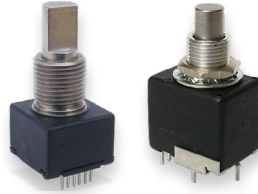




PRODUCT UPDATE MEMO

ENCODERS

Revised December 1, 2022



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. **For product with date codes after 2244M, The external pull-up resistors (1K ohms) and filter caps (22 nF) can be removed at customer's discretion.**

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

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

SC2218REV

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	