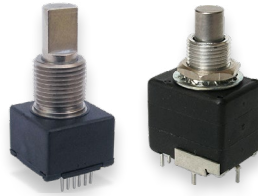




# PRODUCT UPDATE MEMO

## ENCODERS



### Update to ASIC Product Change Notification SC2110, Issued April 8, 2021

#### Model EM14 and EN Series

Riverside, California – November 4, 2022 – On April 8, 2021, Bourns issued a Product Change Notification regarding ASIC (Application-Specific Integrated Circuit) modifications for certain Model [EM14](#) and [EN](#) Series Rotary Optical Encoders. As disclosed in the Product Change Notification, the supplier tooling change for the ASIC used a new process. This new process resulted in extra pulses at the rising edge when rotating at low rpms. A correction has been added to the process consisting of inserting hysteresis at input to the Schmitt Trigger to eliminate spurious spikes at output. A previous data sheet statement regarding the need for a pull resistor and capacitor is no longer required and the data sheets have been updated to reflect this information.

If you have any questions or need additional information, please feel free to contact Customer Service/Inside Sales.

To review the updated data sheets, please see the following links:

<https://www.bourns.com/docs/product-datasheets/em14.pdf>

<https://www.bourns.com/docs/product-datasheets/enc1j.pdf>

To review the published PCN, please use the following link:

[https://bourns.com/docs/technical-documents/product-change-notifications/Bourns\\_SC2110\\_EM14\\_EN\\_PCN.pdf](https://bourns.com/docs/technical-documents/product-change-notifications/Bourns_SC2110_EM14_EN_PCN.pdf)

Affected part numbers are listed below:

#### Affected Part Numbers

EM14A1A-B24-L008N	EM14A0A-C24-L064S	EM14A0D-515-L032H	EM14A0D-C24-L032N	EM14A0D-C28-L032S
EM14A1A-B28-L032N	EM14A0A-C28-L232N	EM14A0D-520-R264N	EM14A0D-C24-L032S	EM14A0D-C28-L064N
EM14A1B-517-L032H	EM14A0B-503-L064H	EM14A0D-B24-L032S	EM14A0D-C24-L064H	EM14A1A-B24-R032N
EM14A1B-C24-L032H	EM14A0B-513-L064H	EM14A0D-B24-L064S	EM14A0D-C24-L064N	EM14A1A-B24-R032S
EM14C1A-C24-L032N	EM14A0B-525-L064S	EM14A0D-B28-L008S	EM14A0D-C24-L064S	EM14A1A-C24-L032S
EM14C1A-E24-L008N	EM14A0B-B24-L064H	EM14A0D-B28-L032N	EM14A0D-C24-L132N	EM14A1B-502-L032N
EM14C1A-E24-L032H	EM14A0B-B28-L064H	EM14A0D-B28-L032S	EM14A0D-C24-L132S	EM14A1B-516-L032N
EM14A0A-504-L064H	EM14A0B-B28-R064N	EM14A0D-B28-L064N	EM14A0D-C24-L164N	EM14A1B-526-L008S
EM14A0A-505-L064H	EM14A0B-C24-L064H	EM14A0D-B28-L064S	EM14A0D-C24-L216S	EM14A1B-527-L032H
EM14A0A-B24-L064N	EM14A0B-C24-L064S	EM14A0D-C24-L008N	EM14A0D-C24-L264H	EM14A1B-B24-L032N
EM14A0A-B24-L064S	EM14A0D-506-L064N	EM14A0D-C24-L016S	EM14A0D-C24-R008S	EM14A1B-C24-L008H
EM14A0A-B24-L164N	EM14A0D-507-L064N	EM14A0D-C24-L032H	EM14A0D-C28-L032N	EM14A1B-C24-L008N

SC2218

## Affected Part Numbers

EM14A1B-C24-L032N	EM14R0A-M20-R064N	EM14R1D-M20-L032S	ENA1D-B28-R00128L	ENA1J-B28-R00064L
EM14A1B-C24-L032S	EM14R0A-M25-L064S	EM14R1D-M20-L208S	ENA1D-B28-R00256	ENA1J-B28-R00100L
EM14A1B-C24-R008N	EM14R0A-M25-R032N	EM14R1D-M20-R008N	ENA1D-B28-R00256L	ENA1J-B28-R00128
EM14A1B-C24-R032S	EM14R0A-M25-R064N	EM14R1D-M25-L032N	ENA1D-B28-W00256L	ENA1J-B28-W00128
EM14A1D-501-L032H	EM14R0B-510-L064N	EM14R1D-M25-L032S	ENA1D-B32-L00025	ENA1J-B40-L00025
EM14A1D-511-L008H	EM14R0B-522-L064N	EM14R1D-R20-L032N	ENA1D-C16-L00100	ENA1J-C20-N00128L
EM14A1D-512-L232H	EM14R0B-524-L064N	EM14R1D-R20-L032S	ENA1D-C28-L00256L	ENA1J-C28-L00064L
EM14A1D-514-L232N	EM14R0B-528-L032N	EM14R1D-R25-L032S	ENA1D-C28-R00256L	ENA1J-C28-L00100L
EM14A1D-518-L232H	EM14R0B-529-L064S	ENA1D-472-L00050	ENA1J-442-M00128	ENA1J-C28-L00128
EM14A1D-519-L232N	EM14R0B-C24-L064S	ENA1D-472-L00050L	ENA1J-456-L00128	ENA1J-C28-L00128L
EM14A1D-B24-L032S	EM14R0B-M20-L064N	ENA1D-477-L00100	ENA1J-456-L00128L	ENA1J-C28-N00128L
EM14A1D-B28-L032H	EM14R0B-M20-L064S	ENA1D-481-L00100	ENA1J-473-Y00064	ENA1J-C28-R00128
EM14A1D-B28-L032N	EM14R0B-M25-L064N	ENA1D-481-L00100L	ENA1J-482-R00064	ENA1J-C28-R00128L
EM14A1D-B28-L032S	EM14R0B-M25-L064S	ENA1D-482-R00064	ENA1J-492-M00100	ENA1J-C28-Y00128
EM14A1D-C24-L008H	EM14R0B-R20-L064N	ENA1D-491-Y00200	ENA1J-498-R00064	ENA1J-D28-L00256
EM14A1D-C24-L008N	EM14R0B-R20-R064S	ENA1D-494-L00100	ENA1J-498-R00064L	ENA1P-427-L00128
EM14A1D-C24-L008S	EM14R0D-M15-L016N	ENA1D-494-L00100L	ENA1J-500-L00256	ENA1P-453-L00050
EM14A1D-C24-L032H	EM14R0D-M20-L008N	ENA1D-510-N00064L	ENA1J-501-N00064	ENA1P-453-L00050L
EM14A1D-C24-L032N	EM14R0D-M20-L016N	ENA1D-511-N00128L	ENA1J-501-N00064L	ENA1P-B16-L00050
EM14A1D-C24-L032S	EM14R0D-M20-L064H	ENA1D-514-L00064L	ENA1J-505-L00128	ENA1P-B28-L00050
EM14A1D-C24-L108S	EM14R0D-M20-L064N	ENA1D-514-L00066L	ENA1J-509-W00128L	ENA1P-B28-L00050L
EM14A1D-C24-L132N	EM14R0D-M20-L064S	ENA1D-519-N00128L	ENA1J-512-L00100L	ENA1P-B28-L00128
EM14A1D-C24-L208H	EM14R0D-M20-L132S	ENA1D-B16-L00064	ENA1J-516-M00256L	ENA1P-B28-L00128L
EM14A1D-C24-L232H	EM14R0D-M20-L216N	ENA1D-B16-L00100	ENA1J-518-N00128L	ENA1P-C24-L00256L
EM14A1D-C24-L232S	EM14R0D-M20-L232N	ENA1D-B16-R00064	ENA1J-520-W00128L	ENA2D-B28-L00064
EM14A1D-C28-L032S	EM14R0D-M20-R064N	ENA1D-B16-R00128	ENA1J-B16-L00064	ENA2J-B28-L00064
EM14A1D-C28-R032H	EM14R0D-M20-R464N	ENA1D-B20-L00025	ENA1J-B16-Y00025L	ENA2J-B28-L00064L
EM14A1D-C28-R232H	EM14R0D-M25-L016N	ENA1D-B20-L00064	ENA1J-B20-L00064	ENA2J-B28-L00100
EM14C0A-E24-L064H	EM14R0D-M25-L032N	ENA1D-B20-L00064L	ENA1J-B20-L00064L	ENA2J-B28-L00100L
EM14C0A-E24-L064S	EM14R0D-M25-L064N	ENA1D-B20-L00100	ENA1J-B20-L00100	ENA2J-B28-R00100
EM14C0A-E28-R164H	EM14R0D-M25-L064S	ENA1D-B20-L00100L	ENA1J-B20-L00100L	ENA2J-C28-L00128
EM14C0D-E24-L016S	EM14R0D-R20-L032N	ENA1D-B20-L00128	ENA1J-B20-L00128	ENA2J-C28-L00128L
EM14C0D-E24-L032S	EM14R0D-R20-L032S	ENA1D-B20-L00128L	ENA1J-B20-L00128L	ENC1D-429-W00064
EM14C0D-E24-L064N	EM14R0D-R20-L064S	ENA1D-B20-R00025	ENA1J-B20-R00064	ENC1D-484-R00128
EM14C0D-E24-L064S	EM14R0D-R20-R016S	ENA1D-B20-R00025L	ENA1J-B20-R00064L	ENC1D-485-L00100
EM14C0D-E24-L264N	EM14R0D-R20-R032N	ENA1D-B20-R00128	ENA1J-B24-L00100	ENC1D-487-L00100
EM14C0D-E28-L016N	EM14R0D-R25-L032N	ENA1D-B20-W00128	ENA1J-B28-L00025	ENC1D-D16-L00064
EM14C0D-E28-L032S	EM14R0D-R25-L032S	ENA1D-B20-W00128L	ENA1J-B28-L00025L	ENC1D-D16-L00064L
EM14C0D-E28-L064N	EM14R0D-R25-L064S	ENA1D-B22-L00064	ENA1J-B28-L00050	ENC1D-D16-L00128
EM14C0D-E28-L064S	EM14R1A-M20-L032S	ENA1D-B24-L00064	ENA1J-B28-L00064	ENC1D-D16-L00128L
EM14C1A-E28-L032N	EM14R1A-M20-R032S	ENA1D-B28-L00050	ENA1J-B28-L00064L	ENC1D-D16-L00256
EM14C1D-B24-L032S	EM14R1A-M25-L008H	ENA1D-B28-L00064	ENA1J-B28-L00100	ENC1D-D20-L00128
EM14C1D-E24-L008S	EM14R1A-M25-L032S	ENA1D-B28-L00100	ENA1J-B28-L00100L	ENC1D-D20-L00128L
EM14C1D-E24-L032S	EM14R1A-R20-L008N	ENA1D-B28-L00100L	ENA1J-B28-L00128	ENC1D-D20-L00256
EM14C1D-E28-L032S	EM14R1A-R20-L032S	ENA1D-B28-L00128	ENA1J-B28-L00128L	ENC1D-D20-R00128
EM14C0A-E24-L064S	EM14R1B-523-L032S	ENA1D-B28-L00128L	ENA1J-B28-L00256	ENC1D-D28-L00064
EM14R0A-500-L016N	EM14R1B-M20-L032N	ENA1D-B28-L00256	ENA1J-B28-L00256L	ENC1D-D28-L00064L
EM14R0A-508-L064H	EM14R1B-M20-L032S	ENA1D-B28-N00128L	ENA1J-B28-M00128	ENC1D-D28-L00100
EM14R0A-M20-L064H	EM14R1B-M25-L008H	ENA1D-B28-R00064	ENA1J-B28-N00128	ENC1D-D28-L00100L
EM14R0A-M20-L064N	EM14R1D-M20-L008S	ENA1D-B28-R00064L	ENA1J-B28-N00128L	ENC1D-D28-L00128
EM14R0A-M20-L264H	EM14R1D-M20-L032H	ENA1D-B28-R00128	ENA1J-B28-R00064	ENC1D-D28-L00128L

## Affected Part Numbers

ENC1D-D28-N00128	ENS1D-452-Y00256L	ENS1J-B16-R00100	ENS2J-B28-L00100	ENT1J-D28-L00256
ENC1D-D28-R00025	ENS1D-460-W00128	ENS1J-B20-L00064	ENS2J-B28-L00128	ENT1J-D28-L00256L
ENC1D-D28-R00025L	ENS1D-464-M00128	ENS1J-B20-L00100	ENS2J-B28-L00128L	ENT1J-D28-M00128
ENC1D-D28-R00064	ENS1D-474-M00128	ENS1J-B20-L00100L	ENS2J-C20-R00050	ENT1J-D28-R00050
ENC1D-D28-R00256	ENS1D-475-Y00200	ENS1J-B20-L00128	ENT1D-419-Y00128	ENT1J-D28-R00128
ENC1D-D28-R00256L	ENS1D-475-Y00200L	ENS1J-B20-L00256	ENT1D-430-Y00050	ENT1J-D28-R00256
ENC1J-421-L00128	ENS1D-489-W00100	ENS1J-B20-L00256L	ENT1D-431-W00064	ENW1D-432-W00064
ENC1J-459-L00128	ENS1D-489-W00100L	ENS1J-B20-R00025	ENT1D-437-L00256	ENW1D-432-W00064L
ENC1J-465-R00064	ENS1D-B28-L00064	ENS1J-B20-R00256L	ENT1D-437-L00256L	ENW1D-461-M00100
ENC1J-487-L00100	ENS1D-B28-L00064L	ENS1J-B28-L00025	ENT1D-438-L00256	ENW1D-479-L00256
ENC1J-D16-L00064	ENS1D-B28-L00100	ENS1J-B28-L00050	ENT1D-438-L00256L	ENW1D-D16-R00256
ENC1J-D16-L00064L	ENS1D-B28-L00100L	ENS1J-B28-L00064	ENT1D-449-Y00064	ENW1D-D24-L00064
ENC1J-D16-L00128	ENS1D-B28-L00128	ENS1J-B28-L00064L	ENT1D-449-Y00064L	ENW1D-D28-L00128
ENC1J-D16-L00128L	ENS1D-B28-L00128L	ENS1J-B28-L00100	ENT1D-457-Y00050	ENW1D-D28-L00256
ENC1J-D16-L00200	ENS1D-B28-L00256	ENS1J-B28-L00100L	ENT1D-467-Y00064	ENW1D-D28-L00256L
ENC1J-D16-L00256	ENS1D-B28-L00256L	ENS1J-B28-L00128	ENT1D-467-Y00064L	ENW1J-D28-L00128
ENC1J-D16-R00128	ENS1D-B28-R00050	ENS1J-B28-L00128L	ENT1D-502-W00064	ENZ1D-411-W00100
ENC1J-D16-R00256	ENS1D-B28-R00050L	ENS1J-B28-L00256	ENT1D-502-W00064L	ENZ1D-416-L00128
ENC1J-D16-R00256L	ENS1D-B28-R00064	ENS1J-B28-L00256L	ENT1D-D16-L00256	ENZ1D-417-L00100
ENC1J-D20-L00064	ENS1D-B28-Y00256	ENS1J-B28-R00100	ENT1D-D16-R00128	ENZ1D-423-Z00128
ENC1J-D20-L00100	ENS1D-B28-Y00256L	ENS1J-B28-R00100L	ENT1D-D20-L00128	ENZ1D-423-Z00128L
ENC1J-D20-L00100L	ENS1D-C28-L00128	ENS1J-B28-R00128	ENT1D-D20-L00256	ENZ1D-444-L00100
ENC1J-D20-L00128	ENS1D-C28-L00128L	ENS1J-B28-R00128L	ENT1D-D20-L00256L	ENZ1D-444-L00100L
ENC1J-D20-L00128L	ENS1D-C28-W00128	ENS1J-B28-R00256	ENT1D-D20-R00128	ENZ1D-461-M00100
ENC1J-D20-L00256	ENS1J-440-L00128	ENS1J-B28-W00100	ENT1D-D20-R00256L	ENZ1D-463-L00100
ENC1J-D20-R00125L	ENS1J-448-M00100	ENS1J-B28-W00128	ENT1D-D28-L00100	ENZ1D-471-Z00128
ENC1J-D20-R00128L	ENS1J-448-M00100L	ENS1J-B28-Y00128	ENT1D-D28-L00100L	ENZ1D-471-Z00128L
ENC1J-D24-R00064	ENS1J-450-R00256	ENS1J-B28-Y00128L	ENT1D-D28-L00256	ENZ1D-488-L00100
ENC1J-D28-L00025	ENS1J-450-R00256L	ENS1J-B28-Y00256	ENT1D-D28-M00256	ENZ1D-488-L00100L
ENC1J-D28-L00050	ENS1J-454-L00100	ENS1J-B28-Y00256L	ENT1D-D28-M00256L	ENZ1D-493-L00100
ENC1J-D28-L00064	ENS1J-454-L00100L	ENS1J-B32-W00256	ENT1D-D28-R00100	ENZ1D-494-L00100
ENC1J-D28-L00064L	ENS1J-466-W00128	ENS1J-B40-L00025	ENT1D-D28-R00100L	ENZ1D-495-L00100
ENC1J-D28-L00100	ENS1J-466-W00128L	ENS1J-B60-L00100	ENT1D-D28-W00100	ENZ1D-495-L00100L
ENC1J-D28-L00100L	ENS1J-469-L00256	ENS1J-C20-Y00256	ENT1D-D28-W00100L	ENZ1D-496-L00100
ENC1J-D28-L00128	ENS1J-469-L00256L	ENS1J-C24-R00025	ENT1D-D20-L00128	ENZ1D-506-Z00128L
ENC1J-D28-L00128L	ENS1J-470-W00128	ENS1J-C24-R00025L	ENT1J-445-M00100	ENZ1D-507-Z00128L
ENC1J-D28-L00200	ENS1J-470-W00128L	ENS1J-C28-L00064L	ENT1J-D16-L00256	ENZ1J-401-L00256
ENC1J-D28-L00256	ENS1J-476-L00256	ENS1J-C28-L00128	ENT1J-D20-L00256	ENZ1J-405-L00128
ENC1J-D28-L00256L	ENS1J-478-M00128	ENS1J-C28-L00128L	ENT1J-D20-R00256	ENZ1J-410-Y00025
ENC1J-D28-M00064	ENS1J-497-L00256	ENS1J-C28-R00128	ENT1J-D20-R00256L	ENZ1J-410-Y00025L
ENC1J-D28-R00064	ENS1J-504-L00256	ENS1J-C28-R00128L	ENT1J-D28-L00025	ENZ1J-462-L00050
ENC1J-D28-R00128L	ENS1J-504-L00256L	ENS1J-C28-Y00256	ENT1J-D28-L00025L	ENZ1P-436-L00050
ENC1J-D28-W00128	ENS1J-508-R00128L	ENS1P-427-L00128	ENT1J-D28-L00064	ENZ1P-436-L00050L
ENC1P-421-L00128	ENS1J-517-L00128L	ENS1P-458-L00128	ENT1J-D28-L00064L	ENZ1P-515-L00050L
ENC1P-D28-L00128	ENS1J-B16-L00100	ENS1P-458-L00128L	ENT1J-D28-L00100	
ENC2J-D16-R00100L	ENS1J-B16-L00100L	ENS1P-B28-L00128	ENT1J-D28-L00100L	
ENS1D-441-M00128	ENS1J-B16-L00128	ENS2D-B28-L00128	ENT1J-D28-L00128	
ENS1D-452-Y00256	ENS1J-B16-L00256L	ENS2J-B28-L00064	ENT1J-D28-L00128L	