



PROPRIETARY ITEM - EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS PATENT AND OTHERWISE ARE RESERVED BY SOUTHCO, INC.

EKEEPER

DATE	DRAWN	CHKD	SCALE	DRAWING NUMBER
11APR2006	GGG		1:1	J-EM-10-13-310

REV	DATE	DRAWN/CHKD	DESCRIPTION	PART NUMBER	MATERIAL	FINISH
1	20APR2006	GGG	FIRST ISSUE	EM-10-13-310	SEE NOTE A	BLACK
2	09AUG2006	GGG	CHNGD NOTES, ADDED DIAGRAM	EM-10-12-310		
3	04OCT2006	GGG/MJS	PRN: P2006-1215	EM-10-11-310		
A	28DEC2006	GGG/MJS	PRN: P2006-1802			

MILLIMETERS
THIRD ANGLE PROJECTION
A3 PAPER SIZE

NOTES
A. MATERIAL AND FINISH:
- ENCLOSURE AND LATCH BOLT: ENGINEERING THERMOPLASTIC

B. ELECTRICAL SPECIFICATIONS:
POWER: 12 VDC (9 TO 14 VDC)
- OPERATING CURRENT: LESS THAN 200 mA @ 12VDC WITH NO EXTERNAL MECHANICAL LOAD
- MAX CURRENT WITH STALLED LATCH: 1A MAX @ 12VDC (STALL LIMITED TO 2 SECONDS)
- STANDBY CURRENT: LESS THAN 1 mA PLUS OUTPUT SIGNAL CURRENT IF APPLICABLE
- LATCH WILL MAINTAIN EITHER POSITION IF POWER IS REMOVED (FAILS NEUTRAL).

CONTROL INPUT:
- FOR RETRACTED POSITION: SUPPLY 12 VDC (7 TO 14V) FOR A MINIMUM OF 50 MILLISECONDS. THE LATCH BOLT WILL REMAIN RETRACTED FOR AS LONG AS THE SIGNAL IS PRESENT OR A MINIMUM OF 1 SECOND.
- FOR EXTENDED POSITION: SUPPLY 0 VDC (0 TO 0.5 V)

OUTPUT SIGNAL:
- OPEN COLLECTOR OUTPUT. RATING 12VDC, 450mA MAX LOAD.
- CAUTION: DO NOT EXCEED MAXIMUM LOADS STATED AND FOLLOW WIRING DIRECTIVES.
- OUTPUT WILL TURN ON WHEN LATCH BOLT IS IN RETRACTED POSITION.
- NOTE: EXTERNAL COMPRESSION OF THE LATCH BOLT WILL NOT PRODUCE ANY OUTPUT SIGNAL.
- OUTPUT SLOW FLASHES ON/OFF WHEN LATCH ERROR OCCURS.

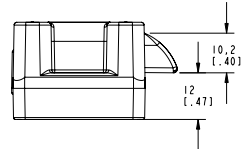
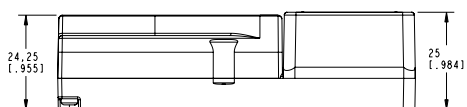
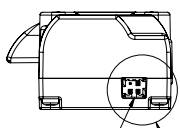
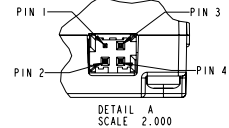
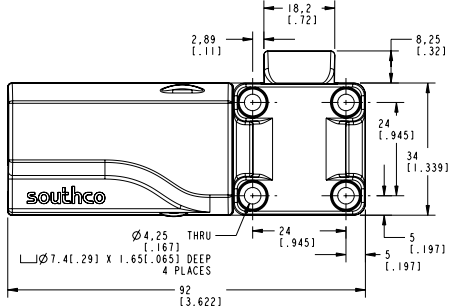
THE ERROR FUNCTION IS A TIMER FUNCTION THAT MONITORS THE TRANSIT TIME OF THE LATCH WHEN TRAVELLING BETWEEN EITHER OF THE POSITIONS, EXTENDED OR RETRACTED. THE LATCH WILL TRY TO REACH THE NEW POSITION FOR TWO ATTEMPTS. IF THE LATCH DOES NOT REACH THE NEW POSITION THE LATCH WILL ENTER ERROR MODE AND FLASH THE OUTPUT TO INDICATE THAT THERE IS A PROBLEM. THE ERROR MODE IS A PASSIVE ERROR INDICATOR ONLY AND WILL RESET WHEN A NEW CHANGE IN POSITION IS COMMANDED. THE LATCH WILL GO INTO ERROR MODE:
- IF THERE IS TOO MUCH LOAD, OR THERE IS AN OBSTRUCTION PREVENTING THE RETRACTING MOVEMENT OF THE LATCH BOLT.
- IF THE OUTPUT GEAR IS MISSING OR IF THERE IS INTERNAL DAMAGE TO THE LATCH.

CONNECTIONS:
- FOUR POSITION CONNECTOR
HIROSE ELECTRIC CO. LTD. PART NUMBER DF11-4DP-2DS
PIN 1: CONTROL INPUT SIGNAL
PIN 2: POWER (+)
PIN 3: OUTPUT SIGNAL
PIN 4: GROUND (-)
- MATE CONNECTOR (NOT INCLUDED)
HIROSE ELECTRIC CO. LTD.
- PART NUMBER DF11-4DS-2C CRIMP SOCKET
- PART NUMBER DF11-SERIES CRIMPING CONTACT FOR SOCKET
- 24 AWG WIRE MINIMUM RECOMMENDED.
- ORDER EM-10-40 FOR MATE CONNECTOR WITH 300mm WIRES.

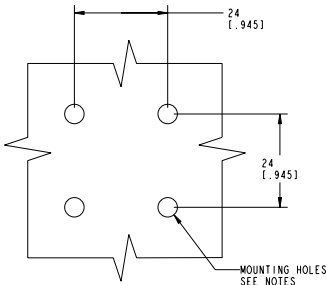
C. CONFIGURATIONS: SEE PAGE 2
- LATCH BOLT CENTER ORIENTATION P/N: EM-10-11-310
- LATCH BOLT RIGHT ORIENTATION P/N: EM-10-12-310
- LATCH BOLT LEFT ORIENTATION P/N: EM-10-13-310

D. MOUNTING
- MOUNT THE UNIT USING FOUR (4) #6-32 OR M4 SCREWS (NOT PROVIDED).
- CAUTION: DO NOT OPERATE UNIT WITHOUT MOUNTING FASTENERS TO SECURE THE LATCH HOUSING.

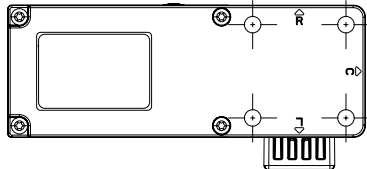
E. PACKAGING
- EM-10-xx-xxx: PACKAGED ONE UNIT PER BOX.
- EM-10-xx-xxx-1: PACKAGED IN CELL DIVIDERS.



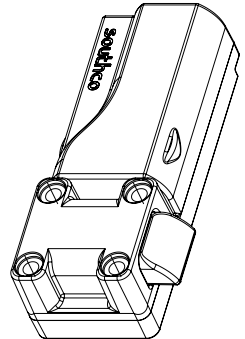
CONNECTOR SEE DETAIL A



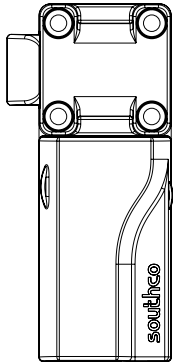
PANEL PREPARATION



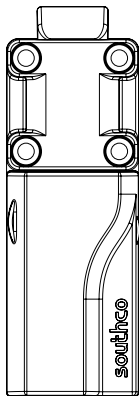
EM-10-13-310
LATCH BOLT LEFT ORIENTATION SHOWN



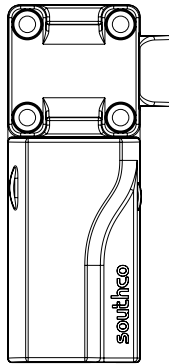
southco		PROPRIETARY ITEM - EXCEPT FOR USES EXPRESSLY GRANTED IN WRITING INFORMATION DISCLOSED HEREON IS CONFIDENTIAL AND ALL RIGHTS PATENT AND OTHERWISE ARE RESERVED BY SOUTHCO, INC.				EKEEPER			DATE	DRAWN	CHKD	SCALE	DRAWING NUMBER
									11APR2006	GGG		1:1	J-EM-10-13-310
REV	DATE	DRAWN/CHKD	DESCRIPTION	PART NUMBER	MATERIAL	FINISH							
1	20APR2006	GGG	FIRST ISSUE	EM-10-13-310									
2	09AUG2006	GGG	CHNGD NOTES, ADDED DIAGRAM	EM-10-12-310									
3	04OCT2006	GGG/MJS	PRN: P2006-1215	EM-10-11-310									
A	28DEC2006	GGG/MJS	PRN: P2006-1802										
MILLIMETERS													
THIRD ANGLE PROJECTION												A3 PAPER SIZE	



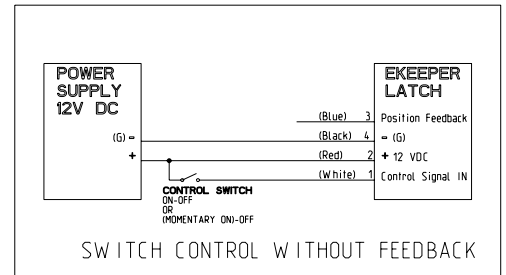
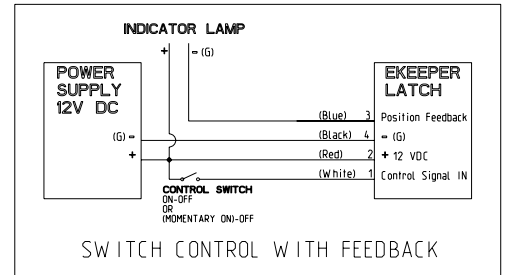
LATCH BOLT
LEFT ORIENTATION
EM-10-13-XXX-X



LATCH BOLT
CENTER ORIENTATION
EM-10-11-XXX-X



LATCH BOLT
RIGHT ORIENTATION
EM-10-12-XXX-X



WIRING DIAGRAM