Troubleshooting Err84.0

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Motor Business Unit
Automotive & Industrial Systems Company
Panasonic Corporation

Cause & Solutions of Err84.0 (Timeout)

	Situation	Cause	Solution
A	When replacing the communication cable, it gets well. When shaking the plug, Err84.0 frequency is changed.	**Connector contact failure**	Change connector plug manufacturer.
B	The frequency of communication error is high. This error counts can be indicated on 7-segment LED. When installing ferrite cores or removing shield, the frequency is changed.	**Noise** When communication data is broken, it becomes Err83.0. But when a part identifying frame type is broken, the frame is thrown away as a waste. Thus, it makes frame lost in itself and the following nodes. When this situation is continued for a certain time, it causes Err84.0.	Remedy against noise such as installing ferrite cores. Confirm whether certain shielding is done or not. If earth-potential is unstable, remove shield.
C	All Slaves detect timeout at the same time.	**Reset in Master com. circuit** By some of unknown reason, Master reset communication circuit itself.	Verify power source and operation of Master.
D	It depends on a certain servo drive, and the following nodes detect timeout or communication error.	**Servo drive failure**	Replace the drive. Contact us through your local distributor.

Communication Error Counter

When Err84.0, measure frequency of the communication error to distinguish causes.
Communication error counts can be indicated on 7-segment LED. (Pr7.00 = 3)

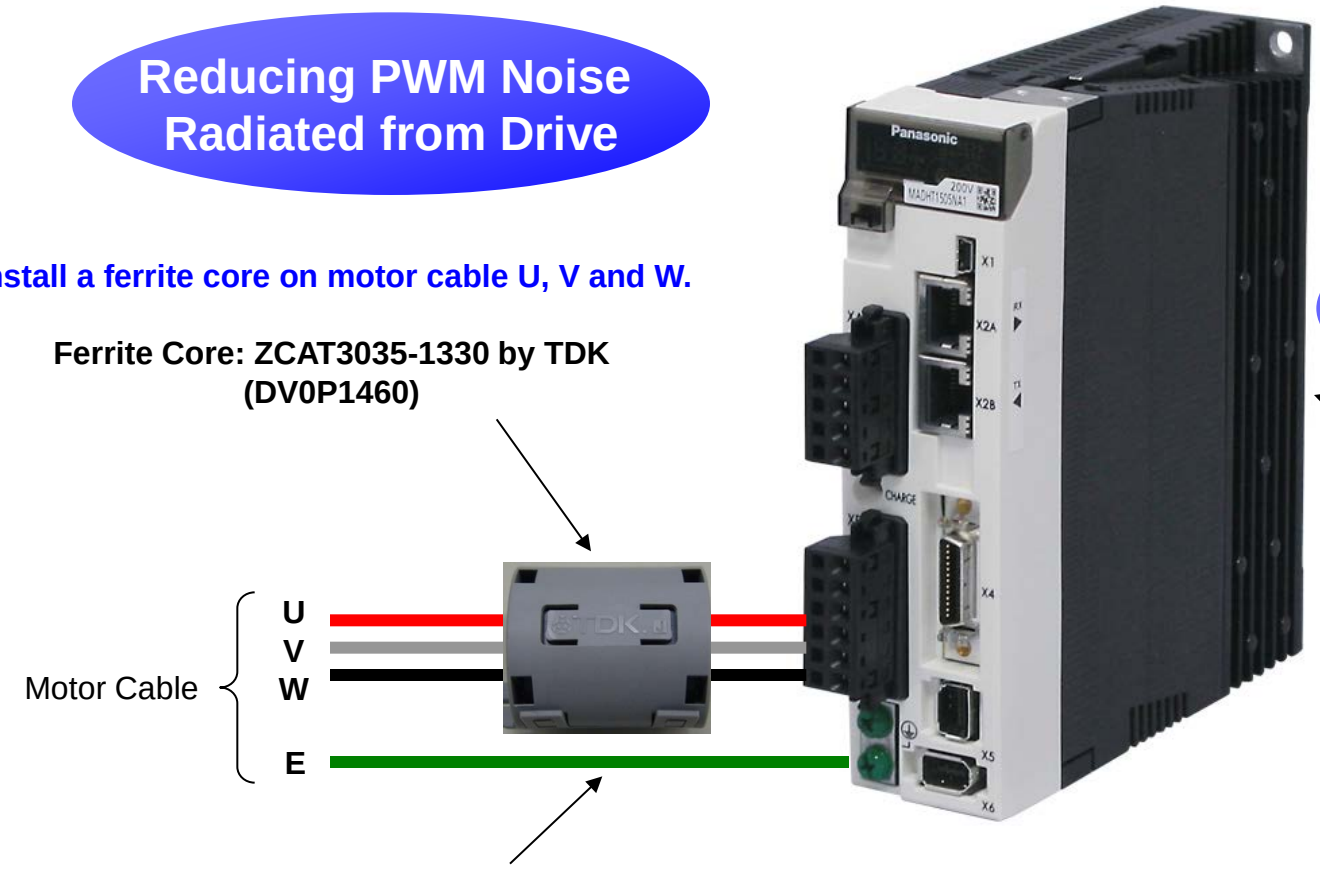
Pr 7.00	Information on display	Remarks
0	Normal display	[-]: servo OFF, [00]: servo ON
1	Mechanical angle	Range: 0 to FFF hex. 0: zero position of 1 revolution data of encoder. Data increments as motor turns CCW. When the displayed value exceeds [FF], the count is reset to [0] and restarted. When the incremental encoder is used, upon turning ON of the control power, [nF] (not Fixed) is displayed until zero position of the encoder is detected.
2	Electrical angle	Display range: 0 to FF hex. 0: the position where U phase induced voltage reaches the positive peak. Data increments as motor turns CCW. When the displayed value exceeds [FF], the count is reset to [0] and restarted.
3	RTEX Accumulated communication error counts	Display range: 0 to FF hex. Max. accumulated communication error counts: FFFF hex. Only the least significant byte is displayed. When the displayed value exceeds [FF], the count is reset to [00] and restarted. * Accumulated communication error counts will be cleared upon turning OFF of the control power source.
5	Encoder Accumulated communication error counts	
6	External scale Accumulated communication error counts	
4	Node address value	Displays the value set on rotary switch (node address) and read upon power-up, in decimal number. After power-up, the value cannot be changed from the rotary switch.
7	Z phase counter	When the incremental external scale is used in full closed control, displays the value of Z phase counter read from external scale: 0–F hex. * This displayed value is not affected by the value of Pr 3.26 Reversal of direction of external scale.
Other	To be used by the manufacturer but not by the user.	—

Counter-measures for Noise

Reducing PWM Noise Radiated from Drive

Install a ferrite core on motor cable U, V and W.

Ferrite Core: ZCAT3035-1330 by TDK (DV0P1460)



Do not install it on E.

Stable Frame Ground

Make the back of chassis tightly contact earthed metal-frame. The surface of the metal-frame must be kept conductive.