

MA RELAY REV 9 (Backward Compatible with 8C)
 PROFIBUS DP INPUT, OUTPUT AND PARAMETER IDENTIFICATION

Max_Input_Len = 7 bytes
 Max_Output_Len = 2 bytes
 Max_Diag_Data_Len = 47 bytes (Std 6 byte header as per DP Std)
 User_Prm_Data_Len = 16

Cyclic Data Out (from PLC)			
Byte, bit	Parameter	Meaning	Cyclic Output
Byte 0.0	RelayControl_C,0	Relay_1	Not Controlled
Byte 0.1	RelayControl_C,1	Relay_2	Relay_2
Byte 0.2	RelayControl_C,2	Relay_3	Relay_3
Byte 0.3	RelayControl_C,3	Relay_4	Not Controlled
Byte 0.4	RelayControl_C,4	MA configuration 00H to 06H Stand Alone Relay 70 H- 8F H PLC control & data	MA configure 0 (LSB)
Byte 0.5	RelayControl_C,5		MA configure 1
Byte 0.6	RelayControl_C,6		MA configure 2 (MSB)
Byte 0.7	RelayControl_C,7	Set to maintain relay output status if PLC communications fail	Operation Control Status
Byte 1.0	RelayControl_D,0		
Byte 1.1	RelayControl_D,1		
Byte 1.2	RelayControl_D,2		
Byte 1.3	RelayControl_D,3		
Byte 1.4	RelayControl_D,4		
Byte 1.5	RelayControl_D,5		
Byte 1.6	RelayControl_D,6	Set to reset relay fault condition	Reset relay
Byte 1.7	RelayControl_D,7	Set to enable MA relay settings downloaded from PLC	Parameterize relay



<i>Cyclic Data In (to PLC)</i>			
<i>Byte, bit</i>	<i>Parameter</i>	<i>Meaning</i>	<i>Cyclic Input</i>
Byte 0.0	DigInputReg,0	Set = Input 1 closed	Digital Input 1
Byte 0.1	DigInputReg,1	Set = Input 2 closed	Digital Input 2
Byte 0.2	DigInputReg,2	Set = Input 3 closed	Digital Input 3
Byte 0.3	DigInputReg,3	Set = Input 4 closed	Digital Input 4
Byte 0.4	DigInputReg,4	Set = Input 5 closed	Digital Input 5
Byte 0.5	DigInputReg,5		
Byte 0.6	DigInputReg,6		
Byte 0.7	DigInputReg,7	MA Relay Comms OK	MA Relay Comms
Byte 1.0	Alarm_Flag_A,0	Motor Running	InServiceFlag
Byte 1.1	Alarm_Flag_A,1	Overcurrent Alarm	OC_Flag
Byte 1.2	Alarm_Flag_A,2	Unbalance Alarm	UnbalFlag
Byte 1.3	Alarm_Flag_A,3	Min Load Alarm	UC_Flag
Byte 1.4	Alarm_Flag_A,4	Earth Leakage	EL_Flag
Byte 1.5	Alarm_Flag_A,5	Under Voltage	Volt_Flag
Byte 1.6	Alarm_Flag_A,6	Over Temperature	RTD_Flag
Byte 1.7	Alarm_Flag_A,7	Frozen Contactor	FrozenCnt_Flag
Byte 2.0 – 2.7	Actual Load Current	Actual Load Current	I act x 4 = % Load
Byte 3.0	TripFlag_A,0	Overcurrent Trip	OC_TripFlag
Byte 3.1	TripFlag_A,1	Unbalance Trip	Unbal_TripFlag
Byte 3.2	TripFlag_A,2	Single Phase Trip	SP_TripFlag
Byte 3.3	TripFlag_A,3	Min Load Trip	UC_TripFlag
Byte 3.4	TripFlag_A,4	Earth Leakage Trip	EL_TripFlag
Byte 3.5	TripFlag_A,5	Phase Rotation Trip	VoltTrip_Flag
Byte 3.6	TripFlag_A,6	Over Temperature Trip	RTD_TripFlag
Byte 3.7	TripFlag_A,7	Frozen Contactor Trip	FrozenCnt_TripF
Byte 4.0 – 4.7	Thermal Capacity	Thermal Capacity	
Byte 5.0 – 5.7	RunHourHi	Running Hours	
Byte 6.0 – 6.7	RunHourLo		

<i>Diagnostic Data</i>			
<i>Parameter</i>	<i>Meaning</i>	<i>Access</i>	<i>Bit Range</i>
UserDiagLen	Length Diagnostic Telegram	DP	
ThermalCap	Thermal Capacity	Read	(0-7)
RunHourCntr	Totaled Running Hours	Read	(8-15) (16-23)
TripFaultCnt	Trip Fault Counter	Read	(24-31) (32-39)
StartUpCntr	Totaled Number of Starts	Read	(40-47) (48-55)
Last Fault 1	Most recent fault	Read	(56-63) (64-71)
LF1 Year	Time Stamp Year	Read	(72-79)
LF1 Month	Time Stamp Month	Read	(80-87)
LF1 Day	Time Stamp Day	Read	(88-95)
LF1 Hour	Time Stamp Hour	Read	(96-103)
LF1 Min	Time Stamp Minute	Read	(104-111)
Last Fault 2	Previous Fault	Read	(112-119) (120-127)
LF2 Year	Time Stamp Year	Read	(128-135)
LF2 Month	Time Stamp Month	Read	(136-143)
LF2 Day	Time Stamp Day	Read	(144-151)
LF2 Hour	Time Stamp Hour	Read	(152-159)
LF2 Min	Time Stamp Minute	Read	(160-167)
Last Fault 3	Post Previous Fault	Read	(168-175) (176-183)
LF3 Year	Time Stamp Year	Read	(184-191)
LF3 Month	Time Stamp Month	Read	(192-199)
LF3 Day	Time Stamp Day	Read	(200-207)
LF3 Hour	Time Stamp Hour	Read	(208-215)
LF3 Min	Time Stamp Minute	Read	(216-223)
Last Fault 4	Post, Post Previous Fault	Read	(224-231) (232-239)
LF4 Year	Time Stamp Year	Read	(240- 247)
LF4 Month	Time Stamp Month	Read	(248-255)
LF4 Day	Time Stamp Day	Read	(256-263)
LF4 Hour	Time Stamp Hour	Read	(264-271)
LF4 Min	Time Stamp Minute	Read	(272-279)
StrtUpYear	Year	Read	(280-287)
StrtUpMnth	Month	Read	(288-295)
StrtUpDay	Day	Read	(296-303)
StrtUpHour	Hour	Read	(304-311)
StrtUpMin Min	Min	Read	(312-319)