File E175531 Project 08CA48639

August 6, 2009

REPORT

on

PROGRAMMABLE CONTROLLERS

Hirschmann Automation and Control GmbH Neckartenzlingen, Germany

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DESCRIPTION

PRODUCT COVERED:

USL, CNL - open type, programmable controller, Ethernet switch ruggedized, cat. no. MAR10- or MAR11- followed by two numbers, followed by 99 or CC or 40 or 4T or OT, followed by 99 or two letters, followed by S or C or U or F, followed by C or G or L or M, followed by C or G or L or M or 9, followed by a letter, may be followed by additional suffixes.

GENERAL

These devices are Ethernet switches intended for use in industrial applications. They are microcontroller-based and communicate via interfaces through wire or optical port.

ELECTRICAL RATINGS:

Input ratings:

Input 1		Input 2		Cat. Nos.
Ratings	Power Supply Unit Model No.	Ratings	Power Supply Unit Model No.	
24-48 V, 1.4-0.7 A, DC	PSU-1141-0y	-	_	MAR1xx0- xxxxxxxxxxxxxxxxxxxxxxxxC9xxx MAR1xx0- xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
24-48 V, 1.4-0.7 A, DC	PSU-1141-0y	24-48 V, 1.4-0.7 A, DC	PSU-1141-0y	MAR1xx0- xxxxxxxxxxxxxxxxxxxxxxXXXXCCxxx MAR1xx0- xxxxxxxxxxxxxxxxxxxxxXXXXXXXXXXXXXX
24-48 V, 1.4-0.7 A, DC	PSU-1141-0y	100-240 V, 0.7-0.4 A, 50/60 Hz	PSU-0141-0y	MAR1xx0- xxxxxxxxxxCGxxx MAR1xx0- xxxxxxxxxxxXXXXXXXXXXXXXXXXXXXXXXXX
24-48 V, 1.4-0.7 A, DC	PSU-1141-0y	100-240 V, 0.7-0.4 A, 50/60 Hz	PSU-0151-0z	MAR1xx2- xxxxxxxxxxxxxxxxxxxxxxxCGxxx MAR1xx2- xxxxxxxxxxxxxxxxxxxxxXXXXXXXXXXXXXX

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ELECTRICAL RATINGS (Continued):

Input ratings (Continued):

Input 1		Input 2		Cat. Nos.
Ratings	Power Supply Unit Model	Ratings	Power Supply Unit Model	
100 040 77	NO.		NO.	
100-240 V,	PSU-0141-	-	-	MARIXXU-
0.7-0.4 A,	0 y			xxxxxxxxxxxxxxxxxxxxxxxxXXXXXXXXXXXXXX
50/60 Hz				XXX
				MAR1xx0-
				xxxxxxxxxxxxxxxxxxxxxxxXXXXXXXXXXXXXXX
-				XXX
100-240 V,	PSU-0141-	100-240 V,	PSU-0141-	MAR1xx0-
0.7-0.4 A,	0у	0.7-0.4 A,	0y	xxxxxxxxxxxxxxxxxxxxXXXXXXXXXXXXXXX
50/60 Hz		50/60 Hz		XXX
				MAR1xx0-
				XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
				XXX
100-240 V,	PSU-0141-	24-48 V,	PSU-1141-	MAR1xx0-
0.7-0.4 A,	0y	1.4-0.7 A,	0y	xxxxxxxxxxxxxxxxxxxxxxXXXXXXXXXXXXXXXXX
50/60 Hz		DC		xxx
				MAR1xx0-
				XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
				xxx
*100-240	PSU-0141-y	100-240 V,	PSU-0151-	MAR1xx2-
V, 0.7-0.4		0.7-0.4 A,	0z	xxxxxxxxxxxxxxxxxxxxxXGG
A, 50/60		50/60 Hz		xxx
Hz				MAR1xx2-
				xxxxxxxxxxxxxxxxxxXXXXXXXXXXXXXXXXXXXXX
				xxx

where x stand for letters or numbers according to the Nomenclature, where y stand for 1 - without coating or 2 - with coating

where z stand for 2 - without coating or 3 - with coating

Output ratings:

Relays contacts: 230V/2A AC resistive load 30V/2A DC resistive load

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ELECTRICAL RATINGS (Continued):

Output ratings (Continued):

Communication Ports:

Module	Communication	Media type	Connector	Conductor	Data
Id. (see	standard		type	type	rate
Nomen-					
clature)					
CC	Gigabit	Wire and	RJ45 and SFP	Twisted pair	10/100/ 1000
	Ethernet	Fiber-optic	slot	and Fiber	Mbit/s
		Wire and	RJ45 and SFP	Twisted pair	10/100/ 1000
		Fiber-optic	slot	and Fiber	Mbit/s
40	Gigabit	Fiber-optic	SFP slot	Fiber	1000 Mbit/s
	Ethernet	_	(four used)		
4T	Gigabit	Wire	RJ 45	Twisted pair	10/100/ 1000
	Ethernet		(four used)		Mbit/s
OT	Gigabit	Wire	RJ 45	Twisted pair	10/100/ 1000
	Ethernet		(two used)	-	Mbit/s
		Fiber-optic	SFP slot	Fiber	1000 Mbit/s
			(two		
			provided)		
TT	Fast	Wire	RJ 45	Twisted pair	10/100
	Ethernet		(two used)	-	Mbit/s
MM	Fast	Fiber-optic	DSC	Multi-mode FX	100 Mbit/s
	Ethernet		(two used)	fiber	
JJ	Fast	Fiber-optic	MTRJ	Multi-mode FX	100 Mbit/s
	Ethernet		(two used)	fiber	
NN	Fast	Fiber-optic	ST	Multi-mode FX	100 Mbit/s
	Ethernet		(four used)	fiber	
VV	Fast	Fiber-optic	DSC	Single-mode	100 Mbit/s
	Ethernet		(two used)	FX fiber	
UU	Fast	Fiber-optic	ST	Single-mode	100 Mbit/s
	Ethernet		(four used)	FX fiber	
T.T.	Fast	Fiber-optic	DSC	Single-mode	100 Mbit/s
	Ethernet	riber opere	(two used)	long haul FX	100 11010,0
			(,	fiber	
GG	Fast	Fiber-optic	DSC	Single-mode	100 Mbit/s
	Ethernet		(two used)	long haul 200	
			(,	km FX fiber	
ZZ	Fast	Fiber-optic	SFP slot	fiber	100 Mbit/s
	Ethernet		(two used)		
RR	Fast	Wire	M12	Twisted pair	10/100
	Ethernet		(two used)		Mbit/s
FF	Fast	Fiber-optic	ST ST	Multi-mode FL	10 Mbit/s
	Ethernet	- LOCE OF DEC	(four used)	fiber	
USB	Serial	Wire	USB	USB cable	12 Mbit/s
0.00	communication				12 11010/0
V 24	Serial	Wire	RJT11	Serial cable	9 600 baud
	communication			Seriar Cabic	s.coo baaa
	00	1	1	1	1

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ELECTRICAL RATINGS (Continued):

Output ratings (Continued):

Communication Ports:

Module Id. (see Nomen- clature)	Communication standard	Media type	Connector type	Conductor type	Data rate
BB	Fast Ethernet	Fiber Optic	LC	2 * Multimode Fx LC	100 Mbits/s
DD	Fast Ethernet	Fiber Optic	LC	2 * Singlemode Fx LC	100 Mbits/s
НН	Fast Ethernet	Fiber Optic	LC	2 * Singlemode + Fx LC	100 Mbits/s
КК	Fast Ethernet	Fiber Optic	LC	2 * Singlemode Long Haul Fx LC	100 Mbits/s

where x stand for letters or numbers according to the Nomenclature.