-R control signal	Communication protocol	Dedicated protocol for RX-R control
		Maximum cable length	50 m
	RX-L control signal	Communication protocol	Dedicated protocol for RX-L control
		Maximum cable length	500 m
General specifications	Weight		Approx. 550 g
	Color		Black
	Structure		Two-piece construction with a separate base and main unit
	Standard compliance		EN 298*2
Cable	Reset		Cable length: Max. 10 m
	Interlock contact input		Cable length: Max. 200 m
	Signal line type/length		See Table 1.

*1. Cannot be used for dry output. For relay output, be sure to connect an AC power load (10 VA min.).
*2. Safety and control devices for gas burners and gas burning appliances.
(Safety and control devices for gas burners and gas burning appliances)

Table 1.)

Signal	Cable type	Max. cable length
RX-R control signal	0.2 to 1.5 mm² (AWG28-14)*1	50 m
RX-L control signal		500 m
Reset signal	0.3 to 0.75 mm² (AWG22-18)*2	10 m
Start signal		200 m
IN1 to IN16 signal		
RS-485 communication	0.2 to 1.5 mm² (AWG28-14)*3	500 m
Blower output	JIS C 3306, 0.75 mm² (dia. 0.18, 30 strands) min.	—
Motor output		

*1. Recommended: JCS4364 cable for light electrical instruments (twisted shielded cable for instruments), 8 cores (4 pairs)
*2. Max. wire dia. 2 mm. Recommended crimp terminal: V1.25-3 (RAV1.25-3) made by JST Mfg. Co., Ltd.
*3. Recommended: JCS4364 cable for light electrical instruments (twisted shielded cable for instruments), 4 cores (2 pairs)

Model No. configuration

Name	Model No.	Description
Burner interlock module	RX-L80A010010	RS-485 communication
	RX-L80A01001D	RS-485 communication + inspection results
	RX-L90A010020	RS-485 and Ethernet communications
	RX-L90A01002D	RS-485 and Ethernet communications + inspection results

Optional parts (sold separately)

Name	Model No.	Description
Transistor output connector	81446847-001	FCN361J040-AU jack (1, solder type), and FCN-360C040-B cover (1), both made by Fujitsu Components
RX-R/RX-L control signal connector	81447402-001	BL3.5/7SNSW (Part No.: 161019) made by Weidmuller (qty. 2)
Smart Loader Package	SLP-RXMJ70	For maintenance (with cables)
	SLP-RXMJ71	For maintenance (without cables)
	SLP-RXEJ70	For function selection (with cables)
	SLP-RXEJ71	For function selection (without cables)
Surge absorber	83968019-001	

External dimensions

(Unit: mm)